



Climate City Contract

2030 Climate Neutrality Action Plan

2030 Climate Neutrality Action Plan of the City of Muenster





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Summary

Textual element

In the Münster climate neutrality 2030 target scenario, CO₂ emissions fall by more than 95% compared to 1990. In 1990, annual emissions totalled 2,618,000 tonnes. A 95% reduction means reducing emissions by 2,487,000 tonnes annually in 2030 compared to 1990. Since this goal complies with the goal of reducing 82 percent of the 2021 baseline year GHG emissions calculated by the Economic Model, the Münster climate neutrality 2030 target meets the requirements of the "100 climate-neutral and smart cities by 2030" mission.

City Group Münster's action plan centres on a mix of technical fields of action with high CO₂ reduction potential and non-technical fields of action that are primarily centred around a cultural transformation of Münster society:

- Energy production
- Mobility
- Building carbon reduction measures
- Business and academia
- Climate budget
- Education and food

City Group Münster's action plan is not a rigid plan. Rather, the action plan is a flexible framework for action with which the City Group can react to changing framework conditions and requirements in future. A successful climate and energy transition requires that we start implementing, prioritising and developing change processes that have been developed in concepts and plans. To this end, Münster is focussing on the implementation of strategic projects that lie within the scope of action of the City Group and with which direct and indirect influence can be exerted on the implementation of climate protection measures. Direct influence means that City Group Münster can realise climate protection measures itself. Indirect influence means that City Group Münster sets the framework conditions, but that realisation of climate protection measures is highly dependent on the involvement of Münster society. For example, the City Group Münster exerts indirect influence on increasing the share of cycling from the current 47 per cent to 55 per cent of the modal split by improving the cycle infrastructure further in order to make cycling more attractive for its citizens.

Strategic City Group Münster projects bring about the realisation of climate protection-related projects and measures in City Group Münster and in Münster society by

- supporting and promoting



- making change possible
- setting clear rules

Strategic projects therefore form the framework for implementation projects through which City Group Münster or Münster society ultimately realise the climate protection process and ensure its success.

When departments and specialised offices implement projects relevant to climate protection, they run a wide variety of citizen participation initiatives to enable citizens to help to shape these projects. With the message "Münster is becoming a climate city" and the climate city contract, a process has been launched that aims to bring together as many stakeholders in Münster society as possible, including the City Administration, City Group Münster, companies, associations, citizens, clubs and climate activists. The motto for this process is, "Because it takes all of us". The focus of the process is primarily on information, activation and motivation. Climate protection is not solely a municipal task. It can succeed only with the help of Münster society.

The goals set out in the Climate City Contract can only be achieved in close co-operation with Münster society and with the state, federal government and EU. The Climate City Contract is intended as an innovative instrument for bringing these groups together and deepening their cooperation in multiple areas. At the time of submission, the Climate City Contract of the City of Münster and the linked goal of climate neutrality for Münster are supported by around 70 commitments from individual citizens, civil society institutions, universities and businesses. This circle will be expanded over the course of the mission.



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Abbreviations and acronyms

The list of abbreviations and acronyms **identifies the abbreviations** (a shortened form of a word used in place of the full word) **and acronyms** (a word formed from the first letters of each of the words in a phrase or name) used in the Action Plan.

Abbreviations and acronyms	Definition of
/ a	Per annum
ADFC	The German Cyclists Association
AWM	Abfallwirtschaftsbetriebe Münster
BEW transformation plan	Transformation plan for heat networks (in the context of federal funding for efficient heating networks (BEW))
BImSchG	Immission control law (Bundes-Immissionsschutzgesetz)
CHP	combined heat and power plant
City of Münster Group	The City Administration, municipal operations and municipal subsidiaries
DNK	The German Sustainability Code
EE	Renewable energies
ENP	Municipal heat and energy utilisation planning
ESD	Education for sustainable development
ESG	Environmental, Social and Governance



EU CSRD	Corporate Sustainability Reporting Directive)
GEG	Buildings Energy Act (Gebäudeenergiegesetz)
FF	Ground-mounted renewable energy systems (Freiflächen Anlagen)
GO	Municipal code in German law
GTP	Gas Grid Transformation Plan
GWh	Gigawatt hour(s)
IFM	Integrated Spatial Concept for Münster
KfW	KfW is one of the world's leading promotional banks. KfW has been committed to improving economic, social and environmental living conditions across the globe on behalf of the Federal Republic of Germany and the federal states since 1948.
KLENKO	City Administration Münster Climate and Energy Coordination Centre – renamed the Climate Office (under the Directorate for First Mayor Affairs) in summer 2022.
KWh	kilo watt-hour
MIV	Motorised individual transport
MS	Münster
MW	Mega-Watt
MWp	Mega-Watt peak
OGS	Open all-day school
PV	Photovoltaic
SWM	Stadtwerke Münster GmbH
TÜV	Technical Inspection Agency
VHS	Münster Adult Education Centre
WPG	Heat planning law (Wärmeplanungsgesetz)



1 Introduction

The introduction should outline the local policy context in which the Action Plan is being developed and describe the gap it is addressing in broad terms.

Table 1 Introduction - textual element

Introduction - textual element
<p>Münster climate neutrality 2030</p> <p>In ratifying the Paris Climate Agreement, the Federal Republic of Germany has entered into a binding commitment under international law to meet the climate targets set out therein. These targets mandate limiting global warming to well below 2 degrees Celsius above pre-industrial levels. The recommendation is that if possible this increase should not exceed 1.5 degrees. Although a binding transformation pathway for Germany and therefore local authorities has not yet been charted, it is clear that municipal climate protection targets need to be renegotiated and realigned.</p> <p>On 11 December 2019, the City Council passed a resolution to strive for climate neutrality by 2030. Against the backdrop of the goals of the Paris Climate Agreement, Münster City Council uses the following definition of climate neutrality:</p> <ul style="list-style-type: none"> • The City of Münster will no longer produce any energy-related greenhouse gas emissions by 2030. • The energy-related carbon budget needed to achieve the 1.5 degree target will be adhered to. • The City of Münster is prioritising the avoidance and reduction of greenhouse gases in the city. • Greenhouse gases will be offset where this is necessary to achieve the goal of climate neutrality by 2030 and will be informally considered during accounting. • Offsetting will be carried out to the extent required first locally and then regionally. <p>The resolution relates to the urban area of Münster, an area of 303.3 square kilometres. As of 2022, Münster had 320,946 inhabitants. According to the City of Münster's energy and greenhouse gas inventory for 2021 (published in 2023), CO₂ emissions break down as follows: Private households 28 per cent, commerce and miscellaneous 30 per cent, industry 11 per cent and transport 31 per cent.</p> <p>In the Münster climate neutrality 2030 target scenario, CO₂ emissions will fall by over 95% compared to 1990. In 1990, annual emissions amounted to 2,618,000 tonnes, so that a reduction of 95% means a reduction in annual emissions of 2,487,000 tonnes in 2030 compared to 1990. Since this goal complies with the goal of reducing 82 percent of the 2021 baseline year GHG emissions calculated by the Economic Model, the Münster climate neutrality 2030 target meets the requirements of the "100 climate-neutral and smart cities by 2030" mission.</p>



Thanks to wide-ranging climate protection efforts over the last 30 years and a good decentralised energy supply, in 2020 carbon emission intensity, at 5.8 t/a per inhabitant, was well below the national average. Münster is therefore on the right track.

If we are to limit global warming to well below 2 degrees compared to pre-industrial levels, meeting percentage emissions reduction targets alone is not sufficient. To achieve the goals of the Paris Climate Agreement, it is also necessary to limit total greenhouse gas emissions in absolute terms. The term carbon budget is used to illustrate how much CO₂ can be emitted per capita in order to limit global warming to 1.5°C. The German Advisory Council on the Environment (SRU) recommends setting a German carbon budget compatible with the Paris Climate Agreement and tightening climate targets accordingly. The carbon budget is intended as a broad-based assessment tool to help achieve these targets.

There are no binding methodological guidelines for calculating the carbon budget at municipal level. If the population principle recommended by the SRU is applied to the distribution within Germany, this results in a share of around 51 tonnes per person to meet the 1.5 degree target. The population principle also specifies an equal per capita emissions right for every person on earth.

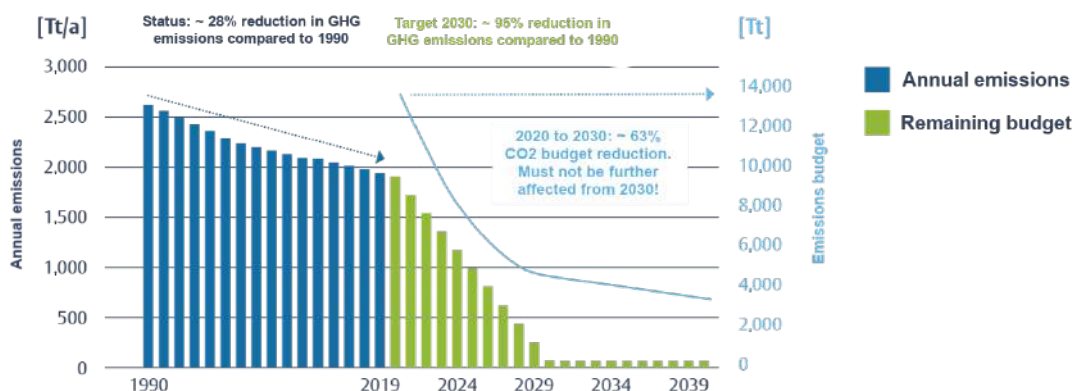
The "Münster Climate Neutrality 2030" concept study calculated a carbon budget for Münster for the period 2020/2021 using the then applicable baseline data. This was based on the assumption that the 1.5 degree target would be met. At the time of the calculation, this meant that Münster, with a population of around 310,000 people, would have a budget of around 15,800,000 tonnes of CO₂ by 2050.

In accordance with the territorial principle (BISKO standard), the City of Münster only accounts for energy-related greenhouse gases, including methane and nitrous oxide in the form of CO₂ equivalents. In applying the carbon budget to the budget limits for Münster, the following assumptions were therefore made: The National Inventory Report on the German Greenhouse Gas Inventory found that approximately 93% of emissions (CO₂, methane and nitrous oxide) are energy-related. Budget analysis was based on just 14,700,000 tonnes of the 15,800,000 tonnes of CO₂ described above. To generate a residual footprint, from this budget we deducted annual emissions for Münster in the form of the BISKO inventory. As soon as this total becomes negative, Münster's budget is used up and the municipality is considered to have failed to meet the 1.5 degree target. Since the BISKO inventory includes both CO₂ and CO₂ equivalents, this represents a conservative approach.

The "Münster climate neutrality 2030" target scenario describes absolute changes in greenhouse gas emissions and changes over time needed to achieve the goal of climate neutrality by 2030 and compliance with the 1.5 degree target. The figure below highlights the need to accelerate reductions over time in that it also shows the change in GHG emissions since 1990.



Figure 1 The Münster target development path



Source: In-house figures based on Münster Climate Neutral 2030 concept study, p. 14

“Because it takes all of us” - Climate neutrality as a task for all stakeholders

Against the backdrop of the Council resolution to aim for climate neutrality as early as 2030, City Administration Münster commissioned the Münster Climate Neutrality 2030 study. The concept study describes a potential theoretical path to climate neutrality by 2030, associated challenges and areas where action can be taken. The study highlights challenges (e.g. a deep renovation rate of 8% by 2030) that, from today's perspective, appear unrealistic. At the same time, it is becoming apparent that some processes in our fields of action, such as a switch to electromobility by 2030 and construction of new buildings to the Plus Energy standard, have become much more likely. Until a few years ago, for example, it would have been considered unrealistic that commercial companies would choose to stop producing internal combustion engines by 2030. In this respect, when assessing "realistic" development pathways, the possibility of changes in the framework within which we operate must always be taken into account.

The concept study clearly shows that City of Münster does not have sufficient scope for action to realise the goal of climate neutrality by 2030 by itself. Additional measures needed include more favourable framework conditions, over which the City of Münster has little influence. These include, for example:

- Adequate financial resources (e.g. for deep renovation, expansion of renewable energies, investment in electromobility) must be provided punctually through private investment and federal subsidies to eliminate economic efficiency gaps (e.g. in the area of "green district heating").
- A legal framework consistent with an expansion in renewable energy generation needs to be created (federal government)
- The human resources needed for building energy-efficiency improvements need to be available, particularly in the skilled building trades and building completion (commerce).



- Essential technical solutions (particularly in the area of sector coupling) must be available and mature (federal government, market participants).

Achieving Münster's target of climate neutrality by 2030 will require action by stakeholders in Münster society (companies, institutions, universities, homeowners, citizens) in addition to Münster City Council, the federal government, the State and the EU. With the help of the Climate City Contract, Münster society will be engaged in the climate protection process with much greater commitment than previously. The Münster City Administration needs to be constantly working to create the conditions needed for this to happen.

The implementation-based transformation strategy for Münster set out in this Climate City Contract is a suitable format for meeting the challenges because

- By including non-technical fields of action it takes into account the need for a cultural transformation of the whole of Münster society.
- The project is clearly prioritised within City Group Münster in that the climate protection process is managed by the Administrative Board.
- By regularly reviewing the status of project implementation (quarterly by the Administrative Board) and reductions in emissions (annual energy and greenhouse gas inventory), it is possible to react flexibly to changes in the complex and dynamic environment (technical innovations, political framework conditions, etc.).

With regard to extending this transformation strategy to the whole of Münster society, City Administration Münster is able to draw on existing networks and structures, which are gaining in importance and being strengthened not least through the use of the Climate City Contract presented here (see modules A-3).

Münster is becoming a climate city

The "Münster is becoming a climate city" process builds on a climate protection process that dates back to at least 1995, when the City Administration set up the Coordination Centre for Climate and Energy (KLENKO). The strategic basis for Münster City Council's climate protection process consists of the 100% Climate Protection Masterplan, adopted in 2017, and the Münster Climate Neutrality 2030 concept study, drawn up in 2021.

Development of the 100% Climate Protection Masterplan involved a high level of participation by Münster society. Even then, the Council believed that, "A 100% climate protection masterplan can only be successful in the long term if the largest possible section of Münster society can be mobilised to actively participate in municipal climate protection. The citizens of Münster have for decades been dedicated and well-organised, offering the best possible conditions for achieving this. In Münster,



climate protection is defined not as a task for the City Council or the City Administration alone, but as a shared challenge for all of Münster society." (Masterplan 100 % Climate Protection, p. 20)

Against the backdrop of the resolution on climate neutrality by 2030, the Climate Neutrality 2030 concept study adapted the strategy set out in the 100% Climate Protection Masterplan – based on a target of climate neutrality by 2050 – to the new target. The Münster Climate Neutrality 2030 concept study shows that implementation of the actions needed for climate protection and climate neutrality needs to be accelerated. The Council also passed a resolution adopting ad hoc measures, the Climate Protection 2030 action programme and the action programme from the concept study on climate-neutral City Administration. It has since become clear, however, that, in addition to measures taken by the City Administration Münster, achieving this goal will require action by the whole of Münster society, the EU, the federal government and the State - in line with the Climate City Contract within the context of the EU mission.

Figure 2 Milestones and resolutions in Münster's climate protection process



Source: In-house presentation

The above concepts and programmes of measures still represent the strategic basis for the City of Münster's climate protection process. Future strategy is therefore not about filling fundamental omissions, but rather about intensifying and persistently expanding the many existing courses of action



and projects. In addition, new paths need to be carefully prioritised and innovative approaches piloted. The strategy for Münster is therefore not a rigid plan, but rather a flexible framework for action with which the City Group Münster can react to changing framework conditions and requirements in the future.

City Group Münster is now focussing primarily on moving from planning to action and acceleration. The guiding principle is the maxim "From project to principle", which emphasises the prioritisation of systemic change in our chosen fields of action over the implementation of individual projects. Alongside this, at a governance level, climate protection is becoming much more firmly established as a cross-cutting issue within the City Administration, and the Council has deemed it to be one of the most important future issues, meaning that all departments, offices, institutions and municipal subsidiaries must take whatever action they are able.

This process is managed by the Administrative Board. This means there is a person responsible for the process for each area of action at management level, who reports to the Administrative Board and is responsible for the implementation process. They are known as topic owners (Themenpaten). Technical responsibility and responsibility for project implementation remains with the departments. Topic coordinators (Themenkoordinatoren) form the link between departments and topic owners. This process is also supported by the Climate Office. Because achieving the goal of climate neutrality by 2030 requires both technical solutions and a cultural transformation, City Group Münster's efforts are centred on the following fields of action: energy production, building carbon reduction measures, mobility, business and academia, education and food, and climate budget. This addresses all sectors required by the Cities Mission.



2 Work Process

This section should list the working steps carried out, for example along the NZC Climate Transition Map, or related steps planned as well as outline timeline and milestones for future iterations for the continuous development of the Action Plan.

Table 2 Work Process - combination of text and visual elements

Work Process - combination of text and visual elements
<p>The work process for the Climate City Contract is shown using elements from the Net Zero Cities Transition Map.</p>
<p>Figure 3 Net Zero Cities Transition Map</p>
<p>Source: In-house figure based on Net Zero Cities</p>
<h3>Build a strong mandate</h3>
<p>On 11 December 2019, the Council voted to aim for climate neutrality by 2030. Against the backdrop of the Paris Climate Agreement, the City of Münster uses the following definition of climate neutrality:</p>
<ul style="list-style-type: none"> • By 2030, City of Münster will no longer produce any energy-related greenhouse gas emissions. • The energy-related carbon budget needed to achieve the 1.5 degree target will be adhered to. • The City of Münster is prioritising the avoidance and reduction of greenhouse gases in the city.



- Greenhouse gases will be offset where this is necessary to achieve the goal of climate neutrality by 2030 and will be informally considered during accounting.
- Offsetting will be carried out to the extent required first locally and then globally.

The resolution relates to the urban area of Münster, an area of 303.3 square kilometres. As of 2022, Münster had 320,946 inhabitants. The City of Münster's energy and greenhouse gas inventory for 2021 (published in 2023), CO₂ emissions break down as follows: Private households 28 per cent, commerce and miscellaneous 30 per cent, industry 11 per cent, transport 31 per cent.

In the Münster climate neutrality 2030 target scenario, emissions will fall by over 95% compared to 1990. In 1990 annual emissions amounted to 2,618,000 tonnes, so that a reduction of 95% means a reduction in annual emissions of 2,487,000 tonnes in 2030 compared to 1990. Since this goal complies with the goal of reducing 82 percent of the 2021 baseline year GHG emissions calculated by the Economic Model, the Münster climate neutrality 2030 target meets the requirements of the "100 climate-neutral and smart cities by 2030" mission.

Thanks to wide-ranging climate protection efforts over the last 30 years and a good decentralised energy supply, in 2020 carbon emission intensity, at 5.8 t/a per inhabitant, was well below the national average. Münster is therefore on the right track. This is also evident from national and international rankings:

- SECAP has been approved by the official body of the Covenant of Mayors on March 12, 2024
- November 2023: A-Ranking CDP-ICLEI Track
- Award in the "Climate Active Municipality 2022" competition for the concept study and the associated "Climate Neutral Municipality 2030" action programme.
- The City of Münster has several times been honoured with the European Energy Award (EEA) Gold, the highest honour for municipal climate policy measures, for its wide-ranging climate policy measures. Following gold certifications in 2005 and 2009, in 2012, 2015, 2018 and 2022 the city achieved one of the highest scores of all gold-certified municipalities in Europe.
- German Sustainability Award 2019

Nevertheless, we also know that reductions in CO₂ emissions are not sufficient - not even in Münster. The scientific community continues to sound the alarm – the next few years will be decisive, and speed is of the essence. We need to do more to stop climate change, do more to adapt to the consequences of climate change, which now appear unavoidable, and step up the pace of climate action! Unless we change direction on the climate, the future looks bleak. Society, through an unprecedented global movement, has shown that the majority are ready to make the changes needed to achieve climate justice. Since 2019, Münster too has been gearing up for action.

Understand the System

In 2017, the City of Münster's 100% Climate Protection Masterplan outlined how and under what circumstances the City could become largely climate-neutral by 2050, and what strategic steps needed to be



taken to achieve this. At the time, the masterplan target was seen as a major challenge. Given the resolution to aim for climate neutrality as early as 2030, the Münster City Administration commissioned the Münster Climate Neutrality 2030 study. This concept study describes a potential theoretical path to climate neutrality by 2030, associated challenges and areas where action can be taken. Starting from the goal and working backwards means working out the steps and framework conditions needed to achieve that goal. It is therefore not about a rigid plan, but about formulating the framework needed to achieve this goal. In addition to the 100% Climate Protection Master Plan, the concept study was also based on the Climate Protection Action Programme 2030 and the city's annual energy and greenhouse gas inventory.

The Münster Climate Neutrality 2030 concept study shows that the strategy adopted in 2017 as part of the Masterplan 100% Climate Protection is also valid in the light of the Council resolution on climate neutrality 2030 - albeit it requires associated measures to be implemented roughly seven times more quickly and ambitiously.

Co-design a Portfolio

The strategic basis for all of the City of Münster's climate protection activities is the "100% Climate Protection Masterplan" and the "Münster Climate Neutrality 2030 Concept Study", which builds on the masterplan. The "100% Climate Protection Masterplan" was developed in 2017 with extensive participation from Münster society. A total of around 1,200 participants took part in the consultation.

The strategic premises of Münster's climate action are, in priority order:

- saving as much energy as possible
- utilising the energy we still require as efficiently as possible
- generating the energy we still require from renewable resources
- choosing resource and energy-saving behaviours with a consumer culture to match

This strategy guides our actions in our six areas of activity:

- Energy production
- Mobility
- Building carbon reduction measures
- Business and academia
- Climate budget
- Education and food

City Administration and City Group

Based on these strategic guidelines and in response to a number of council resolutions, a wide range of climate protection measures are being implemented by the various organisational units within the City



Administration and City Group. In order to focus on and accelerate the implementation of climate protection measures, the Münster City Administration is treating climate protection as much more of a cross-cutting issue, meaning that all departments, offices, institutions and municipal subsidiaries have to take whatever action they are able. City Group Münster's climate protection process is managed by the Administrative Board. In concrete terms, this means that for each area of action one person from the City Group's senior management team is responsible and reports quarterly to the Administrative Board on the status of the various projects and plans.

City Group Münster, i.e. the core Administration plus its own companies and municipal subsidiaries, is aware of its special responsibility. At the same time, the Münster Climate Neutrality 2030 concept study has shown that Münster cannot achieve its full CO₂ savings potential through the action of politicians and the Administration alone. With the message "Münster is becoming a climate city", the City Administration has therefore launched a process that calls on all stakeholders in Münster society to commit to the goal of making Münster climate-neutral using the levers available to them.

Impact partners

In addition to the municipal corporation, other stakeholders in Münster have significant leverage when it comes to reducing CO₂ emissions. The term "impact partners" refers to any organisation - commercial enterprises, associations, universities, etc. - able to make a significant contribution to climate neutrality in Münster. Some impact partners in Münster have already made concrete plans to achieve climate neutrality, while others are implementing ambitious emissions reduction projects and measures. The Climate City Contract is intended to highlight this commitment and, by making it a matter of public record, strengthen signatories' commitment to it.

Münster benefits from its "Münster's Alliance for Climate Protection" network, founded in 2011, in which more than 100 companies support the city's climate protection goals and are involved in climate protection activities. In developing the Climate City Contract, the City Administration Münster created additional structures to boost stakeholder engagement. For example, it established a regular dialogue between the business community and the Administration with the aim of working together on the implementation of our "Münster climate-neutral 2030" vision.

Innovators

Not every measure is amenable to calculating how much CO₂ it will save or what future effects it might have. Nevertheless, such measures are also important, because making Münster a climate-friendly city takes ideas, creativity, research, progress and the courage to try something new. If, for example, researchers at the University of Münster come up with innovative recycling methods, this knowledge will benefit not just Münster, but ultimately the whole world.

As a city of science, Münster can build on established networks such as the "Alliance for Science" and "Smart City Münster Alliance".



Committed citizens

Every one of Münster's 320,000 inhabitants is part of our city society and affects the pathway to becoming a climate-friendly city. For many, this means reorienting their everyday decisions towards climate-friendly options. Some, however, have the opportunity to engage more profoundly, whether by supporting a repair café or by buying an electric car to share with neighbours.

The motto of the "Münster is becoming a climate city" process and associated Climate City Contract is "Because it takes all of us". The Climate City Contract will be continuously updated over the next few years, always with the aim of finding even more people to join in.

Take Action

City Group Münster is moving beyond planning and is now focused on implementing measures. The focus here is on the implementation of strategic projects that lie within City Group Münster's capabilities and with which we are able to exert direct and indirect influence on the implementation of climate protection measures. Direct influence means that City Group Münster can realise climate protection measures itself. Indirect influence means that City Group Münster sets the framework conditions, but the realisation of climate protection measures is largely dependent on engagement by Münster society. For example, the City Group Münster exerts indirect influence on increasing the share of cycling from the current 47 per cent to 55 per cent of the modal split by improving the cycle infrastructure further in order to make cycling more attractive for its citizens.

Strategic projects of City Group Münster therefore bring about the realisation of climate-related projects in City Group Münster and in Münster society by

- supporting and promoting
- making change possible
- setting clear rules

Strategic projects form the framework for implementation projects with which the municipal corporation or Münster society ultimately realise the climate protection process. Implementation of climate protection-related projects by departments and specialised offices involves a wide variety of citizen participation initiatives. The strategic projects are presented in Module B-2. The portfolio is continuously reviewed, adjusted and developed.

A new internal management structure has been established to accelerate the implementation of measures. The Administrative Board is responsible for managing the climate protection process at City Group Münster. In concrete terms, this means that for each area of action one person from the City Group's senior management team is responsible and reports quarterly to the Administrative Board on the status of the various projects and plans. This ensures that the climate protection process is closely monitored. A core instrument in this process is the 'climate project board', similarly in organisation to a Kanban board. The aim of the project board is to create an overview of all of the City Group's strategic climate



neutrality projects. Topic coordinators (Themenkoordinatoren) form the link between specialist departments and topic owners (Themenpaten). Topic coordinators collect information from specialist departments and identify interfaces between individual projects across all fields of action. The process is supported by the Climate Office (see also Module C-1).

The goals set out in this Climate City Contract can only be achieved through close cooperation with Münster society and with the State, federal government and EU. The Climate City Contract is intended to be an innovative instrument for bringing these groups together and deepening their cooperation in multiple areas. At the time of submission, Münster's Climate City Contract and the associated goal of climate neutrality for Münster is supported by around 70 commitments from individual citizens, civil society institutions, universities and business. This circle will be expanded over the course of the mission.

Learn & Reflect

From project to principle - this maxim underpins Münster's climate protection strategy and over the next few years City Group Münster will be extending it to the whole of Münster society. With the help of the Climate City Contract, city society will be engaged in the climate protection process with much greater commitment than previously. The Münster City Administration needs to be constantly working to create the conditions required for this to happen (see also Social Innovations, Module C-2). To this end, the Climate City Contract will be continuously updated and resubmitted to the European Commission for review every two years.

Prioritising implementation of climate protection strategies and measures is carried out by Münster City Council and the City Administration Administrative Board. Climate protection-related information is currently being developed for both bodies, such as a budget template and the climate protection overview board, intended to provide transparent support for the decision-making process.

The implementation status of climate protection strategies and measures is reviewed internally by the Administrative Board every three months through a reporting system. The city's annual energy and greenhouse gas inventory provides information on Münster's current position with regard to the 2030 climate neutrality target.



3 Part A - Current State of Climate Action

Part A "Current State of Climate Action" describes the point of departure of the city towards climate neutrality, including commitments and strategies of key local businesses, and informs the subsequent modules and the outlined pathways to accelerated climate action.

3.1 Module A-1 Greenhouse Gas Emissions Baseline Inventory

Table 3 A-1.0: Introduction GHG baseline inventory City of Muenster

3.1.1 Energy and greenhouse gas inventory City of Münster

The first energy and greenhouse gas inventory, for 1990, was published in the final report of the Advisory Board for Climate and Energy in 1995 and was regularly updated in a 5-year cycle until 2010. During the development of the Climate Protection Concept 2020, the system was revised and the BiCO₂ balancing system (ifeu GmbH, Heidelberg) introduced. This system has been used for annual balancing since 2009. This involves recording and analysing the final energy consumption of all consumers in the city (transport, households, small consumers, industry, etc.). The balancing methodology and system is based on the BSKO standard (municipal balancing standard) developed by IFEU (Institute for Energy and Environmental Research, Heidelberg). This has been subject to ongoing development over the last few years and is regarded as the leading standard for municipal climate protection assessments in Germany. Based on the territorial principle¹, energy consumption is recorded for the entire municipal area and emissions determined from this. The area considered in calculating the energy and greenhouse gas inventory is therefore identical to the area on which the climate neutrality target is based. This was comprehensively revised in 2021, including the integration of a more sophisticated, Münster-specific transport model and the preparation of a balancing tool for documenting the coming decade.

Most of the data on static final energy consumption (excluding transport) is provided by Stadtwerke Münster GmbH and Stadtnetze Münster GmbH. These data largely reflect actual final energy consumption. Carbon emission intensity calculations take into account upstream emissions and equivalents and electricity and district heating factors in combined heat and power processes are calculated using the exergy method. The local electricity mix is taken into account in accordance with the territorial principle.

¹ Territorial principle means: "All consumption occurring in the territory under consideration is taken into account at the level of final energy (energy that is measured at the house meter, for example) and allocated to the various consumption sectors. The GHG emissions are then calculated using specific emission factors. Grey energy is not accounted for". (Source: IFEU (2019): BSKO. Municipal accounting system. Heidelberg. S. 8)



An important measure in the field of renewable energy is the use of regeneratively produced biomethane. Biomethane is used as a substitute for natural gas to produce electricity and heat in combined heat and power (CHP) plants or as a fuel for vehicles. Stadtwerke Münster GmbH has operated the majority of its CHP plants using biomethane since 2015. This biomethane generally comes from biogas plants that feed processed biomethane into the natural gas grid. Biomethane in Münster is supplied purely on a balance sheet basis, meaning it is not included directly in the CO₂ and energy inventory, as required by the territorial approach. It is indirectly taken into account through the nationwide emission factor for natural gas, which improved from 252 g/kWh in 2013 to 250 g/kWh in 2017.

The City of Münster's energy and greenhouse gas inventory assigns energy consumption and CO₂ emissions to one of four categories: private households, trade, commerce and services, industry and mobility. For the AFOLU sector, CO₂ emissions are recorded on the basis of a balancing tool that calculates region-specific emissions of the greenhouse gases N₂O (nitrous oxide), CH₄ (methane) and CO₂ (carbon dioxide) based on relevant input/activity data. IPCC classifies relevant emissions from agriculture as CRF sector 4. These are sub-divided into the following three sub-sectors: Fermentation during digestion (4.A), Treatment of farm fertilisers (4.B), Agricultural (fertilised) soils (4.D).

The waste sector uses data from the the City of Münster's waste management companies, which report under the German Sustainability Code framework: <https://datenbank2.deutscher-nachhaltigkeitskodex.de/Profile/CompanyProfile/13986/de/2020/dnk> In this report, awm reports emissions for scope 1 and scope 2. In scope 1, direct emission were 2,595,083 t CO₂ (related to vehicle transport in 2020). In scope 2, emissions were 189.565 t CO₂ (related to district heat consumption in 2020). In scope 3, emissions have not been reported yet: <https://datenbank2.deutscher-nachhaltigkeitskodex.de/Profile/CompanyProfile/13986/de/2020/dnk>

The City of Münster reports its GHG inventory via MyCovenant and CDP/ICLEI. The City of Münster's energy and greenhouse gas inventory fulfils the requirements of the Cities Mission.

Table 4 A-1.1: Final energy consumption by sector

A-1.1: Final energy use by source sector				
Year	2021			
Unit	GWh/year			
	Scope 1	Scope 2	Scope 3	Total
Buildings				3,727
Natural gas		1,455		
District heating		736		
Heating oil	426			



RE Heat	43			
Electricity		1,067		
Transport				1,803
Fossil fuels	1,656			
Renewable fuels	113			
Electricity		34		
Waste				No information on energy consumption, see A-1.4
Industrial Process and Product¹ Use (IPPU)				629
Natural gas		434		
District heating		2		
Heating oil	5			
Electricity		188		
Agricultural, Forestry and Land Use² (AFOLU)				No energy-related emissions, see A-1.4
Source: Municipal energy and CO ₂ inventory for 2021; DNK report, AWM				

Table 5 A-1.2: Emission factors

A-1.2: Emission factors applied
(Please specify for primary energy type and GHG emission factor according to methodology used). BSKO stands for <i>Bilanzierungssystematik Kommunal</i> (municipal accounting system) and is a methodology for municipal final energy consumption and greenhouse gas emissions accounting. It was developed as part of a federal research project, is recognised by funding bodies such as the Municipal Directive and is used by many cities in Germany. More detailed information can be found in the updated BSKO methodology paper (https://www.energieatlas.rlp.de/earp/fileadmin/THG-Bilanzierung/Bilder/BSKO_Methodenpapier_kurz_ifeu_Nov19.pdf). The BSKO system takes into account greenhouse gas emissions (in CO ₂ equivalent) of CO ₂ , CH ₄ and N ₂ O. It does not account for F-gases.



(https://leitfaden.kommunaler-klimaschutz.de/wp-content/uploads/2023/02/Praxisleitfaden_2023_Kapitel_B3_Ist-Analyse_quantitativ-1.pdf)

For calculation: grams of CO₂ -eq per kWh

Method: national (BISKO, see above)

Primary energy/ energy source	Car- bon Di- oxide (CO _{2eq})	Me- thane (CH ₄)	Nitrous Oxide (N ₂ O)	F-gases (hydro- fluorocarbons and perfluorocarbons)	Sulphur hexaflu- ride (SF ₆)	Nitrogen trifluoride (NF ₃)
Electricity mix (na- tional)	0.473					
Electricity mix (lo- cal)	0.437					
District heating (lo- cal)	0.121					
Heating oil	0.318					
Natural gas	0.247					
Wood chips	0.029					
Pellets	0.025					
Hydropower	0.003					
Photovoltaics	0.040					
Wind power	0.010					

Source: BISKO standard

Table 6 A-1.3: Energy consumption and utilisation of final energy by sector

A-1.3: Activity by source sector				
Base year 2021				
unit	GWh/year			
	Scope 1	Scope 2	Scope 3	Total
Sector: Buildings				4.416
Municipal buildings		64		64
Residential building	343	1,420		1,763
Non-residential buildings	131	2,458		2,589



Sector: Transport	1,803			1,803
Motorised individual transport	1,183			1,183
Public transport	41			41
Regional rail transport	19			19
Road freight transport	524			524
Long distance passenger transport	7			7
Freight transport Rail+Barge	30			30
Sector: Waste				No information on energy consumption, see A-1.4
Sector: Industrial Process and Product Use (IPPU)				Consumption included in "non-residential buildings"
Sector: Agricultural, Forestry and Land Use (AFOLU)				No energy-related emissions, see A-1.4

Source: Municipal energy and CO₂ inventory for 2021; City Administration GHG inventory (Bericht Klimaneutrale Stadtverwaltung 2030)

Table 7 A-1.4: Greenhouse gas emissions by sector

A-1.4: GHG emissions by source sector				
Base year	2021			
Unit	tonnes CO ₂ equivalent/year			
	Scope 1	Scope 2	Scope 3	Total
Buildings	136,893	922,466		1,059,359
Transport	549,780	16,082		565,862
Waste	2,595	190		2,785
Industrial Process and Product Use (IPPU)	1,631	189,350		190,981



Agricultural, Forestry and Land Use (AFOLU)	53,739			53,739
Total				1,874,841

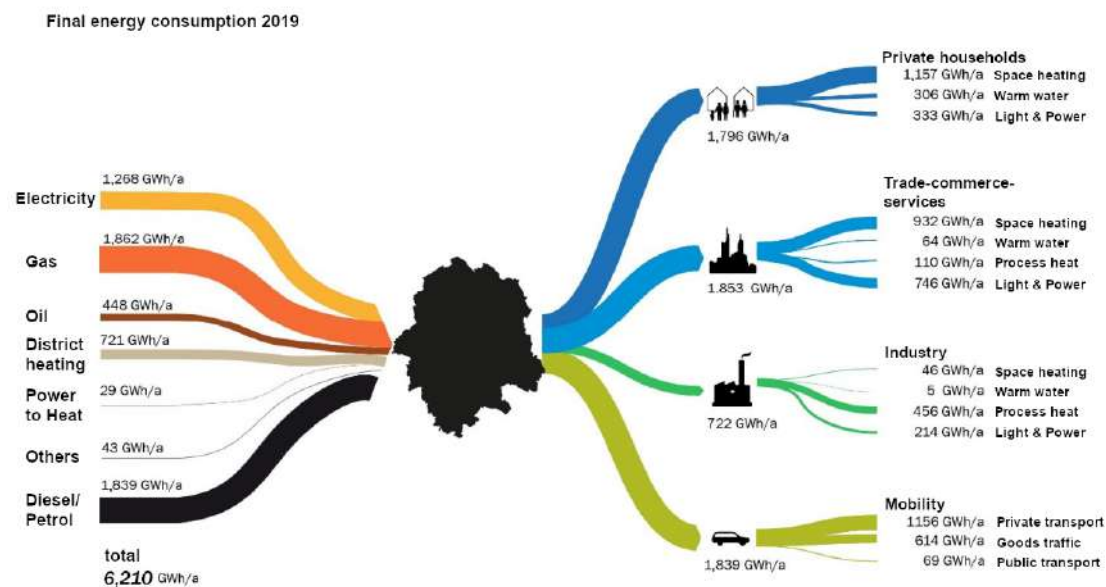
Source: Municipal energy and CO₂ inventory for 2021; DNK report, AWM

Table 8 A-1.5: Graphics and charts

A-1.5: Graphics and charts

The following figures show final energy consumption in Münster in 2019 and associated greenhouse gas emissions. The absolute values have changed between 2019 and 2021 (see below), but the breakdown by energy source and final energy use by sector has remained the same. The left-hand side of the figure below shows the quantity of energy used per energy source (final energy-related), while the right-hand side shows utilisation by sector.

Figure 4 Final energy consumption by energy source and final energy use by sector for 2019

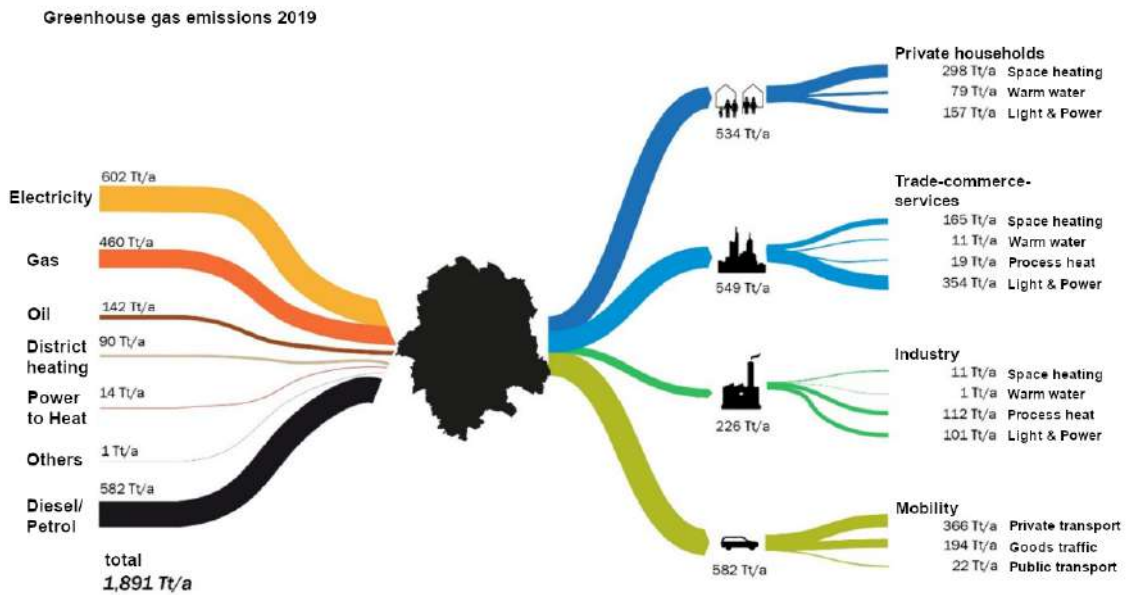


Source: Münster Climate Neutrality 2030 concept study, p. 7

The figure below shows the amount of associated greenhouse gas emissions.



Figure 5 Greenhouse gas emissions by energy source and by final energy use by sector in 2019



Source: Münster Climate Neutrality 2030 concept study, p. 7

Table 9 A-1.6: Description and assessment of GHG baseline inventory

A-1.6: Description and assessment of GHG baseline inventory
3.1.2 Description and assessment of the 2021 energy and greenhouse gas inventory for City of Münster

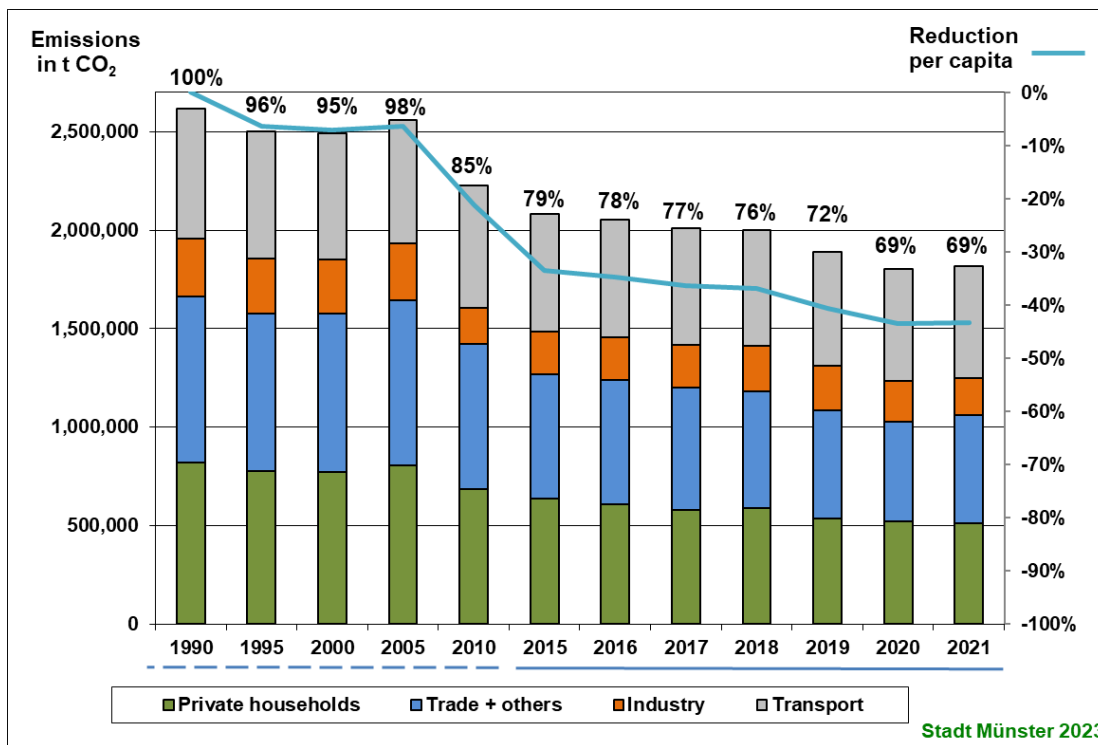
The following is an initial overview of the energy and CO₂ inventory for the City of Münster over time. 1990 is the baseline year to which our internal energy and climate protection targets refer. Data collected on an ongoing basis can be divided into three areas of use: heat, electricity and transport. Within these areas, final energy consumption can be broken down by energy source and user group (households, commerce, industry, transport), allowing a differentiated analysis and evaluation of the inventory results.

3.1.2.1 Core results

Annual CO₂ emissions in Münster have fallen from 2,618 kt in 1990 to 1,816 kt in 2021. Compared to the baseline year 1990, this represents a reduction of approx. 31% or 802 kt CO₂. Compared to the previous year, this represents an increase of approx. 6,000 tonnes. The following figure shows the change in annual CO₂ emissions in Münster in tonnes by sector. 100% corresponds to emissions in the baseline year 1990. The per capita reduction in emissions is shown on the right-hand vertical axis.



Figure 6 Annual CO₂ emissions in Münster in tonnes by sector



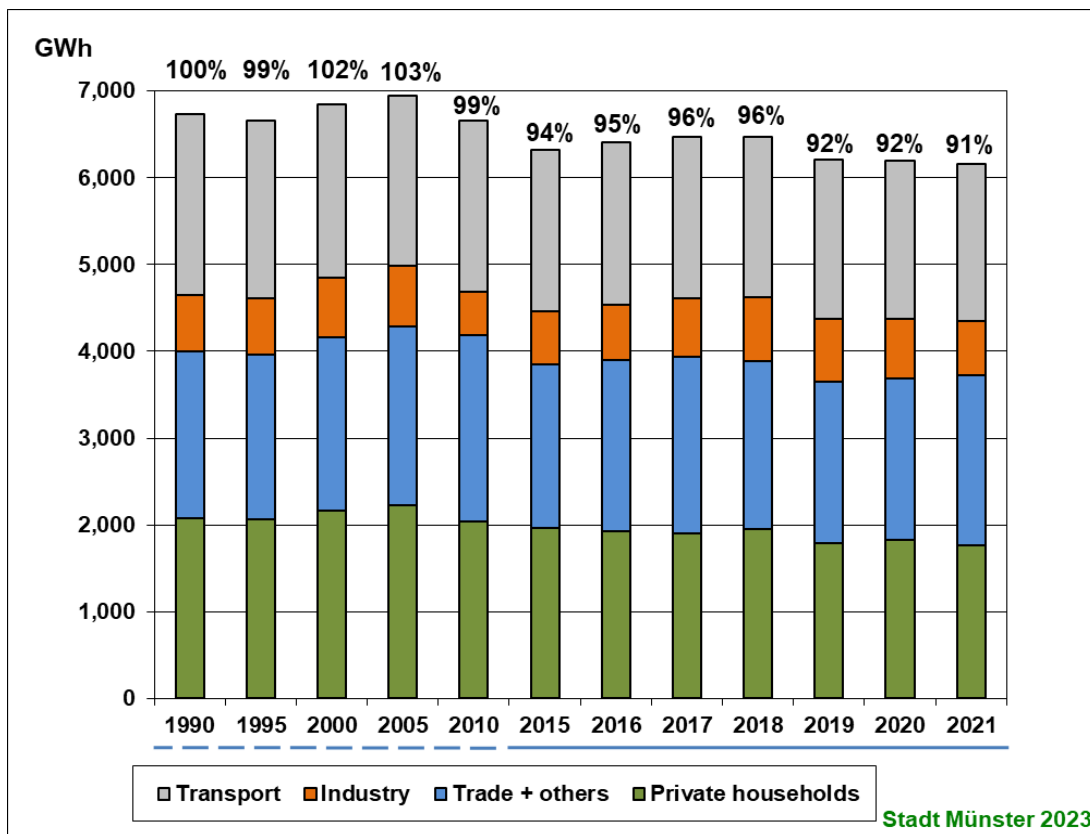
Source: Municipal energy and CO₂ inventory for 2021

The slight increase in CO₂ emissions from 2020 to 2021 is due in particular to high renewable energy yields in 2020, both in Münster and nationwide. As a result, the federal electricity emission factor, which plays a significant role in the city's GHG inventory and significantly affects the overall reduction in emissions, was particularly favourable. This factor was slightly worse in 2021, meaning that despite a slight reduction in energy consumption across all sectors and energy sources, total emissions rose slightly.

City-wide final energy consumption fell from 6,729 GWh in 1990 to 6,125 GWh in 2021 (see figure below). This corresponds to a reduction of 9% or 604 GWh compared to 1990 and a reduction of approx. 100 GWh compared to the previous year. The figure below shows changes in final energy consumption in Münster in GWh by sector. 100% corresponds to final energy consumption in the baseline year 1990.



Figure 7 Final energy consumption in Münster in GWh by sector



Source: Municipal energy and CO₂ inventory for 2021

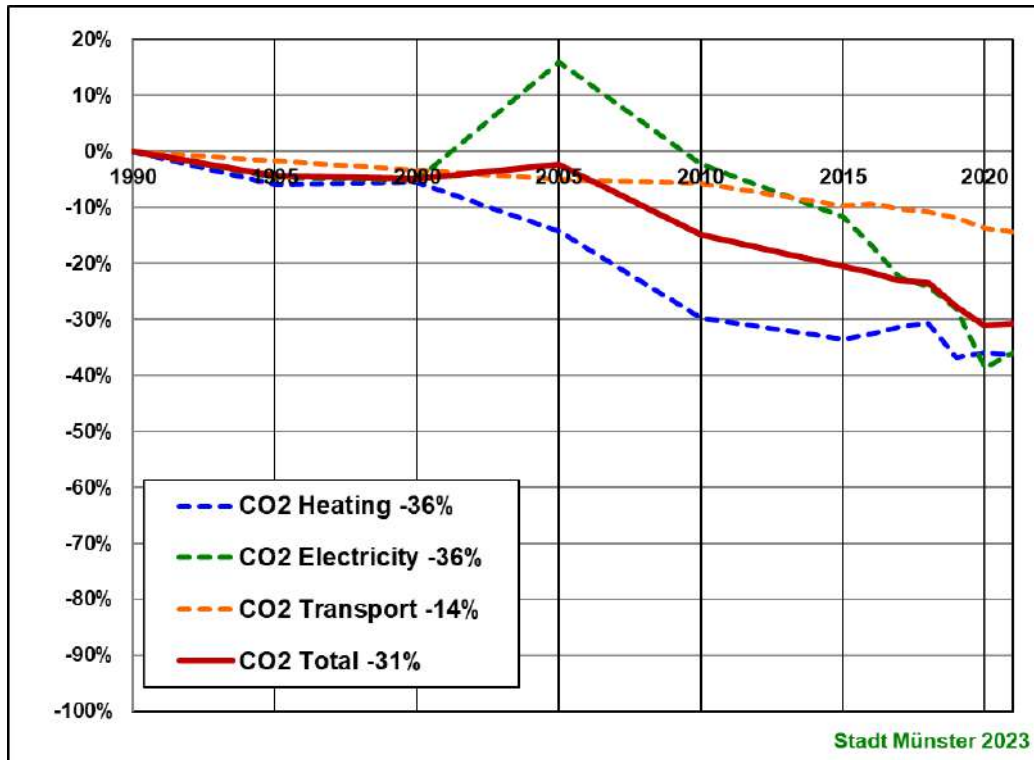
If we compare the reduction over time for CO₂ consumption and for final energy, we can clearly see that final energy consumption is falling much more slowly than CO₂ emissions. This highlights the importance of increasing the reduction in energy consumption in order to accelerate the reduction in emissions.² Every KWh saved directly reduces emissions and, unlike additional energy consumed, does not require increased use of renewable energies. As a rapidly growing city, with the inevitable increase in energy consumption that this growth brings, Münster faces particular challenges.

The figure below shows CO₂ reductions over time broken down by area of use (heating, electricity, transport). The heating sector in particular is negatively affected by rapid population growth and the trend for ever larger flats and houses. In the electricity sector, however, the reduction in emissions is accelerating thanks to a steady expansion of renewable energy. In the transport sector, emissions are falling at a relatively slower rate.

² Based on a 20% reduction in energy consumption in the heating sector (in line with the German government's savings target for the energy crisis), this would save around 130,000 tonnes of CO₂ per year. This would significantly increase the overall reduction from -31% to -36%.



Figure 8 Percentage reduction in CO₂ emissions by area of use in Münster from 1990 to 2021 compared to the baseline year 1990



Source: Municipal energy and CO₂ inventory for 2021

Urban growth, residual CO₂ budget and climate neutrality

The table below shows selected urban development figures that have a strong influence on the city's carbon inventory. These figures make clear the scale of the city's overall growth. Since 1990, the resident population has risen by around 14% to a good 314,000 inhabitants in 2021. In the same period, residential floor space has increased by a good 47% and the number of workers liable to pay social security contributions by 56%. In a continuously growing city like Münster, therefore, to obtain a better all-round view it is helpful to look at the change in CO₂ emission intensity per inhabitant.

Table 10 General figures on developments in the City of Münster by year and percentage increases since 1990

	1990	2000	2010	2015	2020	2021	%
Eligible population	275,150	279,461	285,180	305,235	312,969	314,332	+14 %
Residential building	40,495	45,679	50,611	55,312	57,137	57,446	+42 %
House holds	122,405	139,060	150,188	166,630	170,840	172,659	+41 %

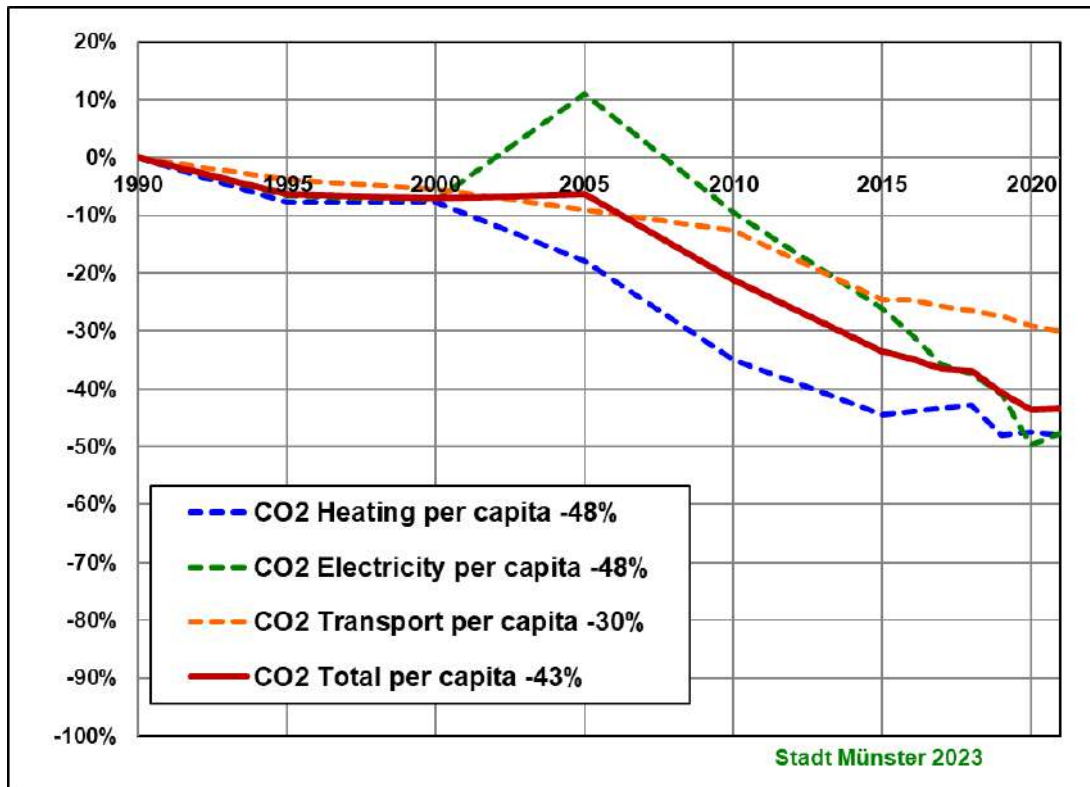


Residential floor space (m²)	9,385,400	10,743,200	11,484,300	13,148,953	13,837,051	13,964,962	+47%
Employees liable to pay social insurance contributions	115,152	130,175	143,147	159,706	179,083	-	+56%
Number of cars	101,255	116,815	125,479	136,624	147,332	150,277	+48%

Source: City of Münster Information Management and Statistics Department, cited from Municipal energy and CO₂ inventory for 2021

We can see that the reduction in total CO₂ emission intensity per inhabitant of around 43% represents a much sharper fall than the absolute reduction in emissions (see figs. 8 and 9). This illustrates and highlights the effect of population growth and overall city growth on CO₂ emissions. Urban growth therefore captures some of this reduction, diluting the overall result.

Figure 9 Changes in the reduction in CO₂ emission intensity per inhabitant by area of use in Münster from 1990 to 2021 compared to the baseline year 1990



Source: Municipal energy and CO₂ inventory for 2021



In addition to the above figures, the two figures below show emissions and final energy consumption broken down by sector and energy source.

It is clear that, with the exception of the fuel mix for transport, electricity is the energy source responsible for the largest share of total urban emissions, followed by natural gas. Despite its relatively large share of total final energy demand, especially in the commercial sector, district heating accounts for a relatively small proportion of total emissions. This illustrates the climate-friendly nature of district heating. Future decarbonisation of district heating will make it even more climate-friendly.

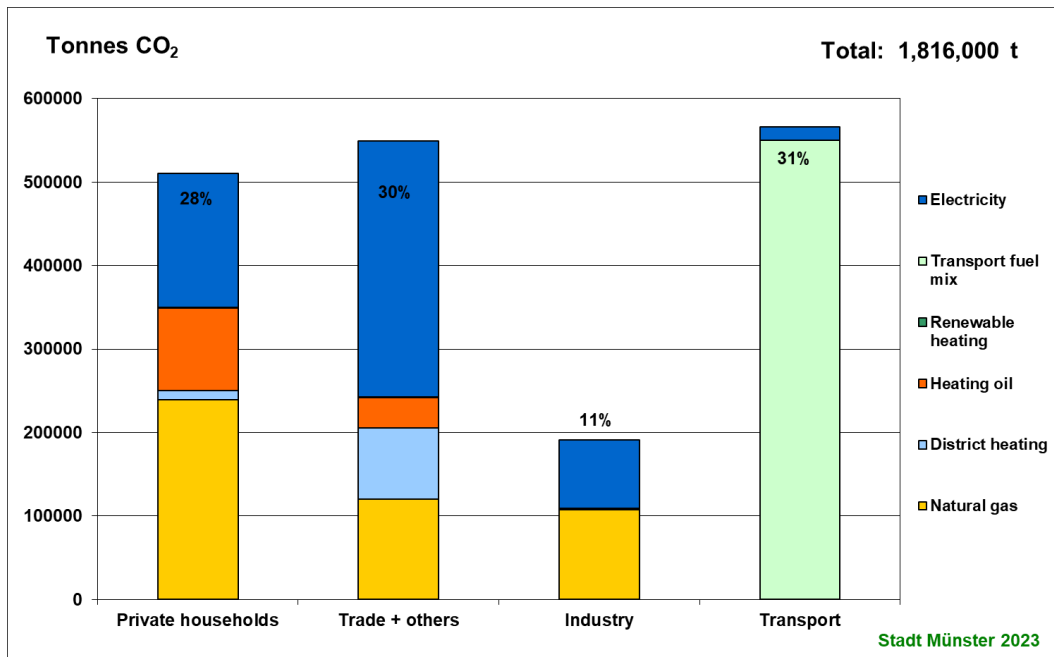
Achieving climate neutrality for the entire city will, however, require far more than just decarbonising district heating – in itself already a mammoth long-term project. The biggest challenge lies in replacing all fossil fuels in the city's energy mix with renewable energy. That means, for example, that more than 60,000 oil and natural gas heating systems in the city's building stock need to be replaced by renewable alternatives. In 2021, fossil fuels were responsible for around 90% of total final energy consumption (electricity, heat & fuels).

In the concept study "Münster Climate Neutrality 2030" (p.9 onwards), it was calculated that the residual emissions budget for achieving climate neutrality by 2030 based on the 1.5 degree target was around 14.7 million tonnes³ from 2020. This means that from 2020, total annual emissions need to be reduced by at least 180,000 tonnes per year. The average reduction in annual emissions over the last 5 years has been around 25,000 tonnes per year. This means that the City would need to accelerate its climate protection ambitions by a factor of roughly 7, and again highlights how comprehensive and far-reaching the social changes needed to achieve the target will need to be.

³ Of the 14.7 million tonnes of CO₂, around 11.1 million tonnes will remain after the balance years 2020 and 2021 Remaining budget.

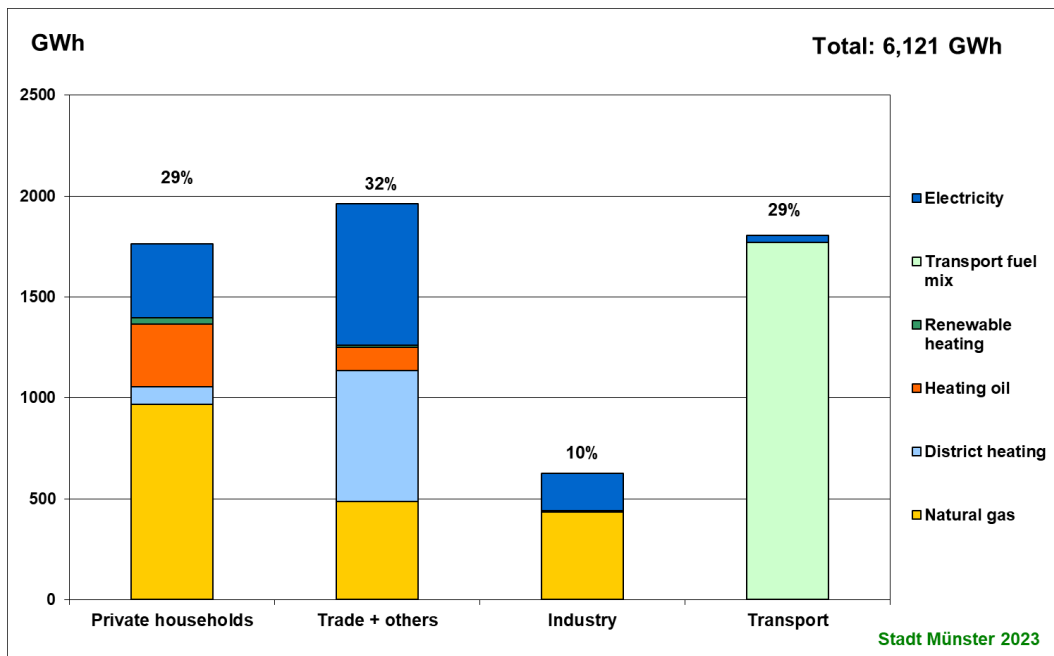


Figure 10 2021 CO₂ emissions by consumption sector and energy source in Münster in tonnes per year



Source: Municipal energy and CO₂ inventory for 2021

Figure 11 2021 final energy consumption by consumption sector and energy source in Münster in GWh



Source: Municipal energy and CO₂ inventory for 2021



3.1.2.2 Summary

Between 1990 and 2021, CO₂ emissions in Münster were reduced by 31%. Over the same period CO₂ emissions per inhabitant fell more sharply by around 43%.

For the City of Münster, achieving climate neutrality is a major challenge and requires a significant increase in the intensity and, above all, speed of activities, measures and processes by all stakeholders (City Administration, businesses, citizens). In view of the findings presented here from the City of Münster's Energy and Greenhouse Gas inventory, it is possible to draw the following conclusions for the impact pathways and strategic priorities: **Building carbon reduction measures** and **mobility** are the areas with the greatest energy saving potential in Münster. Münster's growing population means this potential will continue to grow in future. The **energy production** field of action takes an integrated, sector-independent view of generation, distribution and local, renewable energy. In addition to the expansion of renewable energy, the main challenges here are decarbonisation and expansion of district heating and decarbonisation of property-based individual heat supply. In addition to technical fields of action, a cultural transformation is also required. It is for this reason that the **business and academia** field of action offers strong local potential. As a dynamic science and business location, and with its innovative, highly networked companies and research institutions, Münster offers particular opportunities for accelerating already dynamic transformation processes and for deploying technical innovations. In addition, the City of Münster has long placed a strong emphasis on maintaining an intensive dialogue with civil society on climate protection, and will expand this further in future. The **education and food** field of action deals with climate-friendly lifestyles and sufficiency and is of particular importance. It focuses on promoting an eco-sufficient lifestyle which prioritises the conservation of resources and, in conjunction with technical measures, is essential for achieving our climate protection targets. The city has great potential for action through integrated, interdisciplinary cooperation, particularly important in the area of **climate budget**. The main focus here is on ensuring a close interlinkage between climate neutrality and budget planning. In addition to these issues, City Group Münster has long tackled climate protection and **climate adaptation** in tandem, with Münster aiming to achieve climate neutrality by 2030 and to adapt to the consequences of climate change.

If Münster is to be climate neutral by 2030, this requires as a minimum that both the federal government and the EU also commit to this goal and make maximum use of their scope for action by establishing a corresponding legal framework, funding programmes, etc. The City of Münster does not have sufficient scope for action to achieve this target alone. This is because, in addition to any influence exerted by the City of Münster, changes in greenhouse gas emissions in Münster are heavily dependent on the external political, legal, technical and social framework. The Münster Climate Neutrality 2030 concept study showed that the City Group and city society together have scope to reduce emissions by only around 50 per cent. The energy and carbon inventory is therefore of only limited suitability for assessing the effectiveness of individual measures. It does, however, provide a good overview and highlight any trends in areas where the intensity of measures needs to be increased. In



addition to the indicator model discussed in the introduction and methodological notes, and a qualitative status report, it is an important component of municipal climate protection monitoring.



3.2 Module A-2 Current Policies and Strategies Assessment

Module A-2 "Current Policies and Strategies" should list relevant policies, strategies, initiatives, or regulation from local, regional, and national level, relevant to the city's climate neutrality transition.

Below we offer an overview of the most relevant policies. This overview is limited to a few key policies and is not intended to be exhaustive.

Table 11 A-2.1: List of relevant policies, strategies and legal requirements

A-2.1: List of relevant policies, strategies & regulations					
Type	Level	Name & Title	Description	Relevance	Need for action
(regulation/policy/strategy/action plan)	(local, regional, national, EU)	(Name of policy/strategy/plans)	(Description of policy/strategy/plans)	(Describe relevance / impact on climate neutrality ambition)	(List any suggested action in relation - to be further picked in Module C-1)



A-2.1: List of relevant policies, strategies & regulations					
Type	Level	Name & Title	Description	Relevance	Need for action
policy	EU	European Green Deal	The European Green Deal is aimed at making the 27 EU member states climate-neutral by 2050. As a first step, greenhouse gas emissions will be reduced by at least 55% compared to 1990 levels by 2030. Achieving this goal will require the reorganisation of many areas of the economy and society. The "Fit for 55" package includes a series of proposals for revising and updating EU legislation. It also includes proposals for new initiatives to ensure that EU action is in line with the climate targets agreed by the Council and the European Parliament.	Medium relevance	See A-2.2: Description & assessment of policies
Promotion	national	Federal subsidy for efficient heating networks (BEW)	The BEW promotes the construction of new heating grids with a high proportion of renewable energies and the decarbonisation of existing grids. [...] The BEW creates incentives for heating network operators to invest in the construction of new heating networks with a high proportion of renewable energies and to decarbonise existing networks. Funding takes a systemic approach that focuses on the heating grid as a whole and aims to provide reliable support for the time-consuming conversion of existing grids to renewable energy and waste heat and the construction of new grids predominantly powered by renewable energy. For example, local authorities can receive subsidies for building local heating networks with a high proportion of renewable energy in new development areas or for converting existing district heating networks to renewable energy and waste heat. (Source: Federal Office of Economics and Export Control, URL : https://www.bafa.de/DE/Energie/Energieeffizienz/Waermetetze/Effiziente_Waermetetze/effiziente_waermetetze_node.html)	Very relevant	See A-2.2: Description & assessment of policies



A-2.1: List of relevant policies, strategies & regulations					
Typ e	Level	Name & Title	Description	Relevance	Need for action
Law	national	Heat Planning and Decarbonisation of Heating Networks Act (WPG)	The Act lays the foundations for introducing a binding, nationwide heating planning system in Germany. The aim is to make the heat supply greenhouse gas neutral to help achieve the German government's 2045 climate protection targets (source: https://www.bmwsb.bund.de/SharedDocs/gesetzgebungsverfahren/Webs/BMWSB/DE/kommunale-waermeplanung.html) The WPG and Building Energy Act are interlinked.	Very relevant	See A-2.2: Description & assessment of policies
Law	national	Building Energy Act (GEG)	The GEG contains requirements for building energy ratings, the creation and use of energy performance certificates and the use of renewable energy in buildings. New buildings must achieve an annual primary energy use of just 55% that of a reference building. The GEG also aims to promote the replacement of heating systems. (Source: Federal Ministry of Housing, Urban Development and Building, URL: https://www.bmwsb.bund.de/Webs/BMWSB/DE/themen/bauen/energieeffizientes-bauen-sanieren/gebaeudeenergiegesetz/gebaeudeenergiegesetz-node.html) Local authorities play a role model function and must also fulfil specific requirements for public buildings, e.g. the use of renewable energy in new buildings and renovations. (Source: GEG)	Very relevant	See A-2.2: Description & assessment of policies
Law	national	Federal subsidy for efficient	Federal funding for efficient buildings - BEG for short - combines previous funding programmes for energy efficiency improvements and renewable energy in the building sector and supports, among other things, the use of new heating systems, optimisation of existing heating systems, building envelope improvements and the use of optimised system technology. Funding comprises three sub-	Very relevant	See A-2.2: Description & assessment of policies



A-2.1: List of relevant policies, strategies & regulations					
Type	Level	Name & Title	Description	Relevance	Need for action
		buildings (BEG)	programmes relating to residential buildings, non-residential buildings and individual measures. Local authorities can receive grants for measures in all three sub-programmes. (Source: Federal Office of Economics and Export Control, URL : https://www.bafa.de/DE/Energie/Effiziente_Gebaeude/Foerderprogramm_im_Ueberblick/foerderprogramm_im_ueberblick_node.html)		
Law	national	Federal Climate Protection Act (KSG)	The Federal Climate Protection Act (KSG) is a German federal law designed to ensure the fulfilment of national climate protection targets and compliance with European targets. The Climate Protection Act for the first time enshrines the climate protection and sector targets set out in the Climate Protection Plan 2050 in law. By 2030, greenhouse gas emissions will be reduced to at least 65% below 1990 levels and by 2040 to at least 88%. Net greenhouse gas neutrality will be achieved by 2045. The law also sets annual reduction targets through to 2040. It also specifies maximum annual emission levels for various sectors of the economy through to 2030	Very relevant	See A-2.2: Description & assessment of policies
Law	national	Renewable Energies Act (EEG)	The aim of this Act is to implement the switch to renewable energy. The proportion of electricity generated from renewable energy will be increased to at least 80% of gross electricity consumption in Germany by 2030. The Act regulates grid operator feed-in procedures and tariffs. The Act also regulates proof of origin and regional certification of electricity with the aim of realising transparency. Local authorities will receive a voluntary financial contribution from local plant operators, which plant operators can reclaim from grid operators. The total financial contribution can be up to 0.2 cents/kilowatt hour. (Source: EEG 2023)	Very relevant	See A-2.2: Description & assessment of policies



A-2.1: List of relevant policies, strategies & regulations					
Type	Level	Name & Title	Description	Relevance	Need for action
			In addition, on 29 July 2022, the Act stipulated that renewable energies are in the overriding public interest and serve public safety. This is crucial for increasing the pace of expansion. As a result, they will take precedence over other interests when weighing up decisions in future. This enables a significant acceleration in planning and authorisation procedures. (Source: https://www.bundesregierung.de/breg-de/schwerpunkte/klimaschutz/novelle-eeg-gesetz-2023-2023972)		
Law	national	Building Code	<p>Planning law as set out in the building code has far-reaching consequences for the construction and use of renewable energy systems. It primarily regulates when these systems can be installed under planning law, and is binding on federal states and local authorities. For example, the code allows zoning of areas where the construction of specific renewable energy plants, such as wind turbines, hydrogen plants and photovoltaic systems, can be prioritised.</p> <p>To further accelerate/simplify expansion, from 1 January 2023, solar installations enjoy building law privileges within a specific framework (located in 200m strips along motorways and major railway lines, and agri PV installations which share space with agricultural, forestry or horticultural operations). (Source: https://www.gesetze-im-internet.de/bbaug/_35.html)</p>	Very relevant	See A-2.2: Description & assessment of policies
Law	regional	State building regulations	<p>The State cabinet has approved the draft of the Second Act to Amend the State Building Code and sent it to the state parliament for further consultation and decision-making. The Act is due to come into force on 1 January 2024. Innovations relevant to climate protection:</p> <ul style="list-style-type: none"> - Wind energy: In future, building regulations will require that wind turbines are situated a specific distance from property boundaries and residential buildings. New is that this distance will 	Very relevant	See A-2.2: Description & assessment of policies



A-2.1: List of relevant policies, strategies & regulations					
Type	Level	Name & Title	Description	Relevance	Need for action
			<p>be based on 30 per cent of their maximum height (previously: 50 per cent). The State of North Rhine-Westphalia is taking a major step forward in that, from 1 January 2024, the simplified procedure only will apply to wind turbines, rather than the full building regulations procedure. In addition, developers will be able to request that the building inspection procedure and all other authorisation procedures are handled by a single body.</p> <ul style="list-style-type: none"> - The draft Act also removes from building regulations the minimum distance between solar installations on house roofs/heat pumps and neighbouring properties. For heat pumps, however, building owners must continue to consider the noise impact on neighbours. This will enshrine in law a decree from December 2022 on these projects. From 1 January 2024, rooftop solar systems will not longer need to be installed with a gap to the boundary wall. - Installations for hydrogen production will be exempted from the procedure altogether, provided that the hydrogen produced is consumed within the buildings for which they are erected, and for certain installations for the production and use of hydrogen, including their enclosures and associated gas storage facilities with a storage capacity of up to 20 kilograms per appliance. 		
Law	re-regional	NRW Climate Protection Act	Greenhouse gas neutrality by 2045; emissions will be reduced by 65 per cent by 2030 compared to 1990 and by 88 per cent by 2040; carbon storage capacity of forests will be preserved; expansion of renewable energy; subdivision into sectors: energy, industry, transport, buildings and agriculture and forestry; state government has a role model function and must provide relevant data.	Very relevant	See A-2.2: Description & assessment of policies



A-2.1: List of relevant policies, strategies & regulations					
Type	Level	Name & Title	Description	Relevance	Need for action
Strategy	regional	First climate protection package NRW	<ul style="list-style-type: none"> The climate protection package includes measures for climate protection and key points for an amendment to the Climate Protection Act The climate protection target for 2030 is raised to -65% greenhouse gas emissions Climate protection monitoring to be introduced (enhanced version of climate protection audit) Municipal heating model planning obligation Statutory solar obligation to be introduced Expansion of renewable energies is an issue of overriding public interest to be enshrined in law The state administration should expand its role model function <p>The following key points from the list of measures are particularly relevant for local authorities:</p> <ul style="list-style-type: none"> Municipalities in the vicinity of wind turbines are to enjoy greater financial participation (Citizens' Energy Act) Increased expansion of wind energy Support programmes for municipalities (including heat planning) Promotion of climate impact adaptation in municipalities Support for local authorities in preparing for municipal heating model planning -> Heating transition competence centre, revision of the heating register Support for geothermal studies to support municipalities 	Very relevant	See A-2.2: Description & assessment of policies



A-2.1: List of relevant policies, strategies & regulations					
Type	Level	Name & Title	Description	Relevance	Need for action
			<ul style="list-style-type: none"> Funding for building energy-efficiency improvements in local authorities (ERDF funding guideline) Promotion of sustainable mobility; "ways2work" competition for environmentally friendly journeys to work 		
Law	regional	Climate Adaptation Act NRW (KlAnG)	Setting climate adaptation targets; limiting the negative effects of climate change, increasing climate resilience and contributing to national and international climate adaptation efforts; based on the Paris Agreement	Very relevant	See A-2.2: Description & assessment of policies
Policy	regional	Photovoltaic Open Space Ordinance - PVFVO	To realise climate protection goals, this Ordinance aims to boost the expansion of photovoltaics. To achieve this, the Ordinance expands tenders for ground-mounted photovoltaic systems on arable land and grassland in disadvantaged areas, while safeguarding the interests of agriculture, and nature and landscape conservation.	Very relevant	See A-2.2: Description & assessment of policies
Law	regional	Bicycle and Local Mobility Act (FaNaG)	The aim of this Act is to improve cycling and other forms of local mobility in the State of North Rhine-Westphalia and contribute to sustainable mobility. The aim is to make cycling throughout the state sufficiently attractive that more people will choose to cycle in their everyday lives. The aim is to make so that 25 per cent of journeys are made by bicycle. Cycle tourism can also make a contribution to achieving this. Cycling is to be boosted both as an environmentally and climate-friendly means of transport in its own right and as an essential component of intermodal mobility chains, particularly in	Very relevant	See A-2.2: Description & assessment of policies



A-2.1: List of relevant policies, strategies & regulations					
Type	Level	Name & Title	Description	Relevance	Need for action
			conjunction with local public transport. In future, all modes of transport should be considered equally important.		
Promotion	regional	pro-gres.nrw - Low-emission mobility	<p>Funding for:</p> <ul style="list-style-type: none"> Charging infrastructure for companies and tradespeople: As well as continued funding for charging infrastructure for employees and tenants (flat-rate funding up to a maximum of €1,000 per charging point), the scheme now also supports the installation of fast-charging infrastructure for commercial vehicles. Companies and tradespeople receive funding of up to 40 per cent of eligible expenditure up to a maximum of €15,000 per charging point for charging points with a charging capacity of at least 50 kilowatts. If this requires connection to the medium-voltage grid, this can be funded with 40 per cent of eligible expenditure up to a maximum of €100,000. Charging infrastructure for car sharing stations: For the first time, the scheme now specifically subsidises charging points at car sharing stations. Companies can receive up to 40 per cent of eligible expenditure up to a maximum of 1,500 euros per charging point. Grid connection costs of up to 15,000 euros are also eligible for funding. Power grid connections for parking spaces: Connecting to the electricity grid is often a major cost when installing charging points. Grid connections for existing garage and car park complexes that already have an electricity supply are now also eligible for funding. 		



A-2.1: List of relevant policies, strategies & regulations					
Type	Level	Name & Title	Description	Relevance	Need for action
			<ul style="list-style-type: none"> Electric and fuel cell vehicles for local authorities: The successful previous vehicle subsidy for local authorities is being expanded to include commercial vehicles in vehicle classes N2 and N3, which are used in non-commercial local authority departments. Funding amounts to 80 per cent of the additional investment costs for the procurement of battery-electric or fuel cell vehicles, up to a maximum of 400,000 euros per vehicle. 		
Strategy	local	Master-plan 100% climate protection	The Master Plan 100% Climate Protection from 2017 showcases the City of Münster's possibilities, opportunities and potential in the climate protection field and outlines scenarios for achieving the goal of climate neutrality by 2050. Since 2019, however, the goal has been updated to climate neutrality by 2030. https://www.stadt-muenster.de/sessionnet/sessionnetbi/getfile.php?id=410952&type=do	Very relevant	See A-2.2: Description & assessment of policies
Strategy	local	Münster climate neutrality concept study 2030	In 2019, Münster City Council declared a climate emergency and set itself the goal of achieving climate neutrality by 2030. The Climate Neutrality 2030 concept study was subsequently drawn up and adopted by the Council. It describes a potential theoretical path to climate neutrality by 2030 and associated challenges and scope for action: https://www.stadt-muenster.de/sessionnet/sessionnetbi/getfile.php?id=488057&type=do	Very relevant	See A-2.2: Description & assessment of policies



A-2.1: List of relevant policies, strategies & regulations					
Type	Level	Name & Title	Description	Relevance	Need for action
Strategy	local	Concept study on climate-neutral City Administration	Against the backdrop of the Council resolution on the Climate Action Programme 2030 (V/0770/2019/1) of 11 December 2019 to go beyond the objectives of the 100% Climate Action Master Plan and become climate-neutral by 2030, the Council instructed the Administration to explore options for all direct and indirect municipal fields of action. As an addition to the city-wide analysis carried out for the Münster Climate Neutrality 2030 concept study (V/0628/2021), this study specifically carried out a detailed analysis of the City Administration with the aim of measuring its energy and emissions footprint. Based on this initial footprint, the study identified appropriate reduction pathway scenarios and developed a comprehensive programme of measures which takes into account all processes already underway: https://www.stadt-muenster.de/sessionnet/sessionnetbi/getfile.php?id=490811&type=do	Very relevant	See A-2.2: Description & assessment of policies
Strategy/	local	Climate adaptation concept	Climate change adaptation in Münster: In Münster, climate protection and climate adaptation go hand in hand. A climate adaptation concept was developed in 2015. It forms the strategic basis for climate adaptation in Münster: https://www.stadt-muenster.de/fileadmin/user_upload/stadt-muenster/67_klima/pdf/Klimaanpassungskonzept.pdf	Very relevant	See A-2.2: Description & assessment of policies
Action plan	local	Climate protection action programme 2030	A joint process between the Coordination Office for Climate and Energy (KLENKO) and participating specialist departments and subsidiaries of the City of Münster developed 86 measures and sub-measures for the 2030 action programme. As per the 100% Climate Protection Masterplan, these were assigned to the fields of action work and business, construction and deep renovation, energy supply and renewable energies, climate-friendly choices, mobility and overarching projects. Estimates of reductions in greenhouse gas emissions through the 2030 action programme show that if all	Very relevant	See A-2.2: Description & assessment of policies



A-2.1: List of relevant policies, strategies & regulations					
Type	Level	Name & Title	Description	Relevance	Need for action
			<p>measures with lie within the city's scope for action are consistently implemented, a reduction in CO₂ of approx. 38% compared to 1990 levels can be achieved by 2030. This corresponds to a cumulative reduction of approx. 250 thousand tonnes of CO₂ in 2030. The measures must be expanded by a factor of 7.</p> <p>In approving the action programme for climate protection by 2030, in 2019 the Council passed a resolution that it should become climate-neutral as soon as possible, and by 2030 if possible. The measures from the action programme still represent the portfolio of measures, but the question arises as to how to adapt each measure for the 2030 target and how to prioritise them in light of highly dynamic technical and political framework conditions: https://www.stadt-muenster.de/sessionnet/sessionnetbi/getfile.php?id=448017&type=do</p>		
Action plan	local	Ad hoc measures (Annex: Münster Climate Neutrality 2030 Concept Study)	<p>A list of ad hoc measures was adopted at the council meeting on 29/09/2021 together with the concept study "Münster Climate Neutrality 2030" (V/0628/2021). The Administration reports regularly on the implementation status of the list of measures, most recently in June 2023 (V/0322/2023). As described in the original submission, the measures were determined on the basis of expert recommendations and supplemented by further selected measures from the ongoing internal City Group climate protection process: https://www.stadt-muenster.de/sessionnet/sessionnetbi/getfile.php?id=529594&type=do</p>	Very relevant	See A-2.2: Description & assessment of policies



A-2.1: List of relevant policies, strategies & regulations					
Type	Level	Name & Title	Description	Relevance	Need for action
Action plan	local	Climate adaptation action plan 2030	Climate adaptation action plan 2030 (V/0799/2019/1) Climate adaptation policy work programme (V/0075/2023): https://www.stadt-muenster.de/sessionnet/sessionnetbi/getfile.php?id=523562&type=do	Very relevant	See A-2.2: Description & assessment of policies
Action plan	local	Climate-neutral administration 2030 action programme	The Climate Neutral City Administration 2030 programme of measures from 2021 describes 22 bundles of measures aimed at achieving climate neutrality in the Administration. The measures are spread across the fields of action "Mobility", "Buildings, energy, supply and disposal", "Procurement and events" and "Overarching measures": https://www.stadt-muenster.de/sessionnet/sessionnetbi/getfile.php?id=490812&type=do	Very relevant	See A-2.2: Description & assessment of policies
Regulation	local	Münster's standard for climate-friendly construction	Münster City Council adopted "Münster's standard for climate-friendly construction" through a council resolution on 29 September 2021 (V/0434/2021), and extended it with a further resolution on 14 July 2022 (V/0319/2022). The standard is stipulated in all urban development contracts, land purchase contracts and leasehold contracts with the City of Münster. It includes requirements for the building energy standard and the use of solar energy in new builds. It currently applies to the construction of new residential and non-residential buildings. The aim is to reduce energy consumption in buildings, which currently accounts for around 30 per cent of CO ₂ emissions nationwide. Münster's standard for climate-friendly construction sets out the following requirements: Requirements for residential buildings	The measure will reduce	<ul style="list-style-type: none"> Münster is a rapidly growing city



A-2.1: List of relevant policies, strategies & regulations					
Type	Level	Name & Title	Description	Relevance	Need for action
			<p>1. building energy standard "Efficiency House 40" (in accordance with KfW or federal subsidy for efficient buildings)</p> <ul style="list-style-type: none"> • The annual primary energy requirement (QP) for a new building must be 60 per cent lower than the annual primary energy requirement for the reference building defined in the Building Energy Act (GEG). • The specific transmission heat loss (HT) for the heat-transferring envelope surface of a new building must be 45 per cent lower than the transmission heat loss for the reference building defined in the Building Energy Act (GEG). <p>2. solar standard</p> <p>For new residential buildings, a photovoltaic system with a minimum output of 1 kilowatt peak (kWp) per residential unit must be installed on or near the building. As a rule, however, the economically optimum result is achieved with significantly larger systems. Building owners or planning and specialist companies are free to optimise the design. The requirements of the solar standard are also deemed to be met if a corresponding system for solar energy utilisation is installed and operated by a third party (municipal utility, citizens' energy cooperative, etc.) on or near the building or outbuilding.</p> <p>Requirements for non-residential buildings</p>	emissions in the new construction sector to almost zero	<ul style="list-style-type: none"> • The measure avoids the additional emissions (heat + proportionate electricity) caused by growth



A-2.1: List of relevant policies, strategies & regulations											
Typ e	Level	Name & Title	Description	Relevance	Need for action						
			<p>1. building energy standard "Efficiency Building 40"</p> <ul style="list-style-type: none"> Zones of planned buildings that will be heated to a target room temperature $T \geq 19^{\circ}\text{C}$ must be constructed such that the mean value of the heat transfer coefficients does not exceed the values listed below for the specified components. The mean values for the heat transfer coefficients must be calculated as set out in the Building Energy Act (GEG - Annex 3). <table border="1"> <tr> <td>opake Außenbauteile (U_{opak}):</td> <td>0,18 W/(m²K)</td> </tr> <tr> <td>transparente Außenbauteile und Vorhangfassaden ($U_{\text{transparent, Vorhang}}$):</td> <td>1,0 W/(m²K)</td> </tr> <tr> <td>Glasdächer/Lichtbänder und Lichtkuppeln (U_{Licht}):</td> <td>1,6 W/(m²K)</td> </tr> </table> <ul style="list-style-type: none"> The annual primary energy requirement (PEC) for such new buildings must be at least 60 per cent lower than the annual primary energy requirement for the reference building (PEC reference building) defined in the Building Energy Act (GEG - Annex 2). <p>2. solar standard</p> <p>For new non-residential buildings, solar energy generation systems with a total area of at least 50 per cent of the total building floor area (built area) must be installed on or near the building. Systems for solar utilisation include</p> <ul style="list-style-type: none"> Photovoltaic systems (PV systems) for power generation 	opake Außenbauteile (U_{opak}):	0,18 W/(m ² K)	transparente Außenbauteile und Vorhangfassaden ($U_{\text{transparent, Vorhang}}$):	1,0 W/(m ² K)	Glasdächer/Lichtbänder und Lichtkuppeln (U_{Licht}):	1,6 W/(m ² K)		
opake Außenbauteile (U_{opak}):	0,18 W/(m ² K)										
transparente Außenbauteile und Vorhangfassaden ($U_{\text{transparent, Vorhang}}$):	1,0 W/(m ² K)										
Glasdächer/Lichtbänder und Lichtkuppeln (U_{Licht}):	1,6 W/(m ² K)										



A-2.1: List of relevant policies, strategies & regulations					
Type	Level	Name & Title	Description	Relevance	Need for action
			<ul style="list-style-type: none"> Solar thermal systems (ST systems) for heat generation Combined solar thermal-photovoltaic systems (PVT systems) that produce both heat and electricity <p>For ST systems, this calculation is based on gross collector area, for PV and PVT systems on module area. Building owners or planning and specialist companies are free to optimise the design.</p> <p>The requirements of the solar standard are also deemed to be met if a corresponding solar energy utilisation system is installed and operated by a third party (public utility company, citizens' energy cooperative, etc.) on or near the building or outbuilding.</p>		
Policy	local	Climate-friendly urban development: Guidelines for climate-friendly urban land-use planning	<p>This guideline aims to firmly embed climate protection and climate adaptation in building land development and to make taking them into account compulsory (in both residential and mixed-use areas with primarily residential construction, and in other area categories). This applies from site selection to urban and open space planning configuration through to planning regulations and contractual provisions. In future, this approach will also be extended to land allocation, structural realisation and subsequent demolition. This first guideline is intended to serve as a practical aid for urban land-use planning and is also intended to provide all employees of the City Administration Münster entrusted involved in the development of building land, project owners and commissioned planning offices with information for their role: https://www.stadt-muenster.de/sessionnet/sessionnetbi/get-file.php?id=526516&type=do</p>	Very relevant	See A-2.2: Description & assessment of policies



A-2.1: List of relevant policies, strategies & regulations					
Type	Level	Name & Title	Description	Relevance	Need for action
Strategy	local	Building guidelines 2020: climate protection and sustainability. Münster's path to climate neutrality	Münster is aiming to become climate-neutral by 2030. Achieving this goal means in particular targeting municipal buildings. Buildings account for 33% of the increase in CO ₂ emissions. In August 2020, the Council therefore passed a resolution to reduce the energy consumption of municipal buildings by 50% and CO ₂ emissions by 70% by 2030. Our building guidelines have therefore been fundamentally revised and adapted to the goal of climate neutrality by 2030. There are binding quality criteria and guidelines for everyone involved in the construction process for municipal buildings, both for new builds and for conversion and deep renovation measures. The building guidelines apply to all municipal buildings. The goal is a building stock aligned with climate protection and sustainability: https://www.stadt-muenster.de/fileadmin/user_upload/stadt-muenster/23_immobilien/pdf/Gebaeudeleitlinien_2020_komplett.pdf	Very relevant	See A-2.2: Description & assessment of policies
Policy	local	Energy utilisation planning	To chart a course to climate neutrality by 2030, the City of Münster is drawing up an energy utilisation plan (ENP) intended as a long-term foundation for planning a sustainable heat supply, The plan will be updated regularly. This was approved by the Council at a June 2023 council meeting. Under the leadership of the Climate Office, the Administration is setting up an inter-departmental working group with the participation of Stadtwerke Münster and Stadtnetze Münster. The energy utilisation plan should be available by the end of 2024. Although federal legislation is expected to make municipal heat planning mandatory at the end of 2023/beginning of 2024, the City of Münster, wants to shape the process proactively. Thanks to the	Very relevant	See A-2.2: Description & assessment of policies



A-2.1: List of relevant policies, strategies & regulations					
Type	Level	Name & Title	Description	Relevance	Need for action
			<p>integrated approach taken by the energy utilisation plan, which in addition to municipal heat planning includes topics such as electricity, green gases and cooling, the city is going beyond the expected statutory regulations.</p> <p>The energy utilisation plan will help match expected long-term energy demand in Münster to a renewable energy-based supply infrastructure. This give rise to further conclusions for concrete measures such as the expansion and continued decarbonisation of the district heating supply and support services for homeowners. This will create planning and investment certainty for all Münster stakeholders.</p>		
Policy	local	Support programme for residential buildings	<p>The City of Münster promotes a wide range of measures to optimise the energy efficiency of residential buildings in the city. From building insulation and heating system replacement to ecological insulation materials, there are many ways to make an important contribution to reducing CO₂ emissions in Münster. In addition, green roofs improve the city's water budget and reduce the urban heat island effect, delivering improved living conditions and making the city a better place to spend time.</p> <p>Since 1997, the City of Münster has been investing in building energy-efficiency improvements and has made a funding pot available to citizens. The funding programme has been relaunched annually and continuously expanded. https://www.stadt-muenster.de/klima/foerderprogramm</p>	Very relevant	See A-2.2: Description & assessment of policies
Strategy	local	100% RE for private households	By 2030, Stadtwerke Münster wants to supply all households in Münster with self-produced wind and solar power and also enable citizen participation to enable local people to share in the financial success of renewable projects.	Very relevant	See A-2.2: Description & assessment of policies



A-2.1: List of relevant policies, strategies & regulations					
Typ e	Level	Name & Title	Description	Relevance	Need for action
Strategy	local	100% of public transport electrified	Another important element in keeping Münster's heart beating is conversion of the bus fleet to electric, emissions-free drive systems and the development of transport into a systematically interlinked multimodal mobility system. At the end of 2022, there were already 38 Stadtwerke buses with electric drive systems on Münster's roads. By 2029, 100% of the 116 buses owned by the company and 60% of the roughly 100 buses rented from decentralised depots on the outskirts of the city will be electrified. The multimodal mobility system will integrate various modes of transport, including car sharing through Stadtwerke's holding in local car share provider Stadtteilauto.		
Strategy	local	Master-plan Mobility Münster 2035+	<p>With the Münster 2035+ Mobility Masterplan, the Administration is currently developing a conceptual framework for designing climate and city-friendly mobility for Münster that guarantees social participation for all Münster residents. The focus is on striving to continue to improve the high quality of life in the city in future through binding targets and tailor-made measures.</p> <p>The aim is to achieve extensive local climate neutrality in the mobility sector through increased traffic avoidance and modal shift from motorised private transport to eco-mobility. Local public transport powered by more climate-friendly technologies or running on dedicated tracks is a key pillar of mobility. The system is supplemented by the targeted reallocation of areas and the expansion of infrastructure for local mobility. Reapportioning road space in favour of eco-mobility also promotes better quality of life in public spaces, which can be enhanced by expanding green and open spaces. At the same time, the targeted expansion of charging infrastructures should also promote the drive system transition in private motorised transport.</p>	Very relevant	See A-2.2: Description & assessment of policies



A-2.1: List of relevant policies, strategies & regulations					
Type	Level	Name & Title	Description	Relevance	Need for action
			Subgoals: <ul style="list-style-type: none"> • Continuous reduction in transport-related greenhouse gas emissions • Avoidance of climate-damaging and promotion of climate-friendly routes • Prioritisation of climate-friendly actions in all areas of mobility • Reapportioning road space in favour of eco-mobility • Continuous reduction in public car parks (especially within the Tangentenring) • Ensuring emissions-free, resource-saving city logistics https://mobil-in-muenster.de/c/masterplan-mobilitaet-muenster-2035/		
Strategy	local	Clean air plan	https://www.stadt-muenster.de/sessionnet/sessionnetbi/getfile.php?id=350959&type=do		
Strategy			10 areas of action have been added to and 15 areas of action have been removed from the 2017 noise action plan. These changes are the result of changes in population data and adjustments or improvements to the noise calculation model: https://www.stadt-muenster.de/sessionnet/sessionnetbi/getfile.php?id=473630&type=do		
Strategy	local	Abfall-wirtschafts betriebe Münster:	This vision aims to make Münster cleaner and largely waste-free, but it also aims to improve environmental protections, and realise more togetherness and more regional added value. "Together" is a key word in our Vision 2030 and everything that we have already initiated and will implement in the future is part of this vision: by the end of this decade, we want Münster to have evolved into a capital of waste prevention. In concrete terms, this means there should be no more waste, only recyclable	Very relevant	See A-2.2: Description & assessment of policies



A-2.1: List of relevant policies, strategies & regulations					
Type	Level	Name & Title	Description	Relevance	Need for action
		Sustainable waste management concept for the City of Münster 2023, Vision 2030	materials. The first goal is therefore: no waste. If possible, waste should not be produced in the first place. The second goal is that where waste is produced, we should make the best possible use of it for material or energy recovery. The better the waste separation and the higher the waste quality, the better this can be achieved. https://awm.stadt-muenster.de/ueber-uns/unsere-vision		



Table 12 A-2.2: Description & assessment of policies - Part I

<p>A-2.2: Description & assessment of policies</p> <p>3.2.1 Description and assessment of climate protection-related policies</p>
<p>Description of local policies</p> <p>Against the backdrop of the Council resolution to aim for climate neutrality as early as 2030, City Administration Münster commissioned the Münster Climate Neutrality 2030 study. The concept study describes a potential theoretical path to climate neutrality by 2030, associated challenges and areas where action can be taken. The Münster Climate Neutrality 2030 concept study focussed on two challenges:</p> <ul style="list-style-type: none"> • The target can only be achieved if the whole of Münster society works together • The extent to which the city itself can contribute to meeting this target is limited to at most 50 per cent. The rest requires action at state, federal government and EU level. <p>This means that to realise the ambitious goal of making Münster climate-neutral by 2030, Münster now needs to bring others on board – others within Münster society, but also the state, federal government and EU. It is not enough to secure the commitment of individual companies, initiatives, private individuals or the Administration. With the message "Münster is becoming a climate city", the City Administration is now launching a process that brings together all stakeholders in city society. All participants will be able to show what they are contributing to the goal of climate neutrality</p> <ul style="list-style-type: none"> • Commit to implementing measures that make a difference • Initiate measures that require collaboration with other stakeholders • Receive support implementing measures and offer support to other stakeholders • take responsibility for a better tomorrow <p>For City Group Münster, this means it needs the participation of all departments, offices and municipal subsidiaries. First Mayor Markus Lewe has therefore initiated a much-needed strategic change. A new form of collaboration and a redistribution of responsibility are two important levers now being pulled in Münster. This will up the tempo, enabling faster, more dynamic decision-making for the future through wide-ranging cooperation. Münster is now treating the climate much more as an overarching cross-cutting task. The climate is no longer limited to a single department, but is the responsibility of all areas of the City Administration. City Group Münster is currently trialling and implementing new instruments and structures for managing and monitoring the climate protection process. As part of</p>



this process, the local policies set out in the table above are being continuously developed and adapted.

Examples of climate-relevant policies with which City Group Münster is leading the way include

- Münster's standard for climate-friendly construction: Münster City Council adopted "Münster's standard for climate-friendly construction" through a council resolution on 29 September 2021 (V/0434/2021), and extended it with a further resolution on 14 July 2022 (V/0319/2022). The standard is stipulated in all urban development contracts, land purchase contracts and leasehold contracts with the City of Münster. It includes requirements for the building energy standard and the use of solar energy in new builds. It currently applies to the construction of new residential and non-residential buildings. The aim is to reduce energy consumption in buildings, which currently accounts for around 30 per cent of CO₂ emissions nationwide. The measure will reduce emissions in new buildings to almost zero – extremely important for a growing city like Münster.
- Climate-friendly urban development: The Climate-friendly urban land use planning guideline aims to firmly embed climate protection and climate adaptation in building land development and make taking them into account compulsory (both in residential and mixed-use areas with primarily residential construction, and in other area categories). This applies from site selection to urban and open space planning configuration through to planning regulations and contractual provisions. In future, this approach will also be extended to land allocation, structural realisation and subsequent demolition. This first guideline is intended to serve as a practical aid for urban land-use planning and to provide all employees of the Münster City Administration involved in the development of building land, project owners and commissioned planning offices with information for their role.
- Building guidelines 2020: climate protection and sustainability. Münster's path to climate neutrality: Münster is aiming to become climate neutral by 2030. Achieving this goal means in particular targeting municipal buildings. Buildings account for 33% of the increase in CO₂ emissions. In August 2020, the Council passed a resolution to reduce the energy consumption of municipal buildings by 50% and CO₂ emissions by 70% by 2030. Our building guidelines have therefore been fundamentally revised and adapted to the goal of climate neutrality by 2030. There are binding quality criteria and guidelines for everyone involved in the construction process for municipal buildings, both for new builds and for conversion and deep renovation measures. The building guidelines apply to all municipal buildings. The goal is a building stock aligned with climate protection and sustainability.
- Energy utilisation planning/municipal heating planning: To chart a course to climate neutrality by 2030, Münster City Group is drawing up an energy utilisation plan (ENP) as a long-term foundation for planning a sustainable heating supply. The plan will be updated regularly. This was approved by the Council at a June 2023 council meeting. Under the leadership of the Climate Office, the Administration is setting up an inter-departmental working group with the participation of Stadtwerke Münster and Stadtnetze Münster. Thanks to the integrated approach taken by the



energy utilisation plan, in addition to municipal heat planning includes topics such as electricity, green gases and cooling, the city is going beyond the expected statutory regulations.

- 100% renewable energy for private households: By 2030, Stadtwerke Münster wants to supply all households in Münster with self-produced wind and solar power and also enable citizen participation to enable local people to share in the financial success of renewable projects. The project was awarded the grade "Very good" by Ökotest magazine in its April 2022 issue on "Mein" with Stadtwerke Münster's green electricity option. According to the magazine, the tariff represents a genuine and comprehensible contribution to the energy transition. One cent per kilowatt hour of green electricity used is invested by Stadtwerke Münster in the expansion of renewable energy or energy-saving projects. Stadtwerke Münster's Mein Münster green electricity tariff is Green Electricity Label certified, which guarantees its now officially recognised contribution to the energy transition. Stadtwerke also uses funds from the green electricity cents for its own expansion projects.

Evaluation of policies at national and regional level

Table A-2.1 lists the most important policies at national level. In principle, we share the assessment made in the Federal Environment Agency's 2022 report "Climate protection potential in municipalities. Quantitative and qualitative assessment of greenhouse gas reduction potential in municipalities"⁴ (p. 62/63):

- Not enough consideration is given to climate protection in sectoral legislation aimed at local authorities or which is implemented locally by local authorities. Almost all climate action is based on voluntary local action and therefore have a lower priority than statutory duties. Climate protection and climate adaptation should also become statutory municipal duties. This would require a clear legislative line setting out specific tasks and objectives that need to be met at local authority level and corresponding funding for these statutory duties from the state and federal governments.
- Measures aimed at activating private property owners offer great potential for savings, for example through deep renovation or switching to district heating. In practice, only a fraction of potential GHG reductions are realised, as these are exclusively voluntary activities. To improve utilisation of the huge reduction potential in the building sector, local authority responsibilities in this area need to be expanded.
- There is a lack of specific expertise for important, regulatory options, in particular for legally compliant implementation. These measures are therefore not implemented (e.g. compulsory connection and use of district heating in existing buildings, temporary reclassification of roads as cycle paths).

⁴ Angelika Paar, Fabian Bergk, Miriam Dingeldey, Clemens Hecker, Vanessa Herhoffer (2022): Climate protection potential in municipalities. Quantitative and qualitative assessment of greenhouse gas reduction potentials in municipalities. CLIMATE CHANGE 04/2022. Federal Environment Agency.



- Where sectoral legislation includes climate protection stipulations that are relevant for local authorities (e.g. in Section 52 of the GEG, the obligation to use renewable energies in existing public buildings), the resulting additional personnel costs for local implementation are not taken into account or remunerated

Furthermore, we agree with the assessment of the Deutscher Städtetag (Association of German Cities) that there is a strong need for information and advice for citizens and that this will increase as the transition progresses. It is therefore imperative that existing advisory structures in cities are expanded and supported by the federal and state governments. Local authorities must also receive greater funding support from the federal and state governments, in the form of fixed, long-term climate finance budgets rather than individual funding projects.

We see the following challenges for the City of Münster and our Münster Climate Neutral 2030 ambition:

- Decarbonisation of district heating/expansion of renewable energies: Implementation of the district heating transition in Münster requires a massive expansion of renewable energy, particularly through the use of deep geothermal energy. To accelerate the transformation process and the expansion of renewable energies, this requires simplification of the legal procedures.
- Phase-out of gas supply in existing buildings/ deep renovation of existing buildings: The phase-out of gas supply in existing buildings, both through local deep renovation campaigns and through the development of green gases at federal level, is one of the greatest challenges to achieving the CO₂ reduction targets. A shortage of skilled labour, particularly in the skilled trades, and in some cases supply difficulties are damping the speed of deep renovation. Support for deep renovation campaigns is therefore needed in the form of funding programmes, an increase in legal requirements, and an acceleration in the development of green gases or substitutes for natural gas.
- New building construction: Construction requirements for new buildings are aligned with climate-neutrality by local authorities through local regulations (KfW40 or Passivhaus standard). The challenge for local authorities here is that the former EnEV and the current GEG have lagged behind the state of the art (building envelope) for years. An update to legal requirements is long overdue.
- Accelerating the transport transition: The transport transition cannot be achieved by switching from cars to e-mobility. It requires a significant reduction in the share of journeys made by cars and a massive expansion of local public transport and rail transport. To achieve our ambition, we need more room for manoeuvre as a model for innovative transport models (e.g. expanding 30 km/h zones), simplification and acceleration of rail expansion and financial support for the expansion of local public transport.



Overall, it is clear that, although the legal framework and developments at federal and state level form a good foundation, local authorities are receiving too little support with concrete implementation on the ground - be it regulatory, communicative or financial. As mentioned above, statutory obligations - for example with regard to a climate-neutral heating supply - fall short of what would be needed for effective climate protection. At the same time, the debate is leading to uncertainty in urban society, which is being felt by local authorities through increased demand for advice and information. In addition to legal requirements, subsidies for citizens and companies also need to be expanded in order to accelerate the socially responsible, innovative, growth-promoting transition to climate neutrality locally.

To address these challenges, nine German cities have come together to form the stonGERcities network. The German mission cities regularly exchange information within the framework of this network. A steering committee has also been set up as a formal forum for dialogue between various interest groups. This consists of representatives from federal ministries (Federal Ministry of Housing, Urban Affairs and Development, Building and Construction/ Federal Ministry of Education and Research/ Federal Ministry for Digital and Transport/ Federal Ministry of Economics and Climate and the Ministry of Finance), the Deutscher Städtetag (Association of German Cities), the Federal Institute for Urban Development Research, two representatives from the mission cities and representatives from state ministries. The steering committee provides mission cities with the opportunity to address needs and obstacles, and work on solutions (for more information, see Table C-1.2).

The "Emissions gap" table was calculated using the economic model provided by Net Zero Cities: <https://netzerocities.app/group-capabilitybuildingprogrammebuildingastrongeconomiccase> The emissions gap for achieving the 2030 climate neutrality target is therefore 1,600,000 tonnes of CO₂ measured against the target of the city mission and is therefore lower than the emissions gap shown in the energy and greenhouse gas inventory measured against the City of Münster target. In the Münster climate neutrality 2030 target scenario, CO₂ emissions will fall by over 95% compared to 1990. In 1990, annual emissions amounted to 2,618,000 tonnes, so that a reduction of 95% means a reduction in annual emissions of 2,487,000 tonnes in 2030 compared to 1990. Since this goal complies with the goal of reducing 82 percent of the 2021 baseline year GHG emissions calculated by the Economic Model, the Münster climate neutrality 2030 target meets the requirements of the "100 climate-neutral and smart cities by 2030" mission.

The portfolios of measures described in Module B-2 relate solely to the implementation of strategic projects that are within the scope of action of City Group Münster and which exert a direct and indirect influence on the implementation of climate protection measures. Direct influence means that City Group Münster can realise the climate protection measures itself. Indirect influence means that City Group Münster sets the framework conditions, but implementation of climate protection measures is highly dependent on Münster society. For example, the City Group Münster exerts indirect influence on increasing the share of cycling from the current 47 per cent to 55 per cent of the modal split by improving the cycle infrastructure further in order to make cycling more attractive for its citizens.



Achieving the goal of climate neutrality is therefore dependent on all stakeholders – i.e. City Group Münster, Münster society, the federal government, the state and the EU – utilising their scope for action. City Group Münster's strategic projects directly utilise its own scope for action directly and indirectly addresses the scope for action of city stakeholders. The scope for action at federal, state and EU level is addressed through various forms of representation, for example through the Deutscher Städtetag or through the networks created as part of the mission, as well as through many other associations.

Against this backdrop, the "Emissions gap" table is based on the assumption that all stakeholders are utilising their scope for action. This applies equally to emissions reductions in other sectors, such as agriculture and IPPU. In Münster, these sectors are primarily addressed by the "Education and food" and "Business and academia" fields of action. These sectors are also addressed through the expansion of renewable energy, particularly photovoltaics.



Table 13 A-2.3: Emissions gap (kt CO₂e)

A-2.3: Emissions gap (kt CO ₂ e)							
	Baseline emissions (BAU 2030)	Residual emissions offsetting ¹		Emissions reduction target		Emissions gap (amount necessary to achieve net-zero)	
	(Absolute value)	(Absolute value)	(% of BAU 2030)	(Absolute value)	(% of BAU 2030)	(Absolute value)	(% of BAU 2030)
Transport	430	98	23%	332	77%	0	0%
Buildings & Heating	667	78	12%	589	88%	0	0%
Electricity	530	106	20%	424	80%	0	0%
Waste	22	8	35%	14	65%	0	0%
Other²	293	52	18%	241	82%	0	0%
Total	1942	342	18%	1600	82%	0	0%



¹ Residual emissions consist of those emissions which can't be reduced through climate action and are being offset. Residual emission may amount to a maximum of 20 % as stated by the Mission Info Kit.

² Emissions reduction target percentage for "Other" sector is assumed to be the same as for the other 4 main sectors unless updated by city. Activities and commitments to reduce these emissions are documented in the Climate Neutrality Action Plan.

Source: Net Zero Cities Economic Model



3.3 Module A-3 Systemic Barriers and Opportunities to 2030 Climate Neutrality

Module A-3 "Systemic Barriers and Opportunities to 2030 Climate Neutrality" should document the results of the stakeholder, systems and ecosystem mapping and identification of systemic barriers and opportunities.

Table 14 Analysis of systemic barriers and opportunities - textual elements

3.3.1 Scope for action by Münster society stakeholder groups and municipal sphere of influence

The Münster Climate Neutrality 2030 concept study set out a possible path to achieving the climate neutrality 2030 target and highlighted the challenges this poses for urban society. But what specific scope for actions aimed at shaping the pathway to achieving this target does the city have? What potential savings are there and what direct and indirect influence does City Group Münster have to ensure that these savings are realised? What contribution is needed from federal, state and EU governments and market participants (citizens and households, companies, institutions) in Münster? Below, we aim to outline this distribution, developed as part of the concept study, i.e. savings potential and areas of influence of the various stakeholders by field of action (the fields of action considered in the Münster climate-neutral 2030 concept study differ slightly from the current fields of action in climate protection). Moreover, we identify barriers to and opportunities for action. The concept study has been published in 2021. Therefore, we also provide examples on how the City Group Münster has addressed barriers and opportunities and developed measures further within the last years.

3.3.1.1 Systemic environment and decision-making levels

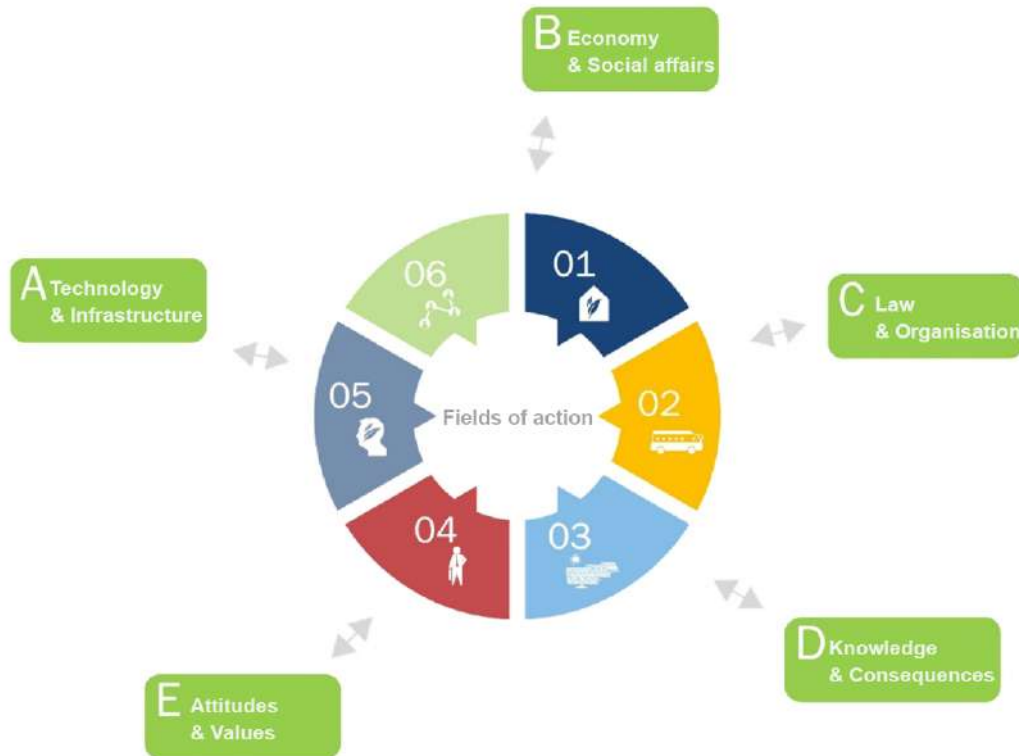
To analyse different influences on the formulated objectives, the Münster Climate Neutral 2030 concept study identified and analysed key factors and associated decision-making levels and determined their influence on achievement of the targets. The individual factors have been summarised into clusters. The result is an actor-factor matrix for each field of action. The matrix represents the base data for analysing influence potential. Factor analysis sheds light on the environment in which the goal of climate neutrality in 2030 is to be achieved. This environment is shaped by decision-making levels and factors that strongly influence the achievement of the target. These factors are therefore equivalent to systems in the logic of Net Zero Cities.

A distinction is made between three decision-making levels: The federal government (including the EU and the state of NRW), City Group Münster together with its subsidiaries, and market participants (citizens and households, companies, institutions). The decision-making levels outline who makes



specific decisions and therefore co-determines the scope of action of all stakeholders. With the decisions at the respective levels, the factors can have an inhibiting or promoting effect. The factors are categorised into the following clusters:

Figure 12 Analysis cluster of the factor analysis



Source: Münster Climate Neutrality 2030 concept study, p. 40

A. Technology and infrastructure: Achieving the goal of climate neutrality by 2030 requires technical solutions for reducing greenhouse gases. The factors describe whether the solutions are available, how they can be used, the opportunities they offer and the obstacles to their use. The existence of and low-threshold access to an infrastructure is a basic prerequisite for being able to utilise climate neutrality solutions and offerings (e.g. the existence of an infrastructure for producing and distributing gases from renewable sources)

B. Economic and social aspects: Good economic management is a basic prerequisite for achieving the goal of climate neutrality. The economic framework conditions influence investment decisions in technologies and infrastructures (e.g. profitability gaps when investing in deep renovation measures), tariffs and subsidies have the effect of guiding climate-friendly decisions (e.g. CO₂ pricing). Economy for the Common Good approaches provide new approaches that take into account social factors. The



preservation of dignity and free development of personality are basic prerequisites for social acceptance of the required transformation (e.g. dealing with sufficiency of income).

C. Law and organisation: Laws and regulations set the legal framework for action. They influence the structures within which people and organisations can act (e.g. opposing steering effect of regulatory instruments). Organisational factors are decisive in determining efficiency of implementation of climate protection measures (e.g. sufficient availability of skilled workers, particularly in construction and renovation).

D. Knowledge and consequences: Knowledge of climate-friendly solutions and direct experience of the consequences of one's own actions are basic prerequisites for individual and organisational learning (e.g. knowledge of how to heat and ventilate correctly). Factors in this cluster directly influence the development of climate-friendly behaviours and are therefore a key driver of transformation.

E. Attitudes and values: Factors in this cluster describe the effects of social transformation on the achievement of objectives with a longer-term effect (values) and short-term effect (attitudes). Values and attitudes influence behaviour at an individual level and the actions of groups and organisations at a societal level (e.g. patterns of consumption)

Factor analysis was carried out for each field of action in the above clusters. A total of 157 individual factors yield a comprehensive description of the current environment for achieving the goal of climate neutrality by 2030. The factor analysis across all clusters provides important pointers for targeting measures aimed at transforming Münster society.

Spheres of influence of City Group Münster

The key question here is, in addition to implementing in-house measures, how much influence does City Group Münster have to motivate and support Münster society in particular to implement measures to reduce greenhouse gas emissions, since Münster society is responsible for the vast majority of emissions. We differentiate between

- Direct sphere of influence: This refers to City Group Münster's ability to directly and immediately influence the implementation of measures (especially by third parties). The direct sphere of influence includes, for example, binding energy standards, stipulations in development plans, specific funding programmes and the deep renovation of its own properties.
- Indirect sphere of influence: This refers to opportunities for municipal influence that exert an indirect effect by initiating or supporting actions by Münster society (companies, citizens, civil society). They carry a reasonable probability of reducing greenhouse gas emissions, but are dependent on implementation by third parties (companies, citizens, civil society).

In addition to City Group Münster and Münster society, the federal government, state and EU also exert a significant influence on the scope for action of all stakeholders. Below, we discuss systemic



barriers, the scope for action of City Group Münster and other stakeholders, and influencing factors, broken down across specific fields of action.

3.3.1.2 Building and deep renovation

Portfolio deep renovation: The **strategic objective for the deep renovation rate is primarily determined by decision-making at federal government level and by local market participants.**

City Group Münster cannot define or fully control decision-making levels of the federal government or market participants. It can only influence them through direct or indirect actions to achieve the target. Clusters with a particularly high significance for achieving the climate-neutral 2030 deep renovation target are economic factors (profitability gap), legal factors (confusing legal framework with insufficient standards) and organisational factors (shortage of skilled workers). These clusters have a particularly high impact on target achievement. The economic efficiency gap represents a significant obstacle to achieving the objectives. This must be closed by means of suitable subsidies at federal level. There is a high risk of market failure due to a lack of specialised personnel.

The City of Münster supports stakeholders from Münster society through the residential building subsidy programme and a comprehensive information service.

New build: In the new build sector, **owner-occupiers** often perceive the Plus Energy standard/climate-neutrality to be uneconomical. For **institutional landlords**, additional cost increases are expected, particularly in (social) rented housing construction, which means that the Plus Energy standard may not be feasible under current regulations for publicly subsidised rental housing construction. Investors and, in some cases, planning offices often do not have the planning and execution expertise required to introduce the Plus Energy standard across the board. There is a risk here that the required circumspection in planning and execution, taking into account cooling, unwanted heat flows and sector coupling, will not be achieved. As energy-related greenhouse gas emissions fall, emissions caused by building materials themselves become more important. These need to be reduced.

Münster's standard for climate-friendly construction includes specifications for the building energy standard and the use of solar energy, and is stipulated in all urban development contracts and leasehold contracts with City of Münster.

Municipal buildings: As a growing city, Münster's demand for municipal building space will continue to grow in the future. In order to achieve the goal of climate neutrality by 2030, the City of Münster must act as a role model and create good examples of sustainable land use and development. In principle, it has a large potential for action in the "Technology and Infrastructure" cluster. This presupposes the availability of sufficient financial resources. This requires a change in the previous planning and decision-making maxim from "What is the maximum we can achieve with the available funds and personnel capacities?" to "What do we need to achieve the goal of climate neutrality by 2030?"



The "2020 Building Guidelines: Climate Protection and Sustainability" represent binding quality criteria and guidelines for everyone involved in the construction process for municipal buildings, both for new builds and for conversion and deep renovation measures.

Based on the influencing factors and municipal spheres of influence described above, the following overall picture emerges. The "Economy and social affairs" and "Law and organisation" clusters are particularly strongly influenced by the federal government and market participants. In the "Technology and infrastructure" cluster, City Group Münster has a high degree of influence through its municipal building stock. The discrepancy between the factor effect and the municipal effect in the "Technology and infrastructure" area is due to the small size of the factor effect. This is due to the fact that the technical prerequisites in the "Construction and deep renovation" field are already very good, and technology in this field requires little further development to achieve the targets. On the other hand, there are several measures offering significant greenhouse gas savings that must be at least partially allocated to this factor, with the result that the municipal effect exceeds the factor effect. The greatest factor effect is achieved in the "economic and social" and "legal and organisational" factors. The municipal impact is largely confined to "economic and social".

3.3.1.3 Climate-friendly decision-making by Münster society

The Münster Climate Neutrality 2030 concept study shows that, by taking a strategic marketplace approach, through campaigns building on this approach, and using predominantly tried and tested mutually reinforcing instruments (e.g. climate training, real-world laboratory), the City of Münster possesses a package of measures offering a high degree of leverage. The concept study came to the conclusion that, provided this package of measures was sufficiently well resourced, the high degree of leverage should enable the reduction target for this field of action to be exceeded. The City of Münster has significant potential for action in this area. Because it is cross-sectoral (energy, housing, mobility, consumption, nutrition), the package of measures also promotes acceptance in all other fields of action.

However, the analysis also made clear that greater consideration needs to be given in particular to **social balance. The "justice question" is of significant importance for acceptance by society as a whole: if consumption is rationalised solely through financial instruments, it will particularly affect those who are already economically disadvantaged. There is considerable acceptance risk here. Realising this potential therefore requires gradually reaching out to all of Münster society.**

By using appropriate, socially just measures and measures to foster solidarity, the City of Münster can have a levelling effect. To this end, the Council has formulated new proposals for measures, some of which also interface with other fields of action (e.g. free public transport to promote low-threshold access to mobility).



Against this backdrop, since August 2023 Münster has had a Münster travelcard priced at €29 per month, which facilitates mobility at a cost of roughly one euro per day.

The City of Münster's marketplace concept already incorporates an economic and entrepreneurial perspective. According to the Münster Climate Neutral 2030 concept study, this requires a balanced strategy that takes into account both economic and social concerns, and promotes climate-friendly, sustainable restructuring of companies.

Additional areas of municipal influence include, for example, the expansion of campaigns. As in the "Construction and deep renovation" field, in the "Climate-friendly decisions" field too there are municipal effects that exceed the factor effect. This is primarily due to the expansion of campaigns and communication, which is allocated to the "Climate-friendly decisions" field of action but also has effects in other areas. In the "Attitudes and values" field, the factor effect is higher than other factors and through the measures is exploited to an even greater extent.

3.3.1.4 Work and business

The Münster Climate Neutrality 2030 concept study shows that this field of action is particularly challenging in terms of the scope of action available to the City of Münster. Environmental objectives and economic policy strategies need to be reconciled in the form of a municipal strategy for improved climate protection and a positive framework for business.

The aim in the "Work and business" field of action is therefore to leverage and strengthen previously identified potential, and to explore new sets of measures. Given this, the concept study has identified two strategic objectives:

- Companies in Münster should undertake climate-neutral work and production. Energy consumption for space heating, light, power and process heat must be reduced by 9.3% every year (as of 2020/2021).
- Climate neutrality must become the goal and success factor of Münster's economic policy.

A significant proportion of greenhouse gas emissions are generated by Münster's businesses, as well as by the large number of administrative buildings in the trade, commerce and services sectors. Although Münster is not particularly seen as an industrial centre, industrial companies and what they consume is relevant to climate protection in Münster. Most of the potential lies in existing buildings. In addition to promoting energy savings through buildings improvements, efficient, sector-specific energy supply services are of particular strategic importance.

The City of Münster's strategy focuses on accelerating the already dynamic transformation processes and deep renovation cycles, on increasing the level of technical innovation through targeted advice and customised offers at both individual company and regional levels. Münster can build on a wide range of measures, projects and approaches, such as the energy efficiency advisory programme for start-ups.



"Münster's Alliance for Climate Protection" is a network of over 100 Münster companies and trade associations. The city therefore offers a good framework, which needs to be consistently built upon in order to achieve the ambitious climate protection targets for trade, commerce, services and industry.

The numerous commitments to support the Climate City Contract by Münster companies also show that Münster's business community actively supports the climate protection process in Münster and has adopted the goal of a climate-neutral economy.

In this context, the City of Münster is striving to anchor the goal of climate neutrality as a strategic guideline in the 2030+ location development strategy, e.g. through climate-neutral business parks or the expansion of infrastructure for climate-neutral business, such as H2 networks and green energy.

An analysis of the influencing factors in the concept study shows that the transformation of Münster's economy towards climate neutrality requires more than just technical efficiency solutions. Climate neutrality needs to become an integrated goal for Münster as a business location, on an equal footing with the goal of creating and securing jobs. This requires good framework conditions as well as the introduction of guidelines for transforming existing companies and the establishment of new climate-neutral businesses.

Overall, the concept study comes to the conclusion that the factor effect across all factors in this area is quite low. Municipal influence can be exerted primarily in the areas of technology and infrastructure. In the economic sector in particular, supra-regional, national and global market interdependencies have a strong impact, partly due to increasing globalisation. This reduces the municipal sphere of influence.

3.3.1.5 Energy supply and renewable energies

The Münster Climate Neutrality 2030 concept study shows that the goal of climate neutrality can only be achieved if fossil fuels can be completely replaced by renewable energies using cross-sectoral approaches. The prerequisite for cross-sector supply concepts is the integration of renewable energies into the system in keeping with the 2030 climate neutrality targets. Energy saving, energy efficiency, renewable energies and the joint optimisation of electricity, gas and heating grids (hybrid grids) and climate-friendly heat generation are the keys to achieving this. On the user side, two trends are becoming clear: individual users striving for self-sufficiency at property level and shared solutions at district and neighbourhood level. Münster's energy-efficiency improvement programme wherever possible prioritises the latter due to the efficiency benefits. Based on the assumed target development path of climate neutrality by 2030, the strategic priorities for action already formulated in the 100% Climate Protection Masterplan apply:

- Driving forward the expansion of renewable energies
- Promoting cross-sector concepts for the replacement of fossil fuels



- Developing an efficient, climate-friendly heat supply in a spatial context
- Developing an energy-efficient land utilisation strategy

Given the goal of climate neutrality, the concept study identifies three strategic goals:

- Power supply: Electricity consumption must be 100% covered by renewable energy. 3,100 GWh would need to be generated locally and remaining electricity demand imported.
- Heat supply: The heat supply must be converted to 100% renewable energy. 100% of oil heating systems must be replaced by efficient renewable energy systems. Fossil natural gas must be replaced by a mixture of different renewable energy sources.
- District heating: As an infrastructure for distributing heat from renewable energy, district heating must be boosted and expanded. Decarbonisation of district heating must be initiated by 2030.

The main influencing factors and municipal spheres of influence for achieving the target are described below.

Power supply: The strategic goal of covering 100% of Münster's electricity consumption with green electricity generated as locally as possible is primarily set by higher level decision-makers at the federal government. The legal framework hinders the expansion of renewable energies at a supra-regional and local level. It is highly unlikely that the German electricity mix will be CO₂-neutral by 2030. At municipal level, decentralised PV solutions (tenant electricity, neighbourhood solutions) are particularly affected by the obstacles, which massively inhibit **the necessary participation of market participants** (housing industry, private homeowners, etc.) and the expansion of PV, despite the presence of roof area potential. The expansion of wind energy in Münster has been significantly hampered in particular by the higher level legal framework (federal government - e.g. through distance regulations) and a lack of acceptance (market participants). **City Group Münster cannot determine or fully control the decision-making levels of the federal government or market participants, but can only influence them through direct or indirect actions to achieve their objectives. The greatest potential for action lies with Stadtwerke Münster, which, as a supply network operator and provider of electricity products, is able to exert direct influence.** Competition for space is a significant risk to realising local potential for the expansion of renewable energies in Münster. City Group Münster has scope to prioritise the use of land for energy. This potential must be utilised at all levels (targeted design of land use plans and urban land-use planning).

Against this backdrop, by 2030 Stadtwerke Münster aims to supply all households in Münster with self-produced wind and solar power generated, and also enable targeted citizen participation.



With regard to the competition for space, the City of Münster is currently working on an integrated space concept with the aim of identifying development areas for new housing and workplaces, locating potential space for a climate-neutral energy supply and at the same time protecting and further developing the city's high-quality open spaces as a key unique selling point.

District heating: Münster already has a well-developed natural gas and district heating network. Münster's district heating network, which is around 200 kilometres in length, consists of one primary and six secondary circuits. It supplies heat to parts of the neighbouring areas of Gievenbeck, Gremendorf and Mecklenbeck. The main feed-in is the CCGT power plant in the Hafen district. Additional combined heat and power plants operate in the more outlying neighbourhoods of Roxel-Nord, Al-bachten and Amelsbüren. Waste heat is fed into the local district heating network and supplies three residential areas. The network operator in Münster is Stadtnetze Münster GmbH. The share of district heating is around 24%. **With the existing grid-based heat supply, City Administration Münster together with Stadtwerke Münster and Stadtnetze Münster has an effective instrument over which it has control, and which has high direct action potential for achieving the key goal of climate neutrality.** The legal framework set by the federal government, inadequate funding and resulting economic viability gaps have an inhibitory effect.

As a strategic technical instrument for distributing renewable and waste heat, the Münster Climate Neutral 2030 concept study found that the district heating network should be expanded. This applies above all to city districts and neighbourhoods with a high number of listed buildings. This is an area where a climate-friendly heat supply could realise significant synergies in building deep renovation. The expansion of district heating should also be stepped up in areas in which buildings do not have significant architectural value. This applies in particular to decentralised heat distribution systems aimed at supplementing the expansion of district heating into new neighbourhoods. The opening up of the district heating network to allow feed-ins from other heat sources (industrial waste heat) should be accelerated. This offers opportunities for the integration of additional generation capacities and the utilisation of private and commercial space potential (e.g. roof areas, car parks, etc.). It would therefore be possible to further develop the district heating infrastructure into a platform for the exchange of heat from renewable energies (cf. "Green district heating" certificate measure).

To chart a course to climate neutrality by 2030, the City of Münster is drawing up an energy utilisation plan intended as a long-term foundation for planning a sustainable heat supply. The plan will be updated regularly. Thanks to the integrated approach taken by the energy utilisation plan, which in addition to municipal heating planning includes topics such as electricity, green gases and cooling, the city is going beyond the expected statutory regulations.

Property supply: When it comes to achieving climate neutrality by 2030, replacing individual oil and gas boilers is a major challenge. One option is to connect to the district heating network (see expansion and densification of district heating). Heating systems that cannot be connected to a grid-based heat supply would have to be converted to renewable energy. This would require realising 100% of



the solar thermal and biomass potential described in the master plan, and in particular switching to green gases and heat pumps by 2030. Oil heating systems need to be completely replaced.

The Building Energy Act (GEG) and Heat Planning Act (WPG) will, from 2024, restrict the use of new oil and natural gas heating systems, but only gradually. The GEG will, however, expand the system of subsidies for replacing heating systems.

Sector coupling: As a cross-sectoral technology, sector coupling is a basic prerequisite for achieving the goals in the field of energy production and renewable energies. We therefore also analyse the potential for action in sector coupling in detail here, as this is necessary to achieve all of the key objectives in the field of action of energy production and renewable energies. **City Group Münster cannot determine or fully control the decision-making levels of the federal government or market participants, but can only influence them through direct or indirect actions to achieve the objectives.** The city can usefully support this process by networking relevant stakeholders, creating framework conditions and assuming a coordinating function: cross-sectoral, interdisciplinary networks and exchange platforms for initiating cooperation, creating relevant knowledge and realising pilot projects are effective ways of exerting influence. The current understanding is that climate neutrality by 2030 cannot be achieved without the consistent use of sector coupling.

The greatest factor impact is achieved in the factors "technology and infrastructure", "economy and social affairs" and "law and organisation". The municipal impact is primarily achieved in the areas of "technology and infrastructure" and "law and organisation".

3.3.1.6 Mobility

Against the backdrop of the goal of climate neutrality, the Münster Climate Neutrality 2030 concept study has identified two strategic goals in this field of action:

- Reduction in the use of motorised private transport and strengthening of eco-mobility: The study model requires a 5% reduction in emissions from motorised private transport, still largely powered by fossil fuels, annually. A central focus is on the consistent strengthening of eco-mobility through the expansion of cycling infrastructure and climate-friendly public transport - both sub-strategies are mutually dependent (push-pull factors).
- Transformation of drive systems: City of Münster must consistently exploit its opportunities for action with regard to transitioning to climate-friendly drive systems and fuels, even if these are small compared to the potential offered by transport planning.

In the assumed target development path, private motorised transport would therefore need to be 100% climate-neutral by 2030. Reducing car traffic by 50% by 2030 will require the expansion of public transport and cycling as mobility alternatives, and these modes of transport will also need to be made more attractive.

The strategic objective is primarily determined by higher level decision-making at the federal government and by supra-regional market participants. City Group Münster cannot determine or



fully control the decision-making levels of the federal government or market participants, but can only influence them through direct or indirect actions to achieve the objective. However, as a masterplan municipality and a city with nationwide appeal in the mobility sector, particularly in relation to cycling, Münster can indirectly influence political decisions at State and federal government level by running successful model projects.

With the Münster 2035+ Mobility Masterplan, the Administration is currently developing a conceptual framework for designing climate and city-friendly mobility for Münster that guarantees social participation for all Münster residents. The focus is on striving to continue to improve the high quality of life in the city in future through binding targets and tailor-made measures.

In Münster, the clear goal is to ambitiously continue on the current path to make cycling even more attractive, to increase the share of cycling from the current 47 per cent to 55 per cent of the modal split, and to promote the city's cycling culture. Model projects such as redesigning more streets to create high-quality cycle priority streets 2.0, the implementation of cycle network 2.0 measures, the Kanalpromenade route, the creation of additional cycle parking facilities and bike boxes at railway stations, and the expansion of cycle routes to boost environmentally friendly mobility in the city region should help in this area.

The greatest factor impact is achieved in the factors "technology and infrastructure", "economy and social affairs" and "law and organisation". The municipal impact is primarily realised in the areas of "technology and infrastructure" and "economy and social affairs". In other areas, the municipal impact is almost zero.

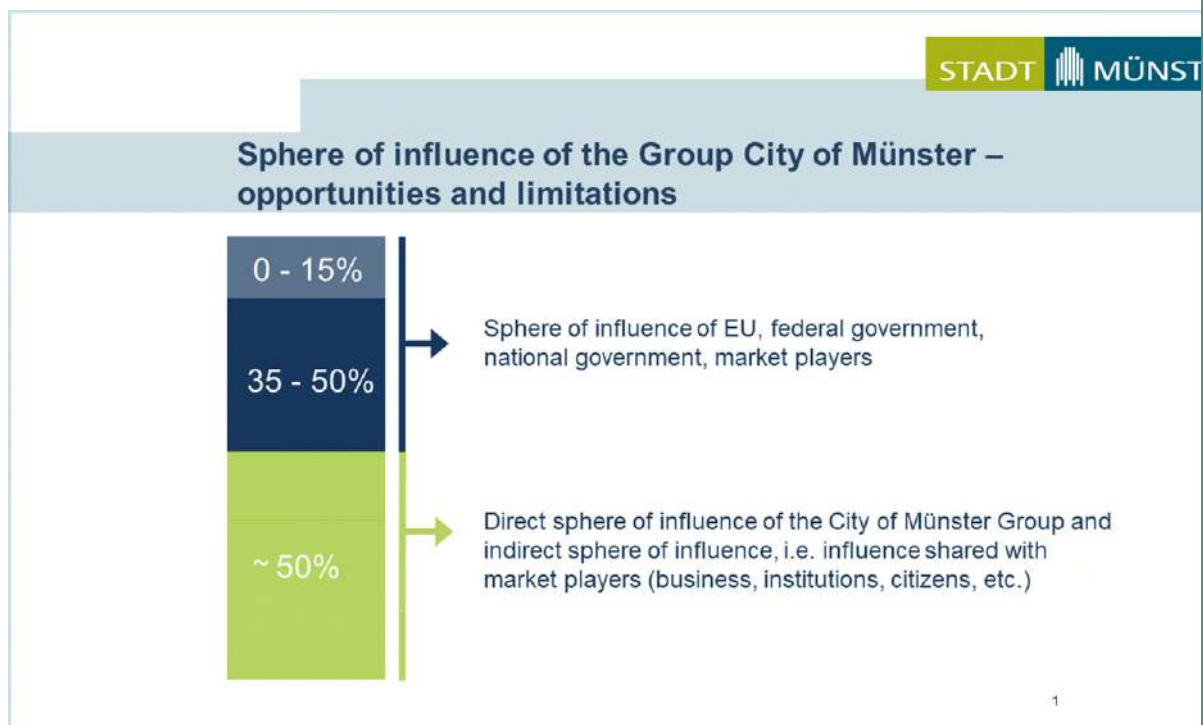
3.3.1.7 Scope for action at a glance

The previous sub-chapters have described the scope for influence and limits of municipal action. Additional potential for action can be identified in all fields of action.

Overall, the potential reduction in emissions achievable by City Group Münster in conjunction with market participants is a maximum of 50%. The degree and extent to which this potential can be realised depends on decisions made by market participants in Münster. The remaining 50 per cent lies within the influence of the federal government, state and EU. This potential can only be realised if all stakeholders are involved in implementing these measures.



Figure 13 Limits and room for manoeuvre of City Group Münster



Source: In house figure, based on Münster Climate Neutrality 2020 concept study, p. 63

In realising its climate goals, the City of Münster benefits from structures and networks established in 1995 and developed continuously since. The following table lists examples of networks that the City of Münster uses to involve stakeholders from Münster society in the "Münster is becoming a climate city" process (please see appendix for more information).



Table 15 A-3.1: Systems & stakeholder mapping

A-3.1: Systems & stakeholder mapping				
System description/ Fields of action	Stakeholders involved	Influencing Factors	Influence of the City Administration	Local Networks (the City of Münster is involved in)
Building and deep renovation: existing buildings	<ul style="list-style-type: none"> Federal Market participants 	<ul style="list-style-type: none"> Economic factors (profitability gap), Legal factors (confusing legal framework with insufficient standards) Organisational factors (shortage of skilled workers) 	Indirect	<ul style="list-style-type: none"> Altbau-Partner Handwerk Münster is an initiative of the City of Münster, the District Craftsmen's Association and craft businesses that have joined forces to form a powerful alliance for the professional deep renovation of buildings. They support Münster residents who need help modernising and renovating their old buildings. Energy consultant network Münster: The network consists of more than 25 energy consultants for the development and organisation of the building renovation campaign in Münster. In addition to a consumer advice centre and energy and engineering offices, the network also includes architects and planning offices that provide targeted support for energy-efficiency improvements with a focus on energy.
Building and deep renovation: New buildings	<ul style="list-style-type: none"> Owner-occupiers Institutional landlords 	<ul style="list-style-type: none"> Economic factors (profitability gap) Knowledge (planning and realisation knowledge) 	Direct: <ul style="list-style-type: none"> Urban development contracts Property sales 	<ul style="list-style-type: none"> Introductory advice from the consumer advice centre: Free, provider-independent introductory advice from the consumer advice centre can address all questions relating to heating replacement, energy saving, energy-efficiency improvements, photovoltaics and energy-efficient new builds.
Building and deep renovation: Municipal buildings	Municipality	<ul style="list-style-type: none"> Economic factors (profitability gap) Law and organisation 	Direct: <ul style="list-style-type: none"> Building guidelines 	On 26 August 2020, the Council adopted the tabled bill on climate neutrality together with the revised building guidelines for Münster. The building guidelines apply to all council buildings. The aim is to create a building stock that is aligned with climate protection and sustainability. The city is thus also leading by example.
Climate-friendly decision making	Citizens	<ul style="list-style-type: none"> Economic factors Social factors Knowledge 	Direct	<ul style="list-style-type: none"> ClimateTraining: The city gives citizens the chance to systematically make their everyday lives more climate friendly through ClimateTraining. People taking part in ClimateTraining develop climate-friendly measures depending on their individual carbon footprint and supported by volunteer ClimateTrainers. Regular dialogue in small ClimateTraining groups and with many Münster-based providers helps participants implement these measures.



				<ul style="list-style-type: none"> Climate walks: The walks pass through unknown climate oases in the city. They also enable discussion of the influence of trees and green spaces on the city's microclimate and potential for climate adaptation measures. Numbers are limited to 15 people. The walks are free of charge.
<p>Business and academia</p>	<p>Business</p>	<ul style="list-style-type: none"> Economic factors (economic viability) Law and organisation 	<p>Indirect</p>	<ul style="list-style-type: none"> Münster Alliance for Climate Protection: Stakeholders from the business world have been brought together in this network to jointly develop new ideas and projects for climate protection and to collect and exchange knowledge. All participating institutions commit themselves to significant CO2 reductions in their companies. New ideas and projects for climate protection in the city and in the businesses, companies and offices of participants are developed in working groups with the help of external experts. Münster's Alliance for Climate Protection regularly organises themed workshops on various aspects of energy saving and corporate climate protection. Münster's Alliance for Climate Protection receives support from external climate protection and moderation experts. Ökoprofit is a co-operation project between the municipality, local business and other regional and supra-regional partners. Developed in Graz and adapted to German conditions in Munich, more than 2,800 companies in over 100 local authorities are now involved. Since 2001, twelve rounds of the project have been carried out in Münster with 130 companies. The results of the project so far are impressive: to date, over 162 million litres of fresh water, 26.3 million kWh of energy, 19,400 tonnes of CO2 and 1,750 tonnes of residual waste have been saved. The total financial savings amount to around 4.6 million euros per year - an average of 30,000 euros per company. In addition to the City of Münster, the coalition of stakeholders includes the following institutions involved in funding the project: Münster Chamber of Crafts, Münster Economic Development Agency, NRW Efficiency Agency, NRW Energy Agency. The Ministry for Climate Protection, Environment, Agriculture, Nature Conservation and Consumer Protection NRW. Energy efficiency start-up consultation: Start-up consultations on reducing energy consumption provide interested companies with free advice on operational energy-saving potential. In addition to examining the company's energy consumption data, potential savings are



				identified during a tour of the company. Companies are also presented with specific solutions and recommendations for action and funding opportunities
Energy supply & renewable energies : Power supply	Federal Market participants	<ul style="list-style-type: none"> • Economic factors (profitability) • Law and organisation 	Direct/indirect	Introductory advice from the consumer advice centre: Free, provider-independent introductory advice service from the consumer advice centre is able to address all questions relating to replacement of heating systems, energy saving, energy-efficiency improvements, photovoltaics and energy-efficient new builds.
Energy supply & renewable energies : District heating	Stadtwerke Münster	<ul style="list-style-type: none"> • Economic factors (profitability) • Law and organisation 	Direct	Energy and product advice from Stadtwerke Münster/Stadtwerke Münster City Shop
Energy supply & renewable energies : District heating : Property supply	Federal Market participants	<ul style="list-style-type: none"> • Economic factors (profitability) • Law and organisation • Social factors 	Indirect/ direct	Energy and product advice from Stadtwerke Münster/Stadtwerke Münster City Shop
Mobility	Federal Market participants	<ul style="list-style-type: none"> • Technology and infrastructure • Economic factors • Social factors 	Indirect/ direct	<ul style="list-style-type: none"> • Münster City Administration cycling office • Mobile - Stadtwerke Münster service point for mobility in Münster
Climate protection : science, politics, economy	Universities Market participants Mandate holder	<ul style="list-style-type: none"> • Law and organisation • Economic factors • Social factors • Knowledge 	Indirect	<ul style="list-style-type: none"> • The City of Münster has had an Advisory Board for Climate Protection since 2011, made up of members from academia, associations, business and politics. • The Münster Alliance for Science is the central network with the aim of positioning and advancing Münster as a science centre and positioning and developing it as a leading location for science, research and development. In addition, it is also important to expand the scientific dialogue with citizens and to communicate science and research in a practical way. Climate protection and the City of Münster's goal of being climate-neutral by 2030 are also important approaches. The network has been coordinated by the City of Münster's Science Office for more than 10 years. The City of Science approach has also been embedded in the city's future process: Science has been highlighted as a key driver for the city's future viability.



<p>Climate protection : National level</p>	<p>German mission cities</p>	<ul style="list-style-type: none"> • Technology and infrastructure • Law and organisation • Economic factors • Social factors • Knowledge 		<ul style="list-style-type: none"> • stronGERcities: Association of the nine German mission cities. At national level, the nine German mission cities have joined forces to form the stronGERcities network. This network is primarily in close contact with the Federal Ministry of Housing, Urban Development and Building, which is in charge of the EU mission. The network is also supported by the Deutscher Städtetag. • Deutscher Städtetag: The Deutscher Städtetag actively represents local government. As the leading local authority association, it lobbies the Federal Government, the Bundestag, the Bundesrat, the European Union and numerous other organisations on behalf of cities. The First Mayor of Münster, Markus Lewe, is the current President of the Deutscher Städtetag.
<p>Climate protection : Regional level</p>	<p>NRW Mission cities</p>	<ul style="list-style-type: none"> • Technology and infrastructure • Law and organisation • Economic factors • Social factors • Knowledge 		<p>Exchange between cities/ministries: At the regional level, the three NRW cities of Münster, Aachen and Dortmund have joined forces and are in active dialogue with the relevant ministries under the leadership of the State Ministry of Home Affairs, Building, Community and Digitalisation.</p>
<p>Climate protection : Urban region</p>	<p>Euregio</p>	<ul style="list-style-type: none"> • Technology and infrastructure • Law and organisation • Economic factors • Social factors • Knowledge 		<p>Münster city region: Regional dialogue at a local level in the Münsterland region is also very important for regional identification of citizens with the topic of climate protection. As a regional centre, Münster has for many years served as a model for the Münsterland region. As a region we work together in the "Münster city region" network, particularly in developing joint projects in the areas of climate protection and climate change. We are currently working with the region to expand cycle paths in order to reduce car traffic travelling into the regional centre.</p> <p>Euregio is also represented with many projects in the field of environmental and climate protection.</p>

Source: In house figure based on Masterplan 100% Climate Protection and Münster Climate Neutrality 2030 concept study


Table 16: Networks and their members

Members of the Network
Process "Münster wird Klimastadt": Business, Science, Civil Society, Citizens
See Signatories Tabelle Commitment
Klimatraining: Coaches
Carsten Dietzel
Jana Baukmann
Lena Dücker
Joachim Kubina
Sibylle Radefeld
Julia von Hayn
Andreas Heimer
Jessica Reinhold
Dr. Paul Kübler
Monika Schürmann
Gerald Müller
Nadine Limbacher-Gärtner
Brigitte Gehring
Thomas Wagner
Dirk Schulte-Weber
Martina Schmitz
Delia Martin
Annette Schacht
Klimatraining: Provider of climate-friendly products and services https://www.stadt-muenster.de/klima/klimafreundlich-leben/klimatraining
Abfallwirtschaftsbetriebe Münster (awm)
Modelabel KnowMe
Lasse - dein Lastenrad für Münster
Repair-Café im SKA-Treff
Stadtteilauto Carsharing
SHARE NOW - wuddi GmbH
Verbraucherzentrale NRW e.V.
Ökullus
Tretty Bike Sharing System
Allianz für Klimaschutz: https://www.stadt-muenster.de/klima/wirtschaften-arbeiten/allianz-fuer-klimaschutz/mitmacher
ACB Umweltlabor GmbH
ADFC – Münster e.V.
AGRAVIS Raiffeisen AG
Allwetterzoo Münster
Alexianer Münster GmbH
Archplan
Atruvia AG
Automobile Burghaus
Bauverein Ketteler eG
Beeline Asset Management GmbH
Beffart Ingenieurbüro
behet bondzio lin architekten GmbH & Co. KG
Beresa GmbH & Co. KG
Bernard Knubel GmbH & Co. KG
BMW Hakvoort
Bode Energieberatung
Brintrup Hotel und Restaurant
Brockmann Handels GmbH
Brück Firmengruppe GmbH
Brüning Bad & Heizung GmbH
Cafe Konditorei Issel
Carl Nolte Technik GmbH
Copy-Center CCC GmbH
Covance Laboratories GmbH



Members of the Network
Der gute Bäcker H. Krimphove GmbH
Deutsche Bank AG
Die Lichtfabrik
Dr. Schengber & Friends GmbH
Druckerei Joh. Burlage
EBM Ingenieurgesellschaft
encadi GmbH
Fachhochschule Münster
Factory Hotel GmbH & Co. KG
FAIR Handelsgesellschaft mb
Fiege Deutschland GmbH & Co. KG
Freuco GmbH & Co. KG
future e.V. - Verantwortung Unternehmen
Goldbeck West GmbH
Großhandel für Modernes Antiquariat GmbH
Handwerkskammer (Bildungszentrum) Münster und HBZ
Handwerkskammer Münster
Hengst GmbH & Co. KG
Herber & Petzel Gebäudetechnik GmbH & Co. KG
Heyen Lippross Kiefer GbR
Hotel Schloss Wilkinghege
Hürter Zweirad GmbH
IHK Münster Nord Westfalen
Ingenieurbüro Nordhorn
Innung für Kälte- und Klimatechnik Münster
Innung Sanitär-Heizung-Klima Münster
ION-TOF GmbH
ista Deutschland GmbH
JEGGLE Das Bett GmbH
Jüdiges Energie- und Gebäudetechnik GmbH
Kaiserhof Hotel GmbH & Co. KG
Kirchhoff GmbH & Co. KG
Klaus Klein GmbH
Kreishandwerkerschaft Münster
Landschaftsverband Westfalen Lippe
Landwirtschaftlicher Kreisverband
Landwirtschaftsverlag GmbH
LBS Westdeutsche Landesbausparkasse
Luft und Klima Anlagenbau GmbH & Co. KG
Maler und Gerüstbau Rolf Jungenblut GmbH
Mario Engbers Gastronomie & Service GmbH
Marmeladenmanufaktur
Mauritzhof Hotel
Medios Kosmetik GmbH & Co. KG
MEET- Münster Electrochemical Energy Technology
Messe und Congress Centrum Halle Münsterland GmbH
Möhle Elektro GmbH & Co. KG
Mövenpick Hotel
noventum consulting GmbH
Pauer GmbH
Provinzial Versicherung AG
PSD Bank
Radstation G. Hundt KG
Ringhotel Landhaus Eggert
RVM - Regionalverkehr Münsterland
Sahle Baubetreuungsgesellschaft mbH
Siemens AG
Sirius fleetmanagement solutions GmbH
SNS Selectric Nachrichten Systeme GmbH
Sparkasse Münsterland Ost
Stadt Münster



Members of the Network
Westfälische Verkehrsgesellschaft mbH
Stadthotel Münster GmbH
Stadtteilauto
Stadtwerke Münster GmbH
Stricker GmbH & Co. KG
SuperBioMarkt AG
Tascon
Technologieförderung Münster GmbH
TraiCen Akademie GmbH
Traix Cycles
trans-acta group GmbH
Verein Deutscher Ingenieure
VOVIS Automobile GmbH
Wach- und Schließgesellschaft
Wasser- und Energiesparsysteme
Wecker Druckluft GmbH
Weinhandel Trixi Bannert
Westfalen AG
Westfälische Verkehrsgesellschaft mbH
Universität Münster
Wohn + Stadtbau GmbH
Zweckverband SPNV Münsterland (ZVM)
Masterplan Handwerk
Stadtverwaltung Münster
Handwerkskammer Münster
Kreishandwerkerschaft Münster
Altbau-Partner Handwerk https://www.stadt-muenster.de/klima/bauen-sanieren/handwerker
Heinz Vorwerk GmbH
Brüning Bad & Heizung GmbH
Heißbrüggen GmbH
Hubert Plenter GmbH
Kleinwechter & Bröker GmbH
Klaus Klein GmbH
Jüdiges Energie- und Gebäudetechnik GmbH
Fensterbau Uckelmann GmbH
Forsthove
Heilenkötter GmbH
Elferich GmbH Akustik- und Trockenbau
Möllers + Reismann GmbH & Co. KG
Lennertz–Gilbert e.K.
Renne Malerbetrieb GmbH
Solarkönig Services GmbH
Röwekamp & Stumpe GbR
Münsteraner Allianz für die Wissenschaft
Stadtverwaltung Münster
Universität Münster
Fachhochschule Münster



Table 17 A-3.3: Description or visualisation of participatory model for the city climate neutrality - textual and visual elements

A-3.3: Description or visualisation of participatory model for the city climate neutrality - textual and visual elements

3.3.2 "Münster is becoming a climate city" - citizen participation

Becoming a climate-positive city depends on the different forms of engagement exhibited by various members and stakeholders of Münster society. Citizen participation is a broad term that can have many meanings. When implementing measures at the municipal level, there is statutory citizen participation, but there is also informal, i.e. non-statutory, citizen participation. In addition, there are also formats that primarily serve to activate and inform. All aspects are utilised in municipal climate protection process. As described in the Expression of Interest, the City of Münster can build on many years of experience and a wide range of participation formats. The City of Münster also offers a wide range of information and advisory services for all stakeholders in urban society: <https://www.stadt-muenster.de/klima/service-beratung>

In this paragraph, we firstly describe how citizen participation is realised in implementing municipal climate measures. In 2017, the "100% Climate Protection Masterplan" has been developed with a high level of citizen participation. This plan still forms the strategic foundation of the City of Münster's climate protection measures. Since Münster is now focussing on the step from planning to implementation, citizen participation takes place in the context of implementation of concrete climate protection measures, i.e. by statutory and non-statutory formats. In order to enable also so-called "silent groups" to take part in these formats, the City Administration Münster has developed guidelines for "good public participation" that are continuously developed further.

Then, we describe how participation in the process "Münster is becoming a climate city" process takes place. In this context, the focus is on expanding and utilising the scope of action of all stakeholders in Münster society. Beyond participation formats, the City of Münster provides also further approaches initiatives to enable stakeholder to engage in the climate protection process by utilising their scope of action. These approaches and initiatives are explained in module C-2.

These different forms of citizen participation are all relevant in the context of the climate city contract. Those explained in the first part, are mainly relevant in the context of municipal portfolio of actions. Those explained in the second part, are mainly relevant in the context of enabling and motivating stakeholders to contribute to the climate protection process according to their individual scope for action.

3.3.2.1 Citizen participation in the implementation of municipal climate protection measures

To up the pace of climate work, Münster is focussing on the step from planning to implementation. The strategic foundation for all of the City of Münster's climate protection activities is formed by the "100% Climate Protection Masterplan" and the "Münster Climate Neutrality 2030 Concept Study",



which builds on the masterplan. The "100% Climate Protection Masterplan" was developed in 2017 with a high level of participation from Münster society. A total of around 1,200 participants took part in the consultation - from local experts and committed volunteers to people who took part in a survey for the sufficiency study. It became clear that climate protection in Münster is of particular concern to the participants. It was also important to them that the input from the events was perceptibly incorporated into the strategies of the masterplan:

1. Key core results of the strengths and weaknesses analysis from the kick-off event have been taken into account, in particular when determining the potential for action in Chapter 5. One focus here was on the assessment of future developments and trends in Münster by the civic players and their assessment of the potential for positive behavioural changes on the part of Münster's population.
2. The ideas and visions of the citizens on the climate-neutral future of the city from the vision workshops and the future workshop were the basis for a tangible vision of Münster in 2050. The results can be found in chapters 2 and 6 of the masterplan.
3. The concrete results of the project workshops are a total of 19 project ideas that were formulated by civic stakeholders. They were included in the programme of action (Chapter 7.2) as project ideas for the master plan. Future support programmes for civic climate protection projects were also discussed in the project workshops and have been developed further afterwards.
4. All project ideas and approaches are documented as a "pool of ideas" for the implementation phase of the masterplan and will support further work.

The participation process and the individual formats are described in detail in the 100% Climate Protection Masterplan: <https://www.stadt-muenster.de/klima/unser-klima-2030/vision/masterplan-100-prozent-klimaschutz>

Citizen participation in implementation of climate protection measures and projects

A wide variety of public participation formats are used by departments and offices during implementation of climate protection-related projects. The Council has adopted guidelines for public participation by tabling the bill "MünsterZukunft gemeinsam machen: "Mitgestaltende Öffentlichkeitsbeteiligung stärken - digitale Beteiligungsinstrumente ausbauen" (V/0553/2021). Particular attention is paid to:

- promoting the participation of previously "silent" population groups (promoting diverse and broad participation, i.e. inclusive participation),
- transparency about the institutional agencies involved in the process,
- the potential inclusion of civil society engagement (strengthening co-production in the sense of joint city-making) and
- the expansion of digital participation opportunities.



It is against this backdrop, that the "Guidelines for good public participation - communication, participation and co-production in Münster" were developed (https://www.muensterzukunft.de/Resources/Persistent/0/6/9/6/0696296735cb5e798d53d4f5424b49d5c532da84/Leitorien-tierungen_Muenster.pdf). They are also available in simple language: https://www.muensterzukunft.de/Resources/Persistent/f/1/e/c/f1ecd68685b10bc6c06ee604dd9476026cf71a2e/Infoblatt_Leichte_Sprache_%C3%9Cbersetzt_07042022.pdf

As an example of a participation process during implementation of municipal climate protection measures, here we explain the public participation process for the "Integrated Land Use Concept", which is being developed under the leadership of the City Administration Münster's Department of City Planning. The aim of the integrated land use concept is to identify development areas for new housing and workplaces, to locate potential areas for a climate-neutral energy supply and, at the same time, to protect and further develop the city's high-quality open spaces as a key unique selling point.

In May 2023, a public participation workshop was held to exchange views on the integrated spatial concept with the aim of charting a course to a common set of values for spatial development supported by Münster society. Participants discussed striking spatial development scenarios and their respective advantages and disadvantages. From 19 May to 11 June 2023, a comprehensive online participation process gave all interested parties the opportunity to immerse themselves in the findings of the workshop process and discuss the striking development scenarios online. With around 400 participants, around 8,350 responses and around 2,260 spatial comments, numerous suggestions from citizens were documented and analysed. Based on the workshop meetings and the evaluation of the online participation, an integrated overall spatial concept was drafted, which takes a balanced approach to the three main uses and tries to combine the advantages of the different scenarios in the best possible way. This draft was again discussed at a final public workshop in November. Detailed information on the public participation process can be found here: <https://www.stadt-muenster.de/stadtplanung/planen/integriertes-flaechenkonzept>

Another example of public participation is the Mobility Masterplan 2035+. Information on different formats that have taken place during the process, like consultation, surveys, or traffic experiments) can be found here: <https://mobil-in-muenster.de/c/beteiligung/>

The City of Münster addresses the issue of social justice both through citizen participation, and through climate protection measures. For example, we know that the effects of the climate crisis affect genders differently, even in the Global North. Both the consequences of climate change and the opportunities for political influence and engagement in the field of climate protection exhibit significant gender-specific differences, which are often related to the gender social roles and economic resources. Gender-sensitive approaches are needed to take account of gender-specific needs and challenges in tackling the climate crisis. The Münster 5th Action Plan of the European Charter therefore focuses on climate and gender justice. The 5th Action Plan will be submitted to Münster City



Council in spring 2024. Another example is the Münster travelcard, costing €29 per month, which enables mobility for roughly one euro per day.

3.3.2.2 Participation in the "Münster is becoming a climate city" process

With the message "Münster is becoming a climate city" and the climate city contract, a process is being launched that aims to bring together as many stakeholders in Münster society as possible - the City Administration, the city corporation, companies, associations, citizens, clubs, climate activists. Because it takes all of us. The focus of this process is on expanding and utilising the scope for action, which means that it is primarily about information, activation and motivation. The individual formats implemented in this process to date are described below.

City forum "Münster is becoming a climate city"

The city forum "Münster is becoming a climate city" was the public launch of this climate protection process. It provided space for different perspectives on the goal of climate neutrality and brought about a constructive exchange between citizens, businesses, science, administration and politics. The programme included a Climate Perspectives forum, in which representatives of the following institutions took to the stage to discuss the challenges to becoming a climate city from their perspective: IHK Nord Westfalen, Kreishandwerkerschaft Münster, Stadtnetze Münster, Landwirtschaftskammer NRW, Beirat für Klimaschutz der Stadt Münster, Zentrum für interdisziplinäre Nachhaltigkeitsforschung (WWU Münster). The evening was organised around the question "Who has a concrete idea, approach or project through which they, alone or with others, can contribute to achieving climate neutrality in Münster?" Citizens were also asked to register topics during the registration process. The proposed topics inspired the creation of the following four working groups:

- Education, opinion and co-determination
- Climate-friendly living - from nutrition to mobility
- Space for green buildings, energy and business
- Climate in art, culture and society



Figure 14 Impressions from the "Münster is becoming a climate city" city forum



Photos: City of Münster/Julian Meyer

For more information, please see <https://www.stadt-muenster.de/klimastadt/stadtforum> On this website, a video recording of the event is also provided.

Following on from the city forum, Münster City Administration launched a process for collecting contributions from Münster society for the Climate City Contract: www.klimastadt.ms (for more information please see below).

Climate City Week: Because it needs impetus

From 21 to 27 October 2023, the City of Münster invited all citizens to its Climate City Week. The event involved numerous stakeholders giving presentations on their contribution to becoming a Climate City. Participants in Climate City Week were invited to find out more, gain new perspectives, discuss together, scrutinise knowledge and be inspired to develop their own ideas and projects for a climate-neutral Münster.

Climate City Week also saw numerous guided tours and events in which citizens could experience what Münster society is doing to create a climate-neutral future for Münster. Climate City Week served as a showcase on the pathway to a climate-neutral, climate-adapted Münster. The low-threshold, free event significantly realised a significant increase in the circle of participants compared to other events. It was also possible to involve sections of Münster society that had previously been reluctant to participate.

During Climate City Week also saw Münster run its first ClimateBarCamp. A BarCamp is a format explicitly designed to be organised by the participants, as, by proposing a session (whether spontaneous or planned), participants are able to get involved with topics of their own choosing. They then



organise and moderate the session themselves. Although very few people had any experience with this format, it was widely used. The participants ran a total of ten different sessions. With different questions and perspectives, all worked towards the shared goal of climate neutrality and engaged in open, constructive dialogue.

Figure 15 Impressions from the ClimateBarCamp



Photos: City of Münster / Julian Meyer

More events to involve and motivate Münster society are planned.

3.3.2.3 Participation in the Climate City Contract

The "Münster is becoming a climate city" city forum in June 2023, has been the start to drawing up a climate city contract and initial contributions from initiatives, citizens and companies were received. Everyone who registered for the city forum was invited to a subsequent workshop. On 25 September 2023, around 70 people interested in and committed to climate action met at the invitation of the City of Münster to work together on two follow-up questions from the city forum:

- What constitutes contributions from citizens and civil society for the Climate City Contract and what criteria do they need to fulfil?
- What ideas, projects and plans from the city forum should be developed further and what needs to be done to realise them?



The workshop showed that the Climate City Contract is an important but not the sole instrument for achieving climate neutrality. No-one can achieve a climate-neutral city alone - it takes all of us (City Administration, business, civil society, national framework conditions). The workshop was therefore a useful step to ensuring that civil society is able to connect with the Climate City Contract and for identifying important issues for the process.

Businesses in particular - as important stakeholders - are also involved in the process. In March 2023, representatives from the city's business community, universities and the Administration met to discuss climate protection in Münster. Over the past few years, participants have observed an increased dynamism and willingness to make changes in the Administration, in the population, and in large parts of the business community. Many companies in Münster are already clearly prioritising the issue of climate protection, making them pioneers within the city. Participants agreed to actively support the Climate City Contract process, including in future years.

Figure 16 Joint meeting of business, science and the Administration



Photo: City of Münster / Michael Möller

In addition to the Alliance for Climate Protection, during the development of the Climate City Contract cooperation in the field of climate protection between the Chamber of Industry and Commerce, the Chamber of Crafts, the District Craftsmen's Association and City group Münster has been further strengthened. The above network of stakeholders has, for example, jointly solicited commitments from companies in Münster. In addition, there is now regular networking within this network, which, alongside the Alliance for Climate Protection, strengthens networking between Münster's business community and the City Administration at the level of associations and chambers and their multiplication and communication effect.



During development of the Climate City Contract, all stakeholders in Münster society are therefore invited and encouraged to commit to the goal of "climate neutrality for Münster" within their scope of action. For companies and institutional stakeholders, that means climate protection projects and measures developed and/or implemented within their company or institution, such as converting their vehicle fleet to electromobility, building energy-efficiency improvements or setting up climate-friendly services. This also includes creating and implementing entire climate protection concepts or transformation roadmaps, or developing and testing innovations that make an important contribution to the climate transition. It also includes public relations work or communication measures, such as education programmes, awareness-raising campaigns or advisory services that promote climate protection. For citizens and civil society, this includes climate protection projects and measures implemented in their own lives, such as energy-efficiency improvements to their homes, getting rid of a car or using social media to raise awareness of climate protection issues. Projects and measures implemented in initiatives and associations also play an important role. The range of activities through which Münster society is supporting the City of Münster on its path to climate neutrality by 2030 is also reflected in the contributions to the first version of the Climate City Contract (see Signatories table in the Commitment). Activating Münster society will be a key element of the "Münster is becoming a climate city" process over the next few years.

The following picture shows how many stakeholders contributed to the first version of the Climate City Contract of the City of Münster:

Figure 17: Contributors the Münster's first Climate City Contract



Photo: Stadt Münster / Meike Reiners



Stakeholders submitted their commitments via a template on the website www.klimastadt.ms. All commitments are attached to the Commitment of this Climate City Contract. They are also made visible by a wall that is now exhibited publicly in the town house (see also pictures in the Commitment).

Figure 18 Commitments to the Climate City Contract



Photo: Stadt Münster / Meike Reiners

Commitments can still be submitted via the website www.klimastadt.ms. This is because the Climate City Contract is constantly being updated, i.e. the process is ongoing and everyone still has the opportunity and is still encouraged to participate.

3.3.2.4 Climate dashboard: data at a glance

Where is Münster on the path to climate neutrality? What progress is being made on climate protection? And where are the consequences of climate change visible in our city? City of Münster energy and greenhouse gas inventory (https://www.stadt-muenster.de/fileadmin/user_upload/stadt-muenster/67_klima/pdf/01032023_Energie_Treibhausgasbilanz_2021_Bericht.pdf) and the climate dashboard at <https://klimadashboard.ms/> provide key data on these questions. They form the basis for charting our future course on climate protection and climate impact adaptation for urban development and urban planning. Today, for example, there are already 38 electric buses in the Stadtwerke Münster bus fleet and 6,003 PV systems with a total output of 91 MWp. <https://klimadashboard.ms/>



4 Part B - Pathways to Climate Neutrality by 2030

Part B represents the core of the Action Plan, shaped by local authorities, local businesses, and stakeholders, consisting of the most essential elements: scenarios, strategic objectives, impacts, action portfolios and indicators for monitoring, evaluation, and learning.

4.1 Module B-1 Climate Neutrality Scenarios and Impact Pathways

Module B-1 "Climate Neutrality Scenarios and Impact Pathways" should list impact pathways, early and late outcomes and direct and indirect impacts (co-benefits) according to and adapted from the NZC Theory of Change and the AP Guidance - clustered by fields of action.

Table 18 B-1.0: Introduction Climate Neutrality Scenarios and Impact Pathways

4.1.1 Münster climate neutrality 2030: strategy and fields of action

Münster is a dynamically growing city and therefore faces particular climate protection challenges. The challenge for the future is to achieve our ambitious climate protection targets against the backdrop of a growing population. Münster is able to build on a strong foundation. Since 1995, the city has been one of the most active cities in Germany and Europe in pursuing climate protection and a pioneer in climate-friendly strategies, measures and projects. The climate protection strategy therefore does not need to make good any fundamental omissions, but rather needs to intensify and expand the many existing lines of action and projects. In addition, however, we also need to take carefully selected new paths and pilot innovative approaches. The strategy for Münster is therefore not a rigid plan, but rather a flexible framework for action which enables the city to react to future changes in framework conditions and requirements (for more information on how this framework is applied in practice please see module C-1). The strategic foundation for all of the City of Münster's climate protection activities is the "100% Climate Protection Masterplan" and the "Münster Climate Neutrality 2030 Concept Study". The strategic premises of Münster's climate protection activities are, in order of priority:

1. Saving as much energy as possible
2. Utilising the energy we still need as efficiently as possible
3. Generating the energy we still need from renewable resources
4. Choosing resource and energy-saving behaviours with a consumer culture to match

This strategy guides our actions in our six areas of activity:

- Energy production
- Mobility
- Building carbon reduction measures



- Business and academia
- Climate budget
- Education and food

Building carbon reduction measures and **mobility** are the areas with the greatest energy saving potential for Münster. Münster's growing population means that this potential will continue to grow in future. The **energy production** field of action takes an integrated, cross-sectoral view of generation, distribution and local, renewable energy. In addition to the expansion of renewable energies, the main challenges here are the decarbonisation and expansion of district heating and the decarbonisation of property-based individual heat supply. In addition to technical fields of action, a cultural transformation is also required. It is for this reason that the **business and academia** field of action offers strong local potential. As a dynamic science and business location and with its innovative, networked companies and research institutions, Münster offers particular opportunities for accelerating already dynamic transformation processes and deploying technical innovations. In addition, the City of Münster has long placed a strong emphasis on maintaining an intensive dialogue with civil society on climate protection and will expand this further in future. The **education and food** field of action deals with climate-friendly lifestyles and sufficiency and is of particular importance. It focuses on promoting an eco-sufficient lifestyle which prioritises the conservation of resources and, in conjunction with technical measures, is essential for achieving our climate protection targets. The city has great potential for action through integrated, interdisciplinary cooperation, particularly important in the area of **climate budget** field of action. The main focus here is on ensuring a close interlinkage between climate neutrality and budget planning.

In addition to these issues, City Group Münster has long tackled climate protection and **climate adaptation** in tandem, with the City of Münster aiming to achieve climate neutrality by 2030 and to adapt to the consequences of climate change.

The results of the assessment of potential and the scenarios outlined in the Münster Climate Neutrality 2030 concept study clearly show that our ambitious climate protection targets are achievable, but that this is a mammoth task for the whole of Münster society. The transformation will only succeed if the technical and spatial potential is utilised consistently and at an early stage, and if the city intensifies and expands its extensive activities by incorporating sufficiency considerations in particular.

The impact pathways for the fields of action required in the templates are presented below. These fields of action do not entirely correspond to the fields of action presented above, which are the main focus in Münster. The impact pathways are primarily based on the results of the Münster Climate Neutrality 2030 concept study, which serves as the strategic foundation for all City of Münster's climate protection activities. The emissions reduction potential that needs to be realised in the fields of action are based on the city's energy and greenhouse gas inventory (as at 2021) and are geared towards the goal of reducing emissions by 95 percent by 2030 compared to 1990 levels. To this end,



the emissions that can be determined from energy consumption in individual sectors (private households, commercial and other, industry, and mobility) have been applied to the individual fields of action as follows.

Emissions that can theoretically be saved through measures in the energy production field of action consist of consumption in the static sector ("private households", "trade, other" and "industry") of the energy sources district heating, heat from renewable energies and electricity. Emissions that can theoretically be saved through measures in the building carbon reduction measures field of action consist of consumption in the static sector ("private households", "trade, other" and "industry") of the energy sources heating oil and natural gas. Emissions that can theoretically be saved through measures in the mobility field of action consist of fuel consumption in the transport sector.

The impact pathways show how the goal of climate neutrality - measured against the Cities Mission target of tackling 80 per cent of the emissions gap by 2030 - could theoretically be achieved, provided that all stakeholders – i.e. the City of Münster (City Group Münster and Münster society) and federal, state and EU governments – fully exploit their scope for action and significantly streamline and accelerate the processes required to achieve this. In order to maximise the scope for action of City Group Münster and Münster society, the fields of action in Münster go beyond the classic climate protection fields of action.

The City of Münster is very aware of the co-benefits associated with the climate protection measures and these are always tackled in discussions. It is not currently possible to quantify the co-benefits associated with individual projects, but there have been deliberations and developments in this area, for example in the CoLAB Pilot Cities project. <https://netzerocities.eu/germanys-pilot-activity-colab-committed-to-local-climate-action-building/>



Table 19 B-1.1: Impact pathways

B-1.1: Impact Pathways					
Fields of action	Systemic levers	Early changes (1-2 years)	Late outcomes (3-4 years)	Direct impacts (Emission reductions)	Indirect impacts (co-benefits)
Energy systems: Electricity and heat	<p>Technology/infrastructure</p> <p>Governance and policy</p> <p>Finance and funding</p>	<p>Electricity</p> <ul style="list-style-type: none"> - Expansion of rooftop PV by reducing bureaucratic hurdles, accompanying municipal offers and effective publicity - Creation of an energy utilisation plan - Creation of integrated space concept Münster <p>Heating</p> <ul style="list-style-type: none"> - Creation of a concrete, binding heating plan - Development of individual neighbourhood solutions 	<p>Electricity</p> <ul style="list-style-type: none"> - Expansion of ground-mounted PV systems on the basis of the integrated ground-mounted concept - Expansion of wind turbines - Utilisation of unused wind energy potential and repowering - Expansion and strengthening of local distribution grids - Expansion of rooftop PV by municipal company and municipal group <p>Heating</p> <ul style="list-style-type: none"> - Expanding and increasing the density of the district heating network 	646.769 t	<ul style="list-style-type: none"> - Regional added value - Job creation - Independence from fossil fuels - Increased local market stability and resilience - Avoiding environmental damage - Increased trade tax revenue



B-1.1: Impact Pathways					
Fields of action	Systemic levers	Early changes (1-2 years)	Late outcomes (3-4 years)	Direct impacts (Emission reductions)	Indirect impacts (co-benefits)
		<ul style="list-style-type: none"> - Promote and support property-related individual heating supply far from district heating areas (especially heat pumps and neighbourhood solutions) - Extension and expansion of the funding framework for grid-connected and property-based renewable energy heat supply at federal level - Continue and expand advice and information on replacing heating systems 	<ul style="list-style-type: none"> - Decarbonising the district heating generation portfolio - Expanding ground-mounted solar thermal energy and integration into local and district heating networks - Property-based heating supply is increasingly being converted to renewable energies 		<ul style="list-style-type: none"> - Favourable/stable energy costs - Clean air
Mobility & transport: City-wide mobility planning	Technology/infrastructure	<ul style="list-style-type: none"> - Development of an integrated mobility concept taking into account a climate neutrality scenario - Establishment of a bicycle network 2.0 with high standards as 	<ul style="list-style-type: none"> - Further progress in the expansion of the Münsterland S-Bahn - Establishment of measures from the car park concept - Electrification of public transport 	565.862 t	<ul style="list-style-type: none"> - Cleaner air - Lower noise emissions



B-1.1: Impact Pathways					
Fields of action	Sys-temic levers	Early changes (1-2 years)	Late outcomes (3-4 years)	Direct im-pacts (Emission reductions)	Indirect im-pacts (co-ben-efits)
	<p>Govern-ance and policy</p> <p>Finance and fund-ing</p>	<p>well as the expansion of cycle routes, mobile stations and the expansion of electric car sharing services</p> <ul style="list-style-type: none"> - Redesigned public transport service - Expansion of the electric vehicle charging infrastructure - Establishing climate-friendly mobility management - city as a role model 	<ul style="list-style-type: none"> - Electrification of motorised private transport and commercial vehicles - Electrification of regional rail transport - Shift from motorised private transport to eco-mobility 		<ul style="list-style-type: none"> - Alternative utilisation options for traffic areas - Better road safety, fewer serious accidents - Increase in value of properties along formerly busy roads - Public spaces become more attractive places to spend time



B-1.1: Impact Pathways					
Fields of action	Sys-temic levers	Early changes (1-2 years)	Late outcomes (3-4 years)	Direct im-pacts (Emission reductions)	Indirect im-pacts (co-ben-efits)
3. waste & circular economy: Münster waste-free 2030	Learning and capabilities Technology Infrastructure	- Renewable energies Climate-friendly vehicle fleet	- Münster waste-free 2030: The remaining waste in 2030 will be recyclable materials, most of which will be recycled. The rest will be used for efficient waste-to-energy generation.	2.800 t	- Clean air - Lower noise emissions - Favourable/stable energy costs - Sustainability
4 Green infrastructure & nature-based solutions: Climate adaptation action plan 2030 for the City of Münster	Technology Infrastructure Governance and policy	- Accompanying analyses to coordinate the implementation of measures - Updating and evaluation of key parameters (e.g. temperature, precipitation, etc.) in the urban area against the background of regional developments	To better anchor and implement existing legal requirements, e.g. in accordance with the Building Code or the State Water Act, in terms of climate adaptation in administrative action and to develop our own standards for Münster.	Not specified	- Clean air - Public spaces become more attractive places to spend time - Increased climate justice



B-1.1: Impact Pathways					
Fields of action	Sys-temic levers	Early changes (1-2 years)	Late outcomes (3-4 years)	Direct im-pacts (Emission reductions)	Indirect im-pacts (co-ben-efits)
	Finance and fund- ing	<ul style="list-style-type: none"> - Public relations work "Climate change in Münster" - Intercommunal coordination - Concept for taking climate adap-tation into account in the planning process - Precautionary measures Building land programme - Information and advice on heat prevention for administrative work-places - Adaptation of the public transport system to heat events - Information and advice on the construction of new buildings - Optimisation of new municipal buildings 			



B-1.1: Impact Pathways					
Fields of action	Systemic levers	Early changes (1-2 years)	Late outcomes (3-4 years)	Direct impacts (Emission reductions)	Indirect impacts (co-benefits)
		<ul style="list-style-type: none"> - Keeping air flow, fresh air and cold air flow paths clear - Water-sensitive urban development: precautionary measures Areas with flooded open spaces - Emergency rules for bus transport in heavy rainfall 			
Built environment: New building	<ul style="list-style-type: none"> Technology Infrastructure Governance and policy Finance and funding 	<ul style="list-style-type: none"> - Guidelines for climate-friendly urban land-use planning - City Administration Münster: Building guidelines 2020 - Further developing Münster's standard for climate-friendly construction 	<ul style="list-style-type: none"> - Urban development and spatial energy supply are closely interlinked - Requirement to use sustainable, recyclable building materials - Application of high energy efficiency standards for all building types (passivhaus or Plus Energy buildings) - Compulsory installation of PV systems and/or green roofs 	603.570 t	<ul style="list-style-type: none"> - Regional added value - Job creation - Increase in property value - Greater living comfort and convenience



B-1.1: Impact Pathways					
Fields of action	Systemic levers	Early changes (1-2 years)	Late outcomes (3-4 years)	Direct impacts (Emission reductions)	Indirect impacts (co-benefits)
			- Establishment of space-saving housing models		- More climate-resilient building stock
Built environment: Stock	<p>Technology Infrastructure</p> <p>Governance and policy</p> <p>Finance and funding</p>	<p>- Strategy for achieving climate neutrality in 2030 for municipal buildings</p> <p>- Municipal funding, advice, information and support for deep renovation projects</p> <p>- Increased focus on neighbourhood redevelopment</p> <p>- Strategy for achieving climate neutrality in 2030 for municipal buildings</p> <p>- Wohn- und Stadtbau deep renovation strategy</p>	<p>- Increase in the deep renovation rate and deep renovation standard</p> <p>- Close integration of deep renovation with spatial energy supply</p>		<p>- Public spaces become more attractive places to spend time</p>

Source: In house presentation



Table 20 B-1.2: Description of impact pathways- textual and visual elements

B-1.2: Description of impact pathways- textual and visual elements

(Describe, visualise, and contextualise pathways listed above)

The explanation below of the impact pathways outlined above is largely based on the Münster Climate Neutrality 2030 concept study. This describes a possible, theoretical pathway to climate neutrality by 2030. It does not formulate a rigid plan, but rather guidelines necessary for achieving this goal. The fields of action correspond to the priorities set out in the commitment - a mix of technical fields of action with high CO₂ reduction potential and non-technical fields of action primarily aimed at the cultural transformation of Münster society. The presentation for each area of action also provides examples of the measures City Group Münster is taking to meet the challenges.

4.1.2 Münster climate neutrality 2030: scenario and impact pathways

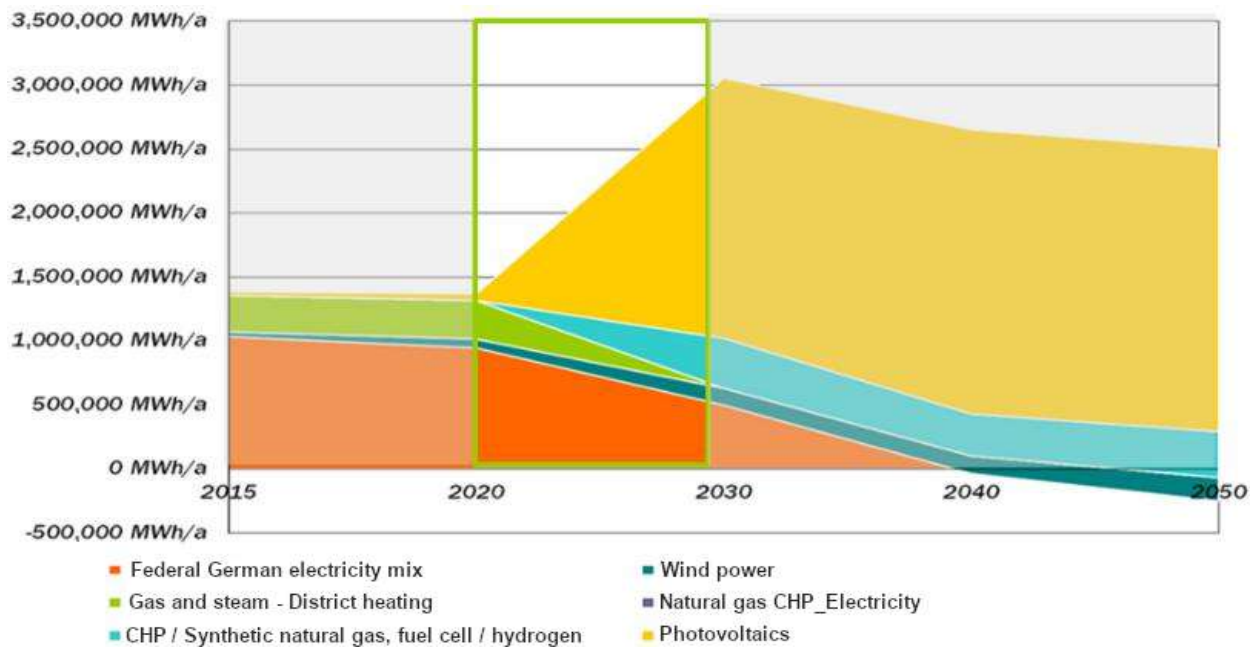
100% of electricity from renewable energy

For a city, Münster has a relatively large theoretical and technical potential to generate electricity from renewable energy. The photovoltaic potential theoretically installable on roofs and in open spaces is 2,400 megawatts peak (MWp). The challenge lies in realising this potential. The total area required is available in principle, but the primary goal has to be solving problems with competition for space. A solution is currently being developed in the form of the Münster integrated area concept. The aim of the integrated area concept is to identify development areas for new housing and workplaces, to identify potential locations for a climate-neutral energy supply and, at the same time, to protect and further develop the city's high-quality open spaces as a key unique selling point.

If this potential is realised, Münster can generate a large proportion of its electricity demand within the city itself. Under our assumptions, additional electricity imports from the surrounding region would need to cover around 16% of electricity demand. From the user point of view, green electricity can already be purchased at the same cost as the basic supply. The figure below shows electricity consumption in Münster and possible changes in the electricity mix. It is based on the scenario for achieving climate neutrality in 2030. Despite an increase in electricity consumption as a result of factors such as the switch to electromobility and electricity use for heat generation, 100% of demand can be met by renewable energies. The scenario was based on the assumption that the German electricity mix will also be required to be climate-neutral by 2030.



Figure 19 Scenario for changes in the electricity supply mix and the share of renewable energies



Source: Münster Climate Neutrality 2030 concept study, p. 29

The fundamental challenge in this area is the competition for and limited availability of space in Münster. The priority is to utilise the potential offered by roof space, particularly in existing buildings. The roof areas of new residential buildings must of course be utilised for photovoltaics.

Photovoltaic and wind power are already economical today (especially when the electricity is used at the point of production).

100% heating from renewable energy

The transition to a climate-neutral heating supply is taking place in the boiler room, the municipal district heating infrastructure and the broader transformation of the gas market. By 2030, the transition to decarbonising district heating will have begun. "Green district heating" can only be realised economically if the number of properties supplied in compact spatial contexts increases and consumption intensity decreases, resulting in a fall in heat density. The transition to "green district heating" requires the conversion of centralised heat generation, a reduction in temperatures in the pipe system and grid densification and expansion.

Challenges to the district heating transition include:

- Decarbonised generation portfolio: The existing generation portfolio needs to be decarbonised. This requires, for example, the replacement or conversion of the existing combined cycle power plant. Deep geothermal energy offers significant potential in Münster.
- Grid expansion and densification: Grid expansion and densification are prerequisites for securing the place of district heating as the backbone of the heating supply in Münster. This applies both in areas with large numbers of listed buildings and in areas consisting of buildings with no significant

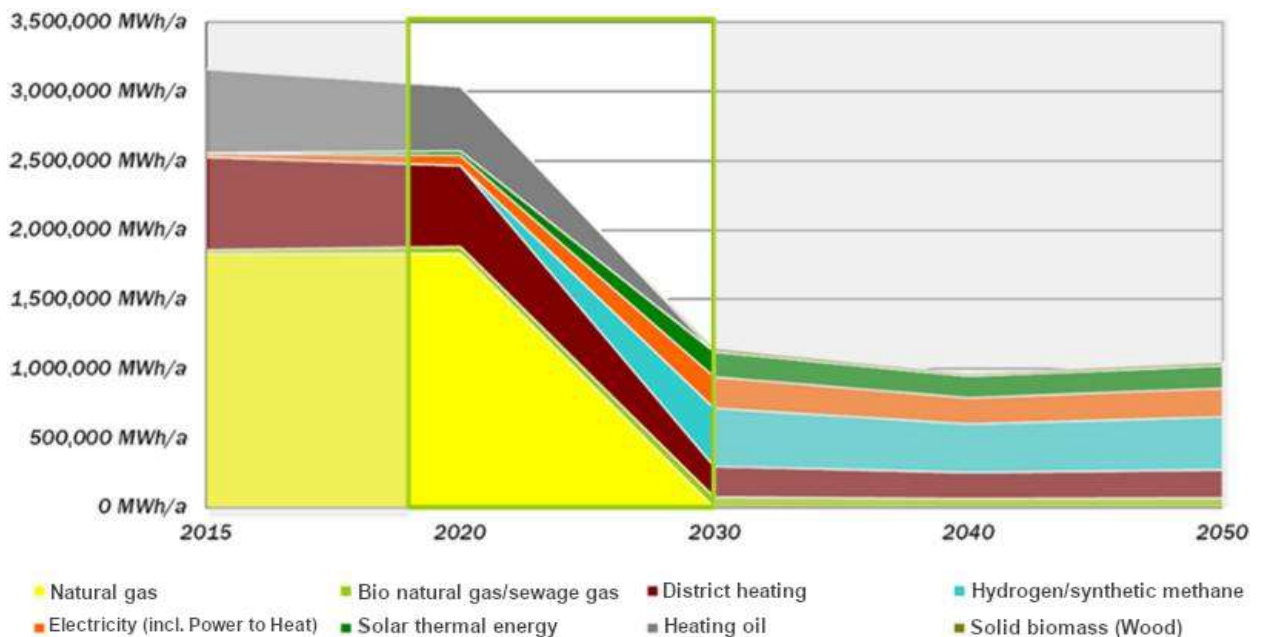


architectural value. In particular, it is necessary to close the profitability gap for new networks - which depends above all on the higher-level legal framework.

- Planning periods: A fundamental problem is the length of planning and implementation periods. Realising the heating supply transition by 2030 requires a significant acceleration in the planning and construction processes.

In addition to the conversion of the district heating system, heating oil and natural gas need to be removed from the heating mix. This affects an estimated 165,000 homes. Heat generation in Münster is unlikely to function entirely without gaseous fuels. Green gases from renewable energy will therefore need to replace fossil natural gas by 2030. One fundamental risk is that there will not be sufficient green gases from renewable energy available by 2030 (sector coupling). Uncertainties concerning future technical and legal developments are creating a cautious investment climate in sector coupling. Many technologies are still in the development or test phases and will only become economically viable for market participants when an appropriate framework is in place and innovative concepts have been developed to market maturity.

Figure 20 Scenario for the evolution of the heating mix and the share of renewable energies



Source: Münster Climate Neutrality 2030 concept study, p. 31

To achieve the goal of a climate-neutral heat supply, a transformation roadmap for Münster is currently being developed in the context of federal funding for efficient heating networks (BEW) as well as a municipal heat and energy utilisation plan.

Climate-friendly mobility

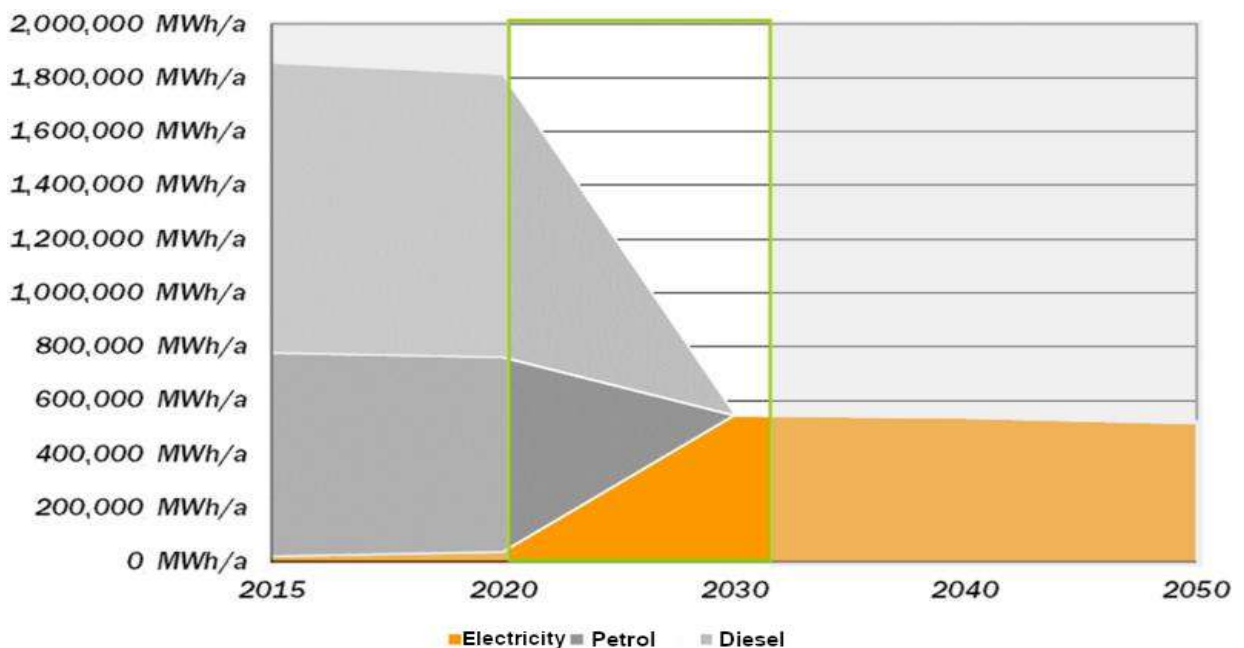
Avoidance, modal shift and improvement (meaning greater efficiency and/or use of renewable energy) is the triad for climate-friendly mobility. The Münster Climate Neutrality 2030 concept study shows that motorised private transport's share of energy consumption needs to fall by around 5% per year. This means



that a shift to cycling and public transport is absolutely essential. Simultaneously, fossil fuels need to be phased out completely, meaning that by 2030 motorised private transport needs to be 100% electric. In addition, it is also necessary to develop a charging infrastructure. This needs to occur in both the public and private domains. To achieve a ratio of 14 vehicles per public charging point requires, taking into account existing public charging points in Münster at the time of the study (2020/2021), around 9,000 public charging points. According to the Münster Climate Neutrality 2030 concept study, around 79,000 private charging points also need to be installed.

The figure below shows the changes in energy consumption in the transport sector required to achieve the target. Energy consumption falls sharply due to efficiency improvements and reduced traffic, coupled with the replacement of petrol and diesel with electromobility

Figure 21 Scenario evolution of energy consumption in the mobility sector and share of electricity from renewable energy



Source: Münster Climate Neutrality 2030 concept study, p. 33

With the Masterplan Mobility Münster 2035+, the City Administration is currently developing a conceptual framework for designing climate and city-friendly mobility for Münster that guarantees social participation for all Münster residents. The aim is to achieve extensive local climate neutrality in the mobility sector through increased traffic avoidance and a shift from motorised private transport to eco-mobility.

Münster waste-free 2030

awm is striving for a waste-free Münster 2030 by turning Münster into a bastion of waste prevention. Realistically, it will not be possible to prevent all waste in future. The goal is therefore to ensure that, by 2030, all remaining waste will be reusable materials, most of which will be recycled. The rest will be channelled



into efficient waste-to-energy generation. The "Waste-free Münster 2030" vision is primarily a public relations challenge.

Climate adaptation

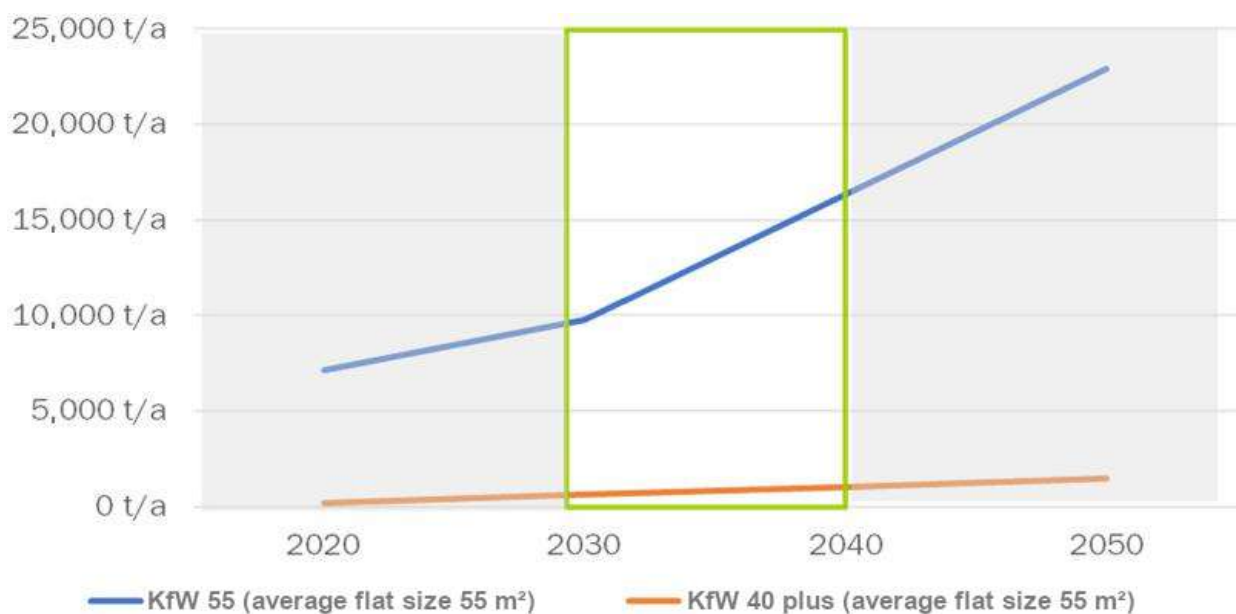
In Münster climate protection and climate adaptation go hand in hand. The strategic foundation for climate adaptation in Münster is the climate adaptation concept developed in 2015. This is the foundation for a climate adaptation policy work programme which aims to continue the longstanding process of developing Münster's urban, green and open spaces to maintain the good urban climate conditions in Münster.

Climate-neutral new builds

Münster is a dynamically growing city. The forecast is for around 2,000 additional residential units per year by 2030. The KfW-40 standard for new builds has been introduced for urban development contracts and property purchase agreements together with the solar standard.

The figure below shows the effect of the KfW 55 and KfW 40 energy standards (gradual introduction of the Plus Energy standard) on City of Münster's greenhouse gas inventory based on the forecast additional residential units. It is clear from this comparison that the introduction of the KfW 40 standard and the gradual introduction of the Plus Energy standard is a necessary prerequisite for avoiding further impacting City of Münster's CO₂ inventory.

Figure 22 Effect of the KfW 55 and KfW 40 plus energy standards (gradual introduction of the Plus Energy standard) on City of Münster's greenhouse gas inventory based on projected additional residential units



Source: Münster Climate Neutrality 2030 concept study, p. 26



The Münster City Administration has binding quality criteria and guidelines for everyone involved in the construction process for municipal buildings for both new builds and renovations. The building guidelines apply to all buildings municipal buildings with the aim of creating a building stock aligned with climate protection and sustainability.

100% climate-neutral residential building stock

In the 2030 scenario, achieving the goal of climate neutrality requires almost 100 per cent of the housing stock to be renovated by 2030. This would correspond to a deep renovation rate of 8-9%, i.e. deep renovation of a total of around 1,210,000 m² of living space per year. This assumes that deep renovation reduces energy demand by around 80 per cent, roughly in line with the KfW 40 standard. The deep renovation of existing buildings represents the biggest local challenge to achieving the climate protection target.

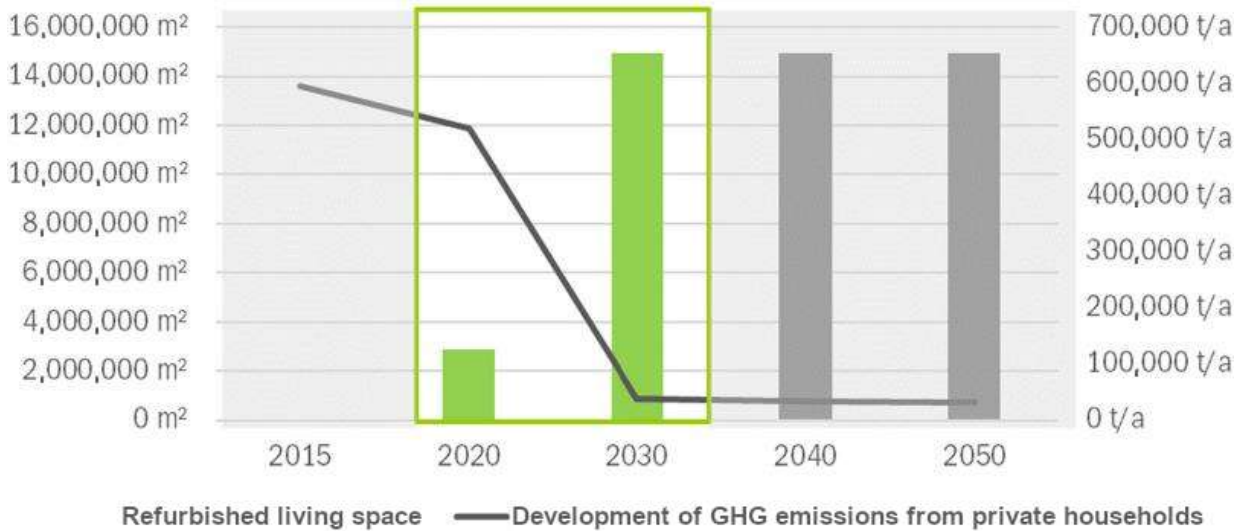
Deep renovation costs are mainly incurred by the housing industry and private homeowners. Economic viability for the housing industry is completely different than for owner-occupiers. Landlords can pass on 8% of the cost to tenants each year after deducting maintenance costs (non-occupancy costs) and subsidies (e.g. repayment subsidy). Depending on the framework conditions (rent levels), deep renovations are more economical in this sector. There is, however, a risk that, in a growing city like Münster, which already suffers from high rents, rents will increase further if this is not cushioned by federal policy regulations.

For owner-occupiers, the only economic amortisation, taking subsidies into account, arises from reduced energy costs. Given the high standards required, there is a fundamental risk that this will be unprofitable.

The shortage of skilled labour and the high capacity utilisation of trade businesses are already hampering deep renovation activity. Given the deep renovation rates required, it is to be expected that market participants will be unable to meet demand. There is a considerable execution risk here, over which City Group Münster has only limited influence, but, together with trades, architects and the construction industry as a whole, they must use what influence they have.



Figure 23 Evolution of the area to be renovated in square metres and associated reduction in greenhouse gas emissions



Source: Münster Climate Neutrality 2030 concept study, p. 25

The City Administration is leading by example with its strategy to achieve climate neutrality for municipal buildings by 2020. Münster also has an initiative by the district craftsmen's association and craft businesses, Altbau-Partner Handwerk Münster, that have joined forces to form a powerful alliance for the expert deep renovation of existing buildings. They support Münster citizens who need help with in modernising and renovating existing buildings. Integrated advisory services, ideally in combination with financial incentives such as Münster's "climate-friendly residential buildings" funding programme, have been in place since 1997 and need to be expanded to cover private renovators and homeowners' associations.

So far, we have primarily outlined the areas of action that - as outlined in the commitment - are of outstanding importance for the climate protection process due to their CO₂ savings potential. However, the City of Münster is also focussing on non-technical fields of action, the impact paths of which are explained briefly below.

Climate-friendly work and business

To maintain an equal emphasis on economic, social and environmental concerns in Münster, emissions must be decoupled as far as possible from employment growth. To achieve this, the 2030 scenario requires an 80-90% fall in GHG emissions per employee - which means a climate-neutral economy. One example is the introduction of mandatory use of photovoltaics in suitable new commercial buildings. This is one area where there is direct potential for municipal action.

Key challenges for realising this transformation include:

- Insufficient renewable electricity for the manufacturing industry. Given the target of CO₂ neutrality by 2030 and to ensure Münster's viability as a future business location, particularly for manufac-

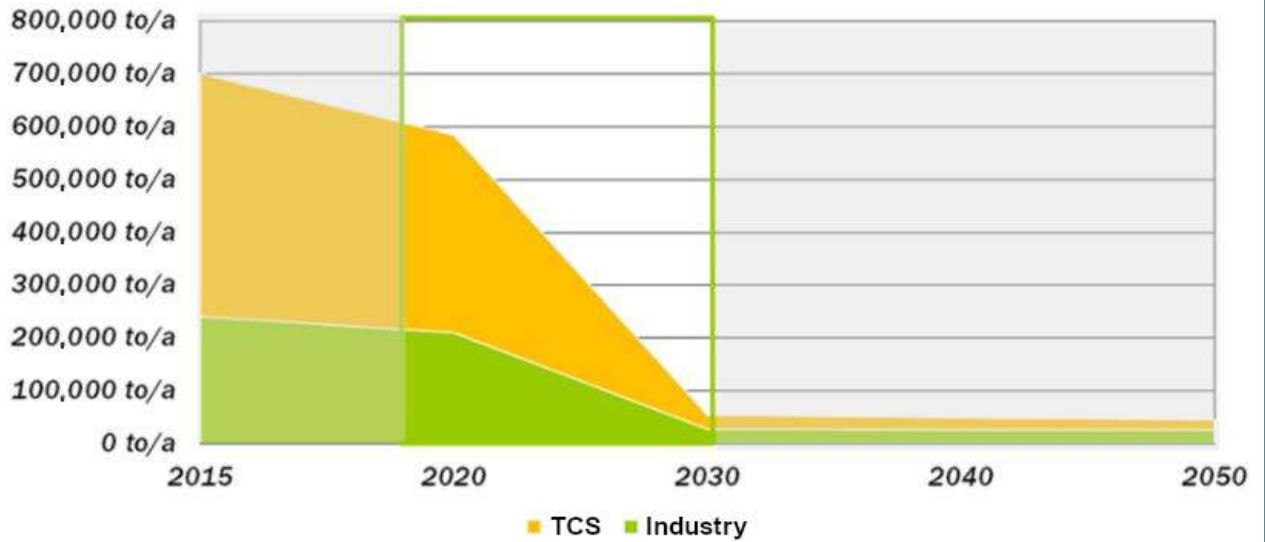


turing and industrial companies, it will be important to provide companies with a reliable, competitive supply of electricity from renewable energy. In view of the limited resources for constructing and operating power plants generating electricity from renewable energy, a proportion of renewable electricity will need to be sourced regionally wherever possible in future.

- Process energy is generated efficiently, but is not climate-neutral. Final energy demand for process heat in Münster arises in particular from companies in the chemical and food industries. Process heat accounts for the largest share of final energy consumption in the industrial sector. The high cost pressure on energy-intensive companies results in the rapid implementation of efficiency improvements. This is not yet sufficient to achieve climate-neutral production. In addition to further efficiency efforts, additional measures for decarbonising process heat are needed. This challenge too can be addressed through the Climate City Contract and dialogue with business representatives.
- Climate-neutral transformation of existing companies and relocation: For many Münster companies, sustainability is also a key corporate development issue. A municipal economic policy orientation towards climate neutrality makes it necessary to focus action on supporting the transformation of existing companies and the establishment of new climate-neutral companies. This issue is a core topic of discussion in "Münster's Alliance for Climate Protection - the Business Network", where experiences in this area are exchanged.
- Lack of knowledge about their emissions. Companies have a social responsibility to reduce climate-relevant emissions. They are coming under increasing pressure to provide information about their efforts to do so. A fundamental problem is often a lack of data on emissions, particularly supply chains emissions. Small and medium-sized companies in particular have neither the knowledge nor the resources to analyse this. Here, too, the Alliance and the start-up advice for SMEs are an important element of municipal action.



Figure 24 Scenario for changes in greenhouse gas emissions in the trade, commerce and services (TCS) and industry sectors



Source: Münster Climate Neutrality 2030 concept study, p. 28

Climate-friendly individual choices

Promoting social change: The experience of being able to do something about global warming strengthens people’s feelings of self-efficacy and is a driving force for social change towards greater sustainability and climate protection. It is not about lecturing, but about taking care of yourself and thus setting a positive example for others. When a critical mass of people is attained, this individual experience becomes a social process.

The Münster Climate Neutrality 2030 concept study shows that around 25% of Münster’s citizens would have to be activated and qualified through concrete offers in order to achieve permanently stable climate-friendly behaviour in everyday life. Experience from City of Münster’s projects (e.g. the climate-friendly choices real-world laboratory) shows a there is the potential to reduce energy-related CO₂ emissions by between 1 and 1.5 tonnes per person per year.

Figure 25 Transformation principle diagram



Source: Münster Climate Neutrality 2030 concept study, p. 31



4.1.2.1 Münster climate neutrality scenario 2030: co-benefits

See B1-1 - Impact Pathways - where the co-benefits are broken down into fields of action.



4.2 Module B-2 Climate Neutrality Portfolio Design

Module B-2 "Climate Neutrality Portfolio Design" should contain a project description for **each intervention planned**, including interventions by local businesses and industry, according to the template B-2.1, including actions those interventions targeted at enhancing carbon sinks to address residual emissions. Narrative analysis and comments can be provided in B-2.2. A summary of how residual emissions are addressed should be provided in B-2.3.

4.2.1 Münster climate neutrality 2030: List of the portfolio of measures

The portfolio of measures of the City of Münster Group focuses on the implementation of strategic projects that are primarily intended to bring about systemic change with regard to both the City of Münster Group's direct and indirect scope for action. The Münster City Group's climate protection work has long pursued the approach of achieving climate protection targets not only by technical measures. What is also needed is a cultural transformation of the entire urban society. The following areas of action are therefore at the centre of the portfolio of measures: Energy production, Mobility, Building carbon reduction measures, Business and academia, Climate budget, Education and food. The measures listed in this brief description are explained in detail in section 4.2.2.

Table 21 Description of action portfolios - textual or visual

B-2.1: Description of action portfolios - textual or visual		
Fields of action	Portfolio description	
	List of actions	Descriptions
Energy production		
Energy production	Wind expansion: In 2030, the number of wind turbines is to be doubled to 42 in order to generate 280 GWh of electricity per year.	Target 2030: As part of an innovative, climate protection-orientated energy supply, Stadtwerke Münster will invest heavily in renewable generation capacities in onshore wind turbines on open spaces. The number of wind turbines is to be doubled to 42 by 2030 in order to generate 280 GWh of electricity per year.
Energy production	PV expansion: In 2030, PV systems with a capacity of 100 GWh of solar power will be installed by Stadtwerke Münster.	Target 2030: As part of an innovative, climate protection-orientated energy supply, Stadtwerke Münster will invest heavily in renewable energy generation capacities, specifically in the construction of photovoltaic systems on (private) roofs in Münster. Stadtwerke Münster wants to expand PV systems (roof systems, ground-mounted systems) by 2030 in order to generate 100 GWh of electricity from the sun.



B-2.1: Description of action portfolios - textual or visual		
Fields of action	Portfolio description	Descriptions
	List of actions	
		The majority of these systems will be realised in the City of Münster. This is achieved by creating customised offers for the target groups "industry/commerce, the housing sector, Münster city administration and agriculture".
Energy production	Municipal heat and energy utilisation planning (ENP)	<ul style="list-style-type: none"> - Creation of an iterative ENP to implement the (upcoming) legal obligation for municipal heat planning - ENP should go beyond municipal heating planning in terms of content, at least in perspective, and consider topics such as electricity, green gases and cooling integrated - Determination of different spatial-temporal energy supply options for long-term planning security for all parties involved, taking into account decarbonisation, price stabilisation and energy security - if possible, publish interim results during the process - Energy efficiency of buildings is also an important condition - Consolidation of already ongoing and existing concepts of the relevant players
Energy production	Transformation plan for heating networks (in the context of federal funding for efficient heating networks (BEW))	<p>Target 2030: Stadtwerke Münster is continuing the transformation to a green district heating supply in Münster with its transformation plan for heating networks. By 2030, the proportion of renewable energies in district heating should be 30%. Realistically, a complete switch to green heat generation will not be possible by 2030. Transitional solutions with environmentally efficient combined heat and power technology are required.</p> <p>Stadtwerke Münster's heating strategy consists of various decentralised renewable generation technologies, with the district heating network forming the backbone as an existing large-scale inner-city distribution structure that is to be further densified. Deep geothermal energy, which is a promising option in view of the geological situation, could become a major component of heat generation. Other leading technologies include solar thermal energy, electrical heat generation in power-to-heat plants, utilisation of environmental heat using large heat pumps (including from the Dortmund-Ems Canal and from wastewater) as well as seasonal large-scale heat storage systems. Some of these technologies are or will be located in the combined heat and power plant.</p>



B-2.1: Description of action portfolios - textual or visual		
Fields of action	Portfolio description	
	List of actions	Descriptions
Energy production	Domestic heat from the depths: Stadtwerke Münster plans to commission the first geothermal heating plant with a drilled doublet in 2030	Target 2030: In 2030, Stadtwerke Münster plans to put the first geothermal heating plant with a borehole into operation and feed up to 40 GWh of climate-neutral energy into Münster's district heating network every year. Stadtwerke is achieving this by continuously exploring the actual potential of deep geothermal energy for Münster at a depth of 1,500 metres using 3D seismics and test drilling. Subsequently, the plan to scale up the utilisation of deep geothermal energy by additional locations in the future will then be more clearly detailed and planning for the second drilling round will begin.
Energy production	Large heat pumps as all-rounders for environmental heat utilisation	Target 2030: Four large heat pumps are to come into operation by 2030. These utilise commercial and industrial waste heat, the Dortmund-Ems Canal and waste heat from sewage treatment plants. Together, these systems will generate up to 100 GWh of climate-neutral heat.
Energy production	Ground-mounted solar thermal energy as an accelerator of the transformation: By 2030, ground-mounted solar thermal energy should be established in Münster.	Target 2030: By 2030, ground-mounted solar thermal energy should be established in Münster, as the technology has been tried and tested. Solar thermal energy could supply customers of Stadtwerke Münster complete climate-neutral heating in the summer. Additionally, from 2030, up to 50 GWh of heat per year could be generated with these systems. Summer surpluses are to be made usable through seasonal thermal energy storage for the autumn.
Energy production	Green local heating: In 2030, four new development areas are to be supplied with heat and "temperature control" using green local heating	Target 2030: In 2030, four new development areas are to be supplied with 5th generation district heating and cooling. The future path for the existing district heating networks in Albachten, Roxel, Amelsbüren and Hiltrup is being mapped out in the transformation plans. In the Amelsbüren's heating network, a first renewable heat generation plant is to be implemented and put into operation by 2030. Project planning for the utilisation of waste heat from the new sewage treatment plant in Hiltrup is to be completed
Energy production	110kV target grid planning: In the south of Münster, electricity is to be supplied by a high-voltage grid in 2030.	Target 2030: Stadtnetze Münster wants to have its own high-voltage grid by 2030. This high-voltage grid consists of two redundantly designed high-voltage cables that feed a new electric power substation at the Hansa Business Park. Utilizing this new electric power substation, the south-western part of Münster, around the Hansa



B-2.1: Description of action portfolios - textual or visual		
Fields of action	Portfolio description	
	List of actions	Descriptions
		Business Park, will be reliably supplied with electricity. It also ensures that the megawatts of renewable energy generated on-site from the surrounding renewable energy plants, e.g. from Stadtwerke Münster's photovoltaic systems and wind turbines, are fed into Münster's electricity grid. Thereby safeguarding Münster's energy requirements via its own electricity generating infrastructures. In this way, the Stadtwerke Münster Group is making an important contribution to the energy and mobility transition.
Energy production	Grid transformation - intelligent low voltage: In 2030, 95% of all households will be equipped with intelligent metering systems for electricity and 100% for gas.	Target 2030: <ul style="list-style-type: none"> - 95% of all households are to be equipped with smart metering systems by 2030 (electricity). - 100% of all households with gas consumption devices should have an intelligent metering system for gas and should be connected to the smart meter gateway (see: §20 MsbG & §40 MsbG) (gas). - 100% of all households with district heating consumption should have an intelligent metering system for heat quantities and should be connected to the smart meter gateway (see: §3 FFVAV ff.) (District heating). - From a grid perspective, this enables better transparency of the consumption and performance of cross-sector purchases. Thereby, enhancing the management of energy consumption facilities. (see: §14a EnWG)
Energy production	Gas grid transformation & hydrogen	Target 2030: Stadtnetze Münster GmbH is part of the H2vorOrt initiative, which has launched an industry-wide planning process with the Gas Grid Transformation Plan (GTP), which lays the foundation for the hydrogen transformation in the distribution grid throughout Germany. H2vorOrt is an association of currently 47 distribution network operators in the German Technical and Scientific Association for Gas and Water (DVGW) in cooperation with the Association of Municipal Enterprises (VKU), who are pooling their expertise for a ramp-up of the hydrogen economy. The aim of the GTP is to accelerate the transformation of the gas distribution networks and to embed the individual plans of the network operators in a coherent target picture for all of Germany. Part of the transformation process is connecting the distribution grid to the hydrogen long-distance grid by rededicating individual transfer stations. Stadtnetze Münster has concrete expansion plans for the supply of climate-neutral gases for all other generation plants that are to be operated in the future. In



B-2.1: Description of action portfolios - textual or visual		
Fields of action	Portfolio description	
	List of actions	Descriptions
		<p>addition, joint projects with upstream network operators will secure capacities of green gases at an early stage and feed them into the distribution networks. In addition, Stadtwerke Münster and Westenergie AG have decided to push ahead with the ramp-up of green hydrogen in Münster. This partnership also extends to its subsidiaries, Westnetz GmbH and Stadtnetze Münster GmbH. In a letter of intent (LOI), the four companies have agreed to share their experience with regard to hydrogen infrastructure and the potential supply of hydrogen by Stadtwerke Münster.</p>
Energy production	Integrated area concept MS: Settlement, open/green spaces and locations for renewable energies in balance	<p>The Integrated Area Concept for Münster (IFM), allows the city to proactively focus on future city development at an early stage. The aim is to identify developmental areas for new housing and workplaces, to locate areas for climate-neutral energy supply while, at the same time, protect and develop the city's high-quality open spaces, which are a key unique selling point. Thereby, creating a sustainable framework for future spatial urban development while concurrently preserve Münster's ability to act with regard to future housing and workplace requirements.</p> <p>In this respect, the IFM process is intended to prepare a technically balanced consideration of the different demands on the space; it is informal and is carried out proactively by the city.</p>
Energy production	Fibre optic expansion Münster	<p>Target 2030: An efficient fibre optic supply will become even more decisive as a location factor for Münster in the future. Therefore, the Stadtwerke Münster is ensuring the "digital heartbeat" of its city. By 2030, 80% of all households in Münster are to be supplied with fibre optic connections. To this end, Stadtwerke Münster has agreed to a comprehensive cooperation with Deutsche Telekom, among others, in which Stadtwerke will contribute its expertise for laying the fibre optic lines and Telekom will provide its own know-how.</p> <p>Due to its higher efficiency, fibre optic technology consumes significantly less electricity than copper-based networks (up to 17 times less electricity). As a result, Stadtwerke Münster's fibre optic expansion is making a crucial contribution to the goal of climate neutrality in Münster.</p>
Building carbon reduction measures		
Building carbon reduction measures	Strategy for achieving climate neutrality for municipal buildings by 2030	Strategy to achieve climate neutrality by 2030 through deep renovation of 46 municipal locations on the basis of the building guidelines resolution of the City



B-2.1: Description of action portfolios - textual or visual		
Fields of action	Portfolio description	Descriptions
	List of actions	
		Council: "The energy consumption of municipal buildings is to be reduced by 50 % and CO ₂ emissions by 70 % by 2030" (compared to 1990)
Building carbon reduction measures	Energy and climate-friendly neighbourhood deep renovation	Energy and climate-friendly neighbourhood deep renovation - Climate protection and climate adaptation in the neighbourhood: Central project to increase the general deep renovation rate - Promoting sustainable, flexible-use urban neighbourhoods - Integrated approach to climate protection, housing, energy supply, mobility and local supply and other topics in Münster.
Building carbon reduction measures	Building guidelines and energy standard for new buildings	On 26 August 2020, the City Council of Münster adopted the revised building guidelines with an amendment for Münster. The energy consumption of municipal buildings is to be reduced by 50% and CO ₂ emissions by 70% by 2030 (compared to 1990). There are binding quality criteria and guidelines for the construction process of municipal buildings as a whole, both for new builds as well as for conversion and deep renovation measures. The building guidelines apply to all municipal buildings in the City of Münster. According to the resolution, the municipal subsidiaries were also requested to adopt and apply the building guidelines.
Building carbon reduction measures	Deep renovation strategy Wohn- und Stadtbau GmbH	Conversion to CO ₂ -free heat and hot water supply for existing buildings and reduction in consumption: insulation, partial and complete deep renovation, optimisation of operations
Building carbon reduction measures	Thermographic flight MS	The project consists of three phases: <ol style="list-style-type: none"> 1. Thermographic flight: Recording the thermal images of Münster's roof landscape Data evaluation 2. Letter to homeowners and an offer for advice on energy-efficient deep renovations. 3. Ongoing free energy advice offers, delivery and analysis of the thermographic images
Building carbon reduction measures	Climate-friendly residential buildings funding programme	With its funding programme, the City of Münster promotes a wide range of measures to optimise the energy efficiency of residential buildings in the city. From building insulation and heating system replacement to green roofs and ecological insulation materials, there are many ways to make an important contribution to reducing CO ₂ emissions in Münster.
Building carbon reduction measures	PV systems on municipal buildings	All future new municipal buildings and extensions will be equipped with full-surface PV systems on the roofs - Council draft is being prepared and will be discussed before the 2024 summer break.



B-2.1: Description of action portfolios - textual or visual		
Fields of action	Portfolio description	
	List of actions	Descriptions
Building carbon reduction measures	Guidelines for climate-friendly urban land-use planning	The planning guidelines list the climate protection and climate adaptation issues that must be taken into account in the respective planning phases.
Building carbon reduction measures	Establishing Münster's standard for climate-friendly construction in land purchase agreements and urban development contracts"	The combination of the "KfW Efficiency House/Building 40" standard and the solar standard significantly reduces CO ₂ emissions in the operation of new buildings and, depending on the building, also achieves an energy-plus standard, allowing the building to generate more energy over the year than it consumes.
Mobility		
Mobility	Electrification of public transport	<p>Target 2030:</p> <p>Another important building block for the heartbeat of Münster is substituting the municipal fleet of diesel busses by electric and emission-free drive technologies. In addition, the development of the transport sector into a systematically interlinked multimodal mobility system. By 2029, 100% of the 116 buses owned by the Stadtwerke Münster and around 100 rental busses from the decentralised depots of private partner companies on the outskirts of the city are to be electric and emission-free.</p> <p>At the same time, the necessary infrastructure is being built at the bus depot and at selected bus stops. Various funding programmes are utilised to finance the project. The Stadtwerke Münster are trying to involve their contractors and regional transport companies as far as possible.</p> <p>The multimodal mobility system will integrate various modes of transport, including carsharing by the Stadtwerke's holding in the carsharing provider "Stadtteilauto".</p>
Mobility	Expansion of public charging infrastructure	The public charging infrastructure is to be continuously developed and expanded so that a comprehensive range of charging options can be provided in future and the switch to e-vehicles becomes more attractive.
Mobility	Expansion of e-car sharing supply	In order to strengthen eco-mobility, to reduce the number of cars in the city and to improve access to the city-wide car sharing service (including e-car sharing), space is being made available for this in the traffic area as well as to potential providers in a tendering process.
Mobility	Expansion of mobility stations	The expansion of mobility stations is intended to improve the networking of modes of transport – especially in terms of eco-mobility.



B-2.1: Description of action portfolios - textual or visual		
Fields of action	Portfolio description	
	List of actions	Descriptions
		Once quality standards have been defined and a political decision has been made on the site concept, the plan is to gradually implement it from 2024 onwards.
Mobility	Car park concept	An action-oriented concept is being developed to reorganise and adapt the parking space availability in the city centre. The aim is to reduce visible parking in public spaces and thus increase both amenity in and accessibility of the city. The residents' parking zones are to be extended. Moreover, a car park management system is to be introduced and "fair parking" to be implemented.
Mobility	Cycle network 2.0	The aim of the "Cycle Network 2.0" is to achieve a hierarchisation and overall improvement of the city's cycling network. Focus is to increase the share of cycling in eco-mobility and thus reducing traffic-related CO ₂ emissions. To this end, various recommendations for action were developed as part of the concept, which was submitted for political consultation at the beginning of 2024.
Mobility	City administration guidelines "Utilising eco-mobility for business trips and journeys"	Definition of guidelines that bindingly include sustainability and climate protection aspects for business trips of employees of the city administration.
Mobility	Expansion of employee mobility programmes within the City administration	Various projects are being planned or have already been implemented to support/encourage city administration's employees to use eco-mobility for their commute to work or to provide incentives to switch from motorised private transport to eco-mobility.
Mobility	Reduction & electrification of the municipal vehicle fleet	The municipal vehicle fleet is to be exchanged to e-mobility on an ongoing basis. This is already happening with many replacement purchases. In addition, the size of the municipal vehicle fleet is being critically analysed in order to reduce overcapacity.
Mobility	S-Bahn Münsterland	Local rail passenger transport is to be massively increased over the next few years, thereby achieving a significant shift in commuter traffic from motorised private transport to eco-mobility as a whole. In addition to increasing train rides on existing routes, disused railway lines are to be reactivated and new stops are to be built.
Mobility	Redesign of the existing public transport service	From now on, the existing public transport services will be further developed and conceptualised with the aim of increasing eco-mobility and thereby reducing transport-related emissions. A central component of this is the development of the local transport plan
Climate budget		



B-2.1: Description of action portfolios - textual or visual		
Fields of action	Portfolio description	
	List of actions	Descriptions
Climate budget	Socio-ecological criteria for procurement	<p>On 7 September 2022, the Council commissioned the First Mayor to set up a joint working group of politicians and the administration in order to develop socio-ecological criteria for the procurement of goods, services and trades. Moreover, this working group's tasks is also to propose a procedure for ensuring and monitoring compliance with these criteria in accordance with the law.</p> <p>The administration has proposed a guideline text to the working group and submitted it for discussion in the political realm with related stakeholders from civil society. Political representatives have commented on the draft of guidelines that is now with the administration for revision so that the working group can then vote on version to propose to the Council.</p>
Climate budget	Guidelines for sustainable investments	<p>There is no standardised definition of a sustainable investment. In principle, sustainable investments are responsible, ethical, social and ecological investments. Environmental factors, social responsibility and good corporate governance are included in the investment process (ESG criteria). Sustainable investing indirectly increases the pressure on companies and countries to fulfil their responsibility towards our society to a greater extent. The investment has a steering function and strengthens sustainable companies/states in competition. Since 2016, investments have been made in accordance with sustainability criteria.</p> <p>The investment guidelines have now been developed and expanded to include sustainability criteria. For the first time, investment and exclusion criteria for the purchase of government bonds have also been defined.</p> <p>In addition, certain ESG rating classifications must be met in the future for investments in companies / countries.</p>
Climate budget	Sustainability reporting in the City of Münster Group	<p>Strengthening sustainability reporting in the City of Münster Group.</p> <p>The existing reporting in the City of Münster Group is heterogeneous since some obligations exist or are emerging (EU CSRD (Corporate Sustainability Reporting Directive) and other reporting formats such as the public-interest-oriented balance sheet are in use.</p> <p>The sustainability reporting of the City of Münster Group's companies is to be strengthened. There will be recommendations on this within the framework of the Public Corporate Governance Code.</p>
Climate budget	Establishment of construction investment controlling	The motion A-R/0053/2022 submitted by Bündnis 90/Die Grünen, SPD and Volt to the Münster City Council aims to "improve the controlling of construction and



B-2.1: Description of action portfolios - textual or visual		
Fields of action	Portfolio description	
	List of actions	Descriptions
		rental costs". To this end, the politicians are calling for the development and establishment of an independent construction investment controlling. In particular, this should serve to keep an eye on investment costs and to assess which cost increases are actually necessary. In addition, controlling should take a critical look at the demands of individual offices and examine the extent to which these are actually necessary. Politics, real estate management and individual offices are currently not able to check this independently.
Climate budget	Development of a climate budget	Steering by the budget is to be combined with an assessment of climate impacts. The climate budget tool is intended to help us understand the impact of decisions regarding investments and financing on the climate. Yet, no local authority in Germany does have a climate budget. Therefore, a concept needs to be developed in order to interlink information on the budget and information on climate projects.
Climate budget	Green bonds	In September 2021, the City Council of Münster resolved that the administration should initiate sustainable capital procurement via a green bond. The Green Bonds has been placed on the market in September 2022. Due to the great interest in the Green Bonds, the original volume of EUR 100 million was increased to EUR 140 million and allocated. It was pleasing that all maturities from 7 to 20 years met with interest from investors and could be serviced. A total of 16 investors subscribed to the green bonds. The first allocation and impact report on the green bond was published in September 2023. The report provides information on the use of funds (allocation report) and the sustainability impact of the financed investments and projects (impact report). The launch of a further green bond for 120 million euros is planned in 2024.
Education and food		
Education and food	Action plan for a sustainable food system Münster	. The goals of a sustainable food system are - Implementation of the German Nutrition Society's quality standards for community catering in as many community catering establishments as possible, including an increase in organic-certified community catering establishments (bronze, silver, gold)



B-2.1: Description of action portfolios - textual or visual		
Fields of action	Portfolio description	Descriptions
	List of actions	
		<ul style="list-style-type: none"> - Establishing and expanding regional value chains and strengthening supply structures for regional, seasonal, fair trade and organically grown foods - Contribute to halving food waste and reducing food losses or packaging waste - Expansion of co-operations - Expansion of educational and information services and - Exploring and utilising the municipal scope for action in order to achieve targets <p>.</p> <p>In August 2023, the city administration has submitted a project proposal for the BMEL competition "Food for Münster 2030 (FoorMS2030). Shaping the food transition in the region collaboratively" in cooperation with Münster University of Applied Sciences and the Ernährungsrat e.V. It is a two-stage process.</p>
Education and food	Establishing education for sustainable development firmly in school and extracurricular educational institutions	Establishing education for sustainable development (ESD) in educational institutions by 2030 is a goal adopted by the City of Münster Council. The priorities for 2024 include a focus on climate and food.
Education and food	Conversion of city administration's canteen food supply	<p>Goal by 2030:</p> <ul style="list-style-type: none"> - Where available, food demands in the canteens of Münster City Group are covered entirely by environmentally friendly, seasonal, organic and local produce. This also applies to municipal facilities and businesses (within the available budget) <p>Various sub-projects need to be realised in order to achieve this goal. Currently, the central approach is to apply for the canteen programme of the NRW Consumer Advice Centre: Through this programme, the NRW Consumer Advice Centre offers specialist advice to support publicly funded institutions in optimising their catering services.</p>
Education and food	Scaling climate training	The so called City of Münster's ClimateTraining programme is a long-term project. This coaching programme is intended to initiate a "snowball effect" through the activation and qualification of Münster's population to adopt climate-friendly behaviour and thus drive forward the transformation of urban society by 2030. ClimateTraining currently takes place twice a year in small groups with around five participants (trainees). Each of these groups is coached by volunteers, so called climate trainers. In the ClimateTraining programme, the participants



B-2.1: Description of action portfolios - textual or visual		
Fields of action	Portfolio description	
	List of actions	Descriptions
		<p>(trainees) develop individual climate protection measures. Moreover, a portfolio of around 15 products and services in the context of housing and energy, mobility, consumption and nutrition is supplied permanently by Münster-based companies and organisations in order to provide the opportunity to test climate-friendly products and services.</p> <p>The ClimateTraining approach is to be scaled up, for example by addressing different and bigger target groups, such as neighbourhoods and school.</p>
Education and food	Climate-friendly lunch catering in schools	<p>Status: The requirements for the quality of lunchtime catering in schools are increasing (Council resolution 2022 / citizens' suggestion §24 GO). The city administration has therefore increased the required proportion of certified organic food from 20% to 30% in the latest tenders.</p> <p>The key component of climate-friendly lunchtime catering would be the use of regionally produced food and catering. This could minimise transport costs and thus CO₂ emissions. However, restricting tenders to a regional area is contrary to public procurement law. The schools currently have different catering systems depending of the availability of on kitchen-, catering facilities-.</p> <p>At the moment, the city administration is exploring alternative forms of organisation for climate-friendly lunchtime catering at schools and day-care centres. Among other things, the possibilities of reducing climate-damaging effects by utilising existing canteen kitchens are being analysed. Due to the complexity of the topic (e.g. various stakeholders with different interests, legal framework conditions, financing), a considerable amount of research and coordination is required. The city administration assumes that a draft resolution on lunchtime catering in day-care centres and schools can be presented to the City of Münster's council committees in the third quarter of 2024.</p>
Education and food	Climate protection education	<p>Objective: To encourage Münster's residents of all ages and stages of life to adopt climate-friendly lifestyles and thus anchoring of such life-styles in urban society. Examples of climate-friendly behaviour are to be presented in a target group-oriented manner and behavioural changes are to be initiated in order to exploit CO₂ reduction potential by behavioural changes. The programmes offered by the vhs ((Münster Adult Education Centre) and the Münster Public Li-</p>



B-2.1: Description of action portfolios - textual or visual		
Fields of action	Portfolio description	Descriptions
	List of actions	
		brary in the areas of environmental education, climate protection and sustainability have already been met with great interest and are to be consolidated/expanded.
Education and food	Biostadt Münster and the Münsterland eco-model region	The City Council of Münster has set the following targets for the year 2030: <ul style="list-style-type: none"> - to actively support regional value creation processes, - to organise catering in municipal canteens, schools and day-care centres to be more organic, fair, regional, vegetarian and vegan, cover 100% of food demands (where available) from environmentally friendly, seasonally produced food from the region and - increase the share of supply by organic farming to at least 5 % by 2030 and also to increase the share of supply by more sustainable conventional farming.
Education and food	"DrinkWater" campaign	Goals: <ul style="list-style-type: none"> - Provision of drinking water in public spaces - Climate protection (CO₂ reduction) / heat prevention / health promotion - Education and information Sub-projects: <ul style="list-style-type: none"> - Construction of drinking fountains to provide drinking water in public places. As far as possible, this should be linked to the existing infrastructure (e.g. public toilet facilities, historic fountains). - Recruit additional refill locations (https://refill-deutschland.de/muenster/) throughout the city, especially in the outer districts, and increase the level of awareness through effective publicity measures. Information campaign "DrinkWater" on the advantages of tap water (fresh from the tap at home and available at any time / constant quality control / healthy because no calories and lots of minerals / inexpensive, approx. one cent for two litres / particularly sustainable because waste-free and no CO ₂ for transport and packaging).
Business and academia		
Business and academia	Crafts masterplan	The skilled trades sector is of great importance for tackling the challenges of the future. This applies in particular to the climate and energy transition. The skilled trades can only fulfil their key function if the framework conditions are



B-2.1: Description of action portfolios - textual or visual		
Fields of action	Portfolio description	
	List of actions	Descriptions
		appropriately designed. The City of Münster, the Chamber of Crafts Münster and the District Crafts Association Münster are therefore working on a joint masterplan to provide concrete support for the skilled trades and thus create the best possible conditions for a strong climate-friendly skilled trades sector.
Business and academia	Ökoprofit	138 companies / institutions from Münster are already benefiting from the savings they have achieved by participating in the Ökoprofit® consultancy project (supplied by the Department of green spaces, environment and sustainability): For one year, companies and sustainability consultants scrutinise all of a company's processes in order to develop and to implement concrete measures through workshops and on-site consultations. All participants are awarded the title of "Ökoprofit company". To date, 13 rounds of the project have been carried out, and a total of 20,108 tonnes of CO ₂ have been saved.
Business and academia	Hydrogen	As of April 2023, a Hydrogen Coordinator has been installed at the Technologieförderung Münster GmbH. The Hydrogen Coordinator is tasked with the development of a hydrogen strategy for the business location Münster. H2inBatCellProd (technology funding, Fraunhofer FFB, Westfalen AG, municipal utilities, municipal grids): Use of green hydrogen as an energy source for drying lines (Trocknungsstrecken) and drying rooms (Trockenräume) in battery cell production
Business and academia	Münster Alliance for climate protection	Network of around 100 Münster-based companies that have committed themselves to the city's climate protection targets and draw up a CO ₂ carbon footprint and a climate protection measure every year. In return, they receive guidance and support from the city administration: four to five annual network meetings, four newsletters per year, various advisory services (5 to 10 consultations per year), and public relations work.
Business and academia	Location development strategy 2030+	Establishing the goal of climate neutrality as a strategic guideline in the 2030+ economic development strategy. Meaning e.g. climate-neutral business parks, expansion of infrastructure for climate-neutral business such as H ₂ networks and green energy, strengthening and further development of Münster as a location of battery research, production, utilisation and recycling and development of the GreenTech region Münsterland.



B-2.1: Description of action portfolios - textual or visual		
Fields of action	Portfolio description	
	List of actions	Descriptions
Business and academia	Business & Technology Development Office for the City of Münster: Information events, workshops, podcast	Information events, workshops, podcast on sustainability and climate protection organised by the Business & Technology Development Office for the City of Münster
Business and academia	Climate City Contract	In the Climate City Contract, the City of Münster Group, actors of the city society and Münster's residents publish their climate saving contributions for Münster on the way to becoming a climate-friendly city. By doing so they commit themselves and inspire and motivate others in doing the same thing. Because we are all needed! Starting with a public event called the City Forum in June 2023, all members of Münster city society, residents - whether companies, citizens, associations or other organisations – have been invited to submit and nominate climate-friendly measures that they want to implement by themselves. Thereby, they contribute to the Climate City Contract as a contribution to Münster's process of becoming a climate-friendly city. Every contribution on the road to climate neutrality is important. Contributions to the Climate City Contract have been developed in an intensive dialogue with businesses and universities.
Business and academia	Developing climate-neutral commercial areas – both existing ones and those under development	<p>1. Transforming existing commercial areas to be climate-neutral: Appointment of a new position at Business & Technology Development Office for the City of Münster on 1 January 2024. In 2024, analysis and implementation of initial measures;</p> <p>2. New commercial areas: including others,</p> <ul style="list-style-type: none"> • Gelmer commercial area - north of Heitmannsweg (development plan procedure with the focus on of "climate –positivity" that has been initiated by a council resolution 22 March 2023), • Busso-Peus-Straße model district (two-staged urban planning competition: council resolution solved on 10.05.2023, climate-positive development competition on 15.02.2024), • Steinfurter Straße model district (workshop procedure completed, council resolution on 10.05.2023, decision to organise competition in mid-2024: climate-positive development)...
Business and academia	Recycling City	The German Institute of Urban Affairs, the Association of German Cities, and 22 municipalities (Business & Technology Development): A model approach



B-2.1: Description of action portfolios - textual or visual		
Fields of action	Portfolio description	
	List of actions	Descriptions
		consisting of a mission statement and objectives, strategy, processes, structures, instruments and products for the development of holistic municipal circular economy strategies is being developed in the network of cities.
Business and academia	Information and advice services on energy efficiency for companies	Climate protection consulting services for small and medium-sized companies focussing on energy saving and sustainable, efficient energy use based on renewable energies. Objective: to initiate very specific climate protection measures in companies. Low-threshold offer: no applications, forms, costs for the company.
Waste & circular economy		
Waste & circular economy	Münster waste-free by 2030	According to the Vision 2030, awm is striving for a waste-free Münster by 2030. Münster's waste management company wants to develop Münster into a capital of waste avoidance by 2030 by actively involving citizens and by a strong network of cooperation partners - including measures like projects with citizen participation, target group-oriented educational work, high-quality recycling of waste and partnerships for the generation of renewable energies. Consequent waste avoidance by urban society and innovative utilisation/recycling of the remaining waste make a fundamental contribution to reducing greenhouse gas emissions.
Waste & circular economy	Pyrolysis as a potential expansion of processes for the utilisation of biowaste and/or green waste	In addition to the measures and projects outlined in the DNK (The German Sustainability Code) report, awm is examining further innovative technologies and methods in order to continuously optimise its processes and intensify its contribution to the bioeconomy and circular economy. One focus is currently on pyrolysis as a potential expansion of processes for the utilisation of biowaste and/or green waste. This negative emission technology (NET) could be utilized to produce biochar from biogenic waste such as fermentation residues and screen overflows from composting.
Green infrastructure & nature-based solutions		
Green infrastructure & nature-based solutions	Climate adaptation policy work programme	
Agriculture		
Agriculture	Position of an Agricultural Officer the City Administration Münster	Since 2021, the city administration of Münster has established the position of an Agricultural Officer, whose task is to advise the administrative management and its offices on all agricultural issues and to act as a contact for Münster's farmers in order to ensure a good exchange between the city administration



B-2.1: Description of action portfolios - textual or visual		
Fields of action	Portfolio description	
	List of actions	Descriptions
		and farmers. This task also comes into play in many projects relevant to climate protection.



4.2.2 Münster climate neutrality 2030: from project to principle - the step from planning to action and acceleration

In order for local climate and energy transition to be successful, it is critical to move from the development of concepts and plans to the development, prioritisation and, most importantly, the implementation of measures and projects. To this end, Münster is focussing in particular on the implementation of strategic projects that are within the city group's scope of action and with which the greatest possible direct and indirect influence can be exerted on the realisation of climate protection measures. Direct influence means that the City of Münster Group can realise the climate protection measures by itself. Indirect influence means that the City of Münster Group sets the framework conditions, but the realisation of climate protection measures is highly dependent on the involvement of the city society. Strategic projects of the City of Münster Group, are defined as projects that enable a realisation of climate protection-relevant activities in the City of Münster Group and in city society by

- Support and promotion
- Making change possible
- Setting clear rules

This focus on these strategic projects, which then should lead to corresponding implementation projects across the breadth of society and of the City group, allows for "moving from planning to action" to a much greater extent and, if possible, to generate additional acceleration of implementation. The strategies, goals and objectives on which these projects are based have been developed in the 100% Climate Protection Masterplan and the Münster Climate Neutrality 2030 concept study. The implementation of the strategic projects is managed by the principle "from project to principle", which means that focus is put on systemic changes rather than on individual projects. To illustrate this, the City of Münster is not only deeply renovating individual school buildings, but has also developed a strategy and a roadmap for how the relevant building portfolio needs to be deeply renovated in terms of energy efficiency.

In the following, an overview of the portfolio of measures is provided which are in the implementation phase as part of the City of Münster Group's strategic projects. It is not possible to show all of the underlying individual implementation measures. This focus on the strategic projects is linked to a new governance structure that is currently being established in order to accelerate implementation. This structure not only has an impact in terms of the climate protection process, but also in terms of climate protection policies, as the fields of action go beyond the traditional fields of action of municipal climate protection. This means that the cross-sectional orientation of climate protection in the City of Münster Group is also realised by a holistic approach to climate protection.

4.2.2.1 Anchoring and monitoring climate protection as a cross-sectional task in the Münster city group

At the governance level, climate protection is now being established as an interdisciplinary topic in the city group to a greater extent and has been defined as one of the most important issues for the future by the city council. This means that all departments and offices as well as institutions and municipal



subsidiaries must utilise their respective scope of action in order to become a climate-friendly city. The Administrative Board manages this process, which is the top management level in the City of Münster group. In concrete terms, one person from the top management level of the city group assumes process responsibility for a specific field of action and reports quarterly to the Administrative Board on the status of implementation of the various projects and plans within that respective field of action. This process ensures an effective monitoring of the climate protection process (see also Module C-1).

The portfolio is presented below, organised by the different areas of action. The current status is also briefly discussed as background information at the beginning of each section.

Quantifying the carbon reduction impact of climate protection measures is complex and not always feasible, as various factors and interactions play a role. This includes complex societal, economic and social systems. In addition, time lags can occur between the implementation of measures and their actual impact. Quantification models are often build on extensive assumptions, which entails uncertainties meaning that it is not possible to measure progress in terms of carbon reduction quantitatively. In addition, local factors and global interactions can complicate the assessment. Therefore, the quantification of climate protection measures can only be provided for some measures - usually where concrete changes in energy consumption can be directly assigned to a measure.

4.2.2.2 Energy production

On the road to climate neutrality: the strategy of the City of Münster and Stadtwerke Münster in the area of energy production.

The City of Münster and Stadtwerke Münster are jointly pursuing an ambitious vision: the transformation of their energy supply towards climate neutrality. This ambitious strategic objective is not only an ecological goal, but also paves the way for a future worth living for all residents of Münster.

The focus of the field of action “energy production” is the conversion of all urban energy sources to renewable alternatives. From the generation of electricity and heat to the distribution of energy through intelligent supply networks, the City of Münster and Stadtwerke are focussing on a mix of wind and solar energy as well as other renewable heat sources to replace fossil fuels. Electricity and heat are becoming genuine local products - and more and more Münster residents are becoming electricity producers.

Sustainable heating transformation: In 2030, new renewable heating technologies will drive the decarbonisation of district heating in Münster. In doing so, the municipal utilities are utilising the opportunities that Münster offers them. From the development of deep geothermal energy to the establishment of ground-mounted solar thermal energy and the use of large heat pumps, innovative technological solutions are being implemented to make the city's heating supply sustainable. Reliable planning forms the basis for the heating transformation: a transformation plan in the context of federal funding for efficient heating networks (BEW) and a municipal “heating and energy utilisation plan” in accordance with the law on municipal heating planning - an integrated plan that also analyses the role of electrification (heat pumps) and hydrogen in the future energy supply. For the necessary decarbonisation of the property-based, individual heat supply by private homeowners, the City of Münster is dependent on the federal



and state governments creating the framework conditions for the heating transition, e.g. through standards and funding by means of the Buildings Energy Act as well as CO₂ pricing.

Expansion of renewable energies: a determined expansion of decentralised energy generation from the sun and wind on-site is key to meeting electricity requirements in a climate-neutral way. The city's wide range of advisory and campaign services continue to support private homeowners in the expansion of PV systems. For example, the Münster solar cadastre service provides an initial assessment of the roof potential for every building in the city: www.solarkataster-muenster.de. Information services like this have contributed to Münster being the leader in the expansion of private photovoltaic systems in 2023. According to a nationwide study: a total of 513 private PV systems per 100,000 residents were installed in the city in the period from January to September 2023 (<https://www.stadt-muenster.de/aktuelles/pm-details?1141702>).

However, when it comes to solar energy generation, it is not just the potential space on roofs that needs to be exploited. Ground-mounted systems will also contribute to both the renewable electricity and heat supply in 2030 - and create ecological niches for biodiversity. Through projects such as agri-PV projects and the implementation of "tenant electricity" (Mieterstrom in German) pilot projects, innovative approaches are being pursued to maximise the use and acceptance of solar energy. The expansion of PV systems on municipal buildings falls within the City of Münster Group's field of action "Building carbon reduction measures ", as this is governed by the so called municipal building guidelines.

Wind energy plays a key role in sustainable energy supply. Stadtwerke Münster plans to generate 280 GWh of electricity per year through its own wind turbines from 2030 and to double the number of turbines it owns and operates.

The energy transition in Münster is a joint project between the city administration, Stadtwerke Münster and the city society. Through innovative technologies, specific measures and the active participation of the population, Münster is a pioneer in terms of climate protection and sustainability.

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Wind expansion: By 2030, the number of wind turbines is to be doubled to 42 in order to generate 280 GWh of electricity per year.
	Action type	Technical Intervention
	Action description	Target 2030: As part of an innovative, climate protection-oriented energy supply, Stadtwerke Münster will invest significantly in renewable generation capacities in onshore wind turbines on open spaces.



		The number of wind turbines is to be doubled to 42 by 2030 in order to generate 280 GWh of electricity per year.
Reference to impact pathway	Field of action	Energy Systems
	Systemic lever	Technology Governance and policy
	Outcome (according to module B-1.1)	Expansion of renewable energies
Implementation	Responsible bodies/person for implementation	Stadtwerke Münster
	Action scale & addressed entities	City-wide supply of electricity
	Involved stakeholders	Stadtwerke Münster, other municipalities, citizens
	Comments on implementation	Implemented until 2030 Current status: <ul style="list-style-type: none">By the end of 2023, Stadtwerke Münster will already be generating 92 GWh of wind energy with its own turbines. Next steps: <ul style="list-style-type: none">Authorisation in accordance with the BIm-SchG for 1 wind turbine in Lemgo with a nominal output of 5.7 MW (2024)Start of construction and commissioning of at least one of three planned wind turbines in Südlohn Eschlohn/Wellschlat with a total nominal output of 17.1 MW (2024)Obtaining licences for the construction of a total of at least 10 wind turbines in the MünsterlandExpansion target 2024: addition of 3 wind turbines
Impact & cost	Generated renewable energy (if applicable)	280 GWh of electricity per year
	Removed/substituted energy, volume, or fuel type	Fossil energies
	GHG emissions reduction estimate (total) per emission source sector	CO ₂ reduction potential: approx. 269,000 tCO ₂ by 2028 (base year 2021)
	Total costs and costs by CO ₂ e unit	Costs of the project until 2028: approx. €215 million for 26 wind turbines



B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	PV expansion: In 2030, PV systems with a capacity of 100 GWh of solar power will be installed by Stadtwerke Münster.
	Action type	Technical Intervention
	Action description	<p>Target 2030:</p> <p>As part of an innovative, climate protection-orientated energy supply, Stadtwerke Münster will invest significantly in renewable generation capacities, specifically in the construction of photovoltaic systems on roofs in Münster. Stadtwerke Münster intends to install PV systems (roof systems, ground-mounted systems) by 2030 in order to generate 100 GWh of electricity from the sun.</p> <p>The majority of these systems will be realised in the area of the City of Münster. This is achieved by creating customised offers for the following target groups "industry/commerce, the housing sector, the city of Münster and agriculture".</p>
Reference to impact pathway	Field of action	Energy systems
	Systemic lever	Technology Governance and policy
	Outcome (according to module B-1.1)	Expansion of renewable energies
Implementation	Responsible bodies/person for implementation	Stadtwerke Münster
	Action scale & addressed entities	Urban area
	Involved stakeholders	Industry/commerce, housing industry, City of Münster, agriculture, private customers, small business customers
	Comments on implementation	Implemented by 2030 Status 2023:



		<ul style="list-style-type: none"> 62 PV systems with approx. 9,000 MWh/a electricity generation (owned by Stadtwerke MS + Stadtnetze MS) 8,381 PV systems in MS with approx. 105 MWp and 105 million KWh/a electricity generation (not owned by Stadtwerke MS) <p>Next steps:</p> <ul style="list-style-type: none"> Expansion of PV systems with a nominal output of at least 4 MWP -> approx. 4.00 GWh/a (2024) Realisation of the first Agri-PV project with the start of construction of a bifacial (fence) PV system in Münster-Amelsbüren Construction of a ground-mounted PV system (ZDM II) with 1 MWp -> 1 GWh/a (2024) Realisation of a tenant electricity pilot project in cooperation with Wohn- und Stadtbau
Impact & cost	Generated renewable energy (if applicable)	100 GWh of electricity per year from the sun
	Removed/substituted energy, volume, or fuel type	Fossil Fuels
	GHG emissions reduction estimate (total) per emission source sector	CO ₂ reduction potential of the SWMS systems: 58,000 tCO ₂ /a in 2030 (base year 2021)
	Total costs and costs by CO ₂ e unit	Costs of the project until 2028: approx. €100 million for 100 GWh expansion

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Municipal heat and energy utilisation planning (ENP)
	Action type	Governance and policy
	Action description	<p>- Creation of an iterative ENP to implement the (upcoming) legal obligation for municipal heat planning</p> <p>- ENP should go beyond municipal heating planning in terms of content, at least in perspective, and consider topics such as electricity, green gases and cooling integrated</p>



		<p>- Determination of different spatially and temporally energy supply options for long-term planning security for all parties involved, taking into account decarbonisation, price stabilisation and energy security - if possible, publish interim results during the process</p> <p>- Energy efficiency of buildings is also an important condition</p> <p>- Consolidation of already ongoing and existing concepts of the relevant players</p>
Reference to impact pathway	Field of action	Energy Systems
	Systemic lever	Governance and policy
	Outcome (according to module B-1.1)	Decarbonisation of the energy and heat supply
Implementation	Responsible bodies/person for implementation	Münster city administration and Council of the City of Münster
	Action scale & addressed entities	Urban area
	Involved stakeholders	Münster city administration with relevant stakeholders, in particular Stadtwerke Münster and Stadtnetze Münster
	Comments on implementation	<p>Next steps:</p> <ul style="list-style-type: none"> • Decision on procedure (Q2/2023) <ul style="list-style-type: none"> • Establishment of interdepartmental working group, commissioning of external coordination/moderation (2023); • Establishment of a steering group to agree on strategic cooperation (as required - possibly at the beginning of 2024); • If necessary, commissioning of external specialist office(s) for content development; • Procurement of a tool or expansion of the digital twin of Stadtwerke Münster; • First-time creation of ENP/kWP; • Political decision ENP preparation (Q2/2025);
Impact & cost	Generated renewable energy (if applicable)	as an informal planning basis none, only later concrete implementation will result in this



	Removed/substituted energy, volume, or fuel type	as an informal planning basis none, only later concrete implementation will result in this
	GHG emissions reduction estimate (total) per emission source sector	<p>CO₂ reduction potential</p> <p>-In accordance with the legal requirements of the Heat Planning Act (WPG) and the Buildings Energy Act (GEG): greenhouse gas neutrality of heating networks by 2045 or operation with 100 % renewable energy/unavoidable waste heat</p> <p>-According to WPG from 2030: share of renewable energy/unavoidable waste heat in heating networks minimum 30 %</p> <p>-according to WPG from 2040: Share of RE/unavoidable waste heat in heating networks minimum 80 % heat sector</p> <p>CO₂ reduction potential according to the energy and greenhouse gas inventory of the City of Münster (2021): 714,000 t CO₂e</p> <p>of which local + district heating according to the energy and greenhouse gas inventory of the City of Münster (2021): 97,000 t CO₂e</p>
	Total costs and costs by CO ₂ e unit	Processing costs: EUR 200,000

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Transformation plan for heat networks (in the context of federal funding for efficient heating networks (BEW); BEW transformation plan)
	Action type	Governance intervention Technical Intervention
	Action description	Target 2030: Stadtwerke Münster is continuing the transformation to a green district heating supply in Mün-



		<p>ster with its transformation plan for heating networks. By 2030, the proportion of renewable energies in district heating should be 30%.</p> <p>Realistically, a complete switch to green heat generation will not be possible by 2030. Transitional solutions with environmentally efficient combined heat and power technology are required.</p> <p>Stadtwerke Münster's heating strategy consists of various decentralised renewable generation technologies, with the district heating network forming the backbone as an existing large-scale inner-city distribution structure that is to be further densified. Deep geothermal energy, which is a promising option in view of the geological situation, could become a major component of heat generation. Other leading technologies include solar thermal energy, electrical heat generation in power-to-heat plants, utilisation of environmental heat using large heat pumps (including from the Dortmund-Ems Canal and from wastewater) as well as seasonal large-scale heat storage systems. Some of these technologies are or will be located in the combined heating and power plant.</p>
Reference to impact pathway	Field of action	Energy Systems
	Systemic lever	Technology Governance and policy
	Outcome (according to module B-1.1)	Decarbonisation of district heating
Implementation	Responsible bodies/person for implementation	Stadtwerke Münster und Stadtnetze Münster
	Action scale & addressed entities	Urban area
	Involved stakeholders	Not specified
	Comments on implementation	<p>Status 2023:</p> <ul style="list-style-type: none"> • Stadtwerke Münster and Stadtnetze Münster are developing a transformation plan for the decarbonisation of district heating with the goal of 100 %



		<p>RE by 2045. To this end, local renewable energy potentials are being evaluated, site concepts are being developed and further grid expansion and conversion are in the planning stage.</p> <p>Next steps:</p> <ul style="list-style-type: none"> • Green heat potentials for Münster's district heating are known (2024) • BEW Trafoplan Completion
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	Fossil fuel
	GHG emissions reduction estimate (total) per emission source sector	<p>Stadtwerke Münster aims to achieve an annual CO₂ reduction potential of approx. 67,000 tonnes/CO₂ by 2030 by using 30% renewable heat in its district heating.</p> <p>This assumption relates to the CO₂ emissions of our power plant at the municipal port in the base year 2021. The actual CO₂ reduction potential can deviate significantly in reality, as the emissions depend on the actual heat consumption in the respective year and are therefore subject to fluctuations due to the expansion of the district heating supply and weather conditions, among other things. The calculation also assumes that the use of renewable heat is emission-free.</p> <p>A more concrete assumption of the CO₂ savings potential can only be made once the transformation plan has been drawn up.</p>
	Total costs and costs by CO _{2e} unit	Costs of all projects for the transformation to green heat between 2024 and 2030: approx. €149.1 million

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)



Action outline	Action name	Heat from the depths: Stadtwerke Münster plans to commission the first geothermal heating plant with a borehole in 2030.
	Action type	Technological Intervention
	Action description	<p>Target 2030:</p> <p>In 2030, Stadtwerke Münster plans to put the first geothermal heating plant with a borehole into operation and feed up to 40 GWh of climate-neutral energy into Münster's district heating network every year. Stadtwerke is achieving this by continuously exploring the actual potential of deep geothermal energy for Münster at a depth of 1,500 metres using 3D seismics and test drilling. Subsequently, the plan to scale up the utilization of deep geothermal energy by additional locations in the future will then be detailed and planning for the second drilling round will begin.</p>
Reference to impact pathway	Field of action	Energy Systems
	Systemic lever	Technology
	Outcome (according to module B-1.1)	Expansion of renewable energies
Implementation	Responsible bodies/person for implementation	Stadtwerke Münster
	Action scale & addressed entities	Urban area
	Involved stakeholders	City administration, politics, Stadtwerke Münster und Stadtnetze Münster, landowners
	Comments on implementation	<p>Status 2023:</p> <p>Investigation of the potential as part of a feasibility study, for which € 5.77 million in funding is provided by the state North Rhine-Westphalia</p> <p>Procurement process for 3D seismics</p> <p>Next steps:</p> <ul style="list-style-type: none"> • 3D seismic survey for further exploration of the subsurface (2024) • Site decision for first exploration well (from 2026);



Impact & cost	Generated renewable energy (if applicable)	up to 40 GWh of climate-neutral heat per year
	Removed/substituted energy, volume, or fuel type	Fossil Fuels
	GHG emissions reduction estimate (total) per emission source sector	CO ₂ reduction potential: see action "BEW transformation plan"
	Total costs and costs by CO ₂ e unit	Costs of all projects for the transformation to green heat between 2024 and 2030: approx. €149.1 million

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Large heat pumps as all-rounders for environmental heating utilisation
	Action type	Technical intervention
	Action description	Target 2030: 4 large heat pumps are to be put into operation by 2030. These utilise commercial and industrial waste heat, the Dortmund-Ems Canal and waste heat from sewage treatment plants. Together, these systems will generate up to 100 GWh of climate-neutral heat.
Reference to impact pathway	Field of action	Energy Systems
	Systemic lever	Technology
	Outcome (according to module B-1.1)	Expansion of renewable energies
Implementation	Responsible bodies/person for implementation	Stadtwerke Münster
	Action scale & addressed entities	Urban area
	Involved stakeholders	Stadtwerke und Stadtnetze Münster, city administration, AWM
	Comments on implementation	Status 2023: <ul style="list-style-type: none"> • Technical approval of a large waste heat pump by TÜV • Next steps:



		<ul style="list-style-type: none"> • Concept development for waste heat utilisation at sewage treatment plants with the relevant stakeholders (2024); • Installation of the second large heat pump of 2 MW (2024); • Feed-in of renewable heat from the first large heat pump (2024)
Impact & cost	Generated renewable energy (if applicable)	Up to 100 GWh of climate-neutral heat.
	Removed/substituted energy, volume, or fuel type	Fossil Fuels
	GHG emissions reduction estimate (total) per emission source sector	CO ₂ reduction potential: see action "BEW transformation plan"
	Total costs and costs by CO ₂ e unit	Costs of all projects for the transformation to green heat between 2024 and 2030: approx. €149.1 million

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Ground-mounted solar thermal energy as an accelerator of the transformation: By 2030, ground-mounted solar thermal energy should be established in Münster.
	Action type	Technical Intervention
	Action description	<p>Target 2030:</p> <p>In 2030, ground-mounted solar thermal energy should be established in Münster, as the technology has been tried and tested.</p> <p>Solar thermal energy could provide customers of Stadtwerke Münster with a completely climate-neutral district heating supply in summer and, from 2030, up to 50 GWh of heat per year could be generated with these systems. Summer surpluses are to be made usable by a seasonal thermal energy storage for the autumn.</p>
Reference to impact pathway	Field of action	Energy Systems
	Systemic lever	Technology Governance and policy
	Outcome (according to module B-1.1)	Expansion of renewable energies
Implementation	Responsible bodies/person for implementation	Stadtwerke Münster



	Action scale & addressed entities	Urban area
	Involved stakeholders	Stadtwerke Münster and Stadtnetze Münster, landowners, city administration
	Comments on implementation	Implemented by 2030 Next steps: <ul style="list-style-type: none"> • Procuring availability of space & project design for the first solar pilot project (2024); • Preparation of B-PLan for 1st plant (2024)
Impact & cost	Generated renewable energy (if applicable)	Up to 50 GWh/ a heat
	Removed/substituted energy, volume, or fuel type	Fossil Fuel
	GHG emissions reduction estimate (total) per emission source sector	CO ₂ reduction potential: see action "BEW transformation plan"
	Total costs and costs by CO ₂ e unit	Costs of all projects for the transformation to green heat between 2024 and 2030: approx. €149.1 million

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Green local heating: In 2030, four new development areas are to be supplied with heat and "temperature control" using green local heating.
	Action type	Technical Intervention
	Action description	Target 2030: Target 2030: In 2030, four new development areas are to be supplied with 5th generation district heating and cooling. The future path for the existing district heating networks in Albachten, Roxel, Amelsbüren and Hilstrup is being mapped out in the transformation plans. In the Amelsbüren's heating network, a first renewable heat generation plant is to be implemented and put into operation by 2030. Project planning for the utilisation of waste heat from the new sewage treatment plant in Hilstrup is to be completed



Reference to impact pathway	Field of action	Energy Systems
	Systemic lever	Technology Governance and policy
	Outcome (according to module B-1.1)	Developing efficient and climate-friendly heat supply in spatial contexts
Implementation	Responsible bodies/person for implementation	Stadtwerke Münster GmbH
	Action scale & addressed entities	Neighbourhood / district level
	Involved stakeholders	Stadtwerke Münsters, city administration, homeowners, residents
	Comments on implementation	In preparation
Impact & cost	Generated renewable energy (if applicable)	See Action description
	Removed/substituted energy, volume, or fuel type	Fossil energies
	GHG emissions reduction estimate (total) per emission source sector	Currently no quantification possible
	Total costs and costs by CO _{2e} unit	Costs of all projects for the transformation to green heat between 2024 and 2030: approx. €149.1 million

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	110kV target grid planning: In the south of Münster, electricity is to be supplied by a high-voltage grid in 2030.
	Action type	Technical Intervention
	Action description	Target 2030:



		<p>Stadtnetze Münster wants to have its own high-voltage grid by 2030. This high-voltage grid consists of two redundantly designed high-voltage cables that feed a new electric power substation at the Hansa Business Park. Utilizing this new electric power substation, the south-western part of Münster, around the Hansa Business Park, will be reliably supplied with electricity. It also ensures that the megawatts of renewable energy generated on-site from the surrounding renewable energy plants, e.g. from Stadtwerke Münster's photovoltaic systems and wind turbines, are fed into Münster's electricity grid. Thereby safeguarding Münster's energy requirements via its own electricity generating infrastructures. In this way, the Stadtwerke Münster Group is making an important contribution to the energy and mobility transition.</p>
Reference to impact pathway	Field of action	Energy Systems
	Systemic lever	Technology Governance and Policy
	Outcome (according to module B-1.1)	Expansion of renewable energies
Implementation	Responsible bodies/person for implementation	Stadtnetze Münster
	Action scale & addressed entities	Power supply for the southern part of the City of Münster.
	Involved stakeholders	Stadtnetze Münster, (Stadtwerke Münster)
	Comments on implementation	<p>Implemented until 2030</p> <p>Status 2023:</p> <ul style="list-style-type: none"> • High utilisation of the 110 kV grid in its own areas • Expansion of the Hansa Business Park as initiator of the Stadtnetze Münster target planning <p>Next steps:</p> <ul style="list-style-type: none"> • With each station deep renovation and new construction (approx. 20 per year) in



		<p>contiguous buildings, Stadtnetze Münster will be able to absorb approx. 50% more decentralised energy into our grid in future, as the Stadtnetze Münster can expand their transformer capacity by around 50% (larger station buildings and corresponding indoor facilities).</p> <ul style="list-style-type: none"> • Stadtnetze is renewing a section of the feeder cable from 185 m² to 500 m², thus doubling the transmission capacity between UW Nord and SH Königsberger Straße. A significant part of the north of Münster is supplied from SH Königsberger Str. via this connection. • Expansion of the Mauritz substation in order to be able to securely supply the east of Münster in future (new development areas and also the planned ground-mounted PV systems)
Impact & cost	Generated renewable energy (if applicable)	Not quantifiable, as grid expansion enables further expansion and additional electricity feed-in from renewable energies in the first place
	Removed/substituted energy, volume, or fuel type	Fossil fuel
	GHG emissions reduction estimate (total) per emission source sector	Not quantifiable, as grid expansion enables further expansion and additional electricity feed-in from renewable energies in the first place
	Total costs and costs by CO ₂ e unit	Costs of the project between 2024 and 2028: approx. €58.9 million

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Grid transformation - intelligent low voltage: In 2030, 95% of all households will be equipped with intelligent metering systems for electricity and 100% for gas.
	Action type	Technical Intervention
	Action description	<p>Target 2030:</p> <p>95% of all households are to be equipped with smart metering systems by 2030 (electricity).</p>



		<p>100% of all households with gas consumption devices should have an intelligent metering system for gas and should be connected to the smart meter gateway (see: §20 MsbG & §40 MsbG) (gas).</p> <p>100% of all households with district heating consumption should have an intelligent metering system for heat quantities and should be connected to the smart meter gateway (see: §3 FFVAV ff.) (District heating).</p> <p>From a grid perspective, this allows better transparency of the consumption and performance of cross-divisional purchases. This enables, the management of energy consumption facilities, for example. (see: §14a EnWG)</p>
Reference to impact pathway	Field of action	Energy Systems
	Systemic lever	Technology
	Outcome (according to module B-1.1)	Energy efficiency, grid stability/security
Implementation	Responsible bodies/person for implementation	Stadtwerke Münster
	Action scale & addressed entities	Urban area
	Involved stakeholders	Private Households
	Comments on implementation	<p>Next steps:</p> <ul style="list-style-type: none"> • Upgrading systems and processes • 1-2 measuring systems per week from Q1 2024
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	Not specified
	GHG emissions reduction estimate (total) per emission source sector	Not specified
	Total costs and costs by CO ₂ e unit	Costs of the project until 2026: approx. €350 million

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)



Action outline	Action name	Gas grid transformation & hydrogen
	Action type	Technical Intervention
	Action description	<p>Target 2030:</p> <p>Stadtnetze Münster GmbH is part of the H2vorOrt initiative, which has launched an industry-wide planning process with the Gas Grid Transformation Plan (GTP). The GTP lays the foundation for a hydrogen transformation in the distribution grid throughout Germany. H2vorOrt is an association of currently 47 distribution network operators in the German Technical and Scientific Association for Gas and Water (DVGW) in cooperation with the Association of Municipal Enterprises (VKU). They are pooling their expertise for a ramp-up of the hydrogen economy. The aim of the GTP is to accelerate the transformation of the gas distribution networks and to embed the individual plans of the network operators in a coherent target picture for the whole of Germany.</p> <p>This involves, among other things, connecting the distribution grid to the hydrogen long-distance grid by rededicating individual transfer stations. Stadtnetze Münster has concrete expansion plans for the supply of climate-neutral gases for all other generation plants that are to be operated in the future. In addition, joint projects with upstream network operators will secure capacities of green gases at an early stage and feed them into the distribution networks.</p> <p>In addition, Stadtwerke Münster and Westenergie AG have decided to push ahead with the ramp-up of green hydrogen in Münster. This partnership also extends to its subsidiaries, Westnetz GmbH and Stadtnetze Münster GmbH. In a letter of intent (LOI), the four companies have agreed to share their experience</p>



		with regard to a hydrogen infrastructure and the potential supply of hydrogen by Stadtwerke Münster.
Reference to impact pathway	Field of action	Energy Systems
	Systemic lever	Technology
	Outcome (according to module B-1.1)	Decarbonisation of energy supply
Implementation	Responsible bodies/person for implementation	Stadtwerke Münster
	Action scale & addressed entities	Urban area
	Involved stakeholders	Stadtwerke Münster und Stadtnetze Münster, operators of biogas plants, other grid operators and energy suppliers
	Comments on implementation	Next steps: <ul style="list-style-type: none"> Finding partners for the conversion or new construction of the systems Technical analysis of the Haus Kannen and Mecklenbeck II transfer stations Exchange with anchor customers
Impact & cost	Generated renewable energy (if applicable)	100% hydrogen or biomethane supply
	Removed/substituted energy, volume, or fuel type	Fossil Fuel
	GHG emissions reduction estimate (total) per emission source sector	Currently no quantification possible
	Total costs and costs by CO _{2e} unit	Currently no quantification possible

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Integrated area concept MS: Settlement, open/green spaces and locations for RE in balance
	Action type	Governance and regulation
	Action description	With the Integrated Area Concept for Münster (IFM), the city is proactively focussing on future



		<p>developments at an early stage. The aim is to identify development areas for new housing and workplaces, to locate potential areas for a climate-neutral energy supply and, at the same time, to protect and further develop the city's high-quality open spaces as a key unique selling point. The aim is to create a sustainable framework for future spatial urban development and at the same time preserve Münster's ability to act with regard to future housing and workplace requirements.</p> <p>In this respect, the IFM process is intended to prepare a cross-departmental and interdisciplinary consideration of the different demands on the space, it is informal and is carried out proactively by the city.</p>
Reference to impact pathway	Field of action	<p>Energy Systems</p> <p>AFOLU</p>
	Systemic lever	<p>Governance and policy</p> <p>Technology</p>
	Outcome (according to module B-1.1)	Expansion of renewable energies
Implementation	Responsible bodies/person for implementation	Department of City Planning of the City Administration of Münster and City Council of Münster
	Action scale & addressed entities	Urban area
	Involved stakeholders	City administration, politics, Stadtwerke Münster und Stadtnetze Münster other relevant stakeholders (e.g. farmers), the public
	Comments on implementation	<p>Next steps:</p> <p>Council resolution on the concept (1st HY/2024);</p>
Impact & cost	Generated renewable energy (if applicable)	none as an informal basis for planning; this will only be realised at a later date



	Removed/substituted energy, volume, or fuel type	none as an informal basis for planning; this will only be realised at a later date
	GHG emissions reduction estimate (total) per emission source sector	<ul style="list-style-type: none"> • CO₂e reduction potential - estimated utilisation of potential 50 % wind energy: total potential 84 MW capacity new build -> 42 MW capacity structural implementation -> 105 GWh/a (at 2,500 full utilisation hours/a) -> 38,850 t CO₂e reduction/a (with emissions of 10 t CO₂e/GWh wind power at 380 t CO₂e/GWh averaged electricity mix) • 25 % FF solar: total potential 2,500 ha -> 625 ha structural implementation -> 377 GWh/a (at 0.67 MWp/ha and 900 MWh/MWp and a) -> 128,150 t CO₂e reduction/a (with emissions of 40 t CO₂e/GWh solar power minus 380 t CO₂e/GWh averaged electricity mix)
	Total costs and costs by CO ₂ e unit	Processing costs: EUR 230,000

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Fibre optic expansion Münster
	Action type	Technical intervention
	Action description	<p>Target 2030:</p> <p>An efficient fibre optic supply will become even more decisive as a location factor for Münster in the future, which is why Stadtwerke Münster is also ensuring the "digital heartbeat" of its city. By 2030, 80% of households in Münster are to be supplied with fibre optic connections. To this end, Stadtwerke Münster has agreed a comprehensive cooperation with Deutsche Telekom, among others, in which Stadtwerke will contribute its expertise for laying the fibre optic lines and Telekom will provide its own expertise.</p> <p>Due to its higher efficiency, fibre optic technology consumes significantly less electricity than copper-based networks (up to 17 times less electricity). As a result, Stadtwerke Münster's fi-</p>



		bre optic expansion is making a decisive contribution to the goal of climate neutrality in Münster.
Reference to impact pathway	Field of action	Energy systems
	Systemic lever	Technology
	Outcome (according to module B-1.1)	Electricity saving
Implementation	Responsible bodies/person for implementation	Stadtwerke Münster
	Action scale & addressed entities	Urban area
	Involved stakeholders	Municipal utilities, Stadtnetze Münster, citizens
	Comments on implementation	Implemented until 2030
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	Due to its higher efficiency, fibre optic technology consumes significantly less electricity than copper-based networks (up to 17 times less electricity).
	GHG emissions reduction estimate (total) per emission source sector	Not specified
	Total costs and costs by CO ₂ e unit	Costs of the project between 2024 and 2028: approx. € 76 million

4.2.2.3 Building carbon reduction measures

In the "Building carbon reduction measures" field of action, a distinction is made between new construction and the deep renovation of existing buildings. The implementation of measures focuses in particular on the topic of deep renovating existing buildings, as this is where the greatest potential for CO₂ savings can be realised. In the area of new construction, the measures focus primarily on the aspect of "setting clear rules". Examples of this are measures such as the guidelines for climate-friendly urban land-use planning or Münster's standard for climate-friendly construction, which are continuously developed further. The aim of the guidelines for climate-friendly urban land-use planning is to establish climate protection and climate adaptation concerns in the processes of building land development and to take them into account obligatorily. Münster's standard for climate-friendly construction is established by all urban development contracts, land purchase contracts and leasehold contracts with the City of Münster and includes requirements for the building energy standard and the use of solar energy in new buildings.



Thus, the municipal scope of actions is utilised purposely. Further specifications and requirements for climate-friendly new construction are required by corresponding laws and regulations at the national and state level. The City of Münster proceeds as a role model with its own building portfolio. With the 2020 building guidelines, binding quality criteria, with regard to climate protection, and sustainability, apply to both the new construction and deep renovation of municipal buildings. These guidelines go well beyond the minimum legal requirements and ensure that new buildings are constructed as net zero-emission buildings. As a municipal subsidiary, Wohn- und Stadtbau also has a deep renovation strategy for its building portfolio. The City of Münster also promotes a wide range of measures to optimise the energy efficiency of private residential buildings through the "climate-friendly residential buildings" funding programme. Moreover, the city administration of Münster offers a wide range of information services: <https://www.stadt-muenster.de/klima/bauen-sanieren>. In addition to strategies for individual buildings, an integrated approach is being pursued at neighbourhood level. In this way, synergy effects can be utilised through a concerted approach, resulting in a significant acceleration of energy-efficient building refurbishment overall.

The neighbourhood level also makes it possible to investigate property-independent factors that increase residential value and have an indirect influence on energy-efficient deep renovation (living environment, local amenities, mobility options, etc.) in an integrated manner. Solutions are tested as models within the framework of neighbourhood concepts and are implemented and further developed in a next step. The stakeholders, e.g. homeowners, must carry-out the deep renovations themselves. The Interreg project FutureBEEing is also developing a specification for a digital tool in Münster that provides an integrated overview of all measures and different scenarios that can promote the sustainability of a neighbourhood. Among other things, it is an important instrument for answering planning questions in connection with the deep renovation and restructuring of existing neighbourhoods in conjunction with their cost points.

Particularly with regard to the deep renovation of the private building stock, it is of central importance that the federal government and the state of NRW exploit their scope for action, e.g. within the framework of the Building Energy Act, the modernisation guideline RL MOD NRW 2023 plus funding programme, the CO₂ pricing as part of the climate package. The portfolio of measures in the "Building carbon reduction measures" field of action thus forms the basis for achieving the necessary emission savings as part of the EU mission. To this end, the measures it contains are constantly being developed and adapted to new standards.

B-2.2: Individual action outlines		
(Fill out one sheet per intervention/project)		
Action outline	Action name	Strategy for achieving climate neutrality for municipal buildings in 2030
	Action type	Technical Intervention



	Action description	Strategy to achieve climate neutrality by 2030 by deep renovation of 46 municipal locations on the basis of the resolution of the City Council on the building guidelines: "The energy consumption of municipal buildings is to be reduced by 50 % and CO ₂ emissions by 70 % by 2030" (compared to 1990)
Reference to impact pathway	Field of action	Built environments
	Systemic lever	Technology Governance and policy
	Outcome (according to module B-1.1)	Energy saving, expansion of renewable energies
Implementation	Responsible bodies/person for implementation	Münster city administration
	Action scale & addressed entities	Municipal buildings
	Involved stakeholders	Department of Property Management of the City Administration Münster
	Comments on implementation	https://www.stadt-muenster.de/sessionnet/sessionnetbi/vo0050.php? kvonr=2004048624
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	around 12.5 million kWh/a
	GHG emissions reduction estimate (total) per emission source sector	2,165 tonnes CO ₂ /a
	Total costs and costs by CO ₂ e unit	Around € 320 million; the costs are to be "provided in an implementation-orientated manner within departmental budgets". The costs are to be "provided within the departmental budgets in an implementation-orientated manner"; the budget currently estimates around €10 million per year

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Energy and climate-friendly neighbourhood deep renovation
	Action type	Other Intervention



	Action description	Energy and climate-friendly neighbourhood deep renovation - Climate protection and climate adaptation in the neighbourhood: Central project to increase the general deep renovation rate - Promoting sustainable, flexible-use urban neighbourhoods - Integrated approach to climate protection, housing, energy supply, mobility and local supply and other topics in Münster.
Reference to impact pathway	Field of action	Built Environment
	Systemic lever	Technology Funding
	Outcome (according to module B-1.1)	Energy saving, expansion of renewable energies
Implementation	Responsible bodies/person for implementation	City administration Münster
	Action scale & addressed entities	Neighbourhood level
	Involved stakeholders	Local stakeholders, energy consultants, crafts sector
	Comments on implementation	Next steps: Energy and climate-friendly neighbourhood deep renovation: In 2024, a tender will be prepared for redevelopment management in combination with an integrated short concept for the first two neighbourhoods.
Impact & cost	Generated renewable energy (if applicable)	To be determined as part of the redevelopment management in combination with a brief concept creation
	Removed/substituted energy, volume, or fuel type	To be determined as part of the redevelopment management in combination with a brief concept creation
	GHG emissions reduction estimate (total) per emission source sector	To be determined as part of the redevelopment management in combination with a brief concept creation
	Total costs and costs by CO ₂ e unit	To be determined as part of the redevelopment management in combination with a brief concept creation

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Building guidelines and energy standard for new buildings
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	Action type	Technical Intervention
	Action description	Standards for new construction and deep renovation measures for municipal buildings
Reference to impact pathway	Field of action	Built Environment
	Systemic lever	Technology Governance and policy
	Outcome (according to module B-1.1)	Energy saving, expansion of renewable energies
Implementation	Responsible bodies/person for implementation	City administration of Münster
	Action scale & addressed entities	New buildings
	Involved stakeholders	Department of Property Management of the City Administration Münster
	Comments on implementation	On 26 August 2020, the City Council of Münster adopted the revised building guidelines with an amendment for Münster. The energy consumption of municipal buildings is to be reduced by 50% and CO ₂ emissions by 70% by 2030 (compared to 1990). There are binding quality criteria and guidelines for all those involved in the construction process of municipal buildings, both for new builds and for conversion and deep renovation measures. The building guidelines apply to all buildings in the City of Münster. According to the resolution, the municipal subsidiaries were also requested to adopt and apply the building guidelines.
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	Not specified
	GHG emissions reduction estimate (total) per emission source sector	Not specified
	Total costs and costs by CO _{2e} unit	Not specified

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Deep renovation strategy of Wohn- und Stadtbau GmbH
	Action type	Technical Intervention
	Action description	Conversion to CO ₂ -free heat and hot water supply for existing buildings and reduction in consumption: insulation, partial and complete deep renovation, optimisation of operations



Reference to impact pathway	Field of action	Built Environment
	Systemic lever	Technology
	Outcome (according to module B-1.1)	Energy saving, expansion of renewable energies
Implementation	Responsible bodies/person for implementation	Wohn+Stadtbau GmbH
	Action scale & addressed entities	Existing buildings of Wohn+Stadtbau GmbH
	Involved stakeholders	Wohn+Stadtbau GmbH
	Comments on implementation	<p>1. operational optimisation and promotion of climate-friendly tenant behaviour as an "quick win";</p> <p>2. energy-efficient refurbishment/insulation of buildings and neighbourhoods incl. PV together with Stadtwerke Münster</p> <p>3. use of sustainable heating systems and realisation of new district heating connections in cooperation with Stadtwerke Münster</p>
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	Not specified
	GHG emissions reduction estimate (total) per emission source sector	CO ₂ emissions avoided through photovoltaic and CHP electricity production (utilisation in the building and grid feed-in): - 146 tonnes / year
	Total costs and costs by CO ₂ e unit	227 million euros

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Thermographic flight MS
	Action type	Other interventions
	Action description	<p>The project consists of three phases:</p> <ol style="list-style-type: none"> 1. Thermographic flight: Recording the thermal images of Münster's roof landscape Data evaluation 2. Letter to homeowners and an offer for advice on energy-efficient deep renovation 3. Ongoing free energy advice offer, delivery and analysis of the thermographic images <p>Around 25,000 people, or around 60 per cent of the homeowners contacted, were sensitised to energy-related issues.</p>



Reference to impact pathway	Field of action	Built Environment
	Systemic lever	Technology
	Outcome (according to module B-1.1)	Energy saving
Implementation	Responsible bodies/person for implementation	City administration of Münster
	Action scale & addressed entities	Building owners
	Involved stakeholders	Stadtnetze Münster
	Comments on implementation	Termination of the external web portal (12/2023)
Impact & cost	Generated renewable energy (if applicable)	Not applicable. Indirectly via energy consulting services and visualisation.
	Removed/substituted energy, volume, or fuel type	Not applicable. Indirectly via energy consulting services and visualisation.
	GHG emissions reduction estimate (total) per emission source sector	Not applicable. Indirectly via energy consulting services and visualisation.
	Total costs and costs by CO ₂ e unit	Not applicable. Indirectly via energy consulting services and visualisation.

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Climate-friendly residential buildings funding programme
	Action type	Financial Intervention
	Action description	<p>Since 1997, the City of Münster has been investing in the energy-efficient deep renovation of buildings and has made a funding pot available to citizens. Since then, the funding programme has been regularly updated and continuously expanded.</p> <p>With its funding programme, the City of Münster promotes a wide range of measures to optimise the energy efficiency of residential buildings in the city. From building insulation and heating system replacement to green roofs and ecological insulation materials, there are many ways to make an important contribution to reducing CO₂ emissions in Münster.</p>
	Field of action	Built Environment



Reference to impact pathway	Systemic lever	Technology Governance and policy
	Outcome (according to module B-1.1)	Energy saving, renewable energies
Implementation	Responsible bodies/person for implementation	City administration of Münster
	Action scale & addressed entities	Residential building
	Involved stakeholders	Homeowner
	Comments on implementation	Approx. € 4.2 million in funding per year 08.11.2023 Council resolution of the submission V/0574/2023; 01.01.2024 new directive has been coming into effect
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	Not applicable
	GHG emissions reduction estimate (total) per emission source sector	5,000 tCO ₂ /a
	Total costs and costs by CO ₂ e unit	approx. 4.2 million €/a; 840 €/t CO ₂

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	PV systems on municipal buildings
	Action type	Technical Intervention
	Action description	Concerning municipal buildings, all future new buildings and extensions will be equipped with full-surface PV systems on the roofs - Council draft is being prepared and will be discussed before the summer break
Reference to impact pathway	Field of action	Built Environment
	Systemic lever	Technology
	Outcome (according to module B-1.1)	Renewable energies
Implementation	Responsible bodies/person for implementation	City administration of Münster



	Action scale & addressed entities	Municipal buildings
	Involved stakeholders	Not specified
	Comments on implementation	Council proposal Q2 2024 - Roof surfaces of municipal properties to be fully equipped with PV In addition, PV systems have also been installed on existing buildings since 2019. Around €1 million per year is currently available for this; first resolution: V/0668/2018
Impact & cost	Generated renewable energy (if applicable)	Still being developed
	Removed/substituted energy, volume, or fuel type	Still being developed
	GHG emissions reduction estimate (total) per emission source sector	Still being developed
	Total costs and costs by CO _{2e} unit	Still being developed

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Guidelines for climate-friendly urban land-use planning
	Action type	Governance and policy
	Action description	The planning guidelines list the climate protection and climate adaptation issues that must be taken into account in the respective planning phases.
Reference to impact pathway	Field of action	Built Environment
	Systemic lever	Governance and policy
	Outcome (according to module B-1.1)	Energy saving, renewable energies
Implementation	Responsible bodies/person for implementation	City administration of Münster
	Action scale & addressed entities	Urban area



	Involved stakeholders	Planners, investors and department of City Planning
	Comments on implementation	Forms the framework for binding and further standards in new buildings (e.g. solar standard in the urban land-use planning)
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	Not applicable
	GHG emissions reduction estimate (total) per emission source sector	Not applicable
	Total costs and costs by CO ₂ e unit	Not applicable

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Münster's standard for climate-friendly construction in land purchase agreements and urban development contracts"
	Action type	Governance and policy
	Action description	The combination of the "KfW Efficiency House/Building 40" standard and the solar standard significantly reduces CO ₂ emissions in the operation of new buildings and, depending on the building, also achieves an energy-plus standard, with which the building generates more energy over the year than it consumes.
Reference to impact pathway	Field of action	Built Environment
	Systemic lever	Governance and policy
	Outcome (according to module B-1.1)	Energy saving, renewable energies
Implementation	Responsible bodies/person for implementation	City of Münster
	Action scale & addressed entities	Urban area
	Involved stakeholders	Building owners, investors



	Comments on implementation	<p>Coordination of the contract text between the Climate office and Department of Property Management</p> <p>Implementation of the standard/text in contracts by Department of Property Management;</p> <p>Solar standard for property purchase agreements and urban development contracts;</p> <p>Audit of compliance by Department of Property Management;</p>
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	Not applicable
	GHG emissions reduction estimate (total) per emission source sector	1250 tonnes CO ₂ /a
	Total costs and costs by CO ₂ e unit	No costs

4.2.2.4 Mobility

The latest mobility survey conducted by the City of Münster in autumn of 2022 shows the following: Münster residents make almost half of their daily journeys by bike, with cycling currently accounting for 47% (2019: 44%). At the same time, the share of car traffic has fallen to 26 per cent (2019: 34 per cent). The share of pedestrians is 19 per cent (2019: 12 per cent), while local public transport accounts for eight per cent (2019: ten per cent). The so-called eco-mobility, i.e. a sustainable transport system consisting of footpaths, bicycles and public transport, thus already has a share of 74 per cent in Münster (2019: 66 per cent). With the Münster Mobility Masterplan 2035+ (Masterplan Mobilität 2035+), the city administration is currently developing a conceptual framework for designing climate-friendly and urban-compatible mobility for Münster that guarantees social participation for all Münster residents. The focus is on continuing to increase a high quality of life in the city in the future through binding targets and tailor-made measures. The objective is to achieve local climate neutrality in the mobility sector to a large extent by an increase in traffic avoidance and modal shift from motorised private transport to eco-mobility. Local public transport, which is shifted towards more climate-friendly drive technologies, is a key pillar of mobility, i.e. it is operated on dedicated routes or prioritised over motorised private transport as far as possible. The system is completed by a reallocation of areas and an expansion of infrastructure for local mobility. A redistribution of road space in favour of eco-mobility and an expansion of green and open spaces also promote a better quality of life in public spaces. At the same time, a purposeful expansion of charging infrastructures should also promote a transition to electric mobility in private motorised transport. The portfolio of measures in the field of mobility will continue to develop against the



backdrop of the development of the masterplan. As for the electrification of commercial vehicles envisaged in the Economic Model, the City of Münster is relying on the federal and state funding framework, e.g. via the "Directive on the promotion of commercial vehicles with alternative, climate-friendly drive systems and associated refuelling and charging infrastructure" (KsNI). Through the measures outlined here and their further development, the City of Münster is laying the foundations for the emission savings required as part of the mission.

B-2.2: Individual action outlines		
(Fill out one sheet per intervention/project)		
Action outline	Action name	Electrification of public transport
	Action type	Technology
	Action description	<p>Target 2030:</p> <p>Another important building block for the heartbeat of Münster is the substitution of municipal fleet's diesel buses by electric and emission-free drive technologies as well as the development of the transport sector into a systematically interlinked multimodal mobility system. By 2029, 100% of the 116 buses owned by the Stadtwerke Münster and around 100 rented buses from the decentralised depots of private partner companies on the outskirts of the city are to be electrified.</p> <p>At the same time, the necessary infrastructure is being built at the bus depot and at selected bus stops. Various funding programmes are being used to finance the project. The Stadtwerke Münster are trying to involve their contractors and regional transport companies as far as possible.</p> <p>The multimodal mobility system will integrate various modes of transport, including car sharing by the Stadtwerke's holding in the carsharing provider "Stadtteilauto".</p>
Reference to impact pathway	Field of action	Mobility
	Systemic lever	Technology



	Outcome (according to module B-1.1)	Electrification of public transport
Implementation	Responsible bodies/person for implementation	Stadtwerke Münster
	Action scale & addressed entities	citywide
	Involved stakeholders	City of Münster, Stadtwerke's contractors, regional transport companies
	Comments on implementation	<p>Implemented until 2030</p> <p>Current status:</p> <p>By the end of 2023, 73 Stadtwerke buses with electric drive systems have been already on the road in Münster.</p> <p>Next steps:</p> <p>Mobility Masterplan 2035+ ;</p> <p>Another 24 electric buses are ordered in 2024 and 2025, meaning 85 e-buses are on the road by the end of 2024 and 97 by the end of 2025.</p> <p>Further charging stations at terminal stops are being planned;</p> <p>Target: municipal bus fleet being converted by 2029</p>
Impact & cost	Generated renewable energy (if applicable)	None
	Removed/substituted energy, volume, or fuel type	approx. 2,000,000 litres of diesel
	GHG emissions reduction estimate (total) per emission source sector / sectors	CO ₂ reduction potential: approx. 5,200 tCO ₂ /a in 2030 (base year 2021) (based on the public transport services offered by Stadtwerke Münster)
	Total costs and costs by CO ₂ e unit	Costs of the project between 2024 and 2028: approx. €21.3 million (in relation to the public transport services offered by Stadtwerke)

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Expansion of public charging infrastructure
	Action type	Technology
	Action description	The public charging infrastructure is to be continuously developed and expanded so that a comprehensive range of charging options can



		be provided in future and the switch to e-vehicles becomes more attractive.
Reference to impact pathway	Field of action	Mobility
	Systemic lever	Technology
	Outcome (according to module B-1.1)	Expansion of the e-charging infrastructure
Implementation	Responsible bodies/person for implementation	City of Münster, Stadtwerke Münster, third parties
	Action scale & addressed entities	citywide, neighbourhoods
	Involved stakeholders	City of Münster
	Comments on implementation	Mobility Masterplan 2035+ - Tender for 16 packages with 4 locations each issued in October 2023 - Realisation of the locations within one year after allocation in January 2024 - Further tendering of packages in preparation
Impact & cost	Generated renewable energy (if applicable)	None
	Removed/substituted energy, volume, or fuel type	Shift in energy sources from fossil fuels to electricity, not quantifiable/measurable
	GHG emissions reduction estimate (total) per emission source sector	not quantifiable/ measurable
	Total costs and costs by CO ₂ e unit	not specified

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Expansion of e-car sharing supply
	Action type	Technology
	Action description	In order to strengthen eco-mobility, a reduction in the number of cars in the city is needed and improved access to the citywide car sharing service (including e-car sharing) shall be made. To achieve this, space is being made available for this in the traffic area as well as to potential providers in a tendering process.



Reference to impact pathway	Field of action	Mobility
	Systemic lever	Technology
	Outcome (according to module B-1.1)	Expansion of supply of e-car sharing
Implementation	Responsible bodies/person for implementation	City of Münster
	Action scale & addressed entities	citywide, neighbourhoods
	Involved stakeholders	Not specified
	Comments on implementation	Mobility Masterplan 2035+ - Invitation to tender for further (e-) car sharing spaces in spring 2024
Impact & cost	Generated renewable energy (if applicable)	None
	Removed/substituted energy, volume, or fuel type	Shift in energy sources from fossil fuels to electricity, not quantifiable/measurable
	GHG emissions reduction estimate (total) per emission source sector	not quantifiable/ measurable
	Total costs and costs by CO _{2e} unit	Not specified

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Expansion of mobility stations
	Action type	Technology
	Action description	The expansion of mobility stations is intended to improve the networking of modes of transport – especially in terms of eco-mobility. Once quality standards have been defined and a political decision has been made on the site concept, the plan is to gradually implement it from 2024 onwards.
Reference to impact pathway	Field of action	Mobility
	Systemic lever	Technology
	Outcome (according to module B-1.1)	Expansion of the mobility stations and extension of the e-car sharing offer



Implementation	Responsible bodies/person for implementation	City of Münster
	Action scale & addressed entities	citywide
	Involved stakeholders	Stadtwerke Münster
	Comments on implementation	Mobility Masterplan 2035+ - Council resolution on the mobile station site concept expected on 21 February 2024 - Gradual implementation from 2024 onwards
Impact & cost	Generated renewable energy (if applicable)	None
	Removed/substituted energy, volume, or fuel type	Saving fossil fuels by shifting motorised private transport to eco-mobility not quantifiable/ measurable
	GHG emissions reduction estimate (total) per emission source sector	not quantifiable/ measurable
	Total costs and costs by CO _{2e} unit	Not specified

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Car park concept
	Action type	Technology, governance and policy
	Action description	An action-oriented concept is being developed to reorganise and adapt the parking spaces available in the city centre. The aim is to reduce visible parking in public spaces and thus increase both the amenity in and accessibility of the city. The residents' parking zones are to be extended. Moreover, a car park management system is to be introduced and "fair parking" is to be implemented.
Reference to impact pathway	Field of action	Mobility
	Systemic lever	Technology, governance and policy
	Outcome (according to module B-1.1)	Implementation of the measures from the car park concept, amenity in the city



Implementation	Responsible bodies/person for implementation	City of Münster
	Action scale & addressed entities	citywide, neighbourhoods
	Involved stakeholders	Not specified
	Comments on implementation	Mobility Masterplan 2035+ - cross-party working group January/February 2024 - Political decision on the concept expected summer 2024 - Implementation of first measures from 2024 onwards
Impact & cost	Generated renewable energy (if applicable)	None
	Removed/substituted energy, volume, or fuel type	Saving fossil fuels by avoiding traffic and shifting motorised private transport to eco-mobility not quantifiable/ measurable
	GHG emissions reduction estimate (total) per emission source sector	not quantifiable/ measurable
	Total costs and costs by CO ₂ e unit	Not specified

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Cycle network 2.0
	Action type	Infrastructure
	Action description	The aim of the so-called "Cycle Network 2.0" is to achieve a hierarchisation and overall improvement of the city's cycling network. Focus is to increase the share of cycling in eco-mobility and thus reducing traffic-related CO ₂ emissions To this end, various recommendations for action were developed as part of the concept, which was submitted for political consultation at the beginning of 2024.
	Field of action	Transport



Reference to impact pathway	Systemic lever	Technology, governance and policy
	Outcome (according to module B-1.1)	approx. 104 kilometres of cycle paths Establishment of a cycle network 2.0 with high standards and the expansion of cycling routes
Implementation	Responsible bodies/person for implementation	Münster city administration
	Action scale & addressed entities	Urban area
	Involved stakeholders	Not specified
	Comments on implementation	Mobility Masterplan 2035+ Political decision on the cycle network 2.0 in the Committee for Transport and Mobility on 7 February 2024
Impact & cost	Generated renewable energy (if applicable)	None
	Removed/substituted energy, volume, or fuel type	Saving fossil fuels, shifting motorised private transport to eco-mobility not quantifiable/ measurable
	GHG emissions reduction estimate (total) per emission source sector	not quantifiable/ measurable
	Total costs and costs by CO _{2e} unit	Not specified

B-2.2: Individual action outlines		
(Fill out one sheet per intervention/project)		
Action outline	Action name	City administration guidelines “Utilising eco-mobility for business trips and journeys”
	Action type	governance and policy
	Action description	Definition of guidelines that bindingly include sustainability and climate protection aspects for business trips of employees of the city administration.
Reference to impact pathway	Field of action	Transport
	Systemic lever	governance and policy



	Outcome (according to module B-1.1)	- Establishment of climate-friendly mobility management in the city administration - City administration as a role model
Implementation	Responsible bodies/person for implementation	Münster city administration
	Action scale & addressed entities	Münster city administration
	Involved stakeholders	Mobility service providers (e.g. Stadtwerke Münster, local sharing providers)
	Comments on implementation	The guidelines are in effect since 12.12.2023 implemented and in use "Climate-neutral city administration" process
Impact & cost	Generated renewable energy (if applicable)	none
	Removed/substituted energy, volume, or fuel type	Saving fossil fuels, shifting motorised private transport to eco-mobility not quantifiable/ measurable
	GHG emissions reduction estimate (total) per emission source sector	approx. 3,000 tonnes
	Total costs and costs by CO ₂ e unit	Not specified

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Expansion of employee mobility programmes within the City administration
	Action type	Technology, governance and policy
	Action description	Various projects are being planned or have already been implemented to support/encourage city administration's employees to use eco-mobility for their commute to work or to provide incentives/incentives to switch from motorised private transport to eco-mobility. These include, for example <ul style="list-style-type: none"> • Bicycle leasing (implemented) • Allowing for charging pedelec batteries (implemented)



		<ul style="list-style-type: none"> • JobTicket (implemented or in progress for civil servants) • Bicycle boxes / additional bicycle parking facilities (in realisation / planning) • Certification as a bicycle-friendly employer
Reference to impact pathway	Field of action	Transport
	Systemic lever	governance and policy
	Outcome (according to module B-1.1)	<ul style="list-style-type: none"> - Establishment of climate-friendly mobility management - City as a role model
Implementation	Responsible bodies/person for implementation	Münster city administration
	Action scale & addressed entities	Münster city administration
	Involved stakeholders	Mobility service providers (e.g. bicycle leasing providers, Stadtwerke Münster, ADFC)
	Comments on implementation	<p>"Climate-neutral city administration" process</p> <ul style="list-style-type: none"> • Completion of bicycle boxes in the multi-storey car park at townhouse 3 (opening Q1/2024) • Completion of bicycle cellar townhouse 1 (reopening according to current status 04/2024); • Decision of the Administrative Board regarding JobTicket for civil servants; • Audit as a bicycle-friendly employer as soon as possible
Impact & cost	Generated renewable energy (if applicable)	None
	Removed/substituted energy, volume, or fuel type	Saving fossil fuels, shifting motorised private transport to eco-mobility not quantifiable/ measurable
	GHG emissions reduction estimate (total) per emission source sector	approx. 6,300 tonnes
	Total costs and costs by CO ₂ e unit	Not specified

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Reduction & electrification of the municipal vehicle fleet
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	Action type	Technology
	Action description	<p>The municipal vehicle fleet is to be replaced to e-mobility on an ongoing basis. This is already happening with many replacement purchases. In addition, the size of the municipal vehicle fleet is being critically analysed in order to reduce overcapacity. To accelerate and systematise the process, the following instruments, projects and accompanying processes will also be initiated:</p> <ul style="list-style-type: none"> • Exploring vehicle stock • Further shift to car sharing • Introduction of a fleet management (perspective) • Company car pooling
Reference to impact pathway	Field of action	Transport
	Systemic lever	Technology
	Outcome (according to module B-1.1)	<p>- Establishment of a climate-friendly mobility management</p> <p>- City administration as a role model</p>
Implementation	Responsible bodies/person for implementation	Münster city administration
	Action scale & addressed entities	Münster city administration
	Involved stakeholders	Not specified
	Comments on implementation	<p>"Climate-neutral city administration" process</p> <ul style="list-style-type: none"> • Coordination of data collection by 04/2024 and, if necessary, acquisition of an evaluation tool; • Exploring vehicle fleet for the introduction of a lead car park management Q2/2025 • Introduction of company car-pooling Q4/2025, if possible together with fleet management;
Impact & cost	Generated renewable energy (if applicable)	None
	Removed/substituted energy, volume, or fuel type	Saving fossil fuels, shifting to electricity not quantifiable/ measurable



	GHG emissions reduction estimate (total) per emission source sector	approx. 2,800 tonnes
	Total costs and costs by CO ₂ e unit	Not specified

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	S-Bahn Münsterland
	Action type	Technology, governance and policy
	Action description	Local rail passenger transport is to be massively increased over the next few years, thereby achieving a significant shift in commuter traffic from motorised private transport to eco-mobility as a whole. In addition to increasing train journeys on existing routes, disused railway lines are to be reactivated and new stops are to be built.
Reference to impact pathway	Field of action	Transport
	Systemic lever	- Newly designed public transport service
	Outcome (according to module B-1.1)	- Further progress in the expansion of the Münsterland S-Bahn - Electrification of regional rail transport
Implementation	Responsible bodies/person for implementation	Münster city administration, Münsterland districts
	Action scale & addressed entities	Münster city area
	Involved stakeholders	Deutsche Bahn, transport associations (ZVM, NWL) and others
	Comments on implementation	Mobility Masterplan 2035+ <ul style="list-style-type: none"> • Stage 1 from 2026: including reactivation of the railway line Münster - Sendenhorst; • Stage 2 from 2032: including main line MS and marketing as S-Bahn; • Stage 3 from 2040: Full expansion of the target concept
Impact & cost	Generated renewable energy (if applicable)	none



	Removed/substituted energy, volume, or fuel type	Saving fossil fuels, shifting motorised private transport to eco-mobility not quantifiable/ measurable
	GHG emissions reduction estimate (total) per emission source sector	up to 200,000 t CO ₂ /year if the assumption of 212,000 travellers/day is realised
	Total costs and costs by CO ₂ e unit	Not specified

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Redesign of the existing public transport service
	Action type	Technology, governance and policy
	Action description	From now on, the existing public transport services will be further developed and conceptualised with the aim of increasing eco-mobility and thereby reducing transport-related emissions. A central component of this is the development of the local transport plan
Reference to impact pathway	Field of action	Transport
	Systemic lever	- Newly designed public transport service supply
	Outcome (according to module B-1.1)	- Newly designed public transport service supply
Implementation	Responsible bodies/person for implementation	Münster city administration
	Action scale & addressed entities	Münster city area
	Involved stakeholders	Regional transport companies
	Comments on implementation	Mobility Masterplan 2035+ <ul style="list-style-type: none"> • Initial steps have already been taken to define a hierarchy for the future supply; • Gradual introduction of high-performance axis in the existing network from 2024 (moderate adjustments);



		<ul style="list-style-type: none"> Resolution of the City Council on the preparation of the 4th Local Transport Plan City of Münster 2nd/3rd quarter 2024;
Impact & cost	Generated renewable energy (if applicable)	None
	Removed/substituted energy, volume, or fuel type	Saving fossil fuels, shifting motorised private transport to eco-mobility not quantifiable/ measurable
	GHG emissions reduction estimate (total) per emission source sector	Not specified
	Total costs and costs by CO _{2e} unit	Not specified

4.2.2.5 Climate budget

In Münster, processes of target and strategy development in order to meet the changing social challenges have been discussed for many years. The grand challenges of the future, such as climate neutrality and its associated tasks, require a reorientation and prioritisation of municipal funding in addition to the necessary federal, state and EU funding schemes. This means that the municipal climate protection strategy and the description of budgets and their impact on the budget must be closely interlinked. Münster is currently working on the development of a climate budget. In addition, the City of Münster has implemented a framework for green and social financing, which includes the obligation to report annually on the use of funds and the sustainability impact of the borrowed capital raised. Beyond that, climate protection is also addressed with regard to capital investments of the City of Münster. Currently, a cross-departmental, cross-party working group is developing guidelines for procurement aiming at establishing social-ecological criteria for the procurement of goods, services and trades for the City of Münster. Although the measures of the "climate budget" field of action do not directly reduce emissions, they form a central basis for the necessary steps towards transformation by guiding the allocation and use of funds and thus pave the way for achieving the mission goal.

B-2.2: Individual action outlines		
(Fill out one sheet per intervention/project)		
Action outline	Action name	Socio-ecological criteria for procurement
	Action type	Procurement actions
	Action description	On 7 September 2022, the Council commissioned the First Mayor to set up a joint working group of politicians and representatives from the city administration in order to develop socio-



		<p>ecological criteria for the procurement of goods, services, and trades. Moreover, this working group's task is also to propose a procedure for ensuring and monitoring compliance with these criteria in accordance with the law.</p> <p>The administration has proposed a guideline text to the working group and submitted it for discussion in the political realm with related stakeholders from civil society. Political representatives have commented on the draft of the guidelines that is now with the administration for revision so that the working group can then vote on which version to propose to the Council.</p>
Reference to impact pathway	Field of action	Climate budget
	Systemic lever	Governance
	Outcome (according to module B-1.1)	Not applicable
Implementation	Responsible bodies/person for implementation	Münster city administration
	Action scale & addressed entities	Municipal group
	Involved stakeholders	City group, provider
	Comments on implementation	Comments of the administration; Council decision;
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	Not applicable
	GHG emissions reduction estimate (total) per emission source sector	Not applicable
	Total costs and costs by CO _{2e} unit	Not applicable

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Guidelines for sustainable investments
	Action type	Financial innovations



	<p>Action description</p>	<p>There is no standardised definition of sustainable investment. In principle, sustainable investments are responsible, ethical, social and ecological investments. Environmental factors, social responsibility and good corporate governance are included in the investment process (ESG criteria). Sustainable investing indirectly increases the pressure on companies and countries to fulfil their responsibility towards our society to a greater extent. The investment has a steering function and strengthens sustainable companies/states in competition.</p> <p>The City of Münster invests money in two special municipal funds, in particular to reduce future pension burdens for pension payments to civil servants. The City of Münster is the sole investor in the Versorgungs- und Sanierungsfonds (VUS Fund), while the Westfälische-Versorgungs-Rücklage Fonds (WVR Fund) is a consortium of nine municipalities.</p> <p>Since 2016, investments have been made in accordance with sustainability criteria. The equities and corporate bonds acquired by the fund management must fulfil certain sustainability criteria. Some sectors are completely excluded (fracking/military weapons/atomic energy/climate-damaging energy), while all other sectors must achieve a certain level of sustainability. Corporate bonds must be so-called 'green bonds'. Provisions on the sustainability of investments are set out in the City of Münster's investment guidelines.</p> <p>In addition, the City of Münster has significantly expanded ESG reporting, particularly in its solely held fund. The ESG report and the carbon report are now an integral part of the Investment Committee's semi-annual meeting. These</p>
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		<p>measures have significantly improved the carbon footprint and ESG rating of the securities held and therefore of the city's investments.</p> <p>The investment guidelines have now been further developed and expanded to include sustainability criteria. For the first time, investment and exclusion criteria for the purchase of government bonds have also been defined.</p> <p>In addition, certain ESG rating classifications must be met in future for investments in companies / countries.</p>
Reference to impact pathway	Field of action	Climate budget
	Systemic lever	Governance
	Outcome (according to module B-1.1)	Not applicable
Implementation	Responsible bodies/person for implementation	City of Münster
	Action scale & addressed entities	City of Münster
	Involved stakeholders	Investors
	Comments on implementation	Proposal for the further development of the City of Münster's investment guideline as a draft resolution in the political arena (20/02/2020)
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	Not applicable
	GHG emissions reduction estimate (total) per emission source sector	Not applicable
	Total costs and costs by CO _{2e} unit	Not applicable

B-2.2: Individual action outlines		
(Fill out one sheet per intervention/project)		
Action outline	Action name	Sustainability reporting in the City of Münster Group
	Action type	Financial



	Action description	<p>Strengthening sustainability reporting within the City of Münster group.</p> <p>On the one hand, the existing reporting in the City of Münster group is heterogeneous, as some obligations exist or are emerging (EU CSRD (Corporate Sustainability Reporting Directive)). On the other hand, other reporting formats such as the public-interest-oriented balance sheet are in use.</p> <p>The sustainability reporting of the municipal companies is to be strengthened. There will be recommendations on this within the framework of the Public Corporate Governance Code.</p>
Reference to impact pathway	Field of action	Climate budget
	Systemic lever	Governance
	Outcome (according to module B-1.1)	Not applicable
Implementation	Responsible bodies/person for implementation	Münster city administration
	Action scale & addressed entities	Münster city group
	Involved stakeholders	Not applicable
	Comments on implementation	A guideline and an overview of the sustainability reports will be included in the Public Corporate Governance Code of the City of Münster. The corresponding template for the Code is planned to be developed in April.
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	Not applicable
	GHG emissions reduction estimate (total) per emission source sector	Not applicable
	Total costs and costs by CO _{2e} unit	Not applicable



B-2.2: Individual action outlines		
(Fill out one sheet per intervention/project)		
Action outline	Action name	Establishment of construction investment controlling
	Action type	Governance
	Action description	The motion A-R/0053/2022 submitted by Bündnis 90/Die Grünen, SPD and Volt to the Münster City Council aims to "improve the controlling of construction and rental costs". To this end, the politicians are calling for the development and establishment of an independent construction investment controlling. In particular, this should serve to keep an eye on investment costs and to assess which cost increases are actually necessary. In addition, controlling should take a critical look at the demands of the individual offices and examine the extent to which these are actually necessary. Politics, real estate management and individual offices are currently not able to check this independently.
Reference to impact pathway	Field of action	Climate budget
	Systemic lever	Governance
	Outcome (according to module B-1.1)	Not applicable
Implementation	Responsible bodies/person for implementation	City of Münster
	Action scale & addressed entities	Münster city administration
	Involved stakeholders	Not applicable
	Comments on implementation	Exchange with other municipalities, Development of a business directive, Implementation
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	Not applicable



	GHG emissions reduction estimate (total) per emission source sector	Not applicable
	Total costs and costs by CO ₂ e unit	Not applicable

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Development of a climate budget
	Action type	Financial
	Action description	<p>Steering by the budget is to be combined with an assessment on climate impacts.</p> <p>The climate budget tool is intended to help us to understand the climate impact of financial decisions.</p> <p>Yet, no local authority in Germany does have a genuine climate budget. Therefore, a concept needs to be developed in order to interlink information on the budget and information on climate projects.</p> <p>The classification into categories A-D with regard to the climate impact of investment in municipal school buildings was a first step, but did not lead to comprehensive transparency and clarity (see Investmentplan). The idea is to create a link between the monitoring elements of budgeting and climate impact via an accompanying budget template in which the city group's major/strategic projects in the area of climate protection and climate adaptation are listed centrally. The template contains the following elements:</p> <p>Review of the balance sheet presentation (water level report)</p> <p>Categorisation of projects and project statuses (progress reporting)</p>



		<p>Key successes and challenges of the reporting year</p> <p>Impact of the projects undertaken beyond the local level</p> <p>(global interactions)</p> <p>There are also two political motions on the climate budget. An exchange with politicians has taken place in this regard. An annual assessment of the achievement of climate neutrality with a presentation of the remaining carbon budget and the link to global and national issues should also to be established.</p>
Reference to impact pathway	Field of action	Climate budget
	Systemic lever	Governance
	Outcome (according to module B-1.1)	Not applicable
Implementation	Responsible bodies/person for implementation	City of Münster
	Action scale & addressed entities	Münster city group
	Involved stakeholders	Council of the City of Münster
	Comments on implementation	<p>Submission of "Municipal management objectives" in April 2024</p> <p>Taking up motion A-R/0010/2023 and A-R/0013/2023</p> <p>Positive, neutral and negative effects of investment measures on the climate should be presented as part of an accompanying budget template as a supplement to the budget</p>
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	Not applicable
	GHG emissions reduction estimate (total) per emission source sector	Not applicable
	Total costs and costs by CO ₂ e unit	Not applicable



B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Green bonds																			
	Action type	Financial																			
	Action description	<p>In September 2021, the City Council of Münster resolved that the administration should initiate sustainable capital procurement via green bonds. The Green Bonds has been placed on the market in September 2022 with the following key data:</p> <table border="1"> <tr> <td>Volume</td> <td>planned 100 million euros, realised 140 million euros</td> </tr> <tr> <td>Allocation</td> <td>30 million euros Stadtwerke Münster / 110 million euros City of Münster</td> </tr> <tr> <td>Redemption</td> <td>bullet</td> </tr> <tr> <td>Running times</td> <td>7 / 10 / 15 / 20 years</td> </tr> <tr> <td>Value date</td> <td>30.09.2022</td> </tr> <tr> <td>Interest payments</td> <td>30.09.</td> </tr> <tr> <td>Interest rate</td> <td>Term-related mid-swap rate (MS) plus spread</td> </tr> <tr> <td>Denomination</td> <td>500,000 euros</td> </tr> <tr> <td>Opening order book</td> <td>13.09.2022</td> </tr> <tr> <td>Closing order book</td> <td>22.09.2022</td> </tr> </table> <p>Due to the great interest in the Green Bonds, the original volume of EUR 100 million was increased to EUR 140 million and allocated. It was pleasing that all maturities from 7 to 20 years met with interest from investors and could be serviced. A total of 16 investors subscribed to the green bonds. The first allocation and impact report on the green bonds was presented in September 2023. The report provides information on the use of funds (allocation report)</p>	Volume	planned 100 million euros, realised 140 million euros	Allocation	30 million euros Stadtwerke Münster / 110 million euros City of Münster	Redemption	bullet	Running times	7 / 10 / 15 / 20 years	Value date	30.09.2022	Interest payments	30.09.	Interest rate	Term-related mid-swap rate (MS) plus spread	Denomination	500,000 euros	Opening order book	13.09.2022	Closing order book
Volume	planned 100 million euros, realised 140 million euros																				
Allocation	30 million euros Stadtwerke Münster / 110 million euros City of Münster																				
Redemption	bullet																				
Running times	7 / 10 / 15 / 20 years																				
Value date	30.09.2022																				
Interest payments	30.09.																				
Interest rate	Term-related mid-swap rate (MS) plus spread																				
Denomination	500,000 euros																				
Opening order book	13.09.2022																				
Closing order book	22.09.2022																				



		<p>and the sustainability impact of the financed investments and projects (impact report) : https://www.stadt-muenster.de/fileadmin/user_upload/stadt-muenster/20_finanzen_und_beteiligungen/pdf/Haushalt/Nachhaltige_Finanzierung/1AllokationsundWirkungsbericht.pdf</p> <p>The launch of a further green bond for 120 million euros is planned for 2024.</p>
Reference to impact pathway	Field of action	Climate budget
	Systemic lever	Financing
	Outcome (according to module B-1.1)	Not applicable
Implementation	Responsible bodies/person for implementation	Münster city administration
	Action scale & addressed entities	Münster city group
	Involved stakeholders	Investors
	Comments on implementation	Placement of the 2nd green bond (2024);
Impact & cost	Generated renewable energy (if applicable)	Not specified
	Removed/substituted energy, volume, or fuel type	Not specified
	GHG emissions reduction estimate (total) per emission source sector	<p>CO₂ -potential:</p> <p>The CO₂ savings do not result from the choice of financing method (here: green bonds), but from the measures financed with the green bonds. These are for the 1st Green Bonds:</p> <ul style="list-style-type: none"> -the Mathilde-Anneke comprehensive school, -the 4th purification stage of the wastewater treatment plant, -the fibre optic expansion (via Stadtwerke Münster GmbH).
	Total costs and costs by CO _{2e} unit	Costs:



		The issue of a green bonds is associated with the usual credit financing costs, whereby the interest rate is slightly below the level for traditional loans. In addition, there are costs for the assessment of the sustainability impact by an external sustainability rating agency.
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4.2.2.6 Education and food

The City of Münster's climate protection work has long been characterised by the approach that climate protection targets cannot be achieved by technical climate protection measures alone. What is needed in addition is a cultural transformation of the entire urban society. In this respect, the main issue is that systemic changes are required for the social transformation to succeed. The aim of the City of Münster is therefore to create and promote an environment that supports citizens to make climate-friendly decisions in areas such as mobility, housing and energy or consumption and nutrition. As part of the transformation process of the city administration into a modern and future-oriented organisation, the following goal was set accordingly: "The transformation of the urban society must be understood as a systemic task of the city, citizens and companies. The aims are to activate, qualify and multiply climate-friendly behaviour in society as a whole". Comprehensive sustainable education is firmly established in school and extracurricular facilities and concrete spaces and opportunities are created for trying out and experiencing with climate-friendly alternatives. Climate training (a coaching programme for citizens) forms a basis for this. It will be scaled up in the coming years. The topic of "Education and food" closely links to the comprehensive Münster 2030 sustainability strategy, which shows how the city can be designed so that future generations will also have the same resources and decision-making opportunities, making Münster fit for grandchildren. In 2019, Münster was honoured with the German Sustainability Award for its 2030 sustainability strategy: <https://www.stadt-muenster.de/umwelt/nachhaltigkeit>. Although the measures in the "Education and food" field of action are unlikely to result in direct emission savings, they are particularly important for communicating the topics of a climate-friendly lifestyle and individual options for action to the population in order to achieve the mission goal.

B-2.2: Individual action outlines		
(Fill out one sheet per intervention/project)		
Action outline	Action name	Action plan for a sustainable food system Münster
	Action type	Social participation and awareness campaigns
	Action description	In 2019, the Global Sustainable Development Advisory Board recommended this project for



		<p>implementation as one of the key projects of the Münster 2030 sustainability strategy.</p> <p>The goals of a sustainable food system are</p> <ul style="list-style-type: none"> - Implementation of the German Nutrition Society's quality standards for community catering in as many community catering establishments as possible, including an increase in organic-certified community catering establishments (bronze, silver, gold) - Establishing and expanding regional value chains and strengthening supply structures for regional, seasonal, fair trade and organically grown foods - Contribute to halving food waste and reducing food losses or packaging waste - Expansion of co-operations - Expansion of educational and information services and - Exploring and utilising the municipal scope for action in order to achieve targets <p>At the time, the administration had commented in the council resolution that this comprehensive project approach could only be realised if additional resources were made available, including for a staff position and material resources.</p> <p>The administration has now (August 2023 submitted a project proposal for the BMEL competition "Food for Münster 2030 (FoorMS2030). Shaping the food transition in the region collaboratively"), in cooperation with Münster University of Applied Sciences and Ernährungsrat e.V. It is a two-stage process. The proposal is under review.</p>
	Field of action	Education and food



Reference to impact pathway	Systemic lever	Social innovation
	Outcome (according to module B-1.1)	Not applicable
Implementation	Responsible bodies/person for implementation	Sustainability Office, City of Münster
	Action scale & addressed entities	Urban society
	Involved stakeholders	Agriculture, companies, civil society
	Comments on implementation	See description
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	Not applicable
	GHG emissions reduction estimate (total) per emission source sector	Not specified
	Total costs and costs by CO _{2e} unit	<p>The "FoorMS2030" project proposal applies for a three-year project period. A total financial volume of € 802,139.70 and an own contribution of € 60,000 have been estimated. Among other things, this is to finance 1.75 full-time equivalents at the city administration and approx. 0.3 full-time equivalents at Münster University of Applied Sciences. If the proposal is rejected, a financing via the City of Münster will have to be discussed.</p> <p>No information can be provided on carbon savings.</p>



B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Establishing education for sustainable development firmly in school and extracurricular educational institutions
	Action type	Social participation and awareness campaigns
	Action description	<p>Establishing education for sustainable development (ESD) in educational institutions by 2030 is a goal adopted by the City of Münster Council. The priorities for 2024 include a focus on climate and food:</p> <ul style="list-style-type: none"> - Further development of the Münster ESD network (organising 2 - 3 network meetings; developing the next joint education programme for the 2023 - 2024 school year, next joint ESD conference in autumn 2024; developing a newsletter) - Support for "School of the Future": Recruitment of additional schools; implementation of 1 - 2 all-day ESD modules (for teachers or other educators) and 1 - 2 student academies (for students across schools); establishment of the Münster "School of the Future" school network - Implementation of the primary school project "YooLe - raus aus Schule" with currently 7 participating primary schools and further development and expansion of the programme for the 2024/2025 school year - Implementation of the diverse educational programme in cooperation with Haus Heithorn - Continuation of the "Future Diploma" as a cooperation project between the ESD Regional Centre and the vhs Münster - Further development of the school garden network with participating schools (joint fruit harvest on the Haus Kump meadow orchard; apple



		<p>juicing campaign with participating primary schools; exchange meetings)</p> <ul style="list-style-type: none"> - Action days for the installation and initial planting of 12 new raised beds at various schools (cooperation project with the Adolph Kolping Vocational College) - Introduction of a regular "ESD consultation hour" in the House of Sustainability of the City of Münster - Awarding and consultation on the municipal funding programme "Urban Citizens' Gardens"
Reference to impact pathway	Field of action	Education and food
	Systemic lever	Social Innovation
	Outcome (according to module B-1.1)	Not applicable
Implementation	Responsible bodies/person for implementation	Sustainability Office, City of Münster
	Action scale & addressed entities	Münster city society
	Involved stakeholders	Urban society
	Comments on implementation	See description
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	Not applicable
	GHG emissions reduction estimate (total) per emission source sector	Not applicable
	Total costs and costs by CO _{2e} unit	Not specified

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Conversion of city administration's canteen food supply
	Action type	Social participation and awareness campaigns
	Action description	Goals by 2030 :



		<p>In its resolution V/0669/2019, the City Council of Münster adopted the following objective: "Catering in the municipal canteens is increasingly organic, fair, regional and seasonal. Vegetarian and vegan options are fixed components of the menu"</p> <p>The programme of measures for a climate-neutral city administration in 2030 was adopted with the submission V/0731/2021. It specifically states: "City events, lunch catering in the canteens and council work will be sustainable and climate-neutral."</p> <p>Until 2022:</p> <p>20% of the catering in the municipal canteens is based on fair, seasonal and regional organic food. 33% of the dishes are vegetarian.</p> <p>By 2030:</p> <ul style="list-style-type: none"> - Where available, food requirements are covered entirely by environmentally friendly, seasonally produced organic food from the region. Also applies to municipal facilities and businesses (within the available budget) <p>Various sub-projects need to be implemented in order to achieve this goal. The central approach is currently the application of the municipal canteen for the NRW canteen programme of the NRW Consumer Advice Centre: The NRW Consumer Advice Centre offers specialist advice to support publicly funded institutions in optimising their catering services. Canteens are supported in making their catering supply more attractive and health-promoting, reducing food waste and raising awareness for greater appreciation of food. They also receive impulses for the procurement of regionally produced food. It re-</p>
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		mains to be seen whether the municipal canteen will be selected to take part in the programme.
Reference to impact pathway	Field of action	Education and food
	Systemic lever	Social Innovation
	Outcome (according to module B-1.1)	Not applicable
Implementation	Responsible bodies/person for implementation	Münster city administration
	Action scale & addressed entities	Münster city administration
	Involved stakeholders	Employees of the City of Münster
	Comments on implementation	See description
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	Not applicable
	GHG emissions reduction estimate (total) per emission source sector	Not specified
	Total costs and costs by CO ₂ e unit	Not specified

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Scaling climate training
	Action type	Social participation and awareness campaigns
	Action description	<p>The so called City of Münster's ClimateTraining programme is a long-term project. This coaching programme is intended to support a "snowball effect" to activate and qualify the Münster population to adopt climate-friendly behaviour and thus drive forward the transformation of urban society by 2030.</p> <p>ClimateTraining currently takes place twice a year in small groups with around five participants (trainees). Each of these groups are moderated by so called volunteer climate trainers</p>



		<p>(coaches). In the ClimateTraining programme, the participants (trainees) develop individual climate protection measures. Moreover, a portfolio of around 15 products and services in the context of housing and energy, mobility, consumption and nutrition is supplied permanently by Münster-based companies and organisations in order to provide the opportunity to test climate-friendly products and services. This portfolios checked on a regular basis and any necessary adjustments are made.</p> <p>The ClimateTraining approach is to be scaled up by providing it more target group-specific</p> <ul style="list-style-type: none"> - ClimateTraining goes school: ClimateTraining is established as a project course at the Mathilde-Anneke comprehensive school, participating pupils are trained as climate trainers in order to coach pupils from the lower school or primary schools, - Climate training in the neighbourhood: As part of project up2030 urban planning and design, the concept of climate training in the neighbourhood will be developed as a measure to involve residents. It is planned to implement the concept in 2025.
Reference to impact pathway	Field of action	Education and food
	Systemic lever	Social innovation
	Outcome (according to module B-1.1)	Not applicable
Implementation	Responsible bodies/person for implementation	Climate office, Münster City Council
	Action scale & addressed entities	Urban society
	Involved stakeholders	Urban society, companies
	Comments on implementation	<p>03/24 - 07/24 Pupils take part in climate training;</p> <p>08/24 - 12/24 Training for climate trainers and concept for training pupils;</p>



		12/23 - 12/24 Concept development for climate training in the neighbourhood
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	Not applicable
	GHG emissions reduction estimate (total) per emission source sector	Not applicable
	Total costs and costs by CO ₂ e unit	<p>Costs:</p> <p>A sum of around 60,000 euros per year is spent on the implementation, public relations work and support of the climate training volunteers. Not specified</p> <p>CO₂ reduction potential:</p> <p>By taking part in ClimateTraining, a single person can save up to 2.4 tonnes of CO₂ per year. This corresponds to a saving of approx. 29 per cent per capita. The greatest CO₂ reduction potential is in the areas of housing and mobility. Here, emissions can be reduced by up to 45 per cent on average per capita.</p> <p>Around 80 to 100 people take part in the climate training programme each year. This results in potential CO₂ savings of up to 240 tonnes per year. This scales up accordingly over the years.</p> <p>In addition, the high level of public awareness generated by the project raises awareness far beyond the circle of participants.</p>

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Climate-friendly lunch catering in schools
	Action type	Social participation and awareness campaigns
	Action description	Status: The requirements for the quality of lunchtime catering in schools are increasing (Council resolution 2022 / citizens' suggestion



		<p>§24 GO). The city administration has therefore increased the required proportion of certified organic food from 20% to 30% in the latest tenders. At the same time, the change in sponsorship of open all day-schools (OGS) from the city to independent sponsors has reduced the city's influence on the organisation of catering at primary schools. The aspect of climate-friendly nutrition is to be pursued further as part of the revision of the OGS quality standards. For tenders for lunchtime catering at secondary schools, climate-friendly aspects can be taken into account in the specifications, insofar as this is permitted under public procurement law. The specifications provide for the proportionate use of organic, seasonal and fairly produced food.</p> <p>The key component of climate-friendly lunchtime catering would be the use of regionally produced food and catering. This could minimise transport costs and therefore CO₂ emissions. However, restricting tenders to a regional area is contrary to public procurement law. The schools currently have different catering systems depending on kitchens facilities available.</p> <p>The city administration is currently looking at other alternative forms of organisation for climate-friendly lunchtime catering at schools and day-care centres. Among other things, the possibilities of reducing climate-damaging effects by utilising existing canteen kitchens are being examined. Due to the complexity of the topic (various stakeholders with different interests, legal framework conditions, financing), a considerable amount of research and coordination is required. The administration assumes that a draft resolution on lunchtime catering in day-care centres and schools can be presented to</p>
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		the City of Münster's council committees in the third quarter of 2024.
Reference to impact pathway	Field of action	Education and food
	Systemic lever	Social Innovation
	Outcome (according to module B-1.1)	Not applicable
Implementation	Responsible bodies/person for implementation	Münster city administration
	Action scale & addressed entities	Schools in Münster
	Involved stakeholders	Schools, pupils
	Comments on implementation	Examine organisational forms for climate-friendly lunch catering (by the end of Q2 2024) Draft resolution for council committees on climate-friendly lunchtime catering (3rd quarter 2024)
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	Not applicable
	GHG emissions reduction estimate (total) per emission source sector	Not applicable
	Total costs and costs by CO ₂ e unit	Not applicable

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Climate protection education
	Action type	Social participation and awareness campaigns
	Action description	Objective: To encourage Münster residents of all ages and stages of life to adopt climate-friendly lifestyles and thus promote their establishment in urban society. Examples of climate-friendly behaviour are to be prepared in a target group-oriented manner, behavioural changes



		<p>are to be initiated in order to exploit CO₂ reduction potential by behaviour changes.</p> <p>The programmes offered by the vhs and the Münster public library in the areas of environmental education, climate protection and sustainability are already meeting with great interest and are to be consolidated / expanded.</p> <p>Exemplary vhs programmes for different target groups:</p> <ul style="list-style-type: none"> - vhs-Zukunftsdiplom for children (for 6 to 10-year-olds): over 70 hands-on activities in cooperation with local / regional partners, makes aspects of climate protection clear and tangible tailor-made for children- - Certificate course "klimafit – getting concrete. Putting the brakes on climate change": provides in-depth knowledge of ecological interrelationships and specifically aims to reduce the ecological footprint of each individual- - Münster Climate Talks in online format: brings scientific results of climate research closer to a broad audience <p>Exemplary public library services for different target groups:</p> <ul style="list-style-type: none"> - Library of Things- Repair Café- Provision of media that serve as educational materials- Creation of a "sustainable living" media centre- Significant expansion of the "sustainable living" media offering - Action days, workshops and events (also with cooperation partners): e.g. Zero Waste, Made by life, waste counselling, upcycling books, upcycling workshops, less is more, climate for children, consumption-critical city tours, etc.
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Reference to impact pathway	Field of action	Education and food
	Systemic lever	Social Innovation
	Outcome (according to module B-1.1)	Not applicable
Implementation	Responsible bodies/person for implementation	Münster city administration
	Action scale & addressed entities	Urban society
	Involved stakeholders	Urban society
	Comments on implementation	Apply education for sustainable development (ESD) along the entire education chain; further expand target group-specific formats of the vhs
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	Not applicable
	GHG emissions reduction estimate (total) per emission source sector	Not applicable
	Total costs and costs by CO ₂ e unit	Not specified

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Biostadt Münster and the Münsterland eco-model region
	Action type	Social participation and awareness campaigns
	Action description	<p>The City Council of Münster has set the following targets for the year 2030:</p> <ul style="list-style-type: none"> - to actively support regional value creation processes - to organise catering in municipal canteens, schools and daycare centres to be more organic, fair, regional, vegetarian and vegan, cover 100% of food demands (if available) from environmentally friendly, seasonally produced food from the region



		- increase the share of supply by organic farming to at least 5 % by 2030 and to increase the share of more sustainable conventional farming.
Reference to impact pathway	Field of action	Education and food
	Systemic lever	Nutrition
	Outcome (according to module B-1.1)	Not applicable
Implementation	Responsible bodies/person for implementation	Sustainability Office, City of Münster
	Action scale & addressed entities	City
	Involved stakeholders	Agriculture, educational institutions
	Comments on implementation	<ul style="list-style-type: none"> - Further training for catering service providers in municipal schools, day-care centres and care homes (GeNah); - Internal administrative training on providing "sustainable" catering at events; - Establishment of the "bioregional meeting point" of the Münsterland eco-model region, start 11.03.2024
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	Not applicable
	GHG emissions reduction estimate (total) per emission source sector	Not specified
	Total costs and costs by CO _{2e} unit	Not specified

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	"DrinkWater" campaign
	Action type	Social participation and awareness campaigns
	Action description	<p>Goals:</p> <ul style="list-style-type: none"> - Provision of drinking water in public spaces - Climate protection (CO₂ reduction) / heat prevention / health promotion - Education and information



		<p>Sub-projects:</p> <ul style="list-style-type: none"> - Construction of drinking fountains to provide drinking water in public places. Where possible, this should be linked to the existing infrastructure (e.g. public toilet facilities, historic fountains). - Recruit additional refill locations (https://refill-deutschland.de/muenster/) throughout the city, especially in the outer districts, and increase awareness through effective publicity measures. - Information campaign "DrinkWater" on the advantages of tap water (fresh from the tap at home and available at any time / constant quality control / healthy because no calories and lots of minerals / inexpensive, approx. one cent for two litres / particularly sustainable because waste-free and no CO₂ for transport and packaging).
Reference to impact pathway	Field of action	Education and food
	Systemic lever	Nutrition
	Outcome (according to module B-1.1)	Not applicable
Implementation	Responsible bodies/person for implementation	Münster City Administration, in particular Department of Human & Animal Health, Stadtwerke/ Stadtnetze Münster
	Action scale & addressed entities	Urban society
	Involved stakeholders	Urban society, stakeholders from neighbourhoods
	Comments on implementation	<ul style="list-style-type: none"> - 09/23 - ongoing: Integrating in the heat action plan for Münster - 12/23 - 06/24: "TrinkWasser" information campaign - 01/24: "Drinking fountain" round table kick-off event - 03/24 - 07/24: Recruitment of new suppliers for Refill Germany - kick-off on 22.3.24 "Water Day"
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	Not applicable
	GHG emissions reduction estimate (total) per emission source sector	Not specified



	<p>Total costs and costs by CO₂e unit</p>	<p>Costs:</p> <p>Construction costs per well (excluding operating costs)</p> <p>Drinking fountain: > 30,000 euros Drinking fountain wall model: < 10,000 euros</p> <p>Example:</p> <p>Every district of Münster (17) will have a drinking fountain. Assumption: Around half of the drinking fountains can be realised as wall-mounted models on existing buildings without an additional pipe network and sewer connection:</p> <p>9 drinking fountains x 30,000 euros = 270,000 euros</p> <p>8 wall models x 10,000 euros = 80,000 euros</p> <p>Total: € 350,000</p> <p>CO₂ reduction potential:</p> <ul style="list-style-type: none"> - Drinking fountains: 102 tonnes of CO₂ reduction with 17 drinking fountains with a withdrawal of 30,000 litres per year (empirical value) - Refill Germany: Water quantities cannot be recorded, so it is difficult to quantify a CO₂ reduction. - "DrinkWater" information campaign: Difficult to quantify, as it is not possible to evaluate changes in user behaviour.
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4.2.2.7 Business and academia

Through networks such as "Münster's Alliance for Climate Protection", "Münster's Alliance for Science", the City of Münster's Advisory Board for Climate Protection and many other formats, close links have been established between the City of Münster and the business and academia sectors since more than 10 years (see Module C-2 and Module A-3). For example, over one hundred companies are involved in the "Münster's Alliance for Climate Protection" network to implement concrete measures and climate protection roadmaps in their own companies. In specific projects, such as "Ökoprofit" or the "Consultation on energy efficiency", companies get specific advice and support by the City of Münster in order to



realise climate protection. With concrete measures, the companies save energy costs and carbon emissions. For example, after a total of 13 project rounds in which a total of 138 companies implemented more than 1,500 individual measures, Ökoprofit was able to collectively save more than 30.4 million kilowatt hours of energy, almost 20,108 tonnes of carbon dioxide, 172,156 million litres of fresh water and 2,064 tonnes of residual waste per year. In addition to the operational support, the City of Münster is focusing on the broad participation and involvement of the local economy in strategic economic projects such as the location development strategy 2030+, in which the development of a climate-neutral city is a central core element. Due to its numerous universities and research institutions Münster as Science City is also a pioneer in many areas, particularly in the field of sustainable and climate research. The success of the energy transition will also largely depend on a functioning skilled trades sector. Close co-operation, e.g. through the master plan for the skilled trades, forms the central basis for this. As part of the development of the Climate City Contract, the Münster City Group has been supported by many companies and universities (see Description of participatory model).

B-2.2: Individual action outlines		
(Fill out one sheet per intervention/project)		
Action outline	Action name	Crafts masterplan
	Action type	General conditions
	Action description	The skilled trades sector is of great importance for tackling the challenges of the future. This applies in particular to the climate and energy transition. The skilled crafts sector can only fulfil its key function if the framework conditions are appropriately designed. The City of Münster, the Chamber of Crafts and the District Crafts Association are therefore working on a joint masterplan to provide specific support for the skilled trades and thus create the best possible conditions for a strong climate-friendly skilled trades sector.
Reference to impact pathway	Field of action	Economy and science
	Systemic lever	Economy
	Outcome (according to module B-1.1)	Not applicable
Implementation	Responsible bodies/person for implementation	City of Münster, Chamber of Crafts and District Craftsmen's Association
	Action scale & addressed entities	Craft



	Involved stakeholders	Craft
	Comments on implementation	1st half of 2024 Adoption of the Crafts Masterplan
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	Not applicable
	GHG emissions reduction estimate (total) per emission source sector	Not applicable
	Total costs and costs by CO _{2e} unit	Not specified

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Ökoprofit
	Action type	Counselling
	Action description	<p>138 companies / institutions from Münster are already benefiting from the savings they have achieved by participating in the Ökoprofit® consultancy project (supplied by Department of green spaces, environment and sustainability): For one year, companies and sustainability consultants scrutinise all of a company's processes in order to develop and to implement concrete measures by workshops and on-site consultations. All participants are awarded the title of "Ökoprofit company".</p> <p>To date, 13 rounds of the project have been carried out and a total of 20,108 tonnes of CO₂ have been saved.</p>
Reference to impact pathway	Field of action	Business and academia
	Systemic lever	Economy
	Outcome (according to module B-1.1)	Not applicable
Implementation	Responsible bodies/person for implementation	City of Münster



	Action scale & addressed entities	Economy
	Involved stakeholders	The company
	Comments on implementation	24.01.24: public award ceremony of the 13th Ökoprofit round, awarding 8 first-time and 7 re-validation awards
Impact & cost	Generated renewable energy (if applicable)	Not specified
	Removed/substituted energy, volume, or fuel type	30.4 million kilowatt hours of energy
	GHG emissions reduction estimate (total) per emission source sector	So far: 20,108 tonnes of CO ₂
	Total costs and costs by CO ₂ e unit	Not specified

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Hydrogen
	Action type	Technical innovation
	Action description	- As of April 2023, a Hydrogen Coordinator has been installed at the Technologieförderung Münster GmbH. The Hydrogen Coordinator is tasked with the development of a hydrogen strategy for the business location Münster. - H2inBatCellProd (technology funding, Fraunhofer FFB, Westfalen AG, municipal utilities, municipal grids): Use of green hydrogen as an energy source for drying lines (Trockungsstrecken) and drying rooms (Trocknungsräume) in battery cell production
Reference to impact pathway	Field of action	Business and academia
	Systemic lever	Innovation
	Outcome (according to module B-1.1)	Not applicable
Implementation	Responsible bodies/person for implementation	Technologieförderung Münster GmbH
	Action scale & addressed entities	Business location
	Involved stakeholders	The company



	Comments on implementation	H2in BatCellProd: end of March 2023 completion of feasibility study; 31 July 2023 submission of project outline to project management organisation Jülich; if successful: March 2024 submission of full proposal; if successful: July 2024 project start; update 15 February 2024: official feedback from PtJ expected in the next few weeks. A submission to the EU Innovation Fund is being examined in parallel; savings potential (project): 13,000 to 19,000 tonnes of CO ₂ per year
Impact & cost	Generated renewable energy (if applicable)	Not specified
	Removed/substituted energy, volume, or fuel type	Not specified
	GHG emissions reduction estimate (total) per emission source sector	13,000 to 19,000 tonnes of CO ₂ per year
	Total costs and costs by CO ₂ e unit	Not specified

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Alliance for climate protection
	Action type	Network
	Action description	Network of around 100 Münster-based companies that have committed themselves to the city's climate protection targets and draw up a carbon footprint and a climate protection measure every year. In return, they receive guidance and support from the city administration: four to five annual network meetings, four newsletters per year, various advisory services (5 to 10 consultations per year), and public relations work.
Reference to impact pathway	Field of action	Economy and science
	Systemic lever	Economy
	Outcome (according to module B-1.1)	Not applicable



Implementation	Responsible bodies/person for implementation	Climate office, City of Münster
	Action scale & addressed entities	Münster's economy
	Involved stakeholders	The company
	Comments on implementation	5 to 10 consultations per year; 4 network meetings and newsletters, public events expected in 2024
Impact & cost	Generated renewable energy (if applicable)	Not specified
	Removed/substituted energy, volume, or fuel type	Not specified
	GHG emissions reduction estimate (total) per emission source sector	Not specified
	Total costs and costs by CO _{2e} unit	25,000 euros per year for support from service providers; membership and services are free of charge for companies

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Location development strategy 2030+
	Action type	Infrastructure
	Action description	Establishing the goal of climate neutrality as a strategic guideline in the 2030+ economic development strategy, e.g. climate-neutral business parks, expansion of infrastructure for climate-neutral business such as H2 networks and green energy, strengthening and further development of Münster as a location of battery research, production, utilisation and recycling location, and development of the GreenTech region Münsterland
Reference to impact pathway	Field of action	Business and academia
	Systemic lever	Location development
	Outcome (according to module B-1.1)	Not applicable
Implementation	Responsible bodies/person for implementation	Münster city administration
	Action scale & addressed entities	City of Münster



	Involved stakeholders	Companies, universities, North Westphalia Chamber of Industry and Commerce, Münster Chamber of Crafts, Münster Industrial Community, Strong City Centre Initiative, etc.
	Comments on implementation	Beginning of mid-2024 site conference; first half of 2024 followed by Council decision
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	Not applicable
	GHG emissions reduction estimate (total) per emission source sector	Not applicable
	Total costs and costs by CO ₂ e unit	Not specified

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Business & Technology Development Office for the City of Muenster : Information events, workshops, podcast
	Action type	Social participation and awareness campaigns
	Action description	Information events, workshops, podcast on sustainability and climate protection organised by the Business & Technology Development Office for the City of Muenster
Reference to impact pathway	Field of action	Economy and science
	Systemic lever	Information on
	Outcome (according to module B-1.1)	Not applicable
Implementation	Responsible bodies/person for implementation	Business & Technology Development Office for the City of Muenster
	Action scale & addressed entities	Economy
	Involved stakeholders	Companies
	Comments on implementation	Efficiency Forum Economy 2024; topic planning 2024: CO ₂ balancing, sustainability reporting
Impact & cost	Generated renewable energy (if applicable)	Not applicable



	Removed/substituted energy, volume, or fuel type	Not applicable
	GHG emissions reduction estimate (total) per emission source sector	Not applicable
	Total costs and costs by CO ₂ e unit	Not specified

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Climate City Contract
	Action type	Social participation and awareness campaign
	Action description	In the Climate City Contract, the City of Münster Group, actors of the city society and Münster's residents publish their climate saving contributions for Münster on the way to becoming a climate-friendly city. By doing so they commit themselves and inspire and motivate others in doing the same thing, because we are all needed! Starting with a public event called the City Forum in June 2023, all members of Münster city society, residents - whether companies, citizens, associations or other organisations — have been invited to submit and nominate climate-friendly measures that they want to implement by themselves. Thereby, they contribute to the Climate City Contract as a contribution to Münster's process of becoming a climate-friendly city. Every contribution on the road to climate neutrality is important. Contributions to the Climate City Contract have been developed in an intensive dialogue with businesses and universities.
Reference to impact pathway	Field of action	Business and university
	Systemic lever	Governance
	Outcome (according to module B-1.1)	Comprehensive



Implementation	Responsible bodies/person for implementation	Climate office, City of Münster
	Action scale & addressed entities	City of Münster
	Involved stakeholders	Entire urban society
	Comments on implementation	31.01.2024 Submission deadline for contributions from science and business; 01.12.2023 Start of poster campaign "Contributions to the Climate City Treaty"; end of February 2024 Ceremonial signing of the contributions; 11.03.2024 Submission of final version to the EU
Impact & cost	Generated renewable energy (if applicable)	See B-1.1
	Removed/substituted energy, volume, or fuel type	See B-1.1
	GHG emissions reduction estimate (total) per emission source sector	See B-1.1
	Total costs and costs by CO _{2e} unit	See CCC Investment Plan

B-2.2: Individual action outlines

(Fill out one sheet per intervention/project)

Action outline	Action name	Developing climate-neutral commercial areas - both existing ones and those under development
	Action type	Infrastructure
	Action description	<p>1. Transforming existing commercial areas to be climate-neutral: Appointment of a new position at Business & Technology Development Office for the city of Münster on 1 January 2024. In 2024, analysis and implementation of initial measures;</p> <p>2. New commercial areas: including others,</p> <ul style="list-style-type: none"> • Gelmer commercial area - north of Heitmannsweg (development plan procedure with the focus on of "climate –positivity" that has



		<p>been initiated by a council resolution 22 March 2023),</p> <ul style="list-style-type: none"> • Busso Peus Straße model district (two-staged urban planning competition: council resolution solved on 10.05.2023, climate-positive development competition on 15.02.2024), • Steinfurter Straße model district (workshop procedure completed, council resolution on 10.05.2023, decision to organise competition in mid-2024: climate-positive development).
Reference to impact pathway	Field of action	Economy and science
	Systemic lever	Infrastructure
	Outcome (according to module B-1.1)	High building energy efficiency, space conservation
Implementation	Responsible bodies/person for implementation	Münster city administration
	Action scale & addressed entities	City of Münster
	Involved stakeholders	Companies
	Comments on implementation	Steinfurter Straße model district: decision to launch competition first quarter of 2024; development plan procedure for Gelmer commercial area - north of Heitmannsweg (ongoing); Busso Peus Straße model district: conclusion of two-phase urban planning competition 15/02/2024; from 1/2024 analysis + implementation of initial measures for climate-neutral redesign of existing commercial areas
Impact & cost	Generated renewable energy (if applicable)	Not specified
	Removed/substituted energy, volume, or fuel type	Not specified
	GHG emissions reduction estimate (total) per emission source sector	Not specified



	Total costs and costs by CO ₂ e unit	Not specified
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B-2.2: Individual action outlines		
(Fill out one sheet per intervention/project)		
Action outline	Action name	Recycling City
	Action type	Sustainability
	Action description	The German Institute of Urban Affairs, Association of German Cities, 22 municipalities (Business & Technology Development): A model approach consisting of the components mission statement and objectives, strategy, processes, structures, instruments and products for the development of holistic municipal circular economy strategies is being developed in the network of cities.
Reference to impact pathway	Field of action	Economy and science
	Systemic lever	Governance and Policy
	Outcome (according to module B-1.1)	Circular Economy
Implementation	Responsible bodies/person for implementation	Münster city administration
	Action scale & addressed entities	City of Münster
	Involved stakeholders	Urban society
	Comments on implementation	Project duration 7/2023 to 2/2025; first concrete implementation measures in Münster in 2024
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	Not applicable
	GHG emissions reduction estimate (total) per emission source sector	Not applicable
	Total costs and costs by CO ₂ e unit	Not specified



B-2.2: Individual action outlines		
(Fill out one sheet per intervention/project)		
Action outline	Action name	Information and advice on energy efficiency
	Action type	Counselling
	Action description	Climate protection consulting services for small and medium-sized companies focussing on energy saving and sustainable, efficient energy use based on renewable energies. Objective: to initiate very specific climate protection measures in companies. Low-threshold offer: no applications, forms, costs for the company.
Reference to impact pathway	Field of action	Business and university
	Systemic lever	Technology
	Outcome (according to module B-1.1)	Energy saving
Implementation	Responsible bodies/person for implementation	Climate office, City of Münster
	Action scale & addressed entities	Economy
	Involved stakeholders	The company
	Comments on implementation	Part of the contingent will be used for the "Climate-neutral industrial estates" project; 2024 expected 20 consultations
Impact & cost	Generated renewable energy (if applicable)	Not applicable
	Removed/substituted energy, volume, or fuel type	Not specified
	GHG emissions reduction estimate (total) per emission source sector	Not specified
	Total costs and costs by CO _{2e} unit	Costs for the city: approx. €25,000 per year.

4.2.2.8 Waste

Waste Management Münster (awm) is a subsidiary of the City of Münster. In 2020, awm has developed its vision for 2030 that entails a clear sustainability perspective. With Vision 2030, awm is striving for a waste-free Münster 2030.



Waste Management Münster wants to develop Münster into a capital of waste prevention by 2030 through actively involving citizens and building a strong network of cooperation partners. These goals can be achieved through projects with citizen participation, target group-oriented educational work, high-quality waste recycling and partnerships for the generation of renewable energies. Consequent waste avoidance by urban society and innovative utilisation of the remaining waste make a fundamental contribution to reducing greenhouse gas emissions. Awm's current measures and objectives are set out in the DNK declaration for 2022:

<https://datenbank2.deutscher-nachhaltigkeitskodex.de/Profile/CompanyProfile/13986/de/2022/dnk>

In addition to the measures and projects outlined in the DNK report, awm is examining further innovative technologies and methods in order to continuously optimise its processes and intensify its contribution to the bioeconomy and circular economy. Currently, one focus is on pyrolysis as a potential expansion of processes for the utilisation of biowaste and/or green waste. This negative emission technology (NET) could be used to produce biochar from biogenic waste such as fermentation residues and screen overflows from composting. This process promises to reduce CO₂ efficiently in the long term. Carbon from the atmosphere is bound in the form of biochar, which thus acts as a carbon sink. In this process, biomass is thermally processed at temperatures between 400 °C and 800 °C under the reduced influence of oxygen. Part of the waste heat generated is utilised to support the process. Surplus energy could also be utilised sensibly, for example by feeding it into the district heating network. The biochar produced by pyrolysis is characterised by its versatility. This method aims to improve the utilisation of organic waste and promote the production of sustainable products, which would make an important contribution to achieving global sustainability goals, particularly in the areas of climate and energy efficiency as well as waste avoidance and recycling.

Awm is currently also intensively examining its own heat production and utilisation with the aim of possibly feeding surplus heat into the public district heating network.

4.2.2.9 Climate adaptation

Climate adaptation has long been part of Münster's climate work. The City of Münster has been taking part in the European Climate Adaptation Award (eca) since autumn 2020. The City Council approved the City of Münster's participation in the European Climate Adaptation Award on 25 March 2020 (V/0149/2020). The eca is a quality management system and certification procedure for municipalities to support them in their work to adapt to the consequences of climate change. In addition to an analysis of the current situation, a climate adaptation policy work programme must be drawn up and adopted for certification. As part of the eca, the existing programme of measures (Climate Adaptation Action Plan 2030) has been explored according to the needs and potentials identified in the as-is analysis. The result of this analysis is that the measures described in the climate adaptation action plan are already a good basis for achieving the City of Münster's climate adaptation goals. Through implementation of the measures by 2024, an increased score for certain areas can be achieved. For this reason, the Climate Adaptation Action Plan 2030 will be transferred to the Climate Adaptation Policy Work Programme as



part of the eca (V/0075/2023): <https://www.stadt-muenster.de/sessionnet/sessionnetbi/get-file.php?id=524001&type=do>

The budgeted costs of the measures in the financial and cost plan (V/0799/2019) are totalling to approx. 12.3 million euros up to 2030. The costs are based on the preliminary estimates of the respective offices and the organisers of the measures and reflect the framework of the costs for personnel, investment and material resources. In addition to the funds estimated here, further funds, primarily investment and personnel funds, are required in the individual budgets of the agencies for adaptation to climate change. It will only be possible to concretise the cost framework in the preparation of the respective separate resolutions. The costs can be significantly reduced through third-party funds (e.g. subsidies or fee financing).

4.2.2.10 Agriculture

The City of Münster covers an area of 303.3 square kilometres. Of this, 103.5 square kilometres are used as farmland, 22.7 square kilometres as green space and 49.70 square kilometres as forest land. Altogether, this area corresponds to almost half of the city area. This land is farmed by around 600 family farms, almost half of which do this as main source of income.

Since 2021, the city administration of Münster has had the position of an Agricultural Officer, whose task is to advise the administrative management and its departments on all agricultural issues and to act as a contact person for Münster's farmers in order to ensure a good exchange between the city administration and farmers. This task also comes into play in many projects relevant to climate protection, for example:

- Initiating and coordinating the organisation of a soil practitioner course in cooperation with Bioland NRW (association of organic farmers), the Bioland Foundation, the Westfälisch-Lippischer Landwirtschaftsverband e.V. (farmers association) and the Landwirtschaftsverlag (publishing house). In the soil practitioner course, 25 farm managers (both organic and conventional) from Münster / Münsterland were trained by the Bioland Foundation in the areas of: Soil life, humus formation, water retention capacity, soil protection, carbon storage, nutrient cycle were intensively trained over a period of 9 months. Further courses are planned in order to distribute the topic of climate protection in agriculture. The journalistic support of the weekly newspaper with a series of articles has given this course a national profile. The transformation of agriculture in the City of Münster is thus decisively advanced.
- Representation of agricultural interests in the process for the integrated area concept for settlement development and the creation of areas for the production of renewable energies with a focus on urban and energy area development that minimises land consumption (see measure in the energy production field of action).
- Initiating, coordinating and planning the joint development of rooftop PV systems in the Kasewinkel farming community. The background to this is the frequent negative feedback from Stadtnetze Münster on the demand of individual farmers to expand the grid due to economically



unviable expansion costs of the grid infrastructure for each individual farmer. The aim of the project is to support the merger of farmers through to the formation of a company in order to realise a joint, economically viable connection point with the grid operator. This is fulfilled in co-operation with the Westfälisch-Lippischer Landwirtschaftsverband e.V. (association of farmers) and the Münster Netze.

Other projects with a link to agricultural concerns can be found in the portfolio outlined above in the fields of energy production and education and nutrition.

Table 1B-2.3: Summary strategy for residual emissions

B-2.3: Summary strategy for residual emissions
<p>(Detail how residual emission will be offset, if applicable)</p> <p>Despite all the efforts that are already being made in the City of Münster to reduce greenhouse gas emissions to net zero and that will continue to be made in the coming years, it will be necessary to offset a residual amount of unavoidable emissions. This residual contribution is made up of unavoidable emissions and upstream chains over whose reduction the City of Münster has no direct influence. Against this background, the City of Münster has commissioned experts to draw up proposals for possible offsetting strategies. However, offsetting is only a last resort in Münster. The focus of climate protection work in Münster is primarily on energy saving, energy efficiency and the expansion of renewable energies, which are strictly prioritised over offsetting.</p> <p>Based on an expert estimate as part of the Münster Climate Neutrality 2030 concept study, this remaining base will still amount to around 90,000 tonnes of CO₂ equivalents annually in 2030. This calculation is based on the City of Münster's target of reducing emissions in 2030 by 95 per cent compared to emissions in 1990. The calculation was based on emissions of 1,891,000 tonnes in 2019 and also assumed a reduction of 95 per cent by 2030.</p> <p>Therefore, the assumption of the residual contribution assumed here differs from that calculated in the economic model. In order to achieve the mission's target of reducing emissions by 80 per cent by 2030, the economic model offered by NetZeroCities has shown that 342,000 tonnes of CO₂ must be offset.</p> <p>The Climate Neutrality 2030 concept study has identified options for offsetting for the City of Münster, which are discussed below. An offsetting strategy for the City of Münster and the goal of climate neutrality in 2030 will be developed.</p> <p>Due to the requirements for municipal greenhouse gas accounting in accordance with the BSKO methodology (municipal accounting system), projects that are not included in the municipal inventory must be selected for offsetting measures. This would otherwise mean double counting of the reduction or include measures that are carried out by the municipality anyway to prevent emissions (e.g. installation of PV systems). An offsetting strategy could therefore also include the following measures in light of the EU mission requirements:</p>



Local compensation through reforestation

There is no general answer to the question of how much CO₂ can be stored by planting a tree. How much and how quickly a tree can bind carbon dioxide depends on various factors such as species, age, wood density, climate, soil quality and water supply. However, it is possible to come close to a statement based on certain assumptions.

Assuming a normally grown beech tree with a height of 23 metres and a certain circumference, it can store around 550 kilograms of dry matter in its leaves, branches and trunk. With an estimated additional ten per cent stored in the biomass of the roots, a total of around 600 kilograms of dry matter is bound - this corresponds to the storage of one tonne of CO₂. Due to the production and release of oxygen during photosynthesis, the amount of CO₂ stored exceeds the dry mass.

In order to absorb one tonne of CO₂, a beech tree must grow for around 80 years. Converted to one year, the tree can store 12.5 kilograms of CO₂. This means that around 80 trees are needed to offset one tonne of CO₂ per year. However, it should be noted that trees tend to accumulate little biomass in the first few years after planting. It is only with increasing age that more CO₂ can be bound.

The following table shows a rough estimate of the space required and the costs if the remaining amount is fully compensated by reforestation on the urban area.

Table 22 Space required for afforestation as a compensation measure

Assessment of space requirements	Unit	Result	
Unavoidable greenhouse gases	[tCO ₂ eq/a]	90.000	
Storage 81 beeches	[tCO ₂ eq/a]	0,0125	
Demand trees	[-]	7.200.000	
Squad afforestation	[Trees/ha]	1.230	
Space requirement	[ha]	5.850	
Area City of Münster	[ha]	30.290	
Share of space required	[%]	20	
Forest stock Münster	[ha]	4.860	
Costs (min. to max.)	[€/ha]	1.500	3.500
Total costs	[€]	8.775.000	20.475.000
Specific costs	[€/tCO ₂]	98	228

Source: Münster Climate Neutrality 2030 concept study, p. 47 (appendix)

In this calculation example, it should be noted that the actual space requirement and the associated costs may be lower. This is due to the fact that in addition to the beech as the main tree species, secondary tree species are also planted between the beech trees in the selected group afforestation. As these also bind CO₂, which was not taken into account in the present calculation, this could result in lower costs in the future

Soil is an indispensable asset not only against this background, but above all due to its diverse functions in the ecosystem. Its loss cannot be compensated for. Münster has been involved in the "Alliance



for Land" at the Ministry of the Environment, Agriculture, Nature Conservation and Consumer Protection of North Rhine-Westphalia and has contributed its experience with resource-conserving settlement development. In 2014, Münster was one of six pilot municipalities to be certified by the NRW Ministry of the Environment with the "Milestone" as a land-saving municipality (Milestone "Gold").

As part of the Münster 2030 sustainability strategy (submissions no. V/0648/2017, no. V/0515/2018 and no. V/0669/2019), strategic development goals were formulated to preserve the natural foundations of life, according to which development potential should generally be utilised in existing built-up areas before new land is used in outdoor areas. In operational target mode, this means keeping sealing as low as possible. This is in recognition of the fact that Münster is a growing city and that the population increased from 296,440 to 319,441 inhabitants between 2011 and 2022, an increase of 7.8 per cent. A further objective was formulated that the ratio of land for settlement and transport (FSuV) per inhabitant should fall continuously.

With the resolution on the 2019 - 2022 programme of measures of the Münster 2030 sustainability strategy (submission no. V/0669/2019), further concrete measures for space-saving development were formulated; among other things, the development of the barracks sites and the reuse of areas such as the former city harbour, Beresa, Lancier were mentioned in the area of inner development.

Regional and supra-regional compensation through moorland rewetting

In principle, it is possible to take measures to rewet moorland areas to compensate for emissions. However, the areas are limited and face enormous demand. Compensating for the remaining 90,000 tonnes of CO₂ per year in 2030 would require a moorland area of around 218,000 to 436,000 hectares. In this case, the costs would amount to an estimated 2,180,000,000 to 4,360,000,000 euros.

MoorFutures: By offsetting through the purchase of corresponding certificates such as MoorFutures from Mecklenburg-Western Pomerania, Brandenburg and Schleswig-Holstein, it is possible to offset 1 tonne of CO₂ by purchasing a certificate for 64 euros. With over 600,000 hectares, these federal states are among the most peatland-rich states in Germany. The certificates are closely aligned with the Verified Carbon Standard and the Kyoto Protocol and follow the requirements of internationally recognised environmental standards (ISO 14064 and 14065). MoorFutures are registered at regional level by regional coordinating organisations, so that decommissioning is ensured by a corresponding register. Offsetting the remaining 90,000 tonnes of CO₂ per year in 2030 would result in costs of around €5,760,000 per year.

On this basis, the City of Münster will develop a compensation strategy in the coming years in order to off-set all residual emissions necessary...



4.3 Module B-3 Indicators for Monitoring, Evaluation and Learning

Module B-3 "Indicators for Monitoring, Evaluation and Learning" **should** contain a selection of indicators taken from the Comprehensive Indicator Sets developed by NZC. The following should be provided: An overview table listing the indicators selected per outcome and impact including targets and evaluation points (B-3.1); and a metadata table for each indicator selected, as specified in the Comprehensive Indicator Sets (B-3.2).

The following table shows target values for overarching indicators. These target values are based on the scenario of the Münster Climate Neutrality 2030 concept study, followed by descriptions of specific indicators, sorted according to the fields of action required by the NZC.

Table 23 B-3.1: Impact pathways

B-3.1: Impact Pathways						
Outcomes/ impacts addressed	Action/ project	Indicator No. (uniquely identified)	Indicator name	Target values		
				2025	2027	2030
(List early changes/ late outcomes and impacts to be evaluated by indicator)	(List action/ pilot project if applicable)	(Indicate unique identifier)	(Insert indicator name)	(List one value per indicator)	(List one value per indicator)	(List one value per indicator)
All the changes/outcomes listed in Table B 1.1 contribute to this to varying	All measures by all stakeholders	1.	CO ₂ reduction	Minus 64 %	Minus 77 %	Minus 95 %



B-3.1: Impact Pathways						
Outcomes/ impacts addressed	Action/ project	Indicator No. (uniquely identified)	Indicator name	Target values		
				2025	2027	2030
degrees and in varying proportions						
All the changes/outcomes listed in Table B 1.1 contribute to this to varying degrees and in varying proportions	All measures that serve the expansion of renewable electricity	2.	Share of RE in total electricity consumption	58%	75%	100%
All the changes/outcomes listed in Table B 1.1 contribute to this to varying degrees and in varying proportions	All measures that serve the expansion of renewable heat	3.	Share of RE in heat consumption	52%	71%	100%
All the changes/outcomes listed in Table B 1.1 contribute to this to varying	All measures that contribute to traffic	4.	emissions from the transport sector	Minus 64 %	Minus 77 %	Minus 95 %



B-3.1: Impact Pathways						
Outcomes/ impacts addressed	Action/ project	Indicator No. (uniquely identified)	Indicator name	Target values		
				2025	2027	2030
degrees and in varying proportions	avoidance and de-carbonisation of transport					


Table 24 B-3.2: Indicator Metadata - CO₂ reduction

B-3.2: Indicator Metadata	
(For each indicator selected - take from Comprehensive Indicator Sets)	
Indicator name	CO ₂ reduction
Indicator Unit	- %
Definition of	Reduction of absolute total emissions in the urban area in relation to the base year 1990
Calculation	(emissions (year) / emissions (base year 1990)) - 1
Indicator Context	
Does the indicator measure direct impacts (i.e., reduction in greenhouse gas emissions?)	[yes]
If yes, which emission source sectors does it impact?	All sectors, excluding climate adaptation and agriculture
Does the indicator measure indirect impacts (i.e., co-benefits)?	[no]
If yes, which co-benefit does it measure?	Not applicable
Can the indicator be used for monitoring impact pathways?	[yes]
If yes, which NZC impact pathway is it relevant for?	Energy systems, Mobility & Transport ,
Is the indicator captured by the existing CDP/ SCIS/ Covenant of Mayors platforms?	[yes]
Data requirements	
Expected data source	Municipal energy and CO ₂ inventory
Expected availability	yearly
Suggested collection interval	yearly
References	
Deliverables describing the indicator	Key indicator for measuring climate neutrality
Other indicator systems using this indicator	Climate dashboard, climate report


Table 25 B-3.2: Indicator Metadata - Share of RE in total electricity consumption

B-3.2: Indicator Metadata	
(For each indicator selected - take from Comprehensive Indicator Sets)	
Indicator name	Share of RE in total electricity consumption
Indicator Unit	%
Definition of	Share of renewable electricity generation in the urban area in total electricity consumption
Calculation	Renewable electricity / total electricity consumption
Indicator Context	
Does the indicator measure direct impacts (i.e., reduction in greenhouse gas emissions?)	[no]
If yes, which emission source sectors does it impact?	All sectors, excluding climate adaptation and agriculture
Does the indicator measure indirect impacts (i.e., co-benefits?)	[no]
If yes, which co-benefit does it measure?	Not applicable
Can the indicator be used for monitoring impact pathways?	[yes]
If yes, which NZC impact pathway is it relevant for?	Energy systems
Is the indicator captured by the existing CDP/ SCIS/ Covenant of Mayors platforms?	[yes]
Data requirements	
Expected data source	Municipal energy and CO ₂ inventory
Expected availability	yearly
Suggested collection interval	yearly
References	
Deliverables describing the indicator	Indicator for measuring the expansion of RE
Other indicator systems using this indicator	Climate dashboard, climate report


Table 26 B-3.2: Indicator Metadata - Share of RES in total heat consumption

B-3.2: Indicator Metadata	
(For each indicator selected - take from Comprehensive Indicator Sets)	
Indicator name	Share of RE in total heat consumption
Indicator Unit	%
Definition of	Share of renewable heat generation in the urban area in total heat consumption
Calculation	RE heat / total heat consumption
Indicator Context	
Does the indicator measure direct impacts (i.e., reduction in greenhouse gas emissions?)	[no]
If yes, which emission source sectors does it impact?	All sectors, excluding climate adaptation and agriculture
Does the indicator measure indirect impacts (i.e., co-benefits?)	[no]
If yes, which co-benefit does it measure?	Not applicable
Can the indicator be used for monitoring impact pathways?	[yes]
If yes, which NZC impact pathway is it relevant for?	Energy systems
Is the indicator captured by the existing CDP/ SCIS/ Covenant of Mayors platforms?	[yes]
Data requirements	
Expected data source	Municipal energy and CO ₂ inventory
Expected availability	yearly
Suggested collection interval	yearly
References	
Deliverables describing the indicator	Indicator for measuring the expansion of RE
Other indicator systems using this indicator	Climate dashboard, climate report


Table 27 B-3.2: Indicator Metadata - Stationary Energy

B-3.2: Indicator Metadata	
(For each indicator selected - take from Comprehensive Indicator Sets)	
Indicator name	CO ₂ reduction in the stationary sector
Indicator Unit	- %
Definition of	Reduction of the absolute total emissions of the stationary sector in the urban area in relation to the base year 1990
Calculation	$(\text{emissions stationary sector (year)} / \text{emissions stationary sector (base year 1990)}) - 1$
Indicator Context	
Does the indicator measure direct impacts (i.e., reduction in greenhouse gas emissions?)	[yes]
If yes, which emission source sectors does it impact?	stationary sector
Does the indicator measure indirect impacts (i.e., co-benefits)?	[no]
If yes, which co-benefit does it measure?	Not applicable
Can the indicator be used for monitoring impact pathways?	[yes]
If yes, which NZC impact pathway is it relevant for?	Energy systems, buildings
Is the indicator captured by the existing CDP/ SCIS/ Covenant of Mayors platforms?	Not specified
Data requirements	
Expected data source	Municipal energy and CO ₂ inventory
Expected availability	yearly
Suggested collection interval	yearly
References	



Deliverables describing the indicator	Indicator for measuring reduction progress in the stationary sector
Other indicator systems using this indicator	Climate dashboard, climate report

Table 28 B-3.2: Indicator Metadata - Grid supplied Energy

B-3.2: Indicator Metadata	
(For each indicator selected - take from Comprehensive Indicator Sets)	
Indicator name	CO ₂ reduction of grid-bound energy sources
Indicator Unit	- %
Definition of	Reduction of emissions from grid-bound energy sources in the urban area in relation to the base year 1990
Calculation	$(\text{emissions from grid-bound energy sources (year)} / \text{emissions from grid-bound energy sources (base year 1990)}) - 1$
Indicator Context	
Does the indicator measure direct impacts (i.e., reduction in greenhouse gas emissions?)	[yes]
If yes, which emission source sectors does it impact?	All sectors, excluding climate adaptation and agriculture; mobility via electricity taken into account
Does the indicator measure indirect impacts (i.e., co-benefits?)	[no]
If yes, which co-benefit does it measure?	Not applicable
Can the indicator be used for monitoring impact pathways?	[yes]
If yes, which NZC impact pathway is it relevant for?	Energy systems
Is the indicator captured by the existing CDP/ SCIS/ Covenant of Mayors platforms?	Not specified
Data requirements	
Expected data source	Municipal energy and CO ₂ inventory



Expected availability	yearly
Suggested collection interval	yearly
References	
Deliverables describing the indicator	Indicator for measuring the reduction progress in the area of grid-bound energy sources
Other indicator systems using this indicator	Climate dashboard, climate report

Table 29 B-3.2: Indicator Metadata - Transport & Mobility

B-3.2: Indicator Metadata	
(For each indicator selected - take from Comprehensive Indicator Sets)	
Indicator name	CO ₂ reduction in the transport/mobility sector
Indicator Unit	- %
Definition of	Reduction of emissions from the transport/mobility sector in the urban area in relation to the base year 1990
Calculation	(Emissions transport/mobility sector (reporting year) / emissions transport/mobility sector (base year 1990)) - 1
Indicator Context	
Does the indicator measure direct impacts (i.e., reduction in greenhouse gas emissions?)	yes
If yes, which emission source sectors does it impact?	Transport/mobility
Does the indicator measure indirect impacts (i.e., co-benefits)?	[no]
If yes, which co-benefit does it measure?	Not applicable
Can the indicator be used for monitoring impact pathways?	yes



If yes, which NZC impact pathway is it relevant for?	Mobility
Is the indicator captured by the existing CDP/ SCIS/ Covenant of Mayors platforms?	yes
Data requirements	
Expected data source	Municipal energy and CO ₂ inventory
Expected availability	yearly
Suggested collection interval	yearly
References	
Deliverables describing the indicator	Indicator for measuring reduction progress in the area of transport/mobility
Other indicator systems using this indicator	Climate dashboard, climate report

Table 30 B-3.2: Indicator Metadata - Waste and Circular Economy

B-3.2: Indicator Metadata	
(For each indicator selected - take from Comprehensive Indicator Sets)	
Indicator name	Waste and Circular Economy
Indicator Unit	Amount of waste
Definition of	Waste volumes by waste type
Calculation	Kilograms per inhabitant per year
Indicator Context	
Does the indicator measure direct impacts (i.e., reduction in greenhouse gas emissions?)	[no]
If yes, which emission source sectors does it impact?	[none]
Does the indicator measure indirect impacts (i.e., co-benefits)?	[no]
If yes, which co-benefit does it measure?	Not applicable
Can the indicator be used for monitoring impact pathways?	[no]



If yes, which NZC impact pathway is it relevant for?	Waste
Is the indicator captured by the existing CDP/ SCIS/ Covenant of Mayors platforms?	yes
Data requirements	
Expected data source	AWM waste balance sheet (Abfallbilanz)
Expected availability	yearly
Suggested collection interval	yearly
References	
Deliverables describing the indicator	Not specified
Other indicator systems using this indicator	Not specified

Table 31 B-3.2: Indicator Metadata - IPPU

B-3.2: Indicator Metadata	
(For each indicator selected - take from Comprehensive Indicator Sets)	
Indicator name	CO ₂ reduction in the industry sector
Indicator Unit	- %
Definition of	Reduction of emissions from the industrial sector in the urban area in relation to the base year 1990
Calculation	$(\text{Emissions sector industry (year)} / \text{emissions sector industry (base year 1990)}) - 1$
Indicator Context	
Does the indicator measure direct impacts (i.e., reduction in greenhouse gas emissions?)	Yes
If yes, which emission source sectors does it impact?	Industry
Does the indicator measure indirect impacts (i.e., co-benefits)?	[no]
If yes, which co-benefit does it measure?	Not applicable



Can the indicator be used for monitoring impact pathways?	Yes
If yes, which NZC impact pathway is it relevant for?	Not recognised separately
Is the indicator captured by the existing CDP/ SCIS/ Covenant of Mayors platforms?	Not specified
Data requirements	
Expected data source	Municipal energy and CO ₂ inventory
Expected availability	yearly
Suggested collection interval	yearly
References	
Deliverables describing the indicator	Indicator for measuring reduction progress in the industrial sector
Other indicator systems using this indicator	Climate dashboard, climate report

Table 32 B-3.2: Indicator Metadata - AFOLU

B-3.2: Indicator Metadata	
(For each indicator selected - take from Comprehensive Indicator Sets)	
Indicator name	CO ₂ reduction in the agricultural sector
Indicator Unit	- %
Definition of	Reduction of emissions from the agricultural sector in the urban area in relation to the base year 1990
Calculation	(Emissions sector agriculture (year) / emissions sector transport/mobility (base year 1990)) - 1
Indicator Context	
Does the indicator measure direct impacts (i.e., reduction in greenhouse gas emissions?)	yes
If yes, which emission source sectors does it impact?	Agriculture



Does the indicator measure indirect impacts (i.e., co-benefits)?	[no]
If yes, which co-benefit does it measure?	Not applicable
Can the indicator be used for monitoring impact pathways?	yes
If yes, which NZC impact pathway is it relevant for?	Not recognised separately
Is the indicator captured by the existing CDP/ SCIS/ Covenant of Mayors platforms?	Not specified
Data requirements	
Expected data source	Municipal energy and CO ₂ inventory (under development for agriculture sector)
Expected availability	yearly
Suggested collection interval	yearly
References	
Deliverables describing the indicator	Indicator for measuring reduction progress in the area of agriculture
Other indicator systems using this indicator	Climate dashboard, climate report (under development)

Table 33 B-3.2: Indicator Metadata - Residual Emissions

B-3.2: Indicator Metadata	
(For each indicator selected - take from Comprehensive Indicator Sets)	
Indicator name	Remaining residual emissions
Indicator Unit	%
Definition of	Residual emissions that remain after the city-wide reduction progress
Calculation	100% - city-wide reduction progress
Indicator Context	



Does the indicator measure direct impacts (i.e., reduction in greenhouse gas emissions?)	yes
If yes, which emission source sectors does it impact?	All sectors, excluding climate adaptation and agriculture
Does the indicator measure indirect impacts (i.e., co-benefits)?	[no]
If yes, which co-benefit does it measure?	Not applicable
Can the indicator be used for monitoring impact pathways?	yes
If yes, which NZC impact pathway is it relevant for?	Offsetting
Is the indicator captured by the existing CDP/ SCIS/ Covenant of Mayors platforms?	Not specified
Data requirements	
Expected data source	Municipal energy and CO ₂ inventory
Expected availability	yearly
Suggested collection interval	yearly
References	
Deliverables describing the indicator	Indicator for measuring the proportion of residual emissions remaining
Other indicator systems using this indicator	Climate dashboard, climate report

The CoLAB "Committed to local climate action" project focuses on the quantitative determination of co-benefits. CoLAB has received funding through NetZeroCities from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101036519.



5 Part C - Enabling Climate Neutrality by 2030

Part C "Enabling Climate Neutrality by 2030" aims to outline any enabling interventions, i.e., regarding organizational setting or collaborative governance models or related to social innovations - designed to support and enable the climate action portfolios described in Module B-2 as well as aiming to achieve co-benefits outlined in the impact pathway (Module B-1).

5.1 Module C-1 Organisational and Governance Innovation Interventions

Module C-1 "Organisational and Governance Innovation Interventions" consists of a summary table, listing organizational and governance interventions and describing their impact (C-1.1) and a section for more detailed descriptions and comments (C-1.2).

Table 34 C.1.1: Enabling organisational and governance interventions

C.1.1: Enabling organisational and governance interventions					
Intervention name	Description	Responsible entity/ dept/ person	Involved stakeholders	Enabling impact	Co-benefits
(Indicate name of intervention)	(Describe the substance of the intervention)	(Indicate responsible)	(List all stakeholders involved and affected)	(Describe how intervention enables climate neutrality)	(Indicate how intervention helps achieve impact listed in Module B-1)
Anchoring climate protection as a cross-sectional task in City Group Münster	A new form of cooperation and a new distribution of responsibility are two important levers being pulled in Münster. In City Group Münster, climate is now an overarching cross-sectional	First Mayor Markus Lewe	City Group Münster	Process monitoring at the level of the Administrative Board	Acceleration of measures through prioritisation and procedural monitoring



C.1.1: Enabling organisational and governance interventions						
Intervention name	Description	Responsible entity/ dept/ person	Involved stakeholders	Enabling impact	Co-benefits	
	task, i.e. climate is no longer located in one department, but is the responsibility of all areas of the City Administration and the City Group.					
Climate Office in the Directorate for First Mayor Affairs	Under the mission statement "Münster - Our Climate 2030", the Climate Office plans, initiates and coordinates the implementation of all necessary measures in the various fields of action. There are contact persons for each field of action who are available to answer questions from City Administration employees and all stakeholders in city society at any time.	Climate Office in the Directorate for First Mayor Affairs; Head: Thomas Möller	Municipal group Urban society	Coordination/ Specialist support/ Communication	Implementation of climate protection as a cross-sectional task in City Group Münster	
Goals of municipal management	On 14 December 2022, the Council therefore adopted climate neutrality as one of four priority areas of action on the basis of motion V/0609/2022 "Targets for municipal management". These fields of	City Administration	Municipal group	Prioritisation and re-source allocation	Acceleration of the implementation of climate protection measures	



C.1.1: Enabling organisational and governance interventions						
Intervention name	Description	Responsible entity/ dept/ person	Involved stakeholders	Enabling impact	Co-benefits	
	action initially determine focal points for the city's development over a medium-term planning horizon.					
Budget template (in development)	Link between individual measures and city-wide objectives	Münster City Administration	City Council	Transparent monitoring of the decision-making process	Climate budget	

Source: In house presentation



Table 35 C-1.2: Description of organisation and governance interventions - textual and visual elements

C-1.2: Description of organisation and governance interventions - textual and visual elements

(Please provide here any further detail on listed interventions)

Back in 2019, the City Council passed a resolution that Münster should become climate neutral by 2030 if possible. The Münster Climate Neutrality 2030 concept study has once again shown very clearly that transforming Münster society to become climate neutral is a systemic task for the city, citizens and companies, and has to be understood as an agile process.

Module A-3 outlined how Münster society is involved in the "Münster is becoming a climate city" process. In summer 2022, an inter-departmental Climate City core team was formed to realise participation by Münster society. The team is made up of the Climate Office from the Directorate for First Mayor Affairs and Münster Marketing, a wholly-owned company based in the Directorate for Planning, Building and Economic Affairs. The Climate Office primarily contributes its professional perspective and experience from almost 30 years of work on citizen participation in municipal climate protection. Münster Marketing has expertise and experience in large, city-wide participation processes, such as the "MünsterZukunft" future process. The core team is also supported by the Department of City Planning, also part of the Directorate for Planning, Building and Economic Affairs. The Department of City Planning also has extensive experience in participation processes and was in charge of developing the "Strengthening co-designing public participation - expanding digital participation tools" public participation guidelines (V/0553/2021).

The municipal scope for action was outlined in Module A-3. Exploiting this requires the participation of all departments, offices, institutions and municipal subsidiaries, not just one focus area.

This process was kicked off by an internal City Group Münster administrative conference in May 2022. The climate conference brought together representatives from the departments and from municipal operating companies such as Abfallwirtschaftsbetriebe Münster and municipal subsidiaries such as Stadtwerke Münster. The all-day event included workshops featuring a moderated process that looked at more than 100 proposals in the areas of education and food, households, mobility, buildings, energy, science and business, and identified, discussed and adopted concrete measures for achieving Münster's goal of climate neutrality by 2030.



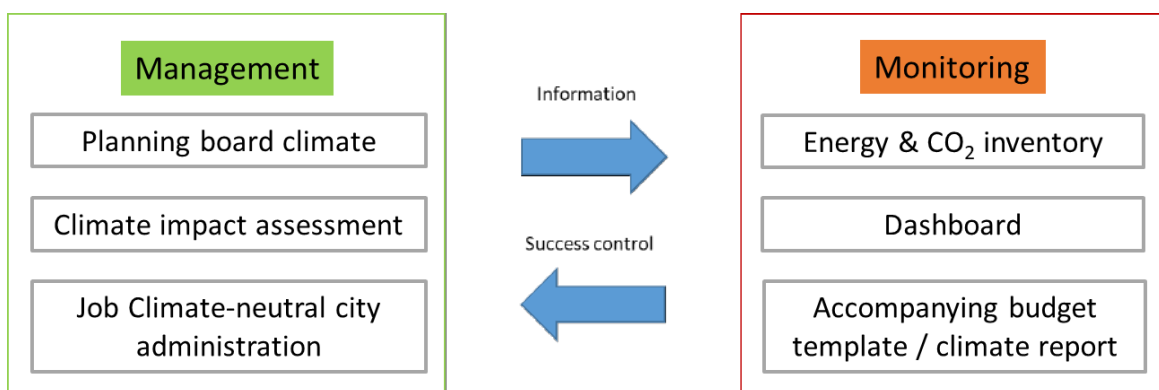
Figure 26 First City Group Münster Climate Conference in May 2022



Photo: City of Münster

This process will be managed across City Group Münster. Various structures and instruments are currently being developed and trialled for this purpose. The diagram below describes governance innovations within the City Administration.

Figure 27 Management and monitoring of the climate protection process



Source: In house presentation

Below, we discuss governance innovations in the management field that realise and support the strategic transition.



Climate neutrality as a priority field of action and cross-cutting issue - management by the Administrative Board

At the governance level, the City Council defined it as a key issue for the future and the City Administration Münster has more firmly established climate protection as a cross-cutting issue. This process is managed by the Administrative Board.

Management by the Administrative Board is based on the climate project board, a digital board similarly to a Kanban board. The aim of the project board is to provide an overview of all of the City Group's strategic climate neutrality projects. In this case, "strategic" means projects that are highly significant in terms of CO₂ savings, regulatory/framework and/or support, such as municipal energy efficient improvements or the expansion of renewable energy.

In the project board, these strategic projects are allocated to fields of action (energy production, building carbon reduction measures, mobility, business and academia, education and food, climate budget). For each field of action, there is a senior manager responsible for the process who reports to the Administrative Board and is responsible for the implementation process. They are known as topic owners (Themenpaten). Technical responsibility and responsibility for project implementation remains with the specialist departments. Topic coordinators form the link between specialist departments and topic owners. They collect information from specialist departments and identify interfaces between individual projects across all fields of action. This process is supported by the Climate Office.

The Climate Project Board, which lists the City Group's major climate projects, is particularly important for internal coordination within the City Group. The project board and the associated process are used to drive forward project implementation. Accordingly, the board is used for status reports/discussions on achieving climate neutrality in the Administrative Board and is continuously updated and supplemented with new measures. Reports are submitted to the Administrative Board on a quarterly basis.

Climate impact assessment

On the basis of three resolutions (V/0669/2019, V/0770/2019, V/0738/2020), the Council has decided that political proposals should be subject to a climate and sustainability assessment. This means that the Council has recognised that the challenges of climate change and sustainability are a high priority in municipal policy and must be taken into account in all decisions. To better consider the impact of all climate and sustainability-related proposals in future, the Administration has developed a proposal on how draft resolutions can indicate the expected impact on climate and sustainability. This proposal is still being finalised within the Administration. Once this proposal is in a position to be applied, it will provide politicians with a further option for steering the city-wide climate protection process. Certainly it creates further transparency and should increase awareness of climate protection within the Administration long term.



Climate-neutral City Administration

In addition to a city-wide assessment in the "Münster climate neutrality 2030" concept study, the "Climate-neutral City Administration" concept study specifically assessed energy consumption and emissions for the City Administration as an organisational unit. Working from this baseline footprint, the study identified reduction path scenarios and, taking into account all processes already underway, developed a comprehensive programme of 22 bundles of measures to set the City Administration on the path to climate neutrality. These measures are being implemented since 2021 and are coordinated by a single office.

The success of the execution of City Group Münster's strategic climate protection projects is reviewed via a monitoring system, the elements of which are described below.

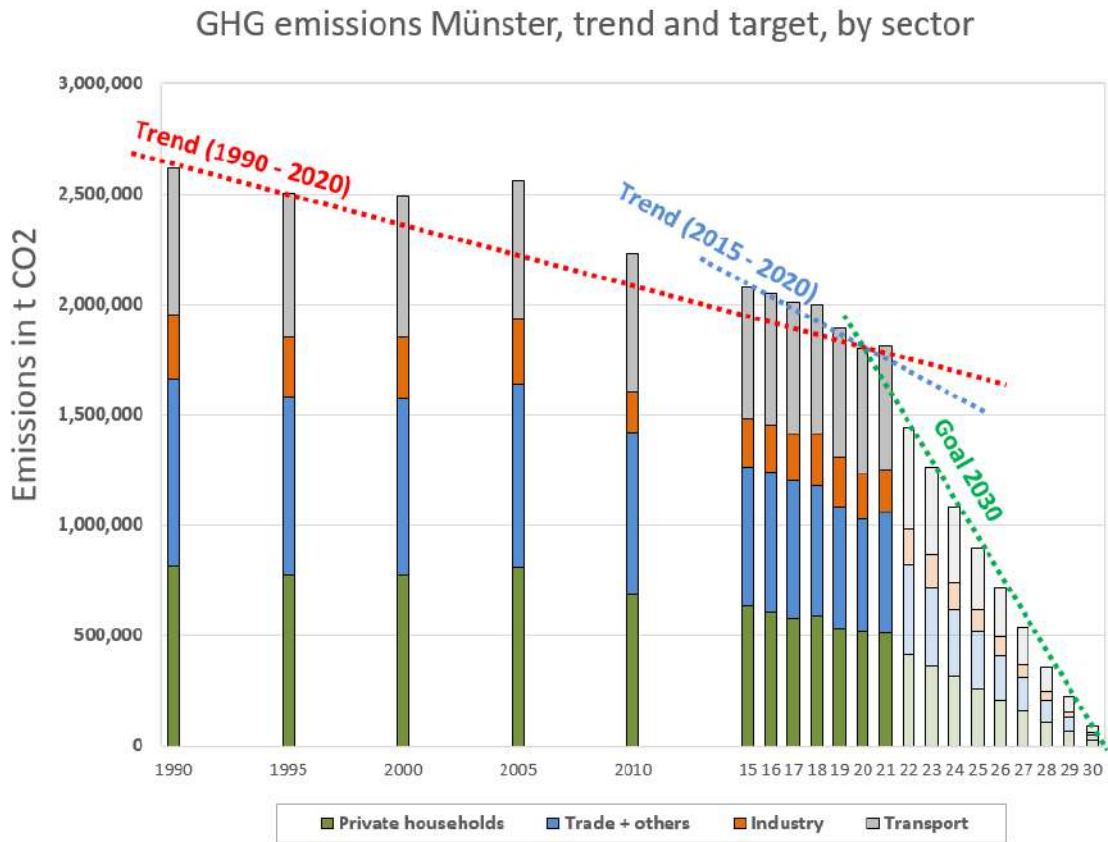
Energy and greenhouse gas inventory

The City of Münster's energy and greenhouse gas inventory provides an overview of changes in energy consumption and energy-related greenhouse gas emissions within the city. It is compiled annually and provides an overview of historical and current emissions. Münster draws up its GHG inventory in accordance with the nationally recognised and established BSKO standard, which takes national framework effects, such as the national electricity mix, into account in making local calculations.

The GHG inventory also differentiates between different areas of use (heat, electricity and transport), energy sources (e.g. heating oil, electricity, natural gas, district heating) and sectors (private households, trade and other, industry and transport). The 2030 climate neutrality target can also be used to model the annual degeneration target and residual budget both by sector and by field of action.

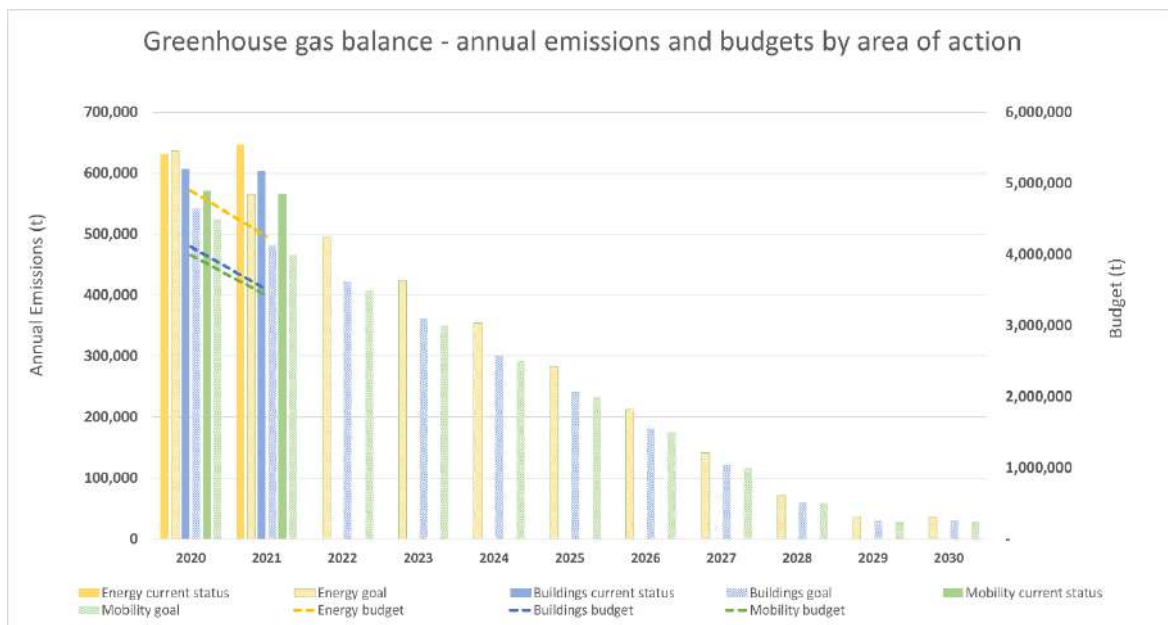


Figure 28 Münster greenhouse gas emissions - trend and target by sector



Source: In house figure based on the energy and greenhouse gas inventory for Münster

Figure 29 Greenhouse gas inventory - annual emissions and budgets by fields of action



Source: In house figure based on the energy and greenhouse gas inventory for Münster



The GHG inventory is updated annually and is the central tool for measuring climate neutrality in Münster. However, because achieving city-wide climate neutrality is not solely in the hands of the City Group, other instruments are helpful for measuring progress in the climate protection process and utilising the City Group's scope for action.

Climate dashboard

Alongside the energy and greenhouse gas inventory, the dashboard uses indicators to show where Münster stands on the path to climate neutrality and where progress is being made in climate protection. It also maps the consequences of climate change. Sample indicators include number and output of installed PV and wind power plants, composition of the local electricity mix, motor vehicle traffic, number/proportion of electric buses, waste quotas, activities of stakeholders from business and society, etc., etc. The data used in the dashboard are updated on an ongoing basis and are open data. See: <https://klimadashboard.ms/>

Budget template (climate budget) and climate report

Currently, the city's investment programme does not fully link individual measures and city-wide objectives or politically agreed fields of action. The focus currently is on the deployment of financial resources in individual planning years. The budget therefore shows investment measures sorted by department and office. This type of overview, which fulfils the requirements of budgetary law, makes direct consideration of the impact of individual measures in the budget difficult (a detailed explanation can be found in the investment plan).

Previous experience with the implementation of a climate budget in Münster has shown that a climate budget taking the form of an accompanying budget template appears to be the most appropriate option. This is because it enables additional information to be presented in a supplementary budget template (as well as in a structured electronic file) without requiring an unreasonable amount of work. Realising a purely qualitative estimate of the impact on a particular field of action, in this case climate neutrality, requires answers to the following questions:

- Does the investment measure support the relevant field of action (positive impact)?
- Does the measure have neither a positive nor a negative effect (neutral)?
- Would the measure have a negative impact on the field of action if implemented?

This outlines the inter-departmental and inter-office management of strategic climate protection projects within City Group Münster. As described in Module A 3, Münster society is involved both in implementing individual climate protection projects and in the broader "Münster is becoming a climate city" process.

Below, we outline the involvement of superordinate bodies.



Regional level: State of NRW

At state level, the three mission cities, Münster, Aachen and Dortmund, have forged an alliance and speak with a common voice to the state government. The three cities view the following points in particular as ways in which the state government of North Rhine-Westphalia, represented by the Ministry of Home Affairs, Municipal Affairs, Building and Digitalization of the State of North Rhine-Westphalia (MHKBD), can support a shared implementation of a comprehensive climate and energy transition:

1. The MHKBD assumes a central contact and coordination function with respect to other state ministries with climate-related mandates for the cities of Aachen, Dortmund and Münster in terms of state policy issues and requirements.
 - The MHKBD pilots potential legislative changes in the cities of Aachen, Dortmund and Münster. The use of experimental clauses (*Experimentierklauseln*) enables the implementation of specific pilot projects, access to funding and, where necessary, a simplified MHKBD procurement process.
 - The cities of Aachen, Dortmund and Münster and the MHKBD agree on regular meetings (four times a year) involving a fixed group of senior figures, to discuss relevant requirements, needs and problems in shaping the climate and energy transition in the participating cities, and address them to the appropriate bodies. The aim is for all other ministries with climate-related mandates to take part in these meetings.
 - The cities of Aachen, Dortmund and Münster will make the experience and knowledge gained in implementing climate protection via the EU mission, and in particular from implementing the specific pilot projects, available to other cities in NRW, with the aim of provide enduring support for the transformation of the state of NRW.

Climate protection can only be realised together. For this reason, support from the superordinate levels of government in NRW will boost and expand scope for action at municipal level.

Since 2022, the state of NRW has combined all previous climate protection and energy initiatives under the umbrella of the state company NRW.Energy4Climate. The core role of this state company is to facilitate necessary investments in NRW, attract funding to NRW and thereby to advance the implementation of climate protection and the energy transition. NRW.Energy4Climate GmbH supports the Münster climate protection process. This support consists primarily of specialist workshops and targeted advice, and networking on various climate protection-related topics and issues, and with other State of North Rhine-Westphalia institutions and committees. NRW.Energy4Climate is able to draw on a broad regional and professional network to actively support the process in Münster.

Federal level

The nine German cities participating in the EU's 100 climate-neutral and smart cities by 2030 mission have come together to form the stronGER Cities network, with the aim of working together at federal



level to create a favourable framework for achieving their goals. They are supported in this by the Deutscher Städtetag, which, as the leading local authority association, lobbies the federal government, Bundestag, Bundesrat, European Union and numerous other organisations on behalf of municipalities. The First Mayor of Münster, Markus Lewe, is current President of the Deutscher Städtetag.

In 2023, the German government stated in its future strategy for research and innovation that it wants to make an active contribution to the success of the EU's "100 climate-neutral and smart cities" mission and provide the selected nine German cities with the best possible support (p. 42): https://www.bmbf.de/SharedDocs/Publikationen/de/bmbf/1/730650_Zukunftsstrategie_Forschung_und_Innovation.pdf?blob=publicationFile&v=4

5.2 Module C-2 Social and Other Innovation Interventions

Module C-2 "Social and Other Innovation Interventions" consists of a summary table, listing organisational and collaborative governance interventions and describing their impact (C-2.1) and a section for more detailed descriptions and comments (C-2.2).

Table 36 Enabling social innovation interventions

C.2.1: Enabling social innovation interventions					
Intervention name	Description	Responsible entity/ dept/ person	Involved stakeholders	Enabling impact	Co-benefits
(Indicate name of intervention)	(Describe the substance of the intervention)	(Indicate responsible)	(List all stakeholders involved and affected)	(Describe how intervention enables climate neutrality)	(Indicate how intervention helps achieve impact listed in Module B-1)
Alliance for climate protection	Network of companies	Climate Office, City Administration Münster	Münster-based companies and institutions	Platform for exchange, workshops, specialist events and advisory services	Economic growth and innovation



Climate-friendly living	Eco-sufficient lifestyles	Climate Office, City Administration Münster	Citizens and companies	Coaching and information	Cultural transformation of Münster society as a whole
5th Action Plan on the European Charter for Gender Equality with a focus on "Climate and gender equality"	Action plan	City Administration Münster	NGOs and citizens	Measures for jointly strengthen the cross-cutting issues of climate protection and gender equality	Cultural transformation of Münster society as a whole
Neighbourhood approach	Building and renovation	Climate Office, City Administration Münster	Housing market participants	Synergy effects, identity, motivation	Liveable living environment
Solar neighbourhood festivals	Support structures	City of Münster, Solarenergie-Förderverein (SFV e.V.),	Citizens	Coaching and information	Cultural transformation of Münster society as a whole
CoLAB	NZC Pilot Cities Project	Climate Office, City Administration Münster	Citizens	Information and motivation	Cultural transformation of Münster society as a whole
Town twinning	Best Practise	International Office, City Administration Münster	Cities	Exchange and learning	

Table 2C-2.2: Description of social innovation interventions - textual and visual elements

C-2.2: Description of social innovation interventions - textual and visual elements
<p>The analysis "Systemic Barriers and Opportunities to 2030 Climate Neutrality" shows that, in addition to federal, state and local government, market participants, i.e. citizens and households, companies and institutions, also have an important role to play in achieving climate neutrality. The City of Münster has long been involving these stakeholders in its climate protection work. In doing so, it is important to consider the scope for action of each of these participants and the framework conditions required,</p>



and to hold them accountable in proportion to their CO₂ emissions reduction potential. In this part, we present approaches initiatives to enable stakeholder to engage in the climate protection process by utilising their scope of action. Citizen participation approaches in the context of climate protection policies are described in Module A-3, 3.3.2).

Business participants in city society

As part of Münster's Alliance for Climate Protection, which has been in existence since 2011, companies are involved in climate protection activities and benefit from a network that offers a platform for dialogue, workshops, specialist events and advice. Dedicated companies and institutions create model projects and campaigns in Münster with the aim of encouraging others to follow suit. Because they know that active climate protection is not just good for the environment, it's good for the economy too. Alliance for Climate Protection members (industrial businesses, skilled trades, retailers, service providers, etc.) undertake:

- to play an active role in achieving Münster's climate protection target
- to take energy-saving and CO₂-reduction measures in their area of responsibility
- to draw up an internal CO₂ footprint with specific CO₂ reduction targets
- to participate in developing and implementing at least one CO₂ reduction project

The companies are supported with their climate protection activities through regular themed workshops, enabling them to benefit from extensive networking opportunities and advisory services. The success of the alliance is clear and quantifiable through the voluntary engagement of those involved and the networking that takes place. Becoming a member of Münster's Alliance for Climate Protection is worthwhile for every company, thanks to the economic benefits achieved by implementing energy-saving projects, sharing experience with other companies and expertise transfer from external advisors.

Alongside the Alliance for Climate Protection, the development of the Climate City Contract has further strengthened cooperation between the Chamber of Industry and Commerce, the Chamber of Crafts, the District Craftsmen's Association and Münster City Administration on climate protection. The above network of stakeholders has, for example, jointly solicited commitments from Münster companies. In addition, there are now regular exchanges within this network, which, alongside the Alliance for Climate Protection, also strengthens networking between Münster's business community and the City Administration at the level of trade associations and chambers of commerce.

City society: Climate-friendly choices by citizens

In 2017, the 100% Climate Protection Masterplan established the principle of trying to connect with the whole of Münster society. Studies carried out during development of the Masterplan clearly show it is not possible to meet climate protection targets through purely technical climate protection measures. It requires a cultural transformation of the whole of Münster society. The issue of eco-sufficiency highlights that climate protection work in Münster is a socio-political task. The Münster



approach sees sufficiency not as a question of going without, but as a question of consuming the right amount of energy and resources in line with the City of Münster's climate protection goals and creating a consumer culture to match. The aim of the City of Münster is to create an environment that promotes climate-friendly choices in areas such as mobility, housing and energy, and consumption and nutrition. This means focusing equally on citizens and providers of climate-friendly services, offerings and products.

The Münster marketplace model: In 2017, results from underlying analysis, first principles and guidelines were used to develop the "Münster marketplace model". As a future target group, it focuses on the heterogeneous civil society, which the model divides into decision-makers and providers. By definition, both groups are open to climate protection, are engaged or already have climate-friendly products on the market. The creation of innovation niches in which decision-makers and providers develop climate-friendly offerings, live and serve as "transformation pioneers" and role models. Initial approaches to activating sections of civil society on the part of the city include participatory formats and offerings such as Münster's participatory campaign "Our Climate 2030", the city's environmental advisory service and project workshops, and the "Climate-friendly residential buildings" funding programme. These approaches are continually being developed further, as outlined below.

Climate training is a key component of the "Climate-friendly living" field of action. ClimateTrainers support others in navigating their way towards climate-friendly day-to-day living. They provide support in drawing up an initial carbon footprint, advice on individual goals and give tips and assistance in realising the goals set. City Administration Münster regularly offers climate training to Münster citizens. All Münster residents aged 16 and over can apply. There are currently 18 active climate trainers.

Everyone who takes part in ClimateTraining is given the opportunity to test and try out climate-friendly behaviours, offerings and products from various Münster providers. This enables them to experience practical ways of sustainably improving their individual day-to-day carbon footprint. The aim for participants during the trial phase is to think about which climate-friendly choices they can and should integrate into their day-to-day lives long term. For a decision to really become routine takes time. Participants support each other and are motivated by the climate trainers. Providers also benefit from direct contact and dialogue with participants, the city and each other. They have the opportunity to test and introduce new products and services, expand cooperation and improve the environment for climate-friendly choices in Münster for everyone.

Pupils at Mathilde Anneke School will also take part in the next ClimateTraining event in spring 2024, with the aim of enabling them to use the knowledge they gain to coach younger pupils.

ClimateTraining was preceded by the real-world laboratory. For one year in 2019, the climate-friendly choices real-world laboratory saw 12 households and 13 companies in Münster work on new ways of integrating climate protection into their everyday lives and sustainably changing individual behaviour. What made this approach different was that it brought together providers of climate-friendly products and services, such as zero waste shops, cargo bike hire, car share providers and clothing upcyclers



with households as potential customers, and enabled them to develop existing or new offerings for private households in Münster. The project focused not on experienced climate protectors, but on curious households who wanted to contribute to protecting the climate. With active support from 13 Münster companies, participating households tested and tried out a wide range of climate-friendly offers roughly 130 times.

The real-world laboratory was such a great success that, from 2022 to 2025, the knowledge gained from it is being rolled out more widely through the "Climate-friendly choices" city network. The network will be funded by the BMWK via the National Climate Initiative (NKI). At the heart of the network concept are 9 cities and one district (Bielefeld, Bottrop, Drensteinfurt, Düsseldorf, Essen, Gelsenkirchen, Wuppertal and the district of Steinfurt), 9 real-world laboratories made up of households and companies, and a sharing of experiences to enable further more widespread application.

A further important measure for ensuring that low-income groups are also involved in the climate protection process is the energy-saving check and scrappage scheme for refrigerators operated by Caritas Münster:

- Energy-saving check: Qualified energy-saving helpers carry out energy-saving checks in low-income households. They measure the energy consumption of refrigerators, washing machines, lamps, consumer electronics and other electrical appliances. Eligible households receive expert tips on simple means for reducing energy consumption, and free individual energy and water-saving items.
- Replacing refrigerators: Old refrigerators are a burden on the environment and your wallet. Anyone on a low income, such as unemployment benefit II, social assistance or housing benefit, can get rid of these energy guzzlers. Energy Saving Check Plus, in addition to the standard energy saving check, offers financial support for the purchase of a new, energy-saving appliance through a scrappage scheme

Another example of City Administration Münster's comprehensive approach to climate protection work is the 5th Action Plan for the European Charter for Gender Equality, which focuses on "Climate and gender equality", was developed by an internal administrative working group, and finally discussed with representatives from civil society organisations. The 5th Action Plan will be submitted to the Council for consideration in spring 2024.

For the "Housing and energy" area of action, the offer has been further developed in two directions - from individual solutions, to a neighbourhood approach and on to creating structures instead of having the City Administration Münster provide everything.

A significant increase in the rate at which existing buildings are deep renovated is a key factor in achieving the goal of climate neutrality by 2030, as these buildings are responsible for a large proportion of climate-damaging emissions. There are a number of factors hindering an increase in deep renovation activity, chief among them being capacity shortages (planning permission, advice and



specialist planning, skilled trades, materials, infrastructure). To make the most efficient use of emissions-reducing improvements to existing buildings, it is recommended that, in addition to strategies for individual buildings, an integrated approach is used at neighbourhood level. A concerted approach enables the exploitation of synergy effects, enabling a significant acceleration in building energy-efficiency improvements. The neighbourhood level also makes it possible to take an integrated look at property-independent factors that make a neighbourhood a more attractive place to live and have an indirect influence on energy-efficiency improvements (living environment, local amenities, mobility options, etc.). Potential solutions can be tested as models within the framework of neighbourhood concepts and then implemented and developed further subsequently. A building deep renovation project then needs to be carried out by local stakeholders. A wide range of funding opportunities are currently available at federal and state level as well as from the City of Münster.

Age-appropriate flexibility in the use of infrastructure in the residential environment can also be considered for supporting sociodemographic change in city neighbourhoods and generating positive effects in terms of building energy-efficiency improvements. The neighbourhood level also offers key advantages for fostering public involvement. Where comparable measures, such as funding programmes, are aimed primarily at individual property owners, addressing entire neighbourhoods enables more people to be persuaded to undertake energy-efficiency improvements. A sense of belonging/neighbourhood identity also increases willingness to actively implement changes in your own living environment.

The neighbourhood approach offers the opportunity to identify efficiency potential and approaches, not just in individual properties, but also in an urban development and energy context. In addition to essential energy-efficiency improvements and a renewable energy and heat supply, an integrated approach also takes into account additional issues relating to energy-efficiency-related urban regeneration for functional, social, environmental and economic reasons. The "energy-efficiency-related urban regeneration" process is therefore one of the most strategically important points in terms of existing buildings. For this reason, the Administration intends to create a pathway to testing "energy-efficiency-related urban regeneration" in individual neighbourhoods and, if possible, to extend and establish it throughout the city in future. Individual projects, such as the EU project UP2030 "urban planning and design ready for 2030" or the Future BEEing project, an Interreg VI C project being carried out in conjunction with Enschede Council, energieland2050, Hengelo Council, Buro de Haan, Küsters.Grün.Stadt.Klima, Münster University of Applied Sciences and Saxion University, will also support this process and contribute building blocks for this overall approach.

The UP2030 project is developing conceptual principles that provide an overview of which planning guidelines/instruments, short, medium and long-term measures, data bases, funding opportunities, participation approaches, etc. should or can be taken into account in existing neighbourhoods. This will then enable concepts to be drawn up more quickly or an initial assessment to be made and measures implemented in comparable neighbourhoods. UP2030 will focus in particular on the synergies between climate adaptation and climate protection measures, and on participation approaches



that go beyond advisory and information services. UP2030 will therefore also further develop the established city-wide approach of neighbourhood level climate training, and thus develop a potentially systematic approach that promotes the implementation and acceptance of measures by neighbourhood stakeholders.

The FutureBEEing sub-project being run by the City of Münster aim to create a specification sheet for the development of a digital tool that presents an integrated overview of all measures and different scenarios able to promote the future viability of a neighbourhood. Among other things, this is an important instrument for answering planning questions relating to deep renovation and restructuring of existing neighbourhoods in conjunction with their cost points. These planning questions relate to energy efficiency, weather resistance and standards for sustainable neighbourhood development. The tool will then be developed by the other partners and is aimed at individual owners, cooperatives, owners' associations and investors.

Creating structures instead of the City Administration providing everything - this is the goal pursued by the-sponsored solar neighbourhood festivals. Solar neighbourhood festivals are events organised by citizens themselves, at which hosts invite other interested citizens to their homes and show them their own solar energy systems. The motto of the solar neighbourhood festival is: "Come on over and take a look at my solar energy system!" Because people who are thinking of installing a solar energy system on their roof often have lots of questions, for example, is my roof suitable? What bureaucratic hurdles do I need to overcome? Is it a worthwhile investment? The City of Münster is working with the Solar Energy Promotion Association (SFV e.V.), responsible for the packsdrauf initiative, to organise solar neighbourhood festivals. These events involve solar energy system owners showing guests their systems and talking about their experience. By raising awareness, this should allow more and more solar energy systems to spread, driving forward the energy transition and doing away with more and more fossil fuels, with corresponding benefits for the climate.

Münster is becoming a climate city

The climate protection process bound up with the Climate City Contract will be continuously built out in future years. In particular, formats and measures for promoting civil society involvement will be developed further. We will also run events such as Climate City Week. Our efforts to address and the involvement of stakeholders from Münster society will also be continuously expanded: www.klimas-tadt.ms

The Committed to local action building project (CoLAB), funded by NetZeroCities as part of its Pilot Cities funding programme, is an important component of this. This project involves the cities of Münster, Aachen and Mannheim testing innovative ways to reduce behaviour-related greenhouse gas emissions. The heart of the project is a platform for connecting all stakeholders in Münster society, from the City Administration and politicians to businesses and citizens, and inspires and mobilises them to take concrete, sustainable action, helping to bridge the gap between theoretical knowledge



and practical changes in everyday life. Münster is developing a digital offering to support the development of a climate-friendly, sustainable lifestyle, which will highlight ways that citizens can take conscious actions that have a significant everyday impact, and help citizens visualise and experience the goal of climate neutrality as a task for the whole community. Münster City is building on its experience in the field of "climate-friendly living". Mannheim is planning a platform called "IDEAL for Mannheim" as a gateway for action to identify areas of impact for local action and stakeholders, analyse their effectiveness, make them visible and network them. Aachen is planning to set up a 2030 agency as a contact point for all stakeholders and as a management unit for the climate goal. It will facilitate access to offerings, enable networking and generate direct local impact.

International city-climate partnerships

The City of Münster also operates the following climate partnerships:

The twin cities of **Münster and Monastir are taking part in** the "Municipal Climate Partnership" project organised by *Servicestelle Kommunen in der Einen Welt* in collaboration with the NRW 21 state working group (LAG 21). The aim is to develop a joint action plan with topics and projects important to both cities in terms of climate protection. The following topics have now been agreed: Waste management, climate-adapted rainwater management, sustainable urban development. The core Münster City team, responsible for actual implementation, consists of staff from various areas, specifically the International Office in the Department for Citizen and Council Services, the Department for Mobility and Civil Engineering, the Department for Green Spaces, Environment and Sustainability and Waste Management Services. The steering group responsible for promoting the project within the city and providing advice is also made up of members of the council, the University, the University of Applied Sciences, the advisory board for municipal development cooperation, Freundeskreis Münster-Monastir e.V. and Overberg College.

Since 2015, there has been a climate policy exchange between cities in NRW and Minnesota (USA). The "Climate Smart Municipalities" (CSM) project is organised by the University of Minnesota in Minneapolis and supported by the State of NRW and the State of Minnesota. **Münster and Rochester** have been nominated as climate partner municipalities within the project. Rochester is a city of around 135,000 people and home to the world-famous Mayo Clinic. Shared topics in the CSM project include "climate-neutral living & building" and "modern infrastructure". The project aims to emphasise that climate protection and the energy transition are a task for society as a whole and can only be achieved through integrative approaches at municipal level.

First Mayor Markus Lewe has agreed a climate partnership in Italy between the cities of **Münster and Bologna**, which is also one of the 100 climate-neutral and smart cities by 2030. Lewe and the Deputy Mayor of Bologna, Valentina Orioli, have agreed on regular mutual consultations and the establishment of a German-Italian committee that will collate best-case studies from both cities and examine them to identify areas of reciprocal transferability.



Since 2022, **City of Münster** has been developing an intensive climate partnership **with its American partner city Fresno** through the Urban Diplomacy Exchange project set up by SKEW. The Urban Diplomacy Exchange project offers existing German-US municipal partnerships and municipalities interested in working together the opportunity to engage in technical and political dialogue. The framework for the project is provided by the 2030 Agenda with its 17 goals for sustainable development and strengthening democracy. Through events, expert exchange trips, ongoing advice and support, "Urban Diplomacy Exchange" helps the cities to strengthen their relationships with municipalities in the USA, establish exchanges of specialist knowledge, network with each other and represent municipal interests at national and international level. Successful implementation of the project in both cities has over the last two years already led to various municipal exchanges on the topics of climate protection, sustainable urban development and climate-friendly mobility in both Münster and Fresno.



5.3 Module C-3 Financing of Action Portfolio

Module C-3 "Financing of Action Portfolio" should contain the list of action portfolios and interventions outlined in Modules B-2, and those from C-1 and C-2 with cost implication to provide a summary list of interventions that need to be unpacked in the Investment Plan.

The table below provides a broad overview of the estimated costs associated with the 2030 climate neutrality ambition. Costs were calculated using the economic model made available to mission cities by NetZeroCities: <https://netzerocities.app/group-capabilitybuildingprogrammebuildingastrongeconomiccase>

Table 37 C-3.1: Summary of interventions with related costs

C-3.1: Summary of interventions with related costs								
Actions	Actions & Results	Responsible entity and person	Start / end date	Sector	Impact			Total investment cost (CAPEX)(MEUR - NPV 2020-2030)
					GHG reduction (kt CO ₂ e)	Operational cost/savings (OPEX) (MEUR - NPV 2020-2040)	Co-benefits (MEUR - NPV 2020-2040)	



<i>(list the actions of your portfolio of transformative projects from modules B-2, C-1 and C-2)</i>	<i>2030 Assumptions</i>		<i>(indicate the entity and person responsible)</i>	<i>(indicate the start and end date of the activity)</i>	<i>(indicate the sector to which the action belongs)</i>	<i>(indicate the impact of the action. Eg GHG reduction/co-benefits)</i>			<i>(Indicate the estimated total cost for the performance in €)</i>
<i>Reduced need for motorised passenger transport</i>	42%	reduction		2020-2030	Transport	124	€ 1.280	€ 313	€ -
<i>Shift to public & non-motorised transport</i>	50%	reduction in car passenger kms		2020-2030	Transport	63	€ 341	€ 404	€ (137)
<i>Increased car pooling</i>	25%	increase in average passengers per car		2020-2030	Transport	20	€ 293	€ 79	€ -
<i>Electrification of cars + motorbikes</i>	35%	electric cars + motorbikes by 2030		2020-2030	Transport	26	€ 67	€ 24	€ (120)



<i>Electrification of buses</i>	100%	electric buses		2020-2030	Transport	6	€ 13	€ 9	€ (15)
<i>Optimised logistics</i>	10%	reduction in total trucking kilometres		2020-2030	Transport	71	€ 76	€ 79	€ -
<i>Electrification of trucks</i>	35%	Light duty trucks (<3.5t) by 2030		2020-2030	Transport	23	€ 59	€ 14	€ (259)
	35%	heavy duty trucks (>3.5t) by 2030		2020-2030	Transport				
<i>Building renovations (envelope)</i>	5,0%	annual renovation rate		2020-2030	Buildings & Heating	105	€ 1.102	€ 63	€ (1.612)
<i>New energy-efficient buildings</i>	30%	share of new buildings built with top performing		2020-2030	Buildings & Heating	6	€ 71	€ 4	€ (145)



		building standard							
<i>Efficient lighting & appliances</i>	100%	share of renovations producing ~40% efficiency improvement		2020-2030	Buildings & Heating	166	€ 1.068	€ 8	€ (481)
<i>Decarbonising heating generation</i>	25%	share of local heating produced with electric heat pumps		2020-2030	Buildings & Heating	311	€ 248	€ 60	€ (318)
<i>Decarbonising electricity generation</i>	80%	share of fossil fuel electricity production replaced with renewables		2020-2030	Electricity	424	€ 807	€ -	€ (233)
<i>Increased waste recycling</i>				2020-2030	Waste	14	€ 5	€ 1	€ (0)



Total						1359	€ 5.430	€ 1.059	€ (3.319)
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Source: Net Zero Cities Economic Model



6 Outlook and next steps

This section should draw any necessary conclusions on the Action Plan above and highlight next steps and plans for further refining the Action Plan as part of the Climate City Contract.

Table 38 Plans for next CCC and Action Plan iteration - textual elements

Plans for next CCC and Action Plan iteration - textual elements

From project to principle - this maxim underpins Münster's climate protection strategy and over the next few years City Group Münster will be extending it to the whole of Münster society. The Climate City Contract will enable Münster society to be engaged in the climate protection process with much greater commitment than previously. Münster's City Administration needs to be constantly working to create the conditions required for this to happen (see also Social innovations). To this end, the Climate City Contract will be continuously updated and resubmitted to the European Commission for review every two years.

Prioritising implementation of climate protection strategies and measures is carried out by Münster City Council and the City Administration Administrative Board. Climate protection-related information is currently being established for both bodies, such as a budget template and the climate protection overview board, intended to provide transparent support for the decision-making process (see module C-1).

The implementation status of climate protection strategies and measures is reviewed internally by the Administrative Board every three months through a reporting system. The city's annual energy and greenhouse gas inventory provides information on where Münster stands with regard to the 2030 climate neutrality target.

7 Annexes and more information

Add any textual or visual material to the 2030 Climate Neutrality Action Plan in the ANNEX as necessary.

For more information, please see:

Masterplan 100 % Klimaschutz: <https://www.stadt-muenster.de/sessionnet/sessionnetbi/getfile.php?id=410952&type=do>

Konzeptstudie Münster Klimaneutralität 2030: <https://www.stadt-muenster.de/sessionnet/sessionnetbi/getfile.php?id=488057&type=do>

Ad hoc Maßnahmen aus der Konzeptstudie Münster Klimaneutralität 2030: <https://www.stadt-muenster.de/sessionnet/sessionnetbi/getfile.php?id=529594&type=do>



Handlungsprogramm Klima 2030: <https://www.stadt-muenster.de/sessionnet/sessionnetbi/getfile.php?id=448017&type=do>

Bericht Klimaneutrale Stadtverwaltung 2030: <https://www.stadt-muenster.de/sessionnet/sessionnetbi/getfile.php?id=490811&type=do>

Handlungsprogramm Klimaneutrale Stadtverwaltung 2030: <https://www.stadt-muenster.de/sessionnet/sessionnetbi/getfile.php?id=490812&type=do>

Konzept Klimaanpassung: https://www.stadt-muenster.de/fileadmin/user_upload/stadt-muenster/67_klima/pdf/Klimaanpassungskonzept.pdf

Klimadashboard Münster: <https://klimadashboard.ms/>

Öffentlichkeitsarbeit:

www.klimastadt.ms

<https://www.stadt-muenster.de/klima/unser-klima-2030/team>

Climate City Contract

2030 Climate Neutrality Commitments

Climate Neutrality Commitments of the City of Muenster



STADT MÜNSTER

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1 Introduction

Introduction

Climate change has already reached us: the effects of global warming have been clearly noticeable in Münster for several years. Excessively hot, dry summers and heavy rainfall events are causing noticeable damage. Climate change is no longer an abstract threat; it is happening right here on our doorstep. Man-made global warming is threatening the quality of life, prosperity and future prospects of people in Münster and around the world. The latest scientific findings and climate forecasts make clear that society today is living at the expense of future generations. We are nearing the point of no return, with melting ice in the Arctic, thawing permafrost in the Arctic Circle and the destruction of rainforests all imminent tipping points for global warming and the climate. It is highly likely that the changing climate will further damage the city's economy and lead to social upheaval in Münster.

Towns and cities play a key role in achieving climate neutrality. They occupy only 4% of the EU's land area, but are home to 75% of EU citizens. In addition, towns and cities consume over 65% of the world's energy and are responsible for more than 70% of global CO₂ emissions.

Against this backdrop, our Climate-neutral Münster 2030 vision aims to significantly boost existing efforts to protect the climate, to increase the use of new technologies, but also to change the way Münster society as a whole thinks and acts. That means that work to reduce our climate impact should no longer be selective, but should instead be comprehensive and undertaken wherever there is opportunity to do so. Thanks to comprehensive climate protection work over the past 30 years and a good decentralised energy supply, in 2020 energy-related CO₂ emissions were, at 5.8 tonnes per inhabitant, below the national average. Münster is therefore on the right track. This is also evident from national and international rankings:

- SECAP has been approved by the official body of the Covenant of Mayors on March 12, 2024
- November 2023 : A-Ranking CDP-ICLEI Track
- "Climate-active Municipality 2022" award for the "Climate-neutral City Administration Münster 2030" concept study and associated action programme.
- The municipality of Münster has several times been honoured with the European Energy Award Gold, the highest honour for municipal climate policy measures, for its wide-ranging climate policy measures. Following gold certifications in 2005 and 2009, in 2012, 2015, 2018 and 2022 the city achieved one of the highest scores of all gold-certified municipalities in Europe.
- German Sustainability Award 2019

Münster is proud of these successes. They show that protecting the climate is in the city's DNA.

Despite these successes, we know that Münster still has a long way to go in reducing its CO₂ emissions. The scientific community continues to sound the alarm – the next few years will be decisive, speed is of the essence. We must do more to stop climate change, do more to adapt to the consequences of climate change, which now appear unavoidable, and step up the pace of climate



action! Unless we change direction on the climate, the future looks bleak. Society, through an unprecedented global movement, has shown that the vast majority is ready to implement the changes needed to achieve climate justice. The aforementioned global movement also brought a sense of urgency to Münster. Against this background, in 2019, Münster City Council set itself the ambitious goal of becoming climate neutral by 2030. As a result, the study "Münster climate neutrality by 2030" has been commissioned to work out what it needed to do to achieve this goal. The study focussed on two challenges:

1. The goal can only be achieved if the whole of city society works together.
2. The extent to which the city itself can contribute to meeting this target is limited to at most 50 per cent. The rest requires action at state, federal government and EU level.

That means that to realise its ambitious climate target Münster now needs also to bring others on board – others within Münster society, but also the state, federal government and EU. The state, federal government and EU have to provide a framework that promotes climate-friendly action and ensures that this action is in keeping with social justice. For their part, within this framework various members and stakeholders of Münster society need to act to make climate neutrality a reality.

With the message "Münster is becoming a climate-positive city", the City Administration is now launching a process that brings together a full range of members and stakeholders within city society. All participants will be able to

- demonstrate what they are currently doing to achieve the goal of climate neutrality,
- commit to implementing measures that make a difference,
- initiate measures that require collaboration with other stakeholders,
- receive support implementing measures and offer support to other stakeholders,
- take responsibility for a better tomorrow.

The City Administration has enlisted support for this process, which will continue to develop over the coming years. Münster has used its role as a pioneer of municipal climate action to apply for the EU mission "100 Climate-Neutral and Smart Cities by 2030" and was chosen by the EU, together with eight other cities in Germany, from 377 applications to be one of 112 mission cities. Münster's application for the Cities Mission has been motivated by both, the Climate City Contract, which is an innovative instrument for accelerating the transformation of city society as a whole (for more on this, see below), and the coming together of 112 pioneering cities for the sake of the climate - particularly in terms of networking, shared learning and fair competition, with the focus on their shared goal of climate neutrality by 2030.

The Münster Climate City Contract

The Climate City Contract is an innovative tool that forms a framework for the work and measures being undertaken in Münster to achieve the goal of climate neutrality. The commitment of individual companies, initiatives, private individuals and the City administration alone is not enough - it takes all



of us! All members and stakeholders in Münster society are called upon to pull whatever levers are available to them to maximum effect:

City administration, its subsidiaries, and municipal companies (Münster City Group)

The strategic basis for all Münster City Administration's climate protection activities is the "100% Climate Protection Masterplan" and the "Münster Climate Neutrality 2030 Concept Study", which builds on the masterplan. The "100% Climate Protection Masterplan" was developed in 2017 with a high level of participation from Münster society. A total of around 1,200 participants took part in the consultation.

The strategic premises of Münster's climate action are prioritised as follows:

1. Saving as much energy as possible.
2. Utilising the energy we still require as efficiently as possible.
3. Generating the energy we still require from renewable resources.
4. Choosing resource and energy-saving behaviours with a consumer culture to match

This strategy shapes our activities in six fields of action:

- Energy production
- Building carbon-reduction measures
- Mobility
- Business and academia
- Education and food
- Climate budget

Based on these strategic guidelines, a wide range of climate protection measures are being implemented by various units within the Münster City Group on the basis of a number of Council resolutions. In order to focus on and accelerate the implementation of climate protection measures, Münster City administration is now treating climate protection as much more of a cross-cutting issue, meaning that all departments, offices, institutions and municipal subsidiaries and companies have to take what action they can. The Münster City Group's climate protection process is managed by the Administrative Board. In concrete terms, this means that for each field of action one person from the city group's senior management team is responsible and reports quarterly to the Administrative Board on the status of the various projects and plans.

The City of Münster Group, consisting of the core administration plus its own companies and municipal subsidiaries, is aware of its special responsibility. At the same time, we know that Münster cannot achieve its full CO₂ savings potential through the action of politicians and the City Group alone. With the message "Münster is becoming a climate-positive city", the City Group has therefore launched a process that calls on all members and stakeholders in Münster society to commit to the goal of achieving "climate neutrality for Münster" using the levers available to them.



Impact partners

In addition to the municipal corporation, other stakeholders in Münster have significant leverage when it comes to reducing CO₂ emissions. The term "impact partners" refers to any organisation - commercial enterprises, associations, universities, etc. – able to make a significant contribution to climate neutrality in Münster. Some impact partners in Münster have already made concrete plans to achieve climate neutrality, others are implementing ambitious emissions reduction projects and measures. The Climate City Contract is intended to highlight this commitment and, by making it a matter of public record, strengthen signatories commitment to it.

Münster benefits from the Münster Alliance for Climate Protection network, founded in 2011, in which more than 100 companies support the city's climate protection goals and are involved in climate protection activities. In developing the Climate City Contract, the city administration created additional structures to boost stakeholder engagement. For example, it established a regular dialogue between the business community and the City Administration with the aim of working together on the implementation of our Climate-neutral Münster 2030 vision.

Innovators

Not every measure is amenable to calculating how much CO₂ it will save or what future effects it might have. Nevertheless, such measures are also important, because making Münster a climate-friendly city takes ideas, creativity, research, progress and the courage to try something new. If, for example, researchers at the University of Münster come up with innovative recycling methods, this knowledge will benefit not just Münster but ultimately the whole world. In addition to our universities, Münster-based companies too are using innovative solutions to drive technological transformation. Close links between the universities and industry ensure that Münster is a highly innovative environment.

As a city of science, Münster can build on established networks such as the "Alliance for Science" or the "Smart City Münster Alliance".

Committed citizens

Every one of Münster's 320,000 inhabitants is part of our city society and affects the pathway to becoming a climate-positive city. For many, this means reorienting their everyday decisions towards climate-friendly options. Some, however, have the opportunity to engage more profoundly, whether by supporting a repair café or by buying an electric car to share with neighbours.

Becoming a climate-positive city depends on the different forms of engagement exhibited by various members and stakeholders of Münster society. To strengthen this and to enable the whole of Münster society to benefit from it, Münster City Administration has long been encouraging Münster society to get involved by means of the following:

- Formal and informal citizen participation initiatives (formal and informal ones) for the joint development of climate-related implementation projects, such as the development of a shared vision for the spatial development of Münster's urban landscape as part of the Münster



integrated area concept, the submission of proposals, ideas and prototypes in the context of the development of the Münster 2035+ mobility master plan, a workshop on the goal of a low-car, accessible city centre with multipliers or the joint development of desired urban development goals and fundamental qualities of the neighbourhood as part of Münster model neighbourhoods

- Information and communication initiatives, such as a wide range of energy advisory services or thermographic flights to create thermal images. There are also initiatives that bring the city community together to inspire, provide information about the climate protection process, engage in dialogue and motivate people to get involved, such as the "Münster is becoming a climate-positive city" forum, Climate City Week and KlimaBarCamp.

In this way, small building blocks in the form of the measures taken and contributions made by each individual stakeholder and citizen help create a shared pathway to becoming a climate-positive city - because it needs all of us to take action. Further participatory initiatives will be organised in the coming years, with the aim of finding even more participants whose contributions will be recorded in the ever growing Climate City Contract.

2 Goal: Climate neutrality by 2030

Goal

Definition of climate neutrality for Münster

In ratifying the Paris Climate Agreement, the Federal Republic of Germany has entered into a binding commitment under international law to meet the climate targets set out therein. These targets mandate limiting global warming to well below 2 degrees Celsius above pre-industrial levels. The recommendation is that if possible this increase should not exceed 1.5 degrees Celsius.

On 11 December 2019, councillors at Münster City Council voted to aim for climate neutrality by 2030. Against the backdrop of the Paris Climate Agreement goals, the following definition of climate neutrality for the city of Münster is used:

- By 2030, the city of Münster will no longer produce any energy-related greenhouse gas emissions.
- The energy-related CO₂ budget for achieving the 1.5 degree target is met.
- The city of Münster is prioritising the avoidance and reduction of greenhouse gases in the city.
- Greenhouse gases are offset if this is necessary to achieve the goal of climate neutrality by 2030 and are informally taken into account in the accounting.
- Offsetting will be carried out to the extent required first locally and then regionally.

The resolution relates to the urban area of Münster, an area of 303.3 square kilometres. As of 2022, Münster had 320,946 inhabitants. According to the city of Münster energy and greenhouse gas



balance for 2021 (published in 2023), CO₂ emissions break down as follows: Private households 28 per cent, commerce and miscellaneous 30 per cent, industry 11 per cent, transport 31 per cent.

In the Münster climate neutrality 2030 target scenario, emissions will fall by over 95% compared to 1990. In 1990, annual emissions amounted to 2,618,000 tonnes, so that a reduction of 95% means a reduction in annual emissions of 2,487,000 tonnes in 2030 compared to 1990. Since this goal complies with the goal of reducing 82 percent of the 2021 baseline year GHG emissions calculated by the Economic Model, the Münster climate neutrality 2030 target meets the requirements of the "100 climate-neutral and smart cities by 2030" mission.

The current version of the City of Münster's energy and CO₂ balance sheet (BISKO standard), which is regularly updated, serves as a frame of reference for ongoing monitoring.

Plotting the pathway to Münster climate neutrality 2030

If we are to limit global warming to well below 2 degrees above pre-industrial levels, meeting percentage emissions reduction targets alone is not sufficient. To achieve the goals of the Paris Climate Agreement, we also need to limit total greenhouse gas emissions in absolute terms. The term carbon budget is used to illustrate how much CO₂ can be emitted per capita while still limiting global warming to 1.5°C. The German Advisory Council on the Environment (SRU) recommends setting a German carbon budget compatible with the Paris Climate Agreement and tightening climate targets accordingly. The carbon budget is intended as a broad-based assessment tool to help achieve these targets.

There are no binding methodological guidelines for calculating carbon budgets at municipal level. If the population principle recommended by the SRU is applied to the distribution within Germany, this results in a share of around 51 tonnes per person to meet the 1.5 degree target¹. The population principle also specifies an equal per capita emissions right for every person on earth.

The "Münster Climate Neutrality 2030" concept study calculated a carbon budget for Münster for 2020/2021 using the then applicable baseline data. This was based on the assumption that the 1.5 degree target would be met. This means that at the time of the calculation, Münster, with a population of around 310,000 people, had a budget of around 15,800,000 tonnes of CO₂ by 2050. The carbon budget considers CO₂ alone, as this is main, longest-lived greenhouse gas. Energy and non-energy CO₂ emissions were analysed. As short-lived greenhouse gases, methane and nitrous oxide were not included in the budget.

In accordance with the territorial principle (BISKO standard), the city of Münster balances only energy-related greenhouse gases, including methane and nitrous oxide in the form of CO₂ equivalents. In applying the carbon budget to the budget limits for Münster, the following assumptions were therefore made: The National Inventory Report on the German Greenhouse Gas Inventory found that approximately 93% of emissions (CO₂, methane and nitrous oxide) are energy-related. Budget

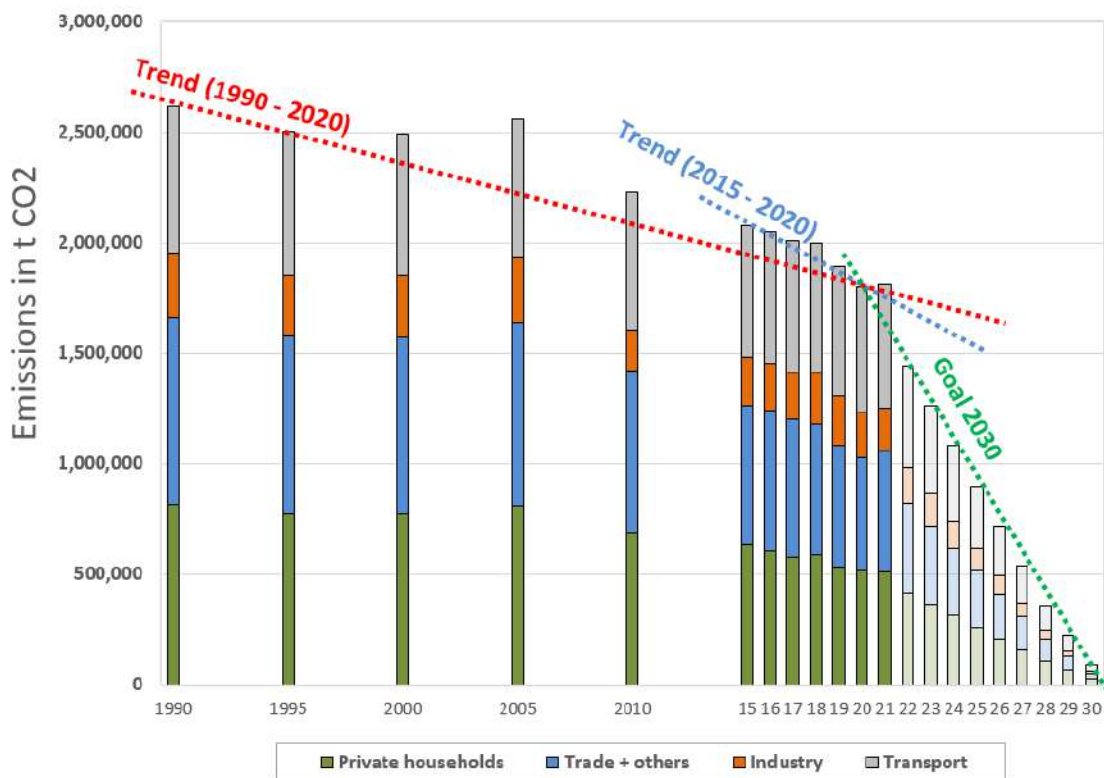
¹ Source: SRU, Environmental Report Chapter 2, Achieving the Paris climate targets with the CO₂ budget, own calculation



analysis was based on just 14,700,000 tonnes of the 15,800,000 tonnes of CO₂ described above. Annual emissions of the city of Münster from the BSKO balance sheet were deducted from this budget in the sense of a residual budget balance. As soon as the total becomes negative, the City of Münster's budget is used up and the city is considered to have failed to meet the 1.5 degree target. Since the BSKO balance includes both CO₂ and CO₂ equivalents, this represents a conservative approach.

The "Münster climate neutrality 2030" target scenario describes absolute changes in greenhouse gas emissions and changes over time needed to achieve the goal of climate neutrality by 2030 and compliance with the 1.5 degree target. The figure illustrates the need to accelerate reductions over time by also showing the change in GHG emissions since 1990.

GHG emissions Münster, trend and target, by sector



From 1990 to 2019, GHG emissions in Münster fell by around 28%. This corresponds to a reduction of around 1% per year. Münster is a dynamic, growing city. The population has increased by 13% over this period. This means that the city has achieved a slight decoupling of GHG emissions despite a rising population, and that, in absolute terms, GHG emissions have fallen. Nevertheless, the speed of reduction in emissions to date is not sufficient to meet the targets set out in the Paris Climate Agreement. The average annual reduction since 1990 is around 25,000 tonnes of CO₂ per year. From 2020 to 2030, annual emissions need to be reduced by around 182,000 tonnes of CO₂ per year. That would mean increasing the rate at which emissions are reduced roughly sevenfold.



According to the 2030 scenario path explored in the concept study “Münster climate neutrality 2030”, from 2020 to 2030, the carbon budget will fall by around 63%, from around 14,800,000 tonnes of CO₂ to around 5,600,000 tonnes of CO₂. Should this be the case does that mean that from 2030 the carbon budget can no longer be burdened. In addition to measures to reduce GHG emissions, to achieve the goal of net zero climate neutrality some offsetting will therefore also be required.

A comparison of emissions reductions to date with the required speed of reductions illustrates how comprehensive the changes we need to make are. The above figure is nonetheless also encouraging, as it shows that the rate of reduction of GHG emissions has accelerated since 2015.

Münster Climate Neutrality 2030 - How the City of Münster Group is meeting the challenge

Against the backdrop of the resolution passed by Münster City Council in 2019 to strive for climate neutrality by 2030, the Climate Neutrality 2030 concept study was drawn up and adopted by the Council to outline a possible theoretical path towards climate neutrality by 2030, associated challenges and fields where action can be taken.

The study highlights challenges (e.g. a refurbishment rate of 8% by 2030) that from today's perspective appear unrealistic. At the same time, it is becoming apparent that some processes in our fields of action, such as the switch to electromobility by 2030 or construction of new buildings to the PlusEnergy standard, have become much more likely. Until a few years ago, for example, it would have been considered unrealistic that commercial companies would choose to stop producing internal combustion engines by 2030. In this respect, when assessing "realistic" development pathways, the possibility of changes in the framework within which we operate always needs to be taken into account.

In this respect, the study cannot answer the question of feasibility of implementation, provide a specific list of measures or ensure that the goal of climate neutrality by 2030 is achieved. The immense challenges in the current climate protection process must be overcome through collaboration between the City of Münster Group and Münster society, and changes in the broader framework within which the city operates.

The concept study clearly shows that the City of Münster Group's does not have sufficient room for manoeuvre to realise the goal of climate neutrality by 2030 by itself. Additional measures needed include a significant change to the broader framework within which we operate, over which the City of Münster Group has little influence. These include, for example

- Sufficient financial resources (e.g. for refurbishing buildings, expansion of renewable energies, investment in electromobility) must be provided punctually through private investment and federal subsidies to eliminate economic efficiency gaps (e.g. in the area of green district heating).



- A legal framework consistent with an expansion in renewable energy generation needs to be created (federal government)
- The human resources needed for energy-efficient refurbishment need to be available, particularly in the skilled building trades and building completion (commerce).
- Essential technical solutions (particularly in the area of sector coupling) need to be available and mature (federal government, commerce).

The implementation-based transformation strategy for Münster set out in this Climate City Contract is a suitable format for meeting the challenges because

- by including non-technical fields of action it takes into account the need for a cultural transformation of the whole of Münster society;
- the project is clearly prioritised within the City of Münster Group in that the municipal climate protection process is managed by the Administrative Board;
- by regularly reviewing the status of project implementation (quarterly by the Administrative Board) and reductions in emissions (annual energy and greenhouse gas balance), it is possible to react flexibly to changes in the complex and dynamic environment (technical innovations, political framework conditions, etc.).

With regard to extending this transformation strategy to the whole of Münster society, the City of Münster is able to draw on existing networks and structures, which will gain further in importance and be strengthened, not least through the use of the Climate City Contract presented here. Priorities in terms of content are explained in Part 3.

Co-benefits of climate protection measures

Various climate protection measures in the action areas of energy production, building carbon reduction measures, mobility, business and academia, education and food, and climate budget generate the following co-benefits: prevention of environmental damage, regional value creation, job creation, independence from fossil fuels, increased local market stability and resilience, increased business tax revenues, favourable/stable energy costs, cleaner air, lower noise emissions, alternative uses for traffic areas, improved road safety/fewer serious accidents, increased value of properties along formerly busy roads, higher quality of life in public spaces, increased climate justice, more pleasant living conditions, more climate-resilient building stock.

3 Strategic priorities

Strategic priorities

From project to principle - moving from planning to action and to acceleration

The explanation of the challenge in Part 2 makes clear that achieving our goal requires comprehensive changes and an acceleration in our implementation.



A successful climate and energy transition requires us to draw up concepts and plans to enable us to start implementing, prioritising and developing change processes. To this end, the focus in Münster is on the implementation of strategic projects that are within the capabilities of the city group and with which we are able to exert direct and indirect influence on the implementation of climate protection measures, especially in Münster society. Direct influence means that the City of Münster Group can realise climate protection measures itself. Indirect influence means that the City of Münster Group creates the framework, but that realisation of climate protection measures is largely dependent on engagement by Münster society. Strategic projects of the City of Münster Group bring about the realisation of climate-related projects and measures in the City of Münster Group and in the Münster community by

- supporting and promoting,
- making change possible,
- setting clear rules.

Strategic projects therefore form the framework for implementation projects with which the municipal group or Münster society ultimately realises the climate protection process and ensures its success. Below we showcase examples of strategic projects for fields of action with outstanding significance for the climate protection process due to their CO₂ savings potential. The list is not exhaustive and does not represent all strategic projects.

Energy production

In 2030, new renewable heating technologies will ensure increasing decarbonisation of district heating. Milestones and next steps:

- Climate-neutral heat from deep underground: By 2030, Stadtwerke Münster will have completed all necessary and possible steps for the development of geothermal energy (3-seismic, model development, extraction and pumping tests, etc.).
- Large heat pumps as all-round solutions for environmental heat: four large heat pumps will start operating in 2030.
- Ground-mounted solar thermal energy as a transformation accelerator: In 2030, ground-mounted solar thermal energy will be established in Münster. Two systems will already have been implemented.

100% renewable electricity for private households from in-house generation by 2030: By 2030, Stadtwerke Münster will generate sufficient electricity for all households in Münster (380 GWh) with its own wind and solar power plants, and will also specifically enable citizen participation to enable local people to have a share of the financial rewards of renewable projects.

To this end, the wind turbine portfolio will be doubled to 42 wind turbines by 2030, with the aim of generating 280 GWh of electricity per year. The 21 additional wind turbines have a nominal output of around 120 MW. Next steps:



- Authorisation in accordance with the BImSchG for 1 wind turbine in Lemgo with a nominal output of 5.7 MW (2024)
- Construction start and commissioning of at least one of three planned wind turbines in Südlohn Eschlohn/Wellschlat with a total nominal output of 17.1 MW (2024)
- Obtain licences for the construction of a total of at least 10 wind turbines in Münsterland

In 2030, PV systems with a nominal output of 120 MWp will be installed by Stadtwerke Münster to generate 100 GWh of electricity from the sun. Next steps:

- Additional PV systems with a nominal output of at least 4 MWP → approx. 4.00 GWh/a (2024)
- Realisation of the first Agri-PV project with construction to start on a bifacial (fence) PV system in Münster-Amelsbüren
- Construction of a ground-mounted PV system (ZDM II) with 1 MWp → 1 GWh/a (2024)
- Realisation of a tenant electricity pilot project in cooperation with Wohn und Stadtbau

Building carbon reduction measures

Climate neutrality 2030 for municipal buildings. Milestones and next steps:

- Concept for achieving climate neutrality by 2030 for municipal buildings by refurbishing 46 locations. A portfolio analysis was used to identify 46 locations from the 500 or so sites in municipal ownership that could be refurbished to achieve the target of climate neutrality for municipal buildings by 2030.
- Programme of measures 2020 - 2025, €41.5 million funding for implementing energy-efficiency measures

Investing 10 million euros per year for implementing **energy efficiency measures for Wohn- und Stadtbau's building portfolio.** Next steps in Wohn- und Stadtbau's deep renovation strategy:

- Optimising operations and promoting climate-friendly rental behaviour as a quick-win
- Implementation of energy-efficiency measures/insulation of buildings and neighbourhoods incl. PV - in conjunction with Stadtwerke Münster
- Use of sustainable heating systems and realisation of new district heating connections with Stadtwerke Münster

Climate-friendly and energy-efficient neighbourhood development by 2030 has been established on the basis of the current resolution. Milestones and next steps:

- Development of building improvements management system
- Münster's standard for climate-friendly construction:
 - All larger new developments will use renewable energy-powered district heating or alternatives.
 - The energy standard for new buildings is "KfW Efficiency House 40" for residential buildings and "KfW Efficiency Building 40" for non-residential buildings.



- In new builds, the solar standard includes an obligation to install a PV system.
- Climate-friendly residential buildings funding programme

Thermographic survey will provide information on energy efficiency measures for all homeowners: Thermal images of Münster's rooftops will be recorded and data evaluated to facilitate energy efficiency measures, plus ongoing free energy advice and support in interpreting and evaluating thermographic survey images.

Mobility

Public transport will be electrified by 2030: Stadtwerke Münster's municipal bus fleet will be fully converted to electromobility by 2029. Required infrastructure will be installed at the bus depot and at selected bus stops and the electricity needed will be provided by further expansion of PV systems. Various funding programmes are being used to finance the project. Stadtwerke Münster is working towards electrification of contractor and regional transport company bus fleet to the extent that it is able.

Münsterland S-Bahn - major implementation steps by 2030: Local rail passenger transport will be massively expanded over the next few years, achieving a shift in commuter traffic from motorised private transport to eco-mobility. As well as increasing the number of trains running on existing routes, disused railway lines will be reactivated and new stations built. Next steps:

- Stage 1 from 2026: includes reactivation of the Westfälische Landes-Eisenbahn (WLE) between Münster and Sendenhorst;
- Stage 2 from 2032: includes main line MS and marketing as S-Bahn;
- Stage 3 from 2040: Full development of the destination concept

Further expansion of the networking of different transport modes and boosting ecomobility by 2030: The expansion of Mobilstationen aims to improve the networking of different transport modes, particularly ecomobility transport. After defining quality standards and developing a design guideline, and once the location concept has been approved by councillors, the scheme will be implemented in stages starting in 2024.

Moving forward with good ideas - en route to becoming cycle city 2.0: In Münster, the clear goal is to continue ambitiously on the path we have taken, to make cycling even more attractive, to increase the share of cycling from the current 47 per cent to 55 per cent of the modal split, and to promote the city's cycle culture. Showcase projects, such as reshaping more streets to create high quality cycle-priority streets 2.0, the implementation of cycle network 2.0 measures, the Kanalpromenade, the creation of additional cycle parking facilities, bike boxes at railway stations and the expansion of cycle routes to boost environmentally friendly mobility within the city region, aim to help realise this goal.



Development of a Mobility Masterplan Munster 2035+: Working with an external agency, the city is developing an implementation scenario and corresponding recommendations for action. The masterplan provides the city of Munster with a strategic instrument for use for future urban and transport planning. It sets out guidelines for shaping transport (in the form of realised mobility) in Munster so that it remains future-proof to 2035 and beyond.

Many of the measures discussed here lie within the City of Münster's direct sphere of influence. Some, particularly in the fields of building carbon reduction measures and mobility, can be influenced only indirectly, i.e. here the city group is dependent on implementation by market participants, specifically homeowners and tradespeople for building carbon reduction measures and Münster society as a whole for mobility choices.

Non-technical fields of action

- **Scaling climate training:** ClimateTrainers help other people draw up an initial CO₂ balance sheet, provide advice and support on individual objectives and give tips and assistance to help them realise the goals they have set. The City of Münster offers all Münster residents one climate training session every six months.
- **Establishing education for sustainable development (ESD) in educational institutions by 2030 has been** adopted as a goal by Münster City Council.
- **Action plan for a sustainable food system:** In 2019, the Global Sustainable Development Advisory Board recommended this project for implementation as a key project for the Münster 2030 sustainability strategy.
- Continue and expand the **climate communication and public relations projects "Our Climate 2030" and "Münster is becoming a climate-positive city"**.
- **Masterplan for the skilled crafts sector:** The skilled crafts sector will be of great importance in tackling the challenges of the future. This applies in particular to the climate and energy transition. The skilled crafts sector can only fulfil its key function if the framework within which it operates is designed to enable it to do so. The City of Münster, the Chamber of Crafts and the District Crafts Association are therefore working on a joint masterplan to provide specific support for skilled trades and to create the best possible conditions for a strong climate-related skilled trades sector.

The goals set out in the Climate City Contract can only be achieved through close cooperation with Münster society and with the state, federal government and EU. The Climate City Contract is intended to be an innovative instrument for bringing these groups together and deepening their cooperation in multiple areas. At the time of submission, Climate City Contract of the City of Münster and the linked goal of climate neutrality for Münster are supported by around 60 commitments from individual citizens, civil society institutions, universities and businesses. This circle will be expanded over the course of the mission.



4 Process and principles

Process and principles

Münster's climate protection process and updates to the Climate City Agreement

From project to principle - this maxim underpins Münster's climate protection strategy and, over the next few years, will also be needed across the whole of Münster society. With the help of the Climate City Contract, city society will be engaged in the climate protection process with much greater commitment than previously. Münster City Group needs to be constantly working to create the conditions required for this to happen. To this end, the Climate City Contract will be continuously updated and resubmitted to the European Commission for review every two years.

Prioritising implementation of climate protection strategies and measures is carried out by Münster City Council and the Administrative Board of the City of Münster. The city is currently developing a range of decision-making formats to enable the climate neutrality goal to be integrated into budget planning.

The implementation status of climate protection strategies and measures is reviewed internally by the Administrative Board every three months through a reporting system. The city's annual energy and greenhouse gas balance sheet provides information on Münster's current position with regard to the 2030 climate neutrality target.

All of these analyses show that, in addition to federal, state and local government organisations, market participants – local citizens and households, companies and institutions – also have an important role to play in achieving climate neutrality. The City of Münster has for a long time been making effort to engage the stakeholders in its climate protection work, which does not just revolve around technical climate protection measures. A cultural transformation of the whole of Münster society is also needed. The aim of the City of Münster is to create an environment that promotes climate-friendly choices in areas such as mobility, housing, energy, consumption and nutrition. This means considering both citizens and providers of climate-friendly services, offers and products. The Climate City Contract is the right instrument for continuing and intensifying this approach.

This approach is characterised by the principles of transparency and accountability, steering and monitoring, stakeholder involvement, citizen participation and climate justice.



5 Signatories

Münster's Climate City Contract embodies the collective commitment of a diverse urban society to the path to climate neutrality. It involves not just the administration and the business community, but the whole of Münster society, including associations, initiatives, universities, private individuals, hospitals, banks, and health and social organisations. It is testimony to the will and willingness of all those involved in tackling this important challenge together.



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The Climate City Contract reflects a broad diversity of contributions, ranging from comprehensive transformation plans by large companies to individual citizens giving up their cars. Each contribution helps pave the way to climate neutrality. What really marks out the Münster Climate City Contract is its focus on implementation. Every contribution includes a concrete implementation project, and large parts of these contributions are already being realised.



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Münster shows that it is possible to move towards a sustainable future through joint efforts and concrete measures. The Climate City Contract is a living document that demonstrates the determination and drive of an entire city. This applies today, tomorrow, the day after tomorrow, and until our common goal is achieved.

The table below lists the signatories who are contributing to the climate protection process through this version of the Münster Climate City Contract, and thereby expressing their support for the goal of climate neutrality for Münster. Specific agreements articulating the details of the climate action(s) of the signatories are included in the Appendix.



The table below lists the signatories who are contributing to the climate protection process by means of a commitment to this version of the Münster Climate City Contract and thus expressing their support for the goal of climate neutrality for Münster.

Name of the signatory (organisation)	Short description based on the contributions submitted	Sector / Domain / Level of operation ²	Legal form	Name of the responsible person	Position of the responsible person
Alexianer Münster GmbH	Committed to 25 measures aimed at making operations more climate-friendly.	Business, buildings, mobility, local	Ltd. (Gesellschaft mit beschränkter Haftung)	Burkhard Vennemann	Environmental Protection Officer
Armacell GmbH	<p>Since 1967, Armacell, successor to the insulation division of Armstrong World Industries and located in the south of Münster, has been manufacturing flexible insulation tubes and panels that protect heating and water pipes, air conditioning ducts, technical equipment such as boilers, pumps, compressors, condensers, ventilation systems and process pipes in industry worldwide from energy loss. Insulating these technical systems is one of the simplest and most efficient measures for improving energy efficiency in buildings and industry. As a life cycle assessment by the company shows, Armacell's flexible insulation materials save 140 times more energy than is required for their production and prevent the emission of several million tonnes of carbon dioxide every year.</p> <p>Armacell was the first company in its industry to publish Environmental</p>	Buildings, business, local/ international	Ltd. (Gesellschaft mit beschränkter Haftung)	Stefan Garmann	Managing Director

² Please mention if the organisation is active at local, regional, national, or international level.



	<p>Product Declarations (EPDs) back in 2015, which form the basis for planning sustainable buildings in accordance with building certification systems such as LEED, BREEAM or DGNB. In 2023, the company introduced a free collection service for its wooden pallets. Re-using pallets conserves resources, and reduces waste and CO₂ emissions.</p> <p>The Münster site has been certified to DIN EN ISO 14001 (environmental management system) since 2000 and to DIN EN ISO 50001 (energy management) since 2014. Since 2015, the company has reduced energy consumption per cubic metre of end product by 27%.</p>					
ATLANTIC Münster	Hotel	<p>The hotel is Green Sign certified and working on increasing its score to achieve an even better result. They are working on determining their CO₂ footprint. In 2024, they will create a green, sustainable conference package that takes into account all aspects of a conference.</p>	Business, local	Ltd. (Gesellschaft mit beschränkter Haftung)	Sascha von Zabern	Hotel Manager
BASF Coatings GmbH		<p>BASF Coatings produces high-quality paints, colours and coating materials that protect surfaces from environmental influences and enhance their appearance. In doing so they make a continuous contribution to sustainable resource conservation. Sustainability is embedded in their business strategy and at the centre of their actions. Their motto is, "Chemistry</p>	Business, local/global	Ltd. (Gesellschaft mit beschränkter Haftung)	Matthias Schöttke & Dr. Markus Piepenbrink	Managing Director & Global Sustainability Officer



	<p>that's connecting for a sustainable future". This vision is integrated into all their business processes.</p> <p>BASF Coatings analyses its carbon footprint along the entire value chain. It has taken measures along the entire value chain to significantly reduce its carbon footprint.</p> <p>The goal is to reduce CO₂ intensity by 40% by 2030. The company has already established a carbon management program for its production sites and is driving forward activities to significantly reduce carbon emissions. As the world's largest coatings site, BASF Coatings Münster is making a major contribution to achieving global sustainability goals. By implementing measures, the BASF Coatings Münster site has already reduced absolute CO₂ emissions by 52% and CO₂ emission intensity per ton of product produced by approx. 38% (reference year 2018, figures for 2022). To achieve the broader goal of a climate-neutral site, further reductions in greenhouse gas emissions are planned. To this end, the site is working on an energy transformation plan involving regular review and evaluation of sustainable energy generation and supply technologies.</p>				
<p>Bistum Münster (Diocese of Münster)</p>	<p>Committed to developing a climate protection concept by 2024: The North Rhine-Westphalia section of the diocese of Münster is currently working on a climate protection concept. Part of this concept involves calculating</p>	<p>Buildings, mobility, and procurement, local</p>	<p>Church</p>	<p>Jasmin Telgmann</p>	<p>Climate protection manager</p>



	<p>the diocese's greenhouse gas emissions. The diocese is analysing its buildings, mobility and procurement in particular. By adopting the concept in summer 2024, the Diocesan Council has committed itself to a self-selected greenhouse gas target. The concept also includes initial measures to reduce greenhouse gases. A variety of workshops will be held to ensure that a wide range of stakeholders are able to contribute their ideas and opinions.</p> <p>The climate protection concept is funded by the Federal Ministry for Economic Affairs and Climate Action based on a resolution passed by the German Bundestag.</p>				
Cervotec GmbH & Co.KG	<p>CERVOTEC has carried out an internal CSR assessment covering areas including workplace and employees, corporate environmental protection, product responsibility and market, and community and civic engagement. CERVOTEC has also developed a basic CSR position and CSR strategy, and drawn up a program of CSR measures. The company is also implementing climate protection measures.</p>	Sustainability, buildings, business, energy generation, local/regional/national	Limited Partnership with Limited Company as General Partner (Gesellschaft mit beschränkter Haftung & Compagnie Kommanditgesellschaft)	Jan Meerheim	Managing Director
Druckerei Joh. Burlage GmbH & Co. KG	<ul style="list-style-type: none"> - Since Q4/2023: Installation of a PV system with the aim of generating up to 80% of the energy required for production operations. - 2024: Conversion of production lighting to LEDs. Already implemented at their old site, the new premises will be converted this year. 	Energy generation, business, mobility, local	Limited Partnership with Limited Company as General Partner (Gesellschaft mit beschränkter Haftung & Compagnie Kommanditgesellschaft)	Christoph Burlage	Managing Director



	<ul style="list-style-type: none"> - 2023-2024: Conversion of the company car fleet to electromobility; one charging station has already been installed, a second will follow in 2024. - 2024 Planting of a wild meadow on the company site with the long-term goal of establishing a bee colony with the possibility of producing their own honey. 				
Evangelischer Kirchenkreis Münster (Evangelical church circle Münster)	<ul style="list-style-type: none"> - Development of a climate protection concept for the church district - Establishment of a climate protection fund - Reallocation of church tax funds for climate protection measures in the context of the EKvW Climate Protection Act - Promotion of energy assessments for buildings in the church district - District synod resolution on promoting bicycle mobility - Resolution on predominantly vegetarian catering at the district synod - Resolution on eco-fair purchasing in the "Haus der Kirche" and in parishes - Planning of environmental communication events. A master plan for climate neutrality will be drawn up in the first half of 2024 	Education and communication, buildings, mobility, local	Church Circle	Holger Erdmann	Superintendent
fairTEILBAR	At all points in the value chain, fairTEILBAR (primarily in Münster and the Münsterland region) saves still-edible food from disposal. Their work is based on a 3-fold concept resting on the pillars shop, manufacture and education. They enable customers, through their purchases, to make a tangible contribution to climate protection in	Education and food, local/regional	Civil society	Jana Gowitzke	Education Coordinator & Advisor



	<p>Münster. The importance of the project/concept is underlined by the fact that it has received awards including the Münster City Council Environmental Award and "Münster: Making Diversity" from "GUTES MORGEN MÜNSTER".</p> <p>By actively rescuing food, fairTEILBAR creates food supply structures for people, and, by curbing regional food waste, helps reduce greenhouse gas emissions. Their work is bringing Münster closer to the key goal of becoming climate-neutral by 2030. They see themselves as a component of a concrete action plan to reduce CO₂ emissions in the city.</p>				
<p>Fachhochschule Münster (FH Münster University of Applied Sciences Münster)</p>	<p>FH Münster has decided to adopt a pioneering role in the field of climate protection and is implementing comprehensive measures to improve its greenhouse gas balance. FH Münster is increasingly pursuing a goal of sustainable development. Through the university development plan for 2021 to 2025, FH Münster is striving to realise greater integration of sustainability principles into its education, research and resource activities.</p> <p>FH Münster has introduced the Academic Scorecard Sustainability as a management tool to develop and implement its sustainability strategy. In teaching, for example, FH Münster offers students the opportunity to engage intensively with sustainability through two Master's programs (Sustainable Services and Sustainable Transformation Design). FH Münster also aims to integrate</p>	<p>Business and academia, buildings, local/regional</p>	<p>Public law corporation (Körperschaft des öffentlichen Rechts)</p>	<p>Guido Brebaum</p>	<p>Chancellor</p>



	<p>sustainability and climate protection in all of its faculties, thereby exerting a targeted influence on social developments and future decision-makers. In the research field, they aim to expand sustainability-related research by, for example, networking researchers and practitioners and providing targeted support for research institutes.</p> <p>FH Münster's increasing efforts to promote sustainable development within the University have given rise to an initiative to create a climate protection concept to provide a targeted strategy for achieving climate-friendly operations. FH Münster has set itself the ambitious but realistic goal of reducing CO₂ emissions by 65% compared to 1990 levels within ten years. The reduction pathway chosen by FH Münster is based on the goal of a climate-neutral North Rhine-Westphalia state administration by 2030, and also aims to maximise savings potential by 2045. In concrete terms, this means that FH Münster will reduce its emissions to 7,687 tonnes or 0.47 tonnes of CO₂ per university member by 2030.</p>				
<p>Glas- und Fensterreinigung Wienkamp</p>	<p>This Münster-based window cleaning company was founded on March 1, 2022. Within the city centre ring, services are provided using a zero emissions cargo bike.</p>	<p>Mobility, local</p>	<p>Company</p>	<p>Ludger Wienkamp</p>	<p>Managing director</p>
<p>Handwerkskammer Münster (Chamber of Skilled Crafts Münster)</p>	<p>The Münster Chamber of Crafts (HWK) offers a wide range of sustainability and climate neutrality-related support services for companies. The range of services is focused on climate-relevant</p>	<p>Education and communication, buildings, local/regional</p>	<p>Public law corporation (Körperschaft des öffentlichen Rechts)</p>	<p>Thomas Banasiewicz</p>	<p>Managing director</p>



	<p>training measures at the Chamber of Crafts Training Centre (HBZ) and individual company energy consultations. In recent years, the Chamber has set up a number of demonstration centres aimed at illustrating the latest technologies for training purposes. These cover areas such as construction and energy, timber framing and refurbishment using renewable raw materials. Various projects are underway to develop solutions for combating climate change. In addition, Münster Chamber of Commerce played a key role in developing the "E-Tool" energy book for SMEs. The tool is used nationwide and it continues to be actively promoted among member companies. Companies receive specific support in the areas of energy efficiency, renewable energies, climate-friendly buildings, circular value creation, innovative mobility and sustainability. As a lobbyist for the skilled trades sector, Münster Chamber of Commerce is involved in a wide range of networks, particularly at municipal level. Together with Münster City Council, it is involved in organisations including the following: Member of Münster's Alliance for Climate Protection (Münster Allianz für Klimaschutz), Global Sustainable Municipality Advisory Board (Beirat Global Nachhaltige Kommune), Netzwerk Altbau-Partner Handwerk, and ÖKOPROFIT. In addition Münster Chamber of Commerce implements a variety of</p>				
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	measures internally that make a short term contribution to the goal of climate neutrality for the city of Münster and reports on their effects, for example on the CO ₂ footprint.				
Hengst Filtration	Hengst Filtration is committed to reducing emissions from fossil fuel combustion by its own plants and vehicles to zero by 2030 and to obtaining 100% of its electricity from renewable sources. At Hengst Filtration, the main fossil fuel burnt is natural gas for heating production halls, warehouses and offices, and for various production processes. The company will gradually phase out these combustion processes by 2030 or redesign them so that they no longer burn fossil fuels. In 2023 they will start developing a transformation concept for the Münster and Nordwalde sites, which are the Hengst Group's largest consumer of natural gas.	Energy generation, local/ regional/ national	Ltd. (Gesellschaft mit beschränkter Haftung)	Christopher Heine	CEO
Hotel Schloss Wilkinghege	The hotel is a Green Sign Hotel and has been focussing on sustainability for many years. Since 2019 they have succeeded in reducing their electricity consumption by 27% through projects such as switching to LED lighting, removing minibars from the hotel rooms and building a walk-in freezer. In a historic building of this size, electricity and heating are two key factors for climate neutrality. For electricity generation, the hotel intends to install a ground-mounted PV system on a plot of land adjacent to the transformer building and the main power line to the	Buildungs, energy generation, local	Company	Getha Winnecken	Managing Director



	<p>hotel. The system is awaiting authorisation. The hotel could also keep livestock such as chickens or sheep in this area. Unfortunately, the ability to site a PV system on the hotel roof is limited, as it would not be possible to obtain authorisation for a PV system on the historic main building and other potential areas would not provide sufficient output. The hotel currently uses oil heating and is looking for a climate-friendly alternative. It is exploring the issue of geothermal energy and will seek external advice on feasibility.</p>				
<p>Industrie- und Handelskammer Nord Westfalen (Chamber of Industry and Commerce North Westfalia)</p>	<p>Climate protection measures focusing on IHK as an organisation: - Introduction/expansion of the 'job ticket' - Bike leasing - Car sharing + electric cars for business trips - Purchasing green electricity since January 1, 2023 - Conversion to LED lighting - Roof refurbishment and installation of a PV system - Nature-friendly redesign of the IHK site with flower meadow and fruit trees - First sustainability report meeting the DNK standard (German Sustainability Code), including a CO₂ footprint. In addition the IHK is raising awareness among IHK member companies through webinars and events, network meetings, public relations work and the development of specific support services for companies on making business</p>	<p>Mobility, Education, Energy generation, local/regional</p>	<p>Public law corporation (Körperschaft des öffentlichen Rechts)</p>	<p>Dr. Fritz Jaeckel</p>	<p>Managing director</p>



	processes more sustainable and climate-friendly.				
Katholische Hochschule Nordrhein-Westfalen, Abteilung Münster (Münster department of the Catholic University of Applied Sciences North Rhine-Westphalia)	The Münster section of the Catholic University of Applied Sciences North Rhine-Westphalia (katho) recognises the importance of sustainable action as an integral component of its responsibility to society and the environment. It is committed to developing concrete measures to support Münster's path to climate neutrality. The university's sustainability strategy, adopted in January 2024, provides a framework for specific measures and projects, such as the SUNRISE LAB. It was developed with the involvement of employees and students and aims to promote sustainable development in the areas of teaching, research and operations. The strategy is based on the principles of Christian social and environmental ethics and is geared towards global challenges such as climate change, resource scarcity and social injustice. The university intends to contribute to overcoming these challenges through concrete measures and initiatives.	Academia, local/regional	non-profit company with limited liability under German law (Katholische Fachhochschule gGmbH)	Claudia Prelle	Administrative management
Kleine Tat Services GmbH	This small company from Münster specialises in solutions for a climate and environmentally friendly lifestyle. With a team of mostly volunteers, they recently launched the "Kleine Tat" sharing app. The app organises sharing for existing groups such as families, groups of friends, work colleagues and neighbours, as well as for large communities such as clubs,	Share economy, local	Ltd. (Gesellschaft mit beschränkter Haftung)	Volker Schittny	Founder



	<p>municipalities and entire districts. Things like hedge trimmers, potato ricers, and beer tents can now be easily shared among friends. The app offers precisely control of access to groups and visibility of offers. This enables school classes, for example, to remain completely invisible when sharing, making sharing particularly secure. As does sharing with people from your personal milieu. Things are done properly and handovers are particularly easy because you are dealing with people you regularly meet. That makes the Kleine Tat sharing app fundamentally different from other apps and web services currently on the market. With no solution yet having led to a breakthrough in sharing, Kleine Tat wants its app to make sharing a natural part of our everyday lives. When many people share things, less gets produced, which requires fewer resources, reduces global transport and reduces the amount of waste produced.</p>				
<p>Klimabeirat Münster (Climate Advisory Board Münster)</p>	<p>The Münster City Council Climate Advisory Board has been supporting the city of Münster on its path to climate neutrality since 2011. Through various formats, the Climate Advisory Board has highlighted issues, initiated debate, analysed complex issues, and advised both politicians and the City Administration on various aspects of climate protection. Experts from academia, trade, business, associations, consumer protection and agriculture work closely together on an</p>	<p>Local</p>		<p>Hans Haake</p>	<p>Managing director</p>



	<p>interdisciplinary basis. The Advisory Board has represented a broad consensus in Münster society that climate protection needs to be a core issue that's addressed by a large number of stakeholders working closely with politicians and the City Administration. Through its initiatives, reports and discussions with a wide variety of stakeholders, the Climate Advisory Board contributes to more effective climate protection and motivates others to aim for more ambitious climate protection.</p> <p>The Climate Advisory Board further considers itself to have a responsibility to provide critical advice and support to politicians, the administration and Münster society in general. In doing so, it can direct attention to the big picture in all its complexity. With this in mind, it will continue to critically monitor the Climate City Contract as a whole, develop proposals for modifications and continuously review to what extent Münster is on the path to achieving climate neutrality.</p>				
Knubel GmbH & Co. KG	<p>Car dealer Knubel has been working in the energy management field since 2013, when it participated in Volkswagen's Future Climate programme. It has since implemented the following:</p> <ul style="list-style-type: none"> - installed three CHP units in their car dealerships; - converted all of their eleven car dealerships to LED lighting; 	Business, local	Limited Partnership with Limited Company as General Partner (Gesellschaft mit beschränkter Haftung & Compagnie Kommanditgesellschaft)	Werner Oesterbeck	Managing director



	<p>- fitted three businesses with new heating systems; - determined a compressed air index in all of their plants, and replaced and adjusted the pressure on some compressors. Each plant has an energy manager and a small energy team of three to four people. They have been ISO 50001-certified for many years. ISO 16247 has been implemented in their buildings since 2020.</p>				
Lackmann	<p>From talking to the trade, Lackmann found that there is a need for more practical training courses on using new technologies such as home energy management systems and heat pumps. In addition, there is a need to be able to integrate these systems into grid operators' the digital communication network operated by the grid operator. Demo systems in properties such as 'Grüner Weiler' have proven a useful concept. The target group would be tradespeople who install new technologies. Realising a demo system requires a network. As a full service provider for digital metering point operation, Lackmann can only be a contributor to such projects. The company is prepared to initiate and actively support such projects.</p>	Buildings, education, local	Limited Partnership with Limited Company as General Partner (Gesellschaft mit beschränkter Haftung & Compagnie Kommanditgesellschaft)	Jürgen Blümer	Project coordinator
Landschaftsverband Westfalen-Lippe	<p>Landschaftsverband Westfalen-Lippe (LWL) is a local authority association which employs more than 20,000 people</p>	Buildings, mobility, education, local/regional	Public law corporation (Körperschaft des öffentlichen Rechts)	Dr. Georg Lunemann	Director



	<p>working for the 8.4 million people in the region. LWL runs 35 special schools, 21 hospitals, 18 museums, two visitor centres and is one of the largest providers of assistance for people with disabilities. It undertakes work in the social sector, in care of people with disabilities and young people, in psychiatry and in culture. It is also committed to an inclusive society in all areas of life. The LWL membership is made up of the nine independent cities and 18 districts in Westphalia-Lippe. They support and finance the regional association, whose work is directed by a parliament made up of 125 members from the local authorities in Westphalia.</p> <p>The LWL has set itself the goal of becoming climate neutral by 2030. This is highly ambitious, but it also incentivises and drives us to take on the role model function proper to the public sector. Saving energy has been a key concern at LWL since the 1970s. Between 1990 and 2020, it reduced the CO₂ emissions of its properties by 63%. Building on this, the LWL Climate, Environment and Sustainability staff unit was established in the department of the LWL First State Councillor and Treasurer in 2021 to manage and support the transformation process.</p> <p>The development of an integrated climate protection concept (IKSK) involved a systematic assessment of all areas of LWL. The IKSK was based on a comprehensive greenhouse gas</p>				
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	<p>footprint. With 62 measures in nine fields of action, LWL's climate protection strategy sets out how it aims to achieve climate neutrality by 2030. The focus is on the fields of buildings and energy, official mobility, sustainable procurement and awareness raising and training for employees.</p>				
<p>Landwirtschaftsverlag GmbH (Agricultural Publishing House Ltd.)</p>	<p>In 2020, Hiltrup-based Landwirtschaftsverlag GmbH established a sustainability team to tackle the issue of sustainability. As well as establishing and updating our guidelines/principles to take into account sustainability, the focus at Landwirtschaftsverlag focus is on implementing specific projects.</p> <p>From the 2025 financial year, Landwirtschaftsverlag will be obliged to issue a CSRD report. At the end of 2023, the company launched a project with the aim, in addition to realising compliance with the legal requirements, of creating a toolkit for a continuous improvement process for sustainability. As part of this process, by June 30, 2025 they plan to draw up a transformation roadmap outlining the route to achieving their sustainability goals.</p> <p>This includes achieving climate neutrality at the Münster site by the end of 2030.</p>	<p>Energy generation, buildings, local</p>	<p>Ltd. (Gesellschaft mit beschränkter Haftung)</p>	<p>Malte Schwerdtfeger</p>	<p>Managing director</p>
<p>Landesbausparkasse NordWest (LBS NordWest)</p>	<p>LBS NordWest is a public sector building and loan association. Sustainability is an important component of LBS NordWest's business strategy. By signing the</p>	<p>Buildings, energy production, funding, local/regional</p>	<p>Institution under public law (Anstalt des öffentlichen Rechts)</p>	<p>Jörg Munning</p>	<p>Chairman of the Executive Board</p>



	voluntary commitment of the Savings Banks Finance Group, LBS NordWest has pledged to make its business operations climate neutral by 2035. LBS NordWest is taking a holistic approach.				
Leezen Heroes GmbH	<p>Everything you can do by car, you can do just as well by 'Leeze' (bicycle). Leezen Heroes have been providing passenger and goods transport services throughout the city since 2018.</p> <p>As well as city tours, they also offer simple bicycle taxi rides.</p> <p>Since 2019, Leezen Heroes has also operated in the cargo sector. They can deliver parcels, documents, pharmaceuticals and pretty much anything else that fits on a bicycle. All services are sustainable and environmentally friendly.</p>	Mobility, local	Ltd. (Gesellschaft mit beschränkter Haftung)	Florian Voß	Managing director
LEIHOTHEK Münster	<p>This automated library of things enables users to borrow all the things they need only rarely. Save money, save space, conserve resources and live a more diverse life with the LEIHOTHEK concept: Items can be reserved and paid for online at www.leihothek.de. Users collect their item at one of the collection locations at their preferred time using a collection code. After use, users return the item to the collection location and are refunded their deposit and provided with a return receipt.</p> <p>An additional benefit is that the scheme meets the UN's sustainability goals for cities and municipalities.</p>	Share economy, local	Company	Daniel Schaschek	Founder
LVM Versicherung	LVM aims to avoid and reduce all emissions from their business activities to	Energy, resources and waste,	LVM Landwirtschaftlicher	Dr. Mathias Kleuker	Chairman of the Executive Board



	<p>reduce their carbon footprint to the lowest possible level. Unavoidable emissions from fleet diesel consumption and district heating are offset by supporting well projects run by "Klima ohne Grenzen" in Mozambique and Uganda.</p> <p>In 2023, LVM had already achieved their goal of scope 1 and 2 climate neutrality by 2025. Their target for scope 3 emissions from their business operations is to be climate neutral by 2045.</p> <p>To ensure that they succeed in systematically reducing their environmental and climate impact, they have established an integrated environmental management system with seven working groups: Energy, Resources and Waste, Procurement, Mobility, Green IT, Events and Agencies. Their declared aim is to save energy and make it as renewable as possible.</p>	<p>procurement, mobility, Green IT, events, local</p>	<p>Versicherungsverein Münster a.G.</p>	<p>& Judith Peters</p>	<p>& Division Manager Sustainability</p>
<p>LWL-Klinik Münster</p>	<p>The catering kitchen produces around 800 lunches a day, with a choice of three different menus. The climate impact of all recipes in the kitchen has been checked using the Eaternity app. Dishes the production of which is associated with particularly high levels of greenhouse gas emissions will at some point be taken off the menu. LWL Klinik tries to reduce the climate impact of its meals by using seasonal, regional and plant-based products. They also aim to direct the attention of staff and patients to organic ingredients and climate-friendly, vegan and vegetarian dishes using notices and icons on the menu. All</p>	<p>Food, local/regional</p>	<p>Public law corporation (Körperschaft des öffentlichen Rechts)</p>	<p>Thomas Voß</p>	<p>Business Director</p>



	dishes labelled with the climate icon produce at least 40% less CO ₂ than the average across the menu. By providing information and labelling, staff and patients can be made aware of climate-friendly dishes and can make their own choices without feeling patronised.				
M+S Sicherheitstechnik GmbH	Installation of a charging point for future electric cars. Work is primarily paperless and technicians use tablets, eliminating the need for timesheets. Any PC-based work uses the cloud, enabling employees to work from home.	Business, local	Ltd. (Gesellschaft mit beschränkter Haftung)	Marius Sommer	Managing Director
Messe und Congress Centrum Halle Münsterland	Messe- und Congress Centrum Halle Münsterland continuously reviews the sustainability of its activities. Since 2010, the company has several times been Green Globe certified. The company considers helping to reduce its impact on the environment an essential part of its role as a business. The company will continue to offer solutions for their customers and work with partners to ensure that Messe- und Congress Centrum Halle Münsterland remains a truly sustainable event centre in future. This is reflected in their sustainability strategy through to 2030.	Business, local	Ltd. (Gesellschaft mit beschränkter Haftung)	Dr. Maria Näther	Managing director
MExLab ExperiMINTE at the University of Münster	MExLab ExperiMINTE is an extracurricular STEM learning centre for children and young people at the University of Münster. In addition to STEM subjects, the focus is on interdisciplinary STEM topics, such as projects on education for sustainable development (ESD). The aim is to	Academia, education, local/regional	Public law corporation (Körperschaft des öffentlichen Rechts)	Ulrike Brandt	Managing director



	<p>combine scientific education of young people with developing social responsibility.</p> <p>It is positioned as an interface between STEM student labs, departments and extracurricular learning centres at the University of Münster and a large network of schools, companies, municipal institutions and associations in Münster and beyond. MExLab ExperiMINTe is also represented in the City of Münster's ESD network.</p>				
Mövenpick Hotel Münster	<p>This year, the hotel will replace the ventilation systems in the restaurant and kitchen, and the water chiller (air conditioning, energy optimisation) for the kitchen, restaurant and banquet kitchen areas. In 2025, they will convert halls 1 to 3 and the pavilion rooms to LED lighting. (Only one area has been converted to date.). They are also planning to install a PV system for their building. This would significantly reduce the daytime base load.</p>	Buildings, energy generation, local	Société anonyme (SA)	Patricia Nilsson	General Manager
Nevalu - Dönne Malinowski Sieg GbR	<p>This start-up promotes sustainable consumer behaviour by offering customisable 3D printed products made from 100% recycled materials, and giving customers the opportunity to convert their own plastic waste into reusable printing materials in their shop. The result is a unique shopping experience and increased awareness of sustainability</p>	Resources and waste, local	Company under civil law (Gesellschaft bürgerlichen Rechts)	Loy Dönne	Managing director
Peter Rose Garten- und Landschaftsbau GmbH	<p>Peter Rose Garten- und Landschaftsbau GmbH, winner of the "ÖKOPROFIT Münster" environmental certificate for</p>	Business, local	Ltd. (Gesellschaft mit beschränkter Haftung)	Peter Rose	Managing Director



	<p>2015/2016, is intensifying its commitment to protecting the environment by producing a comprehensive sustainability report that serves as a detailed transformation roadmap for the company.</p> <p>The report defines clear sustainability goals and documents environmental, social and economic progress. It presents specific measures and projects that directly contribute to climate neutrality, including the introduction of environmentally friendly working methods and materials, employee training and the formation of partnerships with local stakeholders to promote environmental awareness, for example through a targeted reduction in resource use.</p> <p>Through this report, Peter Rose Garten- und Landschaftsbau GmbH is reaffirming its commitment to the environment and making a significant contribution to achieving climate neutrality in Münster.</p> <p>The company is also positioning itself as a pioneer in the green sector.</p>				
Ratiodata SE	<p>In 2024, Ratiodata plans to install four solar tracking systems for energy generation in their car park in Münster. The project aims to create a sustainable energy source and optimise the use of solar energy. The solar trackers will be equipped with highly efficient photovoltaic modules that track the sun to ensure maximum incident solar radiation. The four solar trackers should</p>	Energy generation, mobility, national	Societas Europaea	Klemens Baumgärtel	Board member



	<p>be able to generate at least 60 GWh of electricity, around 10% of Ratiodata's consumption, from solar energy. Through the project, Ratiodata is helping to drive forward the expansion of renewable energy in Germany. If the pilot phase is successful, four more solar trackers will be installed.</p>				
Schoenergie GmbH	<p>Schoenergie offers photovoltaic and battery storage systems, charging infrastructure and turnkey systems for private, commercial and industrial customers in Münster. They are also able to provide complete development and operation services for photovoltaic ground-mounted systems in the Münster area. The goal for 2024 is to install photovoltaic systems with an output of approx. 1,300kWp. This is equivalent to 1.170 million kilowatt hours of solar power, reducing fossil power generation and saving approx. 930 tonnes of CO₂. As a family-run company Schoenergie pursues the vision and guiding principle of making renewable energy available to every citizen. Approx. 300 employees make it their mission to advise customers on photovoltaic systems and plan and build PV systems. From a small detached house PV system to a 214 megawatt power plant (South Eifel), the company provides a full range of services from a single source. The company places great store on making a valuable contribution to the energy transition.</p>	Energy generation, local/regional	Ltd. (Gesellschaft mit beschränkter Haftung)	Erik Schöller	Managing Director



	In addition, the company is also transforming its work processes and systems to make them more climate-friendly.				
SINN – Münsters Kongress für Soziale Innovationen	Together with experts and multipliers, SINN explores the role of social innovations in the urgent, wide-ranging changes needed to achieve socio-ecological transformation and how these innovations can be realised. From business associations to politicians and academics to NGOs, they listen and debate together, learn from and inspire each other. Through keynotes, panel talks and interactive workshops. Through generous networking ecosystems, through art and culture, and through autonomous learning spaces. SINN is a space of opportunity for a sustainable future. The SINN congress brings together people who have made eco-social transformation their mission. From business and academia to politicians and civil society, it brings together all those who are working with curiosity and optimism on sustainable solutions for the future.	Business and academia, local/regional	Ltd. (Gesellschaft mit beschränkter Haftung)	Björn Fischer	Managing partner
Sparkasse Münsterland Ost	The bank is committed to reducing the ecological footprint of their business operations to the maximum possible extent. Measures such as switching to 100% green electricity, a sustainable mobility concept, installation of photovoltaic systems and certification as an "eco-profit organisation" are reducing CO ₂ emissions. Their carbon footprint offers potential, particularly in terms of	Buildings, mobility, funding, local/regional	Public law institution (Anstalt des öffentlichen Rechts)	Klaus Richter	Chairman of the Executive Board



	<p>heating. In future, they will therefore focus on improving energy efficiency of their service centre, branch and other buildings. They are developing a roadmap for improving the energy footprint of their building stock.</p> <p>As a financial services company, Sparkasse Münsterland Ost believes that the most effective contribution it can make to climate protection in their business is with their local customers. In particular by providing funding for climate-friendly investments, ranging from energy-efficiency improvements to private homes to the transformation of entire business models for their commercial customers. In addition to granting loans and arranging public subsidies, they are increasingly focusing on raising awareness and providing advice on sustainability issues.</p> <p>In 2024, Sparkasse is once again supporting non-profit organisations and initiatives to realise sustainable ideas through its "sustainable together" funding campaign. A total of 100,000 euros is available for this purpose.</p> <p>CO₂ reduction in business operations, transformation advice for customers and the targeted promotion of voluntary climate protection projects - this trio of measures is Sparkasse Münsterland Ost's contribution to the Climate City Agreement.</p>				
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<p>Studierendenwerk Münster AöR</p>	<p>1. Converting Hotel Seezeit and the Bismarckallee 47a hall of residence to LED lighting (2024). The whole of Studierendenwerk will soon switch to LED lighting (bulbs and lights will only be replaced when defective). 2. Energy efficiency improvements to the Gescherweg 50-64 hall of residence: new heating system (replacing a previous CHP unit), and a new roof, new windows and a new façade (construction expected to start in 2025). 3. Implementation of a process for moving towards climate neutrality with external support, including developing and implementing further concrete measures in future years.</p>	<p>Institution, academia, local</p>	<p>Public law institution (Anstalt des öffentlichen Rechts)</p>	<p>Dr. Christoph Holtwisch</p>	<p>Managing Director</p>
<p>SuperBioMarkt</p>	<p>Saving energy and conserving resources has always been firmly rooted in the organic supermarket's DNA. To reduce electricity consumption, in recent years the company has converted almost all of the lighting in all of their stores to energy-saving LED technology. In addition, it has consistently chosen green electricity since it became possible. The company's first photovoltaic system came into operation over ten years ago. They will continue to push to expand their solar systems by intensifying discussions with property owners. By far the greatest potential for savings, however, is offered by refrigeration systems. They have retrofitted the open refrigerated shelves with revolving glass doors, strive to plan refrigeration</p>	<p>Business, local</p>	<p>Public Limited Company (Plc) (Aktiengesellschaft)</p>	<p>Michael Radau</p>	<p>Managing Director</p>



	<p>capacity to align with demand and avoid oversizing, and replace old appliances with more efficient technology. They have had good experiences with smart timers for ventilation and air conditioning systems, and CO₂ sensors, enabling demand-controlled ventilation.</p> <p>Employees are offered a company bicycle. With smart, in some cases AI-assisted cultivation planning, they aim wherever possible to prevent food waste at the start of the production chain. They are also increasingly using technology to help them plan orders more efficiently. "Food Tracks" will in future help with planning and ordering. They were one of the first to work with "toogoodtogo" and food rescuers to rescue unsold, but still good food.</p>				
Sustina AG	<p>Sustina is committed to creating circular craft centres in Münster, promoting the regional circular economy. The project is also aimed at inspiring people to take up craftsmanship and promote urban production in Münster. Interdisciplinary exchanges of knowledge and the creation of synergies through collaboration are important aspects of the craft centres. By sharing tools, work and business premises, and shared administrative support this creates an attractive offering for craftspeople. This can save costs and enable more efficient resource use.</p> <p>The concept will also include an integrated DIY store for used and refurbished building materials with the</p>	Business, buildings, local	Public Limited Company (Plc)	Fabian Bergfort	CEO & CO-Founder



	aim of promoting the circular economy in keeping with cradle-to-cradle and urban mining approaches.				
TAFH Münster GmbH / FH Münster	<p>Social Entrepreneurship Education (SEE) at Münster University of Applied Sciences, the University of Münster and the Catholic University of Applied Sciences NRW Münster is an ambitious project that aims to contribute to the city's climate neutrality. By integrating SEE into academic education, TAFH is actively promoting the development and realisation of socio-ecological business ideas and initiatives. Participants learn how to tackle social challenges from a sustainability and entrepreneurial, and systemic perspective. There is a particular focus on linking and balancing ecological, social and economic sustainability.</p> <p>Public relations work and awareness-raising through educational programs: A core aspect of TAFH's engagement is sensitising and educating the public about climate protection. The workshops, seminars and lectures in the SEE program enable them to reach a broad target group of students, teaching staff, social start-ups, projects, civil society, companies and other organisations, and contribute to raising awareness of environmental and climate protection issues.</p> <p>The aim of these measures is both to impart knowledge and to motivate and inspire active participation in climate protection.</p>	Academia, building and communication, business, local	Ltd. (Gesellschaft mit beschränkter Haftung)	Timo Adiek	Authorised Representative



<p>Universität Münster (University of Münster)</p>	<p>The University of Münster views sustainability as a unifying guiding principle supported by all members of the University. In its role as a scientific and educational institution and an integral part of social life, the University assumes responsibility for the ecological, social and economic dimensions of its actions. As an internationally oriented centre for science, study and work, the University of Münster sees sustainable action as an expression of its global responsibility to shape society for the future and preserve the natural foundations of life. The University of Münster is guided by the comprehensive understanding of sustainability set out in the United Nations Sustainable Development Goals (SDGs) and the goals of the Paris Climate Agreement. Sustainability has been integrated into the University's organisational structures in the form of the Sustainability Office and the Vice-Rectorate for International Affairs, Transfer and Sustainability and has become an integral part of the university culture. The University-wide sustainability strategy formulates shared, overarching goals for the university. Sustainability and climate protection in operations and administration: The University of Münster's sustainability strategy sets the goal of making sustainability a guiding principal for operational processes and decisions within its sphere of influence. The focus</p>	<p>Business and academia, education and communication, local/ national/ international</p>	<p>public law corporation (Körperschaft des öffentlichen Rechts)</p>	<p>Prof. Dr. Johannes Wessels</p>	<p>Rector</p>
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	is on operating infrastructure minimise resource use with the aim of achieving climate neutrality. Over the next few years, the university plans to further intensify its work on expanding its photovoltaic systems and mobility management. It will also draw up an integrated climate protection concept for the University by 2026.				
Universitätsklinikum Münster (Münster University Hospital, UKM)	As part of the National Climate Protection Initiative and with funding from the Federal Ministry for Climate Protection, UKM has set out to develop a climate protection concept for UKM. The concept aims to analyse current energy consumption and greenhouse gas emissions, identify potential, define goals, strategies and fields of action, develop concrete climate protection measures, and outline how to engage stakeholders and consolidate, control and communicate climate protection management. The ultimate goal is to establish a climate protection management system, embed climate protection in the corporate culture and support national and local climate protection targets.	Transformation and communication, local	Public law institution (Anstalt des öffentlichen Rechts)	Dr. Christoph Hoppenheit	Business Director
Volksbank im Münsterland eG	The bank considers sustainability to be an essential component of its business strategy. Driven by its responsibility towards its members, the bank began to work to support sustainable, liveable development in the region in 2020. Volksbank im Münsterland's sustainability strategy focuses on the	Sustainability, business, local/regional	Registered cooperative	Friedhelm Beuse & Esther Höggemann	Member of the Board of Management & Advisor Sustainability



	<p>environment, social affairs and governance. Detailed information on sustainability efforts can be found in the annual sustainability and business report on their website.</p>				
WEICON GmbH & Co. KG	<p>Responsible energy use:</p> <ul style="list-style-type: none"> - WEICON's head office in Münster has been using exclusively green electricity since the start of 2022. - In addition, photovoltaic systems are installed on the majority of their buildings. - A further photovoltaic system (approx. 1000 m²) will be installed on a new planned warehouse. - Almost all areas are equipped with LED lighting and motion detectors and operating times are continuously optimised. - Energy-efficient buildings and use of energy-efficient appliances. - Reduced travel to work through flexible working time arrangements (working from home). <p>Climate neutrality:</p> <ul style="list-style-type: none"> - WEICON's headquarters in Münster are climate-neutral (through internal optimisation and climate certificates to offset unavoidable consumption). - 3-year project with Münster University of Applied Sciences to further establish and realise potential sustainability improvements at WEICON Münster and worldwide. 	Business, mobility, electricity generation, local/regional	Limited Partnership with Limited Company as General Partner (Gesellschaft mit beschränkter Haftung & Compagnie Kommanditgesellschaft)	Ann-Katrin Weidling	Managing Director



<p>Westfalen AG</p>	<p>At Westfalen AG, sustainability is part of the corporate strategy aimed at making the company stand out in the marketplace. Their aim is, through their products and services, to support their customers on the path to sustainable progress.</p> <p>The Westfalen Group takes a technology-neutral approach and is investing in various sustainable fuels, including bio-CNG/LNG, hydrogen and e-mobility. At their company headquarters in Münster, they are constantly expanding the range of alternative fuels available to their petrol station customers. CO₂-neutral car washes round off their mobility range, enabling them to further reduce emissions.</p> <p>In the heating sector too, they are driving forward the energy transition. In addition to liquid biogas, they provide planning, installation and maintenance services for domestic and commercial heat pumps, supporting customers through the heating transition.</p> <p>Westfalen AG is also endeavouring to reduce greenhouse gas emissions at its sites: Using certified environmental and energy management systems the company is systematically tackling and endeavouring to minimise its environmental impact. Its German sites are powered by green electricity and the company has also installed its first photovoltaic systems. By refurbishing the main building at its headquarters in</p>	<p>Business, alternative fuels</p>	<p>Public Limited Company (Plc)</p>	<p>Dr. Thomas Perkmann & Christin Wessels</p>	<p>Member of the Board of Management & Sustainability manager</p>
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	Münster, it is also reducing heat consumption and thus emissions in its administration department. It is also in the process of electrifying its vehicle fleet.				
Westdeutsche Lotterie GmbH & Co. OHG	<p>a) Replacement of point of sale hardware (terminals) and removal of A4 printers from all lottery retail outlets. Replacement of printer-based processes and paper-based media with digital solutions and digital signage technology (reduced logistics).</p> <p>b) Expansion of the photovoltaic system to 240 kWp (kilowatt peak)</p> <p>c) Replacement of old building systems (e.g. distributors, ventilation systems)</p> <p>d) Expansion of e-mobility, cycling and public transport infrastructure</p> <p>e) Temperature changes in data centres</p> <p>f) Reduced IT infrastructure (e.g. virtualisation; cloud solutions)</p> <p>g) Further development of building management systems for more efficient control of building infrastructure components (e.g. intelligent heating, ventilation and air conditioning controls)</p> <p>h) Conversion to LED lighting and intelligent lighting control systems</p> <p>i) Raising employee awareness to save energy</p> <p>j) Looking at using other renewable forms of energy</p>	Business, local	GmbH & Co. OHG	Christiane Jansen & Andreas Kötter	Directing Manager & Spokesman of Directing Manager
B-Side Kultur e.V. mit der Hansawerkstatt	In future, Hansawerkstatt will be open to all Münster residents as a craft-based environmental education centre. In the spirit of education for sustainable development, it will enable users to	Sustainability, education, local	Civil Society	Maike Grabowski	Contact person



	<p>acquire valuable skills that enable them to do it themselves, encourage the sustainable use of resources and enable them to take the initiative and make independent choices on their consumption. By making repair options available, Hansawerkstatt will help promote the right to repair.</p> <p>Hansawerkstatt believes it can become an important new player in the extracurricular ESD education landscape in the model municipality of Münster. With the services it offers in its open workshop for all (wood and metal processing, 3D printing, bicycle repair), a repair café and various workshop formats for a wide range of target groups, it aims to contribute to implementing the city's sustainability strategy, necessary climate adaptation measures and the city's climate neutrality goal. It also wants to make its premises available for use by civil society groups.</p>				
<p>Digital Hub münsterLAND / FabLab Münster</p>	<p>By providing the FabLab Makerspace, Digital Hub münsterLAND offers an open experimentation and test environment for digital projects and endeavours. The two institutions are embedded in a regional community for networking start-ups, companies and universities, and act as physical and digital infrastructure for innovative projects, new ideas and for exchanging ideas with other thought leaders and makers. In doing so, FabLab Makerspace supports the development and establishment of a culture of sustainability and innovation, essential</p>	<p>Business and academia, local/regional</p>	<p>Civil society (Digital Hub münsterLAND is a project of the münsterLAND.digital e.V.)</p>	<p>Dr. Sebastian Köffer</p>	<p>Managing Director</p>



	for achieving climate neutrality in large cities.				
foodsharing Münster	Foodsharing Münster combats food waste by establishing a network of food savers and fair sharers to rescue and distribute food. It also offers educational programs to raise awareness of food waste. The aim of the initiative is to create a climate-friendly, sustainable food supply in Münster.	Education and food, local	Civil Society	Anton Ballmaier	Contact person
Grün statt Grau e.V.	The Grün statt Grau e.V. association aims to bring together a range of stakeholders and enable innovative citizen participation with the aim of identifying areas for depaving and subsequent greening measures. As a result of this process, it aims to develop guidelines for citizen participation and climate-friendly urban development, with a focus on depaving as a means for adapting to climate change and upgrading urban space.	Climate adaption, local	Civil Society	Christine Langkamp	Contact person
Move and Meet e.V.	The "Bike and Meet" project run by Move and Meet e.V. offers cycling courses, road safety instruction, repair workshops and courses for migrant women to teach them how to ride a bike and train them as coaches. In doing so, the project aims to boost women's autonomy of mobility and to combat mobility poverty among vulnerable groups. It has received several awards for its efforts.	Mobility and social participation, local	Civil Society	Laura Verweyen	Contact person
Psychologists4Future	Public communication is crucial for mobilising urban society. That's the starting point for Psychologists4Future, a network that aims to offer local politicians expert advice on how best to encourage,	Education and communication, local/regional	Network of climate activists	Anna Hessel	Contact person



	promote and communicate the changes needed internally and externally.				
Initiative Demokratie-Update Münster	Demokratie-Update Münster is committed to responsible co-production of urban policy and municipal democracy in Münster. On their initiative, the City Council has decided to set up the first citizens' council, for which the initiative has already collected over 250 suggested topics. Citizens' councils with participants drawn by lot can help find good, fair solutions to controversial issues around ecological transition and climate adaptation which realise a high level of acceptance. The initiative states that a concrete and direct engagement by all residents of Münster is necessary for dealing well with climate change and declares its willingness to provide advice and support.	Co-production, political participation, local	Civil Society	Andreas Schiel	Contact person
KlimaTrainer*innen (Climate Coaches) of the City of Münster	As part of the Climate City Contract, the City of Münster's volunteer climate trainers together with the Münster City Council Climate Office undertake to offer regular climate training sessions for all interested citizens. The aim is to encourage civic engagement and a willingness to choose climate-friendly everyday behaviours in the city of Münster.	Education and communication, local	Citizens	Julia von Hayn	Contact person
Klima- und Umweltschutzgruppen (www.muenster-klima.info) (Climate and environmental protection groups (www.muenster-klima.info))	The "KlimaEntscheid Münster" network prepared the August 2020 council resolution on climate neutrality by 2030 and has been critically monitoring the implementation process for the 2020 council resolution ever since.	Political activism, local	Network of climate activists	N.N.	Contact person



Platanenpower	Platanenpower participated in a training session run by “Nature and Environmental Protection Academy NRW” on advertising the concept of Tiny Forests in Münster, including planning and implementing steps such as soil analysis and tree species selection, community planting campaigns and long-term support for maintaining the resulting forest, as well as involving schools in educational activities.	Climate local adaption,	Civil Society	Dorothee Speich	Contact person
Students for Future Münster	Students for Future Münster have been campaigning for climate justice at local level and at the University for many years. In the Climate City Contract they wish to commit to continuing to demand the implementation of the council resolution on climate neutrality by 2030 for the city of Münster. Though every citizen is called upon to make their own contribution to climate protection, this should not be allowed to obscure the fact that it is for politicians to create the conditions required. Students for Future Münster see it as their role to remind politicians of their responsibility on the road to a liveable, climate-neutral Münster. Students for Future Münster are members of the “KlimaEntscheid” network, and take part in demonstrations and dialogue with the city.	Political local activism,	Civil Society	Johanna Stenner	Contact person
Manfred Josef Berlin	Has been actively involved in nature conservation since the 1980s and pursues a sustainable, climate-friendly lifestyle.	Climate friendly behaviour	Citizen	Manfred Josef Berlin	Implementing private individual
Monique Eberhardt	She is reducing her wood consumption, and is also endeavouring to acquire an	Sustainability	Citizen	Monique Eberhardt	Implementing private individual



	area of woodland, which she will preserve in a near-natural state to create a natural woodland that stores CO ₂ -storing long term.				
Bernd Genheimer	A detailed plan based on the UN Sustainable Development Goals enables Mr. Genheimer and other motivated citizens to make their homes and communities climate-neutral and sustainable by developing viable strategies, implementing actions and measuring outcomes. To implement the strategy, data on factors such as electricity and gas consumption is collected and processed with the help of a dashboard.	Energy consumption	Citizen	Bernd Genheimer	Implementing private individual
Ulla und Werner Gottbrath	Do not own a car and only use sustainable means of transport.	Mobility	Citizen	Ulla und Werner Gottbrath	Implementing private individuals
Dirk Schulte-Weber	Realising a climate-friendly lifestyle and engaging as a solar consultant.	Climate friendly behaviour	Citizen	Dirk Schulte-Weber	Implementing private individual
Eva Schröder	Does not own a car and uses only sustainable means of transport for herself and her family.	Mobility	Citizen	Eva Schröder	Implementing private individual
Michael Tillmann	Michael Tillmann has been involved in local climate protection and the local climate movement for around 10 years. He has supported and scrutinised the climate city process, with a focus on climate communication. Examples of his engagement include membership of the Münster City Council Climate Advisory Board, organising two "Münster Climate Talks" events centred on the goal of "climate neutrality 2030" (with the participation of guests from the EU	Education and communication, local	Citizen	Michael Tillmann	Implementing private individual



	mission cities Aachen and Mannheim) and writing several columns in the online magazine RUMS. He believes a "Münster Climate Consensus" supported by broad sections of Münster society is necessary for the Climate City process. He has therefore outlined a "Münster Climate Consensus" as a suggested preamble to the Climate City Agreement (published in the September 17, 2023 issue of RUMS). He is committed to continuing debate on a civic climate consensus.				
Jochen Witt	Project objective: To carry out an initial feasibility study into whether Münster's final energy requirements can be fully offset by solar energy harvested in the region of Münster's Tunisian twin city Monastir, North Africa or the Arabian Peninsula, and transported to Münster using a material conversion process. The project will analyse technical, logistic and economic factors. His contribution is to bring together local scientific, industrial, administrative and civil society expertise.	Energy generation, local/international	Citizen	Jochen Witt	Implementing private individual

In the context of Münster's Alliance for Climate Protection, new self-commitment document has been developed. By signing this document, the signatories declare that they will play an active part in achieving Münster's climate protection target and will implement energy-saving and CO₂ -reducing projects and measures in their area of responsibility. By now, about 30 companies and institutions have signed this renewed self-commitment. Please find an example of the revised self-commitment sheet as well as a list of signatories in the attachment.



7 Appendixes

- Commitments of the Signatories
- Münster's Alliance for Climate Protection
- Officially adopted Greenhouse Gas (GHG) Emissions reduction target for the future

EU-Mission „100 Climate-Neutral
and Smart Cities by 2030“

Klimastadt-Vertrag

Beiträge aus der Stadtgesellschaft



**Münster wird
Klimastadt.**



Beiträge für den Klimastadt-Vertrag

Unternehmen & Institutionen



Breite Palette von Klimaschutzmaßnahmen



Unternehmen

Alexianer Münster GmbH

Website

www.alexianer-muenster.de

Ansprechperson

Burkhard Vennemann



1. proEnergie Challenge 1 + 2 für Mitarbeiter*innen und Bewohner*innen
2. Koordinierungsangebot für Fahrgemeinschaften
3. Angebot des Deutschlandtickets
4. Angebot von Business-Bike für Mitarbeiter*innen
5. Acht Elektrofahrzeuge im Fuhrpark
6. Ca. 20 Lademöglichkeiten, auch für Mitarbeiter*innen gegen Gebühren
7. Ausschließlich Recyclingpapier
8. Leitungsgebundene Wasserspender
9. Mehrwegflaschen für Mineralwasser
10. Angebot digitale Lohnabrechnung
11. Kein Einsatz von Pestiziden
12. Müll-Sammelaktion für Bewohner*innen
13. Umweltgruppe für Bewohner*innen
14. Pedelecs als Diensträder
15. Wildblumenwiesen angelegt
16. Mehrweggeschirr im Kantinen- und Großküchenbereich
17. Angebot von Coffee to go Bechern
18. Energieversorgung des Campus-Geländes über ein Gas-Blockheiz-Kraftwerk
19. Ein großes Neubaugebäude – Einsatz einer Wärmepumpe
20. Sämtliche Monitore gehen nach fünf Minuten Nichtnutzung in Standby
21. Fahrradabstellmöglichkeit + Dusche für Mitarbeiter*innen
22. Entsorgungsmöglichkeit für Alt-Handys
23. Alexianer Hotel hat bei Münster-bewegt teilgenommen
24. Alexianer Hotel ist green-sign Level 4 zertifiziert
25. Bei neuer Beleuchtung wird darauf geachtet, ob diese Insektenfreundlich ist.

Burkhard Vennemann

Umweltschutzbeauftragter

Klimaschutz durch Dämmprodukte und Maßnahmen am Standort



Unternehmen
Armacell GmbH

Ansprechperson
Natascha Jüttner

Website
www.armacell.com



Armacell – Making a Difference around the World

Einer der größten Klimaschützer unter den in Münster ansässigen Industrieunternehmen dürfte die Firma Armacell sein. Seit 1967 fertigt das Nachfolgeunternehmen der Dämmstoffsparte der Armstrong World Industries im Süden von Münster flexible Dämmschläuche und -platten, die Heizungs- und Wasserleitungen, Klimakanäle, technische Ausrüstung wie Kessel, Pumpen, Kompressoren, Kondensatoren, Lüftungsanlagen sowie Prozessleitungen in der Industrie weltweit vor Energieverlusten schützen. Die Dämmung dieser technischen Anlagen ist eine der einfachsten und effizientesten Maßnahmen zur Verbesserung der Energieeffizienz in Gebäuden und in der Industrie. Wie eine Ökobilanz des Unternehmens zeigt, sparen die flexiblen Dämmstoffe von Armacell 140-mal mehr Energie ein als für ihre Herstellung benötigt wird und verhindern jährlich den Ausstoß mehrerer Millionen Tonnen Kohlendioxid.

Das Unternehmen weist in seiner Pressearbeit und in Kampagnen regelmäßig auf das enorme Energie-Einsparpotenzial durch technische Dämmung hin. Zudem ist Armacell Gründungsmitglied verschiedener

Verbände, die es sich zum Ziel gesetzt haben, die Energieeffizienz technischer Anlagen durch Isolierung zu verbessern. Hier sei als Beispiel die European Industrial Insulation Foundation (EiIF) genannt, die als gemeinnützige Einrichtung seit 2009 die Dämmung von betriebstechnischen Anlagen in der Industrie zur Verbesserung der Nachhaltigkeit und zur Bekämpfung des Klimawandels fördert. Mit dem TIPCHECK-Programm (Technical Insulation Performance Check) hat die EiIF ein standardisiertes Energie-Audit-Tool entwickelt, das aufzeigt, wie durch die Optimierung von Isoliersystemen eine höhere Energieeffizienz erreicht werden kann. Mehrere Mitarbeiter von Armacell sind geprüfte TIPCHECK-Auditoren und führen selbstständig Energie-Audits durch.

Als erstes Unternehmen seiner Branche hat Armacell bereits 2015 Umweltdeklarationen (Environmental Product Declaration, EPD) veröffentlicht, die die Grundlage für die Planung nachhaltiger Gebäude gemäß Gebäude-Zertifizierungssystemen wie LEED, BREEAM oder DGNB bilden. 2023 hat das Unternehmen einen kostenfreien Rückholservice für seine Holzpaletten eingeführt. Durch diese Mehrfachnutzung werden Ressourcen geschont und das Abfallaufkommen sowie CO₂-Emissionen reduziert. Während sich die am Armacell Standort in Polen gefertigten Polyethylen-Produkte sehr einfach recyceln lassen, ist das mit synthetischen Kautschuk-Materialien schwieriger. Der Produktionsausschuss aus der ArmaFlex-Produktion fließt jedoch in die Fertigung der ArmaSound Schallabsorptionsprodukte. Das Unternehmen bieten auch ein Rücknahme-System von Baustellenverschnitt an. Entscheidend ist hier jedoch, dass die Baustoffe trennbar sind. Die Wiederverwertung ist daher mitunter begrenzt, aber es gibt positive Beispiele.

Fortsetzung des Beitrags folgt hier:

Auch im betrieblichen Umweltschutz ist Armacell Vorreiter seiner Branche. Der Standort Münster ist seit dem Jahr 2000 nach DIN EN ISO 14001 (Umweltmanagementsystem) und seit 2014 gemäß DIN EN ISO 50001 (Energiemanagement) zertifiziert. Der Energieverbrauch ist seit 2015 um 27 % pro m³ Endprodukt gesunken.

Da sich eine energetische Sanierung des alten Verwaltungsgebäudes nicht rentiert hätte, sind die Verwaltungsmitarbeiter im Sommer des letzten Jahres in einen energieeffizienten Büro-Neubau an der Robert-Bosch-Straße umgezogen. Ehrgeizige Pläne hat das Unternehmen auch für die Energieversorgung des neuen Armacell-Werks. Das Unternehmen hatte 2022 das direkt an das Armacell-Gelände angrenzende, außer Betrieb genommene Werk von der Knauf Ceiling Solutions GmbH & Co. KG übernommen. Durch den Ausbau wird die Position des Standorts Münster als zentrales Kompetenzzentrum für flexible Elastomerschäume sowie als Hauptproduktionsstandort für Europa, den Nahen Osten und Afrika (EMEA) weiter gestärkt. Zudem konnte der CO₂-Fußabdruck durch eine deutliche Reduzierung des Transportaufwands verringert werden.



Stefan Garmann
Geschäftsführung

Green Sign Zertifizierung und nachhaltige Tagungspauschale



Unternehmen
ATLANTIC Hotel Münster

Website
www.atlantic-hotels.de/hotel-muenster

Ansprechperson
Sascha von Zabern

ATLANTIC
HOTEL Münster

Wir sind Green Sign zertifiziert.

Wir arbeiten daran unsere Punktzahl weiter auszubauen, um ein noch besseres Ergebnis zu erzielen.

Wir arbeiten an der Ausarbeitung unserer CO₂-Bilanz.

Wir erstellen im Jahr 2024 eine grüne und nachhaltige Tagungspauschale, die alle Aspekte der Tagung berücksichtigt.

Sascha von Zabern
Hoteldirektor

Klimaschutz entlang der gesamten Wertschöpfungskette



Unternehmen
BASF Coatings GmbH

Website
www.basf.com

Ansprechperson
Dr. Markus Piepenbrink



We create chemistry

Transformationsziel
Wir wollen bis 2050 klimaneutral sein.



BASF Coatings stellt hochwertige Lacke, Farben und Beschichtungsstoffe her, die Oberflächen vor Umwelteinflüssen schützen und verschönern. Damit leisten wir permanent einen wichtigen Beitrag zur nachhaltigen Schonung von Ressourcen.

Nachhaltigkeit ist fest in unserer Geschäftsstrategie verankert und steht im Mittelpunkt unseres Handelns, mit dem Motto: „Chemie- die verbindet für eine nachhaltige Zukunft“. Diese Vision ist bereits in allen unseren geschäftlichen Prozessen integriert.

Bei BASF Coatings analysieren wir unseren ökologischen Fußabdruck entlang der gesamten Wertschöpfungskette.

Um unseren CO₂-Fußabdruck deutlich zu senken, haben wir entlang der gesamten Wertschöpfungskette Maßnahmen ergriffen:

- Wir arbeiten zusammen mit unseren Lieferanten daran, die Kohlenstoffemissionen hinsichtlich der von uns verwendeten Rohstoffe zu reduzieren. So haben wir beispielsweise den Einsatz von

erneuerbaren Rohstoffen zur Reduzierung von CO₂-Emissionen erhöht.

- Wir verfolgen an all unseren Standorten Maßnahmen zum Energiemanagement. Wir reduzieren die eingesetzte Energie und die Emissionen, die durch unsere Produktionstätigkeiten entstehen. Ein Beispiel hierfür: Egal ob Verpackungen mit Lackrückständen, Filtermaterial oder flüssiger Abfall – wir verwerten den Abfall, der durch unsere Lackproduktion entsteht, an unserem Standort in Münster.
- Mit unseren Produkten und Prozessen bieten wir Lösungen an, die unseren Kunden bei der Reduzierung ihres CO₂-Fußabdrucks helfen. So werden zum Beispiel durch den integrierten Prozess für Fahrzeuglacke bis zu 20 Prozent CO₂-Emissionen eingespart.

Unser Ziel ist es, bis zum Jahr 2030 eine spezifische CO₂-Reduktion von 40 % zu erreichen. Für die Produktionsstandorte haben wir bereits ein Carbon Management Programm etabliert und treiben Aktivitäten zur deutlichen Reduzierung der

Fortsetzung des Beitrags folgt hier:

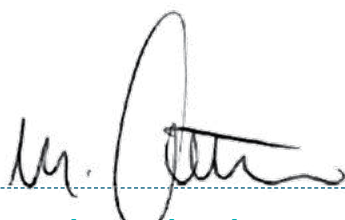
CO₂-Emissionen voran. BASF Coatings Münster, als weltweit größter Lackstandort, leistet einen großen Beitrag zur Erreichung der globalen Nachhaltigkeitsziele. Mit der Umsetzung der Maßnahmen hat der Standort Münster der BASF Coatings die absoluten CO₂-Emissionen bereits um 52 % und die spezifischen CO₂-Emissionen/t produzierte Produkt um ca. 38 % reduziert (Referenzjahr 2018, Stand: 2022). Um das übergeordnete Ziel eines klimaneutralen Standortes zu erreichen, sind weitere Reduzierungen der Treibhausgasemissionen in Planung. Dazu arbeitet der Standort an einem Energietransformationsplan, in dem nachhaltige Technologien zur Energieerzeugung und -versorgung regelmäßig überprüft und bewertet werden.

Beispielhafte Maßnahmen aus der CO₂ Standort Roadmap sowie dem Energietransformationsplan des Standorts:

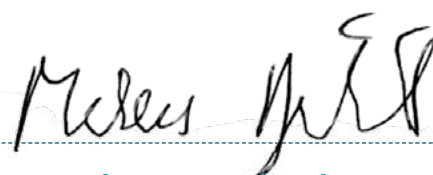
- Energieeffizienzmaßnahmen (in Planung und/oder Umsetzung):
 - Abwärmenutzung aus Entsorgung- und Medieneerzeugungsanlagen
 - Erneuerung der Lüftungsanlagen der Labore, Logistik- und Produktionsanlagen
 - Neues Office Konzept, Stilllegung/ Rückbau alter Gebäude (Labor)

Damit sollen insgesamt mehr als 3.000 t CO₂ Emissionen jährlich eingespart werden.

- Umstellung der Energieversorgung auf erneuerbare Energien (Kooperationsgespräche mit Stadtwerken bereits aufgenommen. Die Studienphase läuft)
- Erweiterung des Wärmenetzes, Anbindung neuer Anlagen und Anschluss an die regionale, regenerative Fernwärme der Stadtwerke Münster



Matthias Schöttke
Geschäftsführung



Dr. Markus Piepenbrink
Global Sustainability Ansprechperson

Erstellung eines Klimaschutzkonzeptes



Institution
Bistum Münster

Website
www.bistum-muenster.de

Ansprechperson
Jasmin Telgmann



Selbstverpflichtung zur Erstellung eines Klimaschutzkonzeptes bis 2024:

Der NRW-Teil des Bistums Münster erarbeitet momentan ein Klimaschutzkonzept. Teil des Klimaschutzkonzeptes ist es, die Treibhausgasemissionen des Bistums zu berechnen. Dabei werden besonders die Bereiche Gebäude, Mobilität und Beschaffung betrachtet.

Mit der Verabschiedung des Konzeptes im Sommer 2024 durch den Diözesanrat setzt sich das Bistum ein selbstverpflichtendes Treibhausgasziel. Das Konzept beinhaltet außerdem erste Maßnahmen, die eine Reduktion der Treibhausgase veranlassen sollen. Durch vielfältige Workshops wird gewährleistet, dass eine Vielzahl von Akteur*innen ihre Ideen und Meinungen einbringen können.

Das Klimaschutzkonzept wird gefördert vom Bundesministerium für Wirtschaft und Klimaschutz aufgrund eines Beschlusses des Deutschen Bundestages.

Jasmin Telgmann
Klimaschutzmanagerin

Klimaschutz vom Betrieb bis zum Produkt



Unternehmen
Cervotec GmbH & Co. KG

Website
www.cervotec.de

Ansprechperson
Jan Meerheim



- Gelebte Nachhaltigkeit im Handwerk – unter diesem Titel haben die Handwerkskammer (HWK) Münster und das Institut für Betriebsführung im DHI e. V. (itb, Karlsruhe) eine Broschüre veröffentlicht. Darin stellen sie zehn nachhaltig wirtschaftende Handwerksbetriebe wie unser Unternehmen CERVOTEC vor. (Nachhaltigkeit im Handwerk leben: <https://www.hwk-muenster.de/de/presse-medien/newsroom/nachhaltigkeit-im-handwerk-leben-2819>; <https://www.hwk-muenster.de/de/presse-medien/newsroom/hoffnungsfroh-nachhaltigkeit-in-betrieben-angehen-2365>)
- CERVOTEC hat eine CSR Selbstbewertung in den Handlungsfeldern Arbeitsplatz & Mitarbeiter*innen, Betrieblicher Umweltschutz, Produktverantwortung & Markt und Gemeinwesen & Bürgerschaftliches Engagement vorgenommen.
- CERVOTEC hat eine CSR Grundpositionierung und eine CSR Strategie entwickelt. CERVOTEC hat ein CSR-Maßnahmenprogramm erarbeitet.
- CERVOTEC-Produkte aus eigener Herstellung werden mit Strom der eigenen Photovoltaik-Anlage sowie bei Bedarf mit 100 % Ökostrom der Stadtwerke Münster produziert.
- CERVOTEC bezieht für die Heizungsanlagen statt klimaschädlichem Erdgas seit Januar 2022 „Bürger-Ökogas“ der Bürgerwerke eG.
- CERVOTEC-Produkte lassen sich reparieren und sind zu 100 % zerleg- und recyclebar. CERVOTEC kompensiert die CO₂-Emissionen der gesamten KFZ- / LKW-Flotte schon direkt bei der Betankung in Kooperation mit DKV – my climate.
- CERVOTEC ist ein beim CSR Kompetenzzentrum Münsterland ausgezeichnetes Unternehmen (Corporate Social Responsibility).
- CERVOTEC ist ein von der Handwerkskammer und dem Westdeutschen Handwerkskammertag (WHKT) geprüftes Unternehmen mit der Auszeichnung „Nachhaltigkeit360°“ auf Grundlage der von der UN festgelegten 17 „Sustainable Development Goals“ (SDGs).
- CERVOTEC erstellt Produktunterlagen und Druckmaterialien aus nachhaltigen, verantwortungsvollen Materialien wie Recyclingpapier + FSC-Zertifiziert.
- CERVOTEC setzt seit 01.2022 mit der EthikBank auf einen nachhaltigen Partner im Geldverkehr – die EthikBank bietet CERVOTEC eine sozialökologische Anlagepolitik.
- CERVOTEC arbeitet in Kooperation für die Herstellung einer Fahrradgarage mit einer integrierten organischen Photovoltaik (OPV) mit Profis des „Bayerischen Zentrum für Angewandte Energieforschung e. V. (ZAE Bayern)“ zusammen
- Weitere Informationen sind unter cervotec.de/nachhaltigkeit zu finden


CERVOTEC
 GmbH & Co. KG
 Geschäftsleitung
 Otto-Hahn-Str. 40
 DE 48161 Münster

Jan Meerheim
Geschäftsführung

Einsatz von PV, LED und Elektromobilität



Unternehmen
Druckerei Joh. Burlage GmbH & Co. KG

Website
www.burlage.de

Ansprechperson
Christoph Burlage



- Seit Q4/2023 Aufbau einer PV-Anlage mit dem Ziel bis zu 80% der benötigten Energie der laufenden Produktion zu generieren (s. Foto).
- Q1/2 2024 Umstellung der Produktionsbeleuchtung auf LED. Wurde an unserem alten Standort bereits umgesetzt, die neu bezogenen Räumlichkeiten folgen dieses Jahr.
- Q4/2023-Q2/2024 Umstellung der Firmen-PKW-Flotte auf Elektromobilität, eine Ladesäule wurde bereits installiert, die zweite folgt bis Q2/2024. Q2/2024 Pflanzung einer Wildwiese auf dem
- Firmengrundstück mit dem langfristigen Ziel, einen Bienenstamm anzusiedeln mit der Möglichkeit eigenen Honig herzustellen.

Christoph Burlage
Geschäftsführer

Erstellung eines Klimaschutzkonzeptes



Institution

Evangelischer Kirchenkreis Münster

Website

www.ev-kirchenkreis-muenster.de

Ansprechperson

Volker Rothhauwe



Transformationsziel

Wir wollen bis 2035 klimaneutral sein.

- Erarbeitung eines Klimaschutzkonzeptes für den Kirchenkreis
- Etablierung eines Klimaschutzfonds
- Umschichtung von Kirchensteuermitteln für Klimaschutzmaßnahmen, im Kontext des Klimaschutzgesetzes der EKvW
- Förderung von Energiegutachten für die Gebäude im Kirchenkreis
- Beschluss der Kreissynode zur Förderung von Fahrradmobilität
- Beschluss zur überwiegend vegetarischen Verpflegung auf der Kreissynode
- Beschluss zum öko-fairen Einkauf im „Haus der Kirche“ und in den Gemeinden
- Planung von Veranstaltungen zur Umweltkommunikation

Der Masterplan zur Klimaneutralität wird in 1. Halbjahr 2024 erstellt.

Holger Erdmann
Superintendent

Eindämmung von Lebensmittelverschwendung



Unternehmen
fairTEILBAR

Website
www.fairteilbar-muenster.de

Ansprechperson
Jana Gowitzke



Entlang der gesamten Wertschöpfungskette retten wir, die fairTEILBAR (vorrangig im Raum Münster & Münsterland), noch genießbare Lebensmittel, indem wir diese vor ihrer Entsorgung bewahren. Auf Basis dieser Arbeit fußt unser 3-Säulen-Konzept mit Laden, Manufaktur & Bildung. So ermöglichen wir unseren Kund*innen durch ihren Einkauf einen sehr konkreten Beitrag zum Münsteraner Klimaschutz zu leisten. Mit Auszeichnungen der Stadt Münster durch den Umweltpreis und „Münster: Vielfalt Machen“ durch „GUTES MORGEN MÜNSTER“, wurde uns bereits mehrfach die Wichtigkeit unseres Projekts/Konzeptes bestätigt.

Durch die aktive Rettung von Lebensmitteln schafft die fairTEILBAR nicht nur Strukturen der Nahrungsversorgung für Menschen, sondern trägt mit der aktiven Eindämmung der regionalen Lebensmittelverschwendung insbesondere dazu bei, dass dadurch ausgestoßene Klimagase verringert werden. Mit Hilfe unserer Arbeit bringen wir Münster näher an das große Ziel, bis 2030 klimaneutral zu werden und sehen uns somit als Teil des konkreten und verbindlichen Maßnahmenplans zur Reduktion der CO₂-Emissionen in der Stadt. Denn allein 10% der ausgestoßenen Treibhausgase werden durch die Verschwendung von Lebensmitteln erzeugt. Durch unsere Arbeit wirken wir diesem Ausstoß konkret entgegen.

Als einer der Hauptakteure im Bereich Ernährungswende im Münsterland erleben wir ein wachsendes Bewusstsein bzw. Motivation der Münsteraner Gesellschaft, sich aktiv für den Klimaschutz einzusetzen. Diesem Hunger nach Wissen und dessen praktischer Umsetzung möchten wir mit unserem Bildungspro-

gramm, unseren Vorträgen und Workshops nicht nur nachkommen, sondern diesen auch ganz bewusst generieren.

Zudem tragen wir durch die Sensibilisierung für saisonalen/regionalen Verzehr von Lebensmitteln ebenfalls dazu bei, dass Münsteraner Bürger*innen sich für kürzere Transportwege entscheiden und sich durch Bildung über klimafreundliche und eine pflanzenbetonte Ernährung klimagesünder ernähren. Des Weiteren sorgen wir durch die Bildung unserer jüngsten Bürger*innen (in Kitas und Schulen) dafür, dass auch in Zukunft das Bewusstsein und die Wertschätzung von Lebensmitteln und den damit verbundenen Ressourcen weiter wächst. Als einer der Hauptakteure der Nachhaltigkeits-Szene sehen wir unsere Arbeit als wichtigen Bestandteil der Münsteraner Transformation zur klimaneutralen Stadt in 2030 an und möchten diese Entwicklung weiter vorantreiben. Ganz im Sinne der Worte unseres Oberbürgermeisters Markus Lewe bei der Eröffnung des Umwelthauses. Allein bis heute haben wir seit unserer Eröffnung bereits ca. 600–700 Tonnen unterschiedlichste Lebensmittel vor ihrer Entsorgung gerettet.

Aber über die Grundidee und Basis unseres Konzeptes hinaus sind zudem nachfolgende Maßnahmen gelebter Teil unserer klimaneutralen Unternehmens-Philosophie:

- Die Organisation unserer Workshops erfolgt mit dem Lastenrad
- Auch unsere wöchentliche Manufaktur (zur Haltbarmachung großer Mengen geretteter Lebensmittel) erfolgt ökologisch mit dem Lastenrad

Fortsetzung des Beitrags folgt hier:

- Die lokalen (täglichen) Lebensmittel-Rettungen in unterschiedlichen Unternehmen erfolgen größtenteils gleichfalls mit dem Lastenrad
- Veranstaltungen und Events, wie die Nachhaltigkeitstage, Messen und Ausstellungen werden konsequent mit dem Lastenrad beschickt
- Wir haben kein eigenes Auto, sondern nutzen Sharing-Angebote
- wir verwenden Ökostrom
- Wir geben Verpackungen an regionale Versandunternehmen ab
- Grünabfälle geben wir teils an das Tierheim und benachbarte Hühner ab
- Wiederverwendung von Eierkartons
- Wir bieten verpackungsfreien Einkauf an
- Wir verfügen über ein Pfandsysteme



Jana Gowitzke
Bildungskoordinatorin & -referentin

Klimaschutz in der Lehre und umfassende Klimaschutzmaßnahmen



Institution
Fachhochschule Münster

Website
www.fh-muenster.de

Ansprechperson
Marion Behrends



Transformationsziel
Das Ziel unseres Transformationsfahrplans ist es, bis 2030 klimaneutral zu sein.

Die FH Münster hat sich entschlossen, eine Vorreiterrolle im Bereich des Klimaschutzes einzunehmen und setzt umfassende Maßnahmen zur Verbesserung ihrer Treibhausgasbilanz um. Die FH Münster verfolgt verstärkt das Ziel der nachhaltigen Entwicklung. Basierend auf dem Hochschulentwicklungsplan für den Zeitraum von 2021 bis 2025 strebt die FH danach, die Nachhaltigkeitsprinzipien verstärkt in den Perspektiven Bildung, Forschung und Ressourcen der Hochschule zu integrieren.

Um die Nachhaltigkeitsstrategie der FH Münster konkret zu entwickeln und umzusetzen, wurde als Managementinstrument die Academic Scorecard (ASC) Nachhaltigkeit eingeführt. In der Lehre beispielsweise bietet die FH den Studierenden die Gelegenheit, Nachhaltigkeit in zwei verschiedenen Masterprogrammen (Nachhaltige Dienstleistungen und Nachhaltige Transformationsgestaltung) intensiv zu verankern.

Die FH Münster möchte darüber hinaus in allen Fachbereichen Nachhaltigkeit und Klimaschutz verankern und somit gezielt Einfluss auf gesellschaftliche Entwicklungen und zukünftige Entscheidungsträger*innen nehmen. Im Bereich der Forschung wird ein Ausbau der nachhaltigkeitsorientierten Forschung angestrebt, unter anderem durch Vernetzung von Forschenden und Praxis und der gezielten Förderung unserer Forschungsinstitute.

Mit den verstärkten Bemühungen der Hochschule, die nachhaltige Entwicklung an der Institution voran zu treiben, ist die Initiative zur Erstellung eines Klimaschutzkonzeptes als zielgerichtete Strategie für den klimafreundlichen Betrieb entstanden. Die FH Münster

setzt sich zum ambitionierten, aber realistischen Ziel, in spätestens zehn Jahren 65 Prozent der CO₂-Emissionen gegenüber dem Vergleichsjahr 1990 einzusparen. Der von der FH Münster angestrebte Reduktionspfad orientiert sich an der Zielsetzung der Klimaneutralen Landesverwaltung (KNLV) 2030 und strebt darüber hinaus das maximale Einsparpotenzial bis 2045 an. Konkret bedeutet das, dass die FH Münster ihre Emissionen bis zum Jahr 2030 auf 7.687 t oder 0,47 t CO₂ pro Hochschulangehörigen reduzieren wird.

Rechtliche Vorgaben verhindern für Hochschulen derzeit noch (Stand Januar 2024) das Erreichen der bilanziellen Klimaneutralität, da der Sockelbetrag an nicht vermeidbaren Emissionen nicht kompensiert werden kann. Maßnahmen des Klimaschutzkonzeptes sind beispielsweise der verstärkte Ausbau der PV-Anlagen, die vollständige Umrüstung zur LED-Technik, die Verankerung von Klimaschutzaspekten in der Beschaffung, die Erstellung eines nachhaltigen Begrünnungskonzeptes zur Anpassung an den Klimawandel sowie die stetige Förderung des Umweltverbundes, um Emissionen aus Pendelwegen zu reduzieren.

Zudem wird aktuell ein Energiemanagement aufgebaut, das zum besseren Verständnis des Energieverbrauchs und zur Identifikation von Energieeinsparpotenzialen dient. Eine regelmäßige Fortschreibung der Bilanz sowie halbjährliche Klimabeiratssitzungen sichern die Umsetzung der definierten Maßnahmen.

Die Kommunikationsstrategie des Klimaschutzkonzeptes enthält eine Reihe von Informations- und Sensibilisierungskampagnen sowie Beteiligungsformaten, wie zum Beispiel ein hochschulinterner Nachhaltigkeitstag mit themenspezifischen Workshops

Fortsetzung des Beitrags folgt hier:

und Vorträgen oder der Ausbildung von Multiplikator*innen. Letztendlich müssen für die erfolgreiche Umsetzung des Konzeptes alle Hochschulangehörigen kontinuierlich informiert, sensibilisiert und motiviert werden, da der Klimaschutz an der FH Münster nur als Gemeinschaftsleistung realisiert werden kann. Die Klimaschutzbemühungen der FH Münster sind Teil eines ganzheitlichen Ansatzes, der nicht nur darauf abzielt, den eigenen CO₂-Ausstoß zu minimieren, sondern auch Bewusstsein für Nachhaltigkeit zu schaffen und umweltbewusste Praktiken in den Hochschulalltag zu integrieren. Durch diese Maßnahmen leistet die Hochschule einen wichtigen Beitrag zum globalen Klimaschutz und setzt gleichzeitig ein inspirierendes Beispiel für andere Bildungseinrichtungen und Institutionen.

Transformationsfahrplan

Meilensteinplanung des Maßnahmenplans der nächsten fünf Jahre

- Errichtung von mindestens fünf PV-Flächen bis Sommer 2026
- Errichtung von privater Ladeinfrastruktur für Bedienstete und Studierende an allen Standorten bis Sommer 2026
- Erstellung nachhaltiges Begrünungskonzept bis Ende 2025
- Optimierung veralteter Lüftungsanlagen bis Sommer 2026
- Ausarbeitung von Klimaschutzaspekten in der Einkaufsrichtlinie bis Sommer 2026
- Verbesserung Fahrradinfrastruktur bis Sommer 2026

Reduktionsziel CO₂-Emissions-Einsparung

Von 14.236 t CO₂ (2019) auf 7.687 t CO₂ bis 2030 reduzieren.

Indikatoren zur Überprüfung der Zielerreichung

- Strom- und Wärmeverbrauch/Jahr
- Anteil erneuerbarer Energien/Jahr
- Anteil E-PKW im Fuhrpark
- Anzahl Fahrradabstellplätze
- Anzahl Pendler*innenduschen
- Erfolgreiche Anwendung von Teilmaßnahmen des Begrünungskonzeptes
- Anzahl sanierter/erneuerter Lüftungsanlagen
- Implementierung von Klimaschutzaspekten in den Einkaufsrichtlinien

Erwartete Co-Benefits

Die FH Münster erwartet durch die Umsetzung des Klimaschutzkonzeptes folgende Co-Benefits:

- Verbesserte Energieeffizienz
- Ausbau erneuerbare Energien
- Erhöhung der Aufenthaltsqualität für Studierende und Beschäftigte
- Gelebter Klimaschutz an der Hochschule
- Reduzierung der Nutzung fossiler Brennstoffe
- Planung und Ausbau von Ladeinfrastruktur zur Förderung der Elektromobilität
- Förderung der Fahrradinfrastruktur
- Positive Auswirkungen auf die Gesundheit von Studierenden und Mitarbeitenden
- Erhöhung der Biodiversität
- Reduzierung von Hitzeinseln

Am 29.12.2022 wurde unser Transformationsfahrplan beschlossen.



Guido Brebaum

Kanzler

Fensterreinigung per Lastenrad



Unternehmen
Glas- und Fensterreinigung Wienkamp

Website
www.fensterreinigung-wienkamp.de

Ansprechperson
Daniel Wienkamp



Seit dem 1. März 2022 habe ich mich in Münster als Fensterreinigungs-Firma selbständig gemacht. Die Besonderheit: Ich biete innerhalb des Innenstadt-Rings meine Dienste mit einem CO₂-freien Lastenfahrrad an.

Ludger Wienkamp
Geschäftsführer



Handwerk fürs Klima

Institution
Handwerkskammer Münster

Website
www.hwk-muenster.de

Ansprechperson
Thomas Rohloff



Die Handwerkskammer (HWK) Münster bietet ein breites Spektrum an Unterstützungsleistungen für Betriebe rund um das Thema Nachhaltigkeit und Klimaneutralität an. Schwerpunkte der Angebotspalette sind klimarelevante Bildungsmaßnahmen im Handwerkskammer Bildungszentrum (HBZ) sowie einzelbetriebliche Energieberatungen. Die für eine hohe Qualität handwerklicher Ausführungen notwendigen Praxisschulungen des HBZ werden durch eine Vielzahl theoretischer Bildungsangebote und Webinare ergänzt. Die direkten Unterstützungsleistungen werden flankiert von Informationsveranstaltungen sowie Online- und Printmedien. Zur Veranschaulichung aktueller Techniken wurden in den vergangenen Jahren mehrere Demonstrationszentren errichtet. Diese sind beispielsweise in den Bereichen Bau & Energie, Fachwerk, Sanieren mit nachwachsenden Rohstoffen dargestellt. In unterschiedlichen Projekten werden Lösungsansätze entwickelt, um dem Klimawandel zu begegnen.

Darüber hinaus war die HWK Münster maßgeblich an der Entwicklung des bundesweit eingesetzten Energiebuches „E-Tool“ der Mittelstandinitiative beteiligt, für dessen Nutzung weiterhin aktiv bei den Mitgliedsbetrieben geworben wird. Weitere konkrete Unterstützung finden die Unternehmen in den Themenfeldern Energieeffizienz, erneuerbare Energien, klimafreundliche Gebäude, zirkuläre Wertschöpfung, innovative Mobilität sowie Nachhaltigkeit.

Als Interessensvertretung des Handwerks ist die HWK Münster an vielfältigen, insbesondere kommunalen Netzwerken beteiligt. Hier sind exemplarisch folgende Beteiligungen gemeinsam mit der Stadt Münster zu

nennen: Mitglied Münsters Allianz für Klimaschutz, Beirat Globale Nachhaltige Kommune, Netzwerk Altbau-Partner Handwerk, Mitwirkung ÖKOPROFIT.

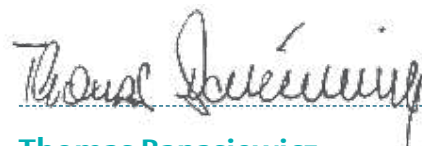
Neben den vielfältigen Angeboten für Mitgliedsbetriebe setzt die HWK Münster als Organisation selbst vielfältige Maßnahmen im eigenen Bereich um, die kurzfristig auf das Ziel der Klimaneutralität der Stadt Münster einzahlen und berichtet über deren Auswirkungen, zum Beispiel auf den CO₂-Fußabdruck. Gemeinsam mit zehn weiteren Handwerkskammern hat die HWK Münster seit dem Jahr 2021 das „Energieeffizienz- und Klimaschutz-Netzwerk der Handwerkskammern“ gegründet. Zielsetzung der Netzwerkarbeit ist es, eine klimaschonendere Betriebsweise der jeweiligen Standorte und Gebäude zu realisieren. Dazu gehören beispielsweise die energieeffiziente Beheizung der Bildungszentren, die Optimierung von Beleuchtung und IT, aber auch eine smarte Gebäudetechnik. Für die Darstellung der Ergebnisse sowie der Analyse der Energieverbräuche wird das entwickelte E-Tool eingesetzt.

Exemplarisch für die konkreten Energieeinsparmaßnahmen der HWK Münster seien die sukzessive Umstellung des Fuhrparks auf Elektromobilität im Gleichklang mit der Installation von E-Ladesäulen, die großflächige Optimierung der Beleuchtungssituation durch Reduzierung von Leuchtmitteln sowie Umstellung auf LED-Leuchtmittel, der Austausch energieaufwändiger Anlagen, wie Druckluftanlagen sowie die Optimierung der Belüftungssteuerung beziehungsweise teilweise Außerbetriebnahme nicht mehr notwendiger Lüftungsanlagen zu benennen.

Fortsetzung des Beitrags folgt hier:

Neben den direkten Maßnahmen wurden zudem die Mitarbeitenden zu Energiesparmaßnahmen sensibilisiert, die HomeOffice-Möglichkeit ausgeweitet und die Nutzung von Job Rad beziehungsweise Job Ticket durch einen freiwilligen Arbeitgeberzuschuss attraktiver gestaltet.

In den Planungen befinden sich aktuell die Ausweitung der Photovoltaikanlagen sowie der verstärkte Einsatz erneuerbarer Energien. Ein großer zukünftiger Meilenstein zur Reduzierung klimaschädlicher Emissionen am Standort Münster wird der geplante Teilneubau inklusive Modernisierung weiterer Bestandsgebäude unseres Bildungszentrums sein. Mit diesem für die HWK Münster historischen Bauprojekt soll nicht nur direkt ein großer Beitrag zur Klimaneutralität geleistet, sondern in der Weiterführung der Tradition der Demonstrationszentren ebenfalls ein Anschauungsobjekt für klimafreundliches Bauen geschaffen werden.



Thomas Banasiewicz
Hauptgeschäftsführer

Klimaneutrale Energieversorgung und Mobilität bis 2030



Unternehmen
Hengst Filtration

Website
www.hengst.com

Ansprechperson
Thomas Hülsdau



Transformationsziel
Das Ziel unseres Transformationsfahrplans ist es, bis 2030 klimaneutral zu sein.

Wir bekennen uns dazu, die Emissionen aus der Verbrennung fossiler Energieträger durch eigene Anlagen und Fahrzeuge bis zum Jahr 2030 auf Null zu reduzieren und 100 % des elektrischen Stroms aus erneuerbaren Quellen zu beziehen. Die Verbrennung fossiler Energieträger erfolgt bei Hengst Filtration im Wesentlichen in Form von Erdgas zur Beheizung von Produktions- und Lagerhallen und Büros sowie in diversen Produktionsprozessen. Diese Verbrennungsprozesse werden wir bis zum Jahr 2030 nach und nach substituieren oder derart umgestalten, dass keine fossilen Energieträger mehr verbrannt werden. Dazu starten wir in 2023 mit der Erarbeitung eines Transformationskonzeptes für die Standorte Münster und Nordwalde, in denen der größte Erdgasverbrauch der Hengst Gruppe zu verzeichnen ist.

Transformationsfahrplan

Meilensteinplanung des Maßnahmenplans der nächsten fünf Jahre
noch zu ermitteln

Reduktionsziel Energieeinsparung
Über unser Energiemanagementsystem nach ISO 50001 arbeiten wir fortlaufend an Energieeinsparungen. Im Fokus des Transformationskonzeptes wird die Reduzierung von THG-Emissionen stehen.

Reduktionsziel CO₂-Emissions-Einsparung
Minus 100% aus der Verbrennung fossiler Energieträger in eigenen Anlagen und Fahrzeugen.

Erwartete Co-Benefits
noch zu ermitteln

Erwarteter Projektaufwand in Euro
noch zu ermitteln

Am 30.09.2024 wird unser Transformationsfahrplan beschlossen.

Christopher Heine
CEO



Klimaschutz in einem Hotel

Unternehmen
Hotel Schloss Wilkinghege

Website
www.schloss-wilkinghege.de

Ansprechperson
Getha Winnecken



Leider ist eine PV-Anlage auf den Dächern limitiert, da auf dem historischen Hauptgebäude keine PV-Anlage genehmigt würde und die anderen Flächen die eventuell in Frage kämen, nicht die entsprechende Leistung bringen würden. Mit Bezug auf das Heizungsthema ist es schwieriger. Momentan heizen wir mit Öl und suchen nach einer klimafreundlichen Alternative. Diesbezüglich würden wir uns gerne mit dem Thema Geothermie befassen und werden uns zur Umsetzbarkeit extern beraten lassen.

Wir sind ein Green Sign Hotel und befassen uns schon seit Jahren mit dem Thema Nachhaltigkeit. In der Vergangenheit haben wir unseren Stromverbrauch durch Projekte wie die Umstellung auf LED, Entfernung der Minibars in den Hotelzimmern und den Bau eines begehbaren Frosters seit 2019 um 27 % deutlich senken können.

In einem historischen Gebäude in dieser Größenordnung sind Strom und die Art wie wir heizen zwei Kernfaktoren, die für eine Klimaneutralität von äußerster Bedeutung sind. Für die Umstellung der Stromerzeugung ist die Realisierung einer PV-Freiflächenanlage auf einem Grundstück geplant, welches an das Trafohaus sowie die Hauptstromleitung des Hotels angrenzt. Diese Anlage muss noch genehmigt werden. Auf dieser Fläche könnten wir zum Beispiel gleichzeitig Nutztiere wie Hühner oder Schafe halten.

Getha Winnecken
Geschäftsführung



Unternehmen fürs Klima

Institution
Industrie- und Handelskammer Nord Westfalen

Website
www.ihk.de/nordwestfalen

Ansprechperson
Markus Lübbering



Auf die IHK ausgerichtete Maßnahmen zum Klimaschutz:

- Einführung/Ausbau des Job-Tickets
- Job Rad Leasing
- Carsharing + E-Auto für Dienstfahrten
- Ökostrombezug seit dem 01.01.23
- Umstellung der Beleuchtung auf LED
- Dachsanierung mit Installation einer PV-Anlage
- Naturnahe Umgestaltung des IHK-Geländes mit Blühwiese und Obstbäumen
- Erster Nachhaltigkeitsbericht nach dem DNK-Standard inklusiver einer CO₂-Bilanz

Sensibilisierung der IHK-Mitgliedsunternehmen durch Webinare und Veranstaltungen, Netzwerktreffen, Öffentlichkeitsarbeit und Erarbeitung konkreter Unterstützungsangebote für Unternehmen, wie unternehmerische Prozesse nachhaltiger und klimaverträglicher gestaltet werden können:

- Entwicklung einer Initialberatung Nachhaltigkeit für Unternehmen, unterstützt durch die hiesigen Beratungsunternehmen

- IHK-Positionspapier – Zukunftspapier „Nachhaltige Wirtschaft Nord-Westfalen“
- IHK-Weiterbildungsangebote (z. B. Betrieblicher Klimamanager, Fachexperte für Wasserstoffanwendungen etc.)
- IHK-Zertifikatslehrgänge „Betrieblicher Mobilitätsmanager“
- Projekt „Energie-Scouts“
- Unterstützung des Projekts „MittelstandsINKUBATOR NRW“ zur Qualifizierung von Transformationsmanager*innen
- Zusammenarbeit mit den Stadtwerken Münster zu Energieeinsparungen und Verhinderung von Gasmangellagen
- Unterstützung der Batterieforschungsfabrik
- Forschungsfertigung Batteriezelle FFB

Weitere IHK-Projekte in Planung:

- Zwei öffentliche Ladestation mit vier Ladepunkten vor der IHK.

Dr. Fritz Jaeckel
 Hauptgeschäftsführer

Klimaschutz in der Lehre und auf dem Campus



Institution

**Katholische Hochschule Nordrhein-Westfalen,
Abteilung Münster**

Ansprechperson

Swantje Notzon

Website

www.katho-nrw.de/standorte/standort-muenster

katho

Katholische Hochschule **Nordrhein-Westfalen**
Catholic University of Applied Sciences

Die Abteilung Münster der Katholischen Hochschule Nordrhein-Westfalen (katho) erkennt die Bedeutung nachhaltigen Handelns als integralen Bestandteil ihrer Verantwortung gegenüber Gesellschaft und Umwelt. Sie verpflichtet sich dazu, konkrete Maßnahmen zu entwickeln, die den Weg Münsters zur Klimaneutralität unterstützen.

Die im Januar 2024 verabschiedete Nachhaltigkeitsstrategie der Hochschule bietet dabei den Rahmen für konkrete Maßnahmen und Projekte (wie das SUNRISE LAB). Sie wurde unter Beteiligung von Beschäftigten und Studierenden entwickelt und verfolgt das Ziel, eine nachhaltige Entwicklung in den Bereichen Lehre, Forschung und Betrieb zu fördern. Diese Strategie basiert auf den Prinzipien einer christlichen Sozial- und Umweltethik und richtet sich an globalen Herausforderungen wie dem Klimawandel, der Ressourcenknappheit und sozialer Ungerechtigkeit aus. Die Hochschule beabsichtigt, durch konkrete Maßnahmen und Initiativen einen Beitrag zur Bewältigung dieser Herausforderungen zu leisten. In der Lehre strebt die katho danach, eine ökologisch-planetarische Perspektive zu fördern und das vorherrschende, anthropozentrische Weltbild kritisch zu hinterfragen.

Konkret erforderlich sind dafür die Integration von Nachhaltigkeitsthemen in die Curricula, die Förderung von interdisziplinären Lehransätzen sowie die Schaffung von Lernumgebungen, die nachhaltiges Denken und Handeln unterstützen. Ziel ist es, Studierende zu befähigen, in ihrer späteren beruflichen Tätigkeit eine ökologische Transformation sozialer und anderer Organisationen voranzutreiben und in dem Bewusstsein von Risiken für Umwelt und Klima verantwortungsvoll zu handeln. Studierende sollen

in die Lage versetzt werden, ihr Wissen an andere weiterzugeben, um so zur gesamtgesellschaftlichen sozial-ökologischen Transformation beizutragen. Das bestehende Lehrangebot zu diesen Themen soll ausgebaut werden und Lerninhalte verschiedener Veranstaltungen und Module sollen aufeinander abgestimmt werden.

Darüber hinaus verpflichtet sich die katho, nachhaltige Betriebsabläufe zu etablieren, beispielsweise durch die Implementierung einer nachhaltigen Gebäudebewirtschaftung, die Förderung von umweltfreundlichen Mobilitätskonzepten und die Reduzierung des Ressourcenverbrauchs. Außerdem überprüft und optimiert die Hochschule regelmäßig ihre Verwaltungsabläufe, um einen ressourcenschonenden Campusbetrieb zu gewährleisten. Dazu gehören die Förderung von Elektromobilität, die energetische Sanierung von Gebäuden sowie die Implementierung klimafreundlicher Dienstleistungen.

Die Zusammenarbeit in Netzwerken spielt eine wichtige Rolle bei der Umsetzung dieser Nachhaltigkeitsstrategie, um Synergien zu nutzen, Best Practices auszutauschen und gemeinsame Ziele zu verfolgen. Im Bereich Forschung und Transfer werden ressourcenschonende Prozesse und innovative Lösungsansätze gefördert. Dies umfasst die Unterstützung von Forschungsprojekten, die sich mit Nachhaltigkeitsthemen befassen, sowie die Förderung von Kooperationen mit externen Partnern, um Forschungsergebnisse in die Praxis zu transferieren. Damit trägt sie zur Erreichung der Klimaneutralität sowie zur Generierung und Verbreitung von Wissen im Bereich Klimaschutz bei.

Fortsetzung des Beitrags folgt hier:

Ein aktuelles Forschungsprojekt „SUNRISE LAB“, das gemeinsam mit der Uni Münster und der FH Münster durchgeführt wird, untersucht, wie die Hochschulen in Münster nachhaltiger gestaltet werden können. Dabei setzen die Hochschulen auf die Etablierung von mindestens fünf Reallaboren als zentrales Instrument. Diese Reallabore sollen dazu dienen, unter kontrollierten Bedingungen gemeinsam mit verschiedenen Akteur*innen konkrete Projektideen umzusetzen und die Transformation zu nachhaltigen Hochschulen zu fördern. Das Reallabor an der katho beschäftigt sich mit Bildung und Beratung zu Maßnahmen, die gleichzeitig gesundheitsförderlich und nachhaltig sind.



Claudia Prella
Verwaltungsleitung

Konsumreduktion durch eine Verleih-Plattform



Unternehmen
Kleine Tat Services GmbH

Website
www.kleinetat.com

Ansprechperson
Volker Schittny



Wir sind ein kleines Unternehmen aus Münster und beschäftigen uns mit Lösungen für einen klima- und umweltfreundlichen Lebensstil. Mit einem Team aus überwiegend Freiwilligen haben wir jüngst die Sharing-App „Kleine Tat“ herausgebracht.

Die App organisiert Sharing für bestehende Gruppen wie Familien, Freundeskreise, Arbeitskolleg*innen, Nachbar*innen aber auch für große Communities wie Vereine, Gemeinden und ganze Stadtteile. Jetzt können Dinge, wie die Heckenschere, Kartoffelpresse oder Bierzeltgarnitur einfach unter Bekannten geteilt werden. Der Clou dabei: Der Zugang zu den Gruppen und die Sichtbarkeit von Angeboten kann punktgenau gesteuert werden. Eine Schulklasse kann so beim Teilen völlig unsichtbar bleiben. Das macht Sharing besonders sicher. Auch, weil man mit Menschen aus

dem persönlichen Umfeld teilt, denn hier werden Dinge ordentlich behandelt und Übergaben sind besonders einfach, weil man sich ja regelmäßig begegnet.

Damit funktioniert die Kleine Tat Sharing-App fundamental anders, als die bisher am Markt verfügbaren Apps und Web-Services. Wir machen dies, weil keine Lösung bisher zum Durchbruch von Sharing geführt hat. Den brauchen wir aber, denn nur wenn Sharing ein so selbstverständlicher Teil unseres Alltags wird, wie Lebensmittel einkaufen, kommen wir zu messbaren Effekten für das Klima. Und das wird passieren, wenn viele Menschen Dinge gemeinsam nutzen. Denn dann wird weniger produziert, was weniger Ressourcen benötigt, den globalen Transport senkt und den bei uns anfallenden Müll reduziert.

Darum ist die Kleine Tat App für private Nutzer*innen kostenlos, werbe- und gebührenfrei. Nutzende können uns freiwillig unterstützen, indem sie „Kleine Tat Tags“ bestellen. Das sind Kennzeichnungs-Etiketten und -Einnäher in verschiedenen Größen mit individuellen QR-Codes. Sie werden auf geteilten Gegenständen und Textilien sichtbar angebracht, erhöhen den Komfort der App und inspirieren andere zum Mitmachen. Sponsor-Tags enthalten zusätzlich das Logo von Unternehmen.

Volker Schittny
Gründer

Unterstützung und Beratung für Klimaneutralität



Institution
Klimabeirat Münster

Website
www.klimabeirat-muenster.de

Ansprechperson
Hans Haake



Der Klimabeirat Münster begleitet seit 2011 die Stadt Münster auf dem Weg zur Klimaneutralität. In einer Vielzahl von Formaten hat der Klimabeirat Themen gesetzt, Debatten angestoßen, komplexe Sachverhalte aufbereitet und sowohl Politik als auch Verwaltung zu vielen Aspekten des Klimaschutzes beraten. In diesem Sinn arbeiten Expert*innen aus Wissenschaft, Handwerk, Unternehmen, Verbänden, Verbraucherschutz und Landwirtschaft eng interdisziplinär zusammen. Der Beirat steht also schon seit vielen Jahren für einen breit getragenen Konsens der Münsteraner Stadtgesellschaft, dass Klimaschutz ein zentrales Thema sein muss, getragen von einer Vielzahl von Akteur*innen, die eng mit Politik und Verwaltung zusammenarbeiten. Entsprechend ist die Verpflichtung zu einer Fortführung und Intensivierung der Aktivitäten im Rahmen des Klimastadt-Vertrags nur folgerichtig.

Die Wirkung der Arbeit des Klimabeirats lässt sich nicht in Zahlen festhalten, da er nicht direkt Emissionen reduzieren kann. Der Klimabeirat trägt über seine Impulse, Stellungnahmen und den Austausch mit vielen anderen Akteur*innen zum effektiveren Klimaschutz bei und erhöht auch die Motivation für ambitionierten Klimaschutz.

Anhand von einigen Beispielen der letzten Jahre lassen sich Wirkmechanismen nachzeichnen: Wenn der Klimabeirat über Publikationen das Bewusstsein dafür schärft, dass Suffizienz ein wichtiges Element bei der Vermeidung von Emissionen sein kann und entsprechend Vorschläge für effektive Suffizienzpolitik macht, werden sowohl Bürger*innen sensibilisiert als auch politische Entscheidungsträger*innen auf mögliche Instrumente hingewiesen. Die Darstellung des Klimabeirates, wie weit nach den aktuellen Emissionszahlen der Weg noch ist, steigert die Handlungsbereitschaft mancher Akteure. Der Beirat beschreibt, was ein wirklich modellhaftes Quartier im Sinne von Klimapositivität leisten muss, und konfrontiert alle Beteiligten an den Münsteraner Modellquartieren mit den notwendigen höheren Anforderungen, die dann teilweise umgesetzt werden.

Weiterhin sieht sich der Klimabeirat in der Verantwortung, Politik, Verwaltung und Stadtgesellschaft allgemein kritisch zu beraten und zu unterstützen. Dabei kann er besonders den Blick auf das „große Ganze“ in seiner Komplexität lenken. In diesem Sinne wird er auch den Klimastadt-Vertrag in seiner Gesamtheit weiterhin kritisch begleiten, Vorschläge für Anpassungen entwickeln und immer wieder überprüfen, inwiefern Münster auf einem guten Weg in Richtung Klimaneutralität ist.

Hans Haake
Geschäftsführung



Langjähriges Energiemanagement

Unternehmen
Knubel GmbH & Co. KG

Website
www.knubel.de

Ansprechperson
Christoph Edelkamp

Wir sind zum Thema Energiemanagement seit 2013 kontinuierlich aktiv. Gestartet sind wir seinerzeit mit dem Nachhaltigkeitsprogramm Future Climate von Volkswagen zur Reduzierung unseres CO₂-Abdrucks.

Im Laufe der Jahre haben sich daraus weitere Maßnahmen entwickelt:

- Austausch der Verglasung
- Umrüstung auf LED-Beleuchtung
- Installation von Bewegungsmeldern zur Schaltung von Lichtquellen
- Modernisierung der Heizungsanlage
- Installation eines Blockheizkraftwerkes
- Dachsanierung
- Installation einer Photovoltaikanlage
- Modernisierung und Austausch von Servern, PCs und anderen elektronischen Geräten
- Umstellung des eigenen Fuhrparks zum größten Teil auf E-Mobilität

Seit 2020 werden wir regelmäßig nach ISO 16247 zertifiziert.

Werner Oesterbeck
Geschäftsführung

Smartes Schulungsgebäude für Handwerker*innen



Unternehmen
Lackmann

Website
www.lackmann.de

Ansprechperson
Jürgen Blümer

Lackmann

Im Austausch mit dem Handwerk stellen wir fest, dass wir mehr praxisnahe Schulungen benötigen für den Einsatz von neuen Technologien wie Home Energy Management Systeme und Wärmepumpen. Zusätzlich müssen diese Systeme ab 2025 schaltbar in das digitale Kommunikationsnetz des Netzbetreibers eingebunden werden können.

Das Konzept einer Demo-Anlage, zum Beispiel in Liegenschaften wie „Grüner Weiler“ hat sich da als Konzept bewährt. Zielgruppe wären Handwerker*innen, die die Installation der neuen Technologien im Alltag vor Ort umsetzen werden. Die Umsetzung einer Demo-Anlage kann nur im Verbund erfolgen. Lackmann als Volldienstleister für den Digitalen Messstellenbetrieb kann für derartige Projekte nur als ein Beitragender agieren. Wir sind bereit, dieses Vorhaben anzuschieben und aktiv zu begleiten.

Als Schulungs- und Demonstrationsgebäude wird eine Liegenschaft mit modernster Technologie ausgestattet – insbesondere:

- PV
- WallBox
- Wärmepumpe
- Erdwärme
- Home Energy Management System
- intelligente Messsysteme
- Funkzähler aller Sparten (Wärme, Wasser, Strom)

Zielgruppe des Schulungsgebäudes sind in erster Linie Handwerker*innen, die hier die neuen Technologien kennenlernen und den Umgang damit trainieren können. Das Gebäude stellt Schulungsräume bereit, die auch von interessierten Gruppen der Zivilgesellschaft genutzt werden können. Eine Projektskizze liegt vor, da sich ein ähnliches Projekt gerade in Wolfhagen in Nordhessen in der Umsetzung befindet. Lackmann ist darüber hinaus bereit, sich in der Lehre einzubringen.

Jürgen Blümer
Projektleiter

Klimaneutralität bis 2030



Institution
Landschaftsverband Westfalen-Lippe (LWL)

Ansprechperson
Dr. Hendrik Kohl

Transformationsziel
Das Ziel unseres Transformationsfahrplans ist es, bis 2030 klimaneutral zu sein.

Website
www.lwl.org und www.klima.lwl.org

LWL

Für die Menschen.
 Für Westfalen-Lippe.



Der Landschaftsverband Westfalen-Lippe (LWL) arbeitet als Kommunalverband mit mehr als 20.000 Beschäftigten für die 8,4 Millionen Menschen in der Region. Der LWL betreibt 35 Förderschulen, 21 Krankenhäuser, 18 Museen, zwei Besucherzentren und ist einer der größten Hilfezahler für Menschen mit Behinderung. Er erfüllt damit Aufgaben im sozialen Bereich, in der Behinderten- und Jugendhilfe, in der Psychiatrie und in der Kultur, die sinnvollerweise westfalenweit wahrgenommen werden. Ebenso engagiert er sich für eine inklusive Gesellschaft in allen Lebensbereichen. Die neun kreisfreien Städte und 18 Kreise in Westfalen-Lippe sind die Mitglieder des LWL. Sie tragen und finanzieren den Landschaftsverband, dessen Aufgaben ein Parlament mit 125 Mitgliedern aus den westfälischen Kommunen gestaltet.

Der LWL hat sich das Ziel gesetzt, bis zum Jahr 2030 bilanziell klimaneutral zu werden. Das ist sehr ambitioniert, gleichwohl aber auch Ansporn und Antrieb zur Wahrnehmung der Vorbildfunktion der öffentlichen Hand. Energiesparen ist beim LWL bereits

seit den 1970er Jahren wichtiges Anliegen. Zwischen 1990 und 2020 konnte der CO₂-Ausstoß der eigenen Liegenschaften bereits um 63% gesenkt werden. Darauf aufbauend wurde 2021 im Dezernat des Ersten Landesrats und Kämmerers / der Ersten Landesrätin und Kämmerin des LWL die LWL-Stabsstelle Klima, Umwelt und Nachhaltigkeit verankert, die den Transformationsprozess steuert und begleitet.

Mit der Erarbeitung eines Integrierten Klimaschutzkonzeptes (IKSK) wurden systematisch alle Bereiche des LWL bewertet. Basis für das IKSK war eine umfassende Treibhausgasbilanz. Mit 62 Maßnahmen in neun Handlungsfeldern skizziert die Klimaschutzstrategie des LWL den Weg, wie bis 2030 die Klimaneutralität gelingen kann. Im Fokus stehen die Bereiche Gebäude und Energie, dienstliche Mobilität, nachhaltige Gestaltung des Beschaffungswesens sowie Sensibilisierung und Fortbildung der Beschäftigten.

Die wesentlichen Stellschrauben und zugleich die größten Herausforderungen liegen im Gebäudebereich: Hier werden über 73% der jährlichen Emissionen verursacht. Der LWL bewirtschaftet etwa 1.400 Gebäude in ganz Westfalen-Lippe. Über 40% davon wurden vor 1970 gebaut, rund 20% stehen unter Denkmalschutz. Um ältere Bestandsgebäude an die heutigen Anforderungen anzupassen, sind große Investitionen notwendig. Energetische Sanierung, Dekarbonisierung der Energieversorgung und Ausbau der Erneuerbaren Energien sind nur Beispiele dafür, wie der LWL den Gebäudebereich nachhaltiger gestalten will. Dadurch könnten bis 2030 gegenüber 1990 circa 80% der Emissionen eingespart werden.

Fortsetzung des Beitrags folgt hier:

Auch im Mobilitätsbereich befindet sich der LWL in einem Transformationsprozess: Der Landschaftsverband betreibt über 1.000 Dienstfahrzeuge, die zusammen ca. 2.600 Tonnen CO₂ im Jahr verursachen. Mit der Umsetzung eines ganzheitlichen Mobilitätskonzeptes wird seit 2022 die betriebliche Mobilität durch ein vielschichtiges Betriebliches Mobilitätsmanagement (BMM) nachhaltiger und effizienter gestaltet. Die Umstellung des Fuhrparks auf emissionsfreie Fahrzeuge, der Ausbau der Ladeinfrastruktur sowie unterschiedliche Mobilitätskampagnen, Angebote und Maßnahmen sollen zu einer kontinuierlichen Senkung der mobilitätsbedingten Emissionen führen (–45% bis 2030).

Die Klimaschutzstrategie des LWL widmet sich ebenfalls dem Einkaufs- und Ernährungsbereich. Hier soll die Entwicklung zu einem nachhaltigen öffentlichen Einkaufs- und Beschaffungswesen weiter vorangetrieben werden. Dadurch können bis 2030 circa 23% der Emissionen eingespart werden. Einen wesentlichen Beitrag zur Erreichung des Ziels leisten die eigenen Beschäftigten. Mit gezielten Sensibilisierungsmaßnahmen, Mitmach-Aktionen und Fortbildungsangeboten wird die Belegschaft immer wieder zum Klimaschutz motiviert. Das verbleibende Kontingent an CO₂-Emissionen soll auch nach 2030 weiter reduziert und bilanziell – möglichst durch den Einsatz von Erneuerbaren Energien und dem Aufbau von CO₂-Senken – ausgeglichen werden. Eine passende Kompensations-Strategie wird noch erarbeitet.

Transformationsfahrplan

Meilensteinplanung des Maßnahmenplans der nächsten fünf Jahre

- EMAS-Validierung weiterer LWL-Einrichtungen
- Erarbeitung einer Sanierungsstrategie für den Gebäudebestand
- Sukzessive Umsetzung der Maßnahmen aus den Handlungsfeldern Nachhaltiges Bauen und Sanieren und Erneuerbare Energien
- Weitere Umsetzung der Strategieprojekte aus dem Betrieblichen Mobilitätsmanagement
- Weitere Umsetzung der internen und externen Klima-Kommunikationsmaßnahmen (Sensibilisierung, Fortbildung, etc.)

Reduktionsziel Energieeinsparung

bis 2030 –11% gegenüber 2019 (nur Gebäudebereich)

Reduktionsziel CO₂-Emissions-Einsparung

bis 2030 –28% gegenüber 2019 (Gesamteinsparung); Gebäudebereich circa –80% gegenüber 1990.

Indikatoren zur Überprüfung der Zielerreichung

- Entwicklung der Gesamt-Treibhausgas-Emissionen [t CO₂e] beim LWL
- Entwicklung der Gesamt-Treibhausgas-Emissionen pro Mitarbeiter*in [t CO₂e/MA]
- Anteil Erneuerbarer Energien am Gesamtenergieverbrauch [%]
- Entwicklung der Erzeugung von Erneuerbarer Energie [kWh/a]
- Anteil Dienst-PKW mit lokal emissionsfreiem Antrieb [%]
- Anzahl der Organisationen beim LWL, die im EMAS-Register eingetragen sind [Absolut]

Fortsetzung des Beitrags folgt hier:

Erwartete Co-Benefits

Durch die Umsetzung des IKSK des LWL entstehen eine Vielzahl an positiven Nebeneffekten im Bereich des Klima- und Umweltschutzes. Der Ausbau der regenerativen Energieerzeugung beim LWL führt beispielsweise zu einer Steigerung des Anteils Erneuerbarer Energien im deutschen Strommix. Die Umsetzung des Betrieblichen Mobilitätsmanagements und die Flexibilisierung des Arbeitsplatzes (z. B. durch Homeoffice) führen zu einer allgemeinen Entlastung des Verkehrsaufkommens sowie zu einer Reduzierung der lokalen Luft- und Lärm-Emissionen sowohl in Münster als auch an den anderen LWL-Standorten in Westfalen-Lippe. Auch im Bereich des öffentlichen Einkaufs können durch die Umsetzung des Transformationsplans Impulse auf dem Markt in Richtung nachhaltiger Produkte und Dienstleistungen gesetzt werden.

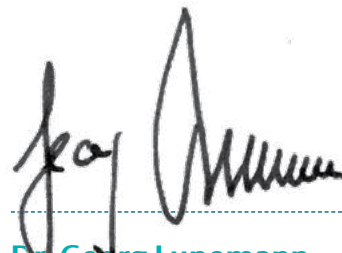
Erwarteter Projektaufwand in Euro

Mit der Umsetzung des Integrierten Klimaschutzkonzeptes sind erhebliche Kosten verbunden.

Ein großer Teil der Kosten fallen im Gebäudebereich außerhalb des LWL-Kernhaushaltes an, insbesondere in den wirtschaftlich eigenständigen LWL-Kliniken und sonst. Gesundheitseinrichtungen.

Den Kosten gegenüber stehen eine Vielzahl von kostendämpfenden Effekten beispielsweise durch zu akquirierende Fördermittel, Einsparungen, Erträge im Energiebereich sowie durch technologischen Fortschritt. Allerdings haben sich seit Aufstellung des IKSK die Rahmenbedingungen, u. a. durch die angespannte kommunale Haushaltslage, den sich verschärfenden Fachkräftemangel und die hohe Inflation verändert.

Am 10.06.2022 wurde unser Transformationsfahrplan beschlossen.



Dr. Georg Lunemann
Direktor des Landschaftsverbandes



Technische Klimaschutzmaßnahmen

Unternehmen

Landwirtschaftsverlag GmbH

Website

www.lv.de

Ansprechperson

Marc Schürmann



Landwirtschaftsverlag

Transformationsziel

Wir wollen bis 2030 klimaneutral sein.

Bereits im Jahr 2020 hat sich die Landwirtschaftsverlag GmbH in Hilstrup mit der Gründung eines „Team Nachhaltigkeit“ dem Thema Nachhaltigkeit intensiv gewidmet.

Neben der Aufstellung und Aktualisierung grundlegender Leitlinien/Grundsätze im Sinne der Nachhaltigkeit für den Landwirtschaftsverlag steht für uns die Umsetzung ganz konkreter Projekte im Vordergrund.

- Wir haben im Februar 2023 unsere PV-Anlage mit 134 KWp in Betrieb genommen. Die Besonderheit dabei ist, dass wir nicht nur auf dem Dach eines unserer Verlagshäuser Photovoltaik installiert haben, sondern auch bestehende, versiegelte Parkplatzflächen mittels Carports überdacht und mit PV-Modulen versehen haben.
- In dem Zusammenhang wurde auf der angrenzenden, von der Stiftung Landwirtschaftsverlag errichteten Kita, ebenfalls Photovoltaik (22 KWp) installiert. Beide Anlagen zusammen produzieren rd. 140.000 KWh/Jahr nachhaltigen Strom.
- Wir forcieren aktuell die Elektromobilität im Landwirtschaftsverlag, indem wir sukzessive unseren Fuhrpark auf E-Autos umrüsten. In diesem Zusammenhang haben wir im Jahr 2022 bereits 5 Ladesäulen mit insgesamt 10 Ladepunkten installiert. Im Jahre 2024 folgen weitere 5 Ladesäulen mit 10 Ladepunkten. Nicht nur Firmen-PKW können dort mit Strom geladen werden, auch unseren Mitarbeitenden ist es dort möglich ihre Elektroautos aufzuladen.
- Der Strom, den wir extern beziehen, ist zu 100 % Ökostrom.
- Für die Ladung der E-Autos werden wir in 2024 eine weitere PV-Anlage mit rund 25 KWp installieren.
- Der Allgemeinheit haben wir in unmittelbarer Nachbarschaft eine öffentliche E-Ladesäule zur Verfügung gestellt und dem Stadteilauto Münster die Möglichkeit geschaffen, dort eine Station zu eröffnen.
- Rund $\frac{2}{3}$ unseres Heizbedarfs wird bereits über Geothermie abgedeckt, der Rest über einen gasbetriebenen Kessel. Vor dem Hintergrund, dass viele Mitarbeitenden teilweise im Homeoffice arbeiten, wollen wir in 2024 an den Heizkörpern smarte Thermostate installieren, die nur an den Tagen heizen, wenn die Mitarbeitenden auch tatsächlich im Büro sind. Wir erwarten dadurch den Gasverbrauch um rund $\frac{1}{3}$ zu reduzieren.
- Wir kümmern uns um IT-Outsourcing und lagern sukzessive hochperformante IT-Infrastruktur in energieeffiziente Rechenzentren aus.
- Die Beleuchtung im Landwirtschaftsverlag wurde bereits größtenteils auf LED-Technik umgestellt. In 2024 werden wir die letzten 200 Leuchtstoffröhren gegen LED-Beleuchtung austauschen.
- Nachdem wir bereits seit langem unsere Print-Produkte ausschließlich auf umweltzertifizierten Bedruckstoffen fertigen lassen, achten wir seit 2023 bei der Vergabe von Druckaufträgen auf besonders energieeffiziente Drucktechnik unserer Partner.
- Neben den „großen“ Projekten haben wir sehr viele „kleine“ Projekte umgesetzt bzw. setzen sie aktuell um (zum Beispiel Erweiterung der Fahrradständer, Installation einer Akkuladestation für E-Bikes, Reduzierung des internen Papierbedarfs um ca. 75 %, Reduzierung der Außenbeleuchtung, nachhaltige Reinigung unserer Räumlichkeiten, Implementierung nachhaltiger Dienstreise-Richtlinien, betriebliche Förderung zur Nutzung öffentlicher Verkehrsmittel, Schulung der

Fortsetzung des Beitrags folgt hier:

Mitarbeitenden zu energieeffizientem Verhalten, Verzicht auf Warmwasser in den Teeküchen u.v.m).

Der Landwirtschaftsverlag ist ab dem Geschäftsjahr 2025 zur CSRD-Berichterstattung verpflichtet. Ende 2023 haben wir dazu ein Projekt mit dem Ziel gestartet, hier nicht nur gesetzlichen Anforderungen nachzukommen, sondern einen „Werkzeugkasten“ für einen kontinuierlichen Verbesserungsprozess im Bereich Nachhaltigkeit für den Landwirtschaftsverlag zu generieren. In diesem Prozess ist bis zum 30.06.2025 auch die Aufstellung eines Transformationsfahrplans zur Erreichung unserer Nachhaltigkeitsziele geplant.

Dazu gehört die Klimaneutralität am Standort Münster bis Ende des Jahres 2030!



Malte Schwerdtfeger
Geschäftsführung

Klimaneutralität im Geschäftsbetrieb bis 2035



Unternehmen
LBS NordWest

Ansprechperson
Carsten Lessmann

Transformationsziel
Wir wollen bis 2035 klimaneutral sein.

Website
www.lbs.de/unternehmen/bausparkassen/lbs-nord-west



Nachhaltigkeit ist ein wichtiger Bestandteil der Geschäftsstrategie der LBS NordWest. Mit der Unterzeichnung der Selbstverpflichtung der Sparkassen-Finanzgruppe hat sich die LBS NordWest zur Klimaneutralität im Geschäftsbetrieb bis 2035 verpflichtet. Die LBS NordWest verfolgt einen ganzheitlichen Ansatz.

Geschäftsbetrieb

Durch verschiedene Maßnahmen gestalten wir den Geschäftsbetrieb und die Gebäude der LBS NordWest umweltfreundlich. Unser Mobilitätskonzept basiert auf dem konsequenten Ausbau der Infrastruktur für Elektromobilität. Durch die Schaffung von Ladestationen für Elektrofahrzeuge und die Förderung der Fahrrad- und ÖPNV-Nutzung tragen wir zur Reduktion von CO₂-Emissionen bei. Der Standort der Unternehmenszentrale in Münster ist mittlerweile mit vier Elektroladesäulen ausgestattet. Zudem arbeiten wir an einem Raumnutzungskonzept, angepasst an die Bedürfnisse unserer Mitarbeitenden, und nutzen die Ressource Raum effizient. Im Zuge unserer digitalen

Transformation arbeiten wir erfolgreich daran, unsere Geschäftsprozesse umfassend zu digitalisieren. Die LBS NordWest verfolgt einen Digitalisierungsfahrplan bis 2025, auf dessen Basis in allen wesentlichen Prozessen festgelegte Digitalisierungs- und Automatisierungsziele angestrebt werden. Diese Maßnahmen steigern die Effizienz unseres Geschäftsbetriebes und minimieren den ökologischen Fußabdruck durch die Reduzierung von Papierverbrauch. Das Lieferantenmanagement der LBS NordWest sowie der Einkauf für das Betriebsrestaurant in Münster legen großen Wert auf Regionalität und Saisonalität. Zudem verfolgt die LBS NordWest eine nachhaltige Geldanlagestrategie, die sich an den Kriterien des staatlichen Pensionsfonds Norwegens orientiert. Die Umsetzung erfolgt über den Ausschluss von Unternehmen, die bestimmte Produkte produzieren beziehungsweise vertreiben oder gegen bestimmte Verhaltensweisen verstoßen.

Energieeffizienter Wohngebäudebestand

Das Klimaschutzgesetz der Bundesregierung setzt auf eine deutliche Reduktion des CO₂-Ausstoßes im Gebäudesektor. Dies verlangt einen deutlichen Anstieg der Sanierungsquote bei Bestandsimmobilien. Die LBS NordWest will hier als Finanzierungspartnerin einen wesentlichen Beitrag zur energetischen Modernisierung leisten. Mit Produkten wie dem „Klima&Zuhause“-Modernisierungskredit bieten wir ein nachhaltig ausgerichtetes Kreditprodukt an, das unseren Kund*innen die Möglichkeit bietet, ihre Immobilie energetisch zu modernisieren. Die Anbindung an ein Netzwerk von Energieberater*innen ermöglicht es uns, ganzheitliche Lösungen für energetische Sanierungen anzubieten. Das Energie-

Fortsetzung des Beitrags folgt hier:

beraternetzwerk wird stetig ausgeweitet und unseren Kund*innen zur Verfügung gestellt. So tragen wir zur umweltfreundlichen Gestaltung und Transformation unseres gesamten Geschäftsgebiets und Münsters bei.

Unser Engagement

Ein zentrales Element unseres sozialen Engagements ist der „Vorausdenker-Wettbewerb“. Mit dieser Initiative unterstützt die LBS NordWest regionale Institutionen, die einen positiven Einfluss auf die Umwelt und die Gesellschaft haben. Für den Vorausdenker-Wettbewerb 2023 stellte unser Haus rund 90.000 Euro an Fördergeldern bereit. Der Münsteraner Oberbürgermeister Markus Lewe unterstütze den Wettbewerb als Teil der Jury. Unter den Gewinnern des Wettbewerbs waren unter anderem Projekte im Münsteraner Stadtgebiet. So konnten wir beispielsweise mehrere Münsteraner Organisationen bei der Anschaffung von Lastenfahrrädern finanziell unterstützen. Der Vorausdenker-Wettbewerb wird auch zukünftig stattfinden und auf das gesamte Geschäftsgebiet der fusionierten LBS NordWest ausgeweitet. Zudem hat die LBS NordWest im April 2023 bei einer Baumpflanzaktion 9.232 Bäume gepflanzt, unter anderem im Waldschadensgebiet am Autobahnkreuz Münster-Süd.



Jörg Munning
Vorstandsvorsitzender

Klimaneutrale Personen- und Paketbeförderung



Unternehmen
Leezen Heroes GmbH

Website
www.leezenheroes.de

Ansprechperson
Florian Voß



Alles was das Auto kann, kann die Leeze auch. Die Leezen Heroes bieten im gesamten Stadtgebiet seit 2018 Personenbeförderung und Lastentransporte an. Neben dem klassischen Stadtrundfahrt-Angebot sind in der Personenbeförderung weitere Highlights wie eine Skulpturen-Tour, eine Grünes Münster-Tour oder auch die Möglichkeit enthalten, eine ganz individuelle Tour zusammenzustellen.

Aber auch eine einfache Taxifahrt per Leeze ist immer möglich.

Im Cargo-Bereich sind die Heroes seit 2019 am Start. Paketzustellungen, Dokumententransport, Arzneimitteltransport und so ziemlich alles, was sonst noch in eine Leeze passt, wird ausgeliefert. Und das alles nachhaltig und umweltbewusst.

Mehr als 25 Personen arbeiten für die Leezen Heroes und sorgen für eine lebenswertere Stadt Münster.

Florian Voß
Geschäftsführung

Automatisierte Leihothek



Unternehmen
LEIHOTHEK Münster

Website
www.leihothek.de

Ansprechperson
Daniel Schaschek



In der automatischen Bibliothek der Dinge leihst du dir all das, was du selten brauchst. Spare Geld, hab mehr Platz für dich, schone Ressourcen und lebe vielfältiger – mit der LEIHOTHEK.

Konzept: Auf www.leihothek.de wird sich der gewünschte Artikel bequem online reserviert und gezahlt. Per Abholcode holst du dir deinen Wunschartikel zum gewünschten Zeitpunkt in einer unserer Abholorte ab. Nachdem du es genutzt hast, bringst du es wieder dorthin zurück, wo du es entliehen hattest und bekommst Pfand und Rückgabequittung.

- Dienstleistung: Verleih von Alltagsgegenständen, die nur episodisch oder zu besonderen Anlässen genutzt werden.
- Zusatznutzen: Erfüllung der sustainable goals der UN für die Städte und Gemeinden.
- Entrepreneur: Dipl.-Kfm. Daniel Schaschek.
- Zielgruppe: Studenten, Expats, junge Familien, nachhaltig-denkende Menschen.
- USP: state-of-the-art Software und Objekterkennung via NFC.

Der Wechsel vom klassischen Leihladen zur automatisierten Leihothek erfolgte Mitte 2022 und steht in der Mensa am Ring in Münster.

Daniel Schaschek
Gründer

Klimaneutralität im Geschäftsbetrieb bis 2045



Unternehmen
LVM Versicherung

Website
www.lvm.de

Ansprechperson
Judith Peters



Transformationsziel
Wir wollen bis 2045 klimaneutral sein.



Die Auswirkungen unseres Geschäftsbetriebs auf Umwelt und Klima werden uns kontinuierlich bewusst. Unser Ziel ist, alle Emissionen, die durch unsere Geschäftsaktivitäten entstehen, so zu vermeiden und zu reduzieren, dass unsere CO₂-Bilanz so gering wie möglich ausfällt. Unvermeidliche Emissionen aus dem Dieserverbrauch unserer Flotte und aus dem Fernwärmebezug kompensieren wir durch die Unterstützung von Brunnenprojekten des Dienstleisters „Klima ohne Grenzen“ in Mosambik und Uganda.

Unser Ziel der Klimaneutralität in Scope 1 und 2 bis 2025 haben wir so bereits 2023 erreicht. Für den Scope 3 des eigenen Geschäftsbetriebs haben wir uns das Klimaneutralitätsziel 2045 gesetzt.

Damit es uns gelingt, unsere Umwelt- und Klimaauswirkungen systematisch zu reduzieren, haben wir ein ganzheitliches Umweltmanagement mit sieben Arbeitsgruppen etabliert: Energie, Ressourcen und Abfall, Beschaffung, Mobilität, Green IT, Veranstaltungen und Agenturen. Energie sparen und möglichst erneuerbar gestalten – das ist erklärtes Ziel. Dabei kommen uns unsere nachhaltigen Bauten am

Campus in Münster zugute: Das Gebäude „Kristall“ erhielt die höchste Auszeichnung der Deutschen Gesellschaft für Nachhaltiges Bauen und auch unserer „Villa Kunterbunt“ bescheinigte die Architektenkammer Nordrhein-Westfalen besondere Energieeffizienz. Jüngster großer Meilenstein ist ein Vertrag mit den Stadtwerken Münster, mit dem wir den Ökostromanteil auf 100 Prozent ausbauen und dabei auf regenerative Energien aus möglichst regionalen Quellen setzen. Ab 2024 kommen rund 20 Prozent des Strombedarfs exklusiv aus einer Dach-Fotovoltaikanlage in Billerbeck. Darüber hinaus benötigten Strom liefern regenerative Kraftwerksparks in Schleswig-Holstein und Niedersachsen. Den größten Teil unserer Wärme beziehen wir über das Fernwärmenetz der Stadtwerke Münster. Um hier langfristig Klimaneutralität ohne Kompensation zu erreichen, wünschen wir uns eine Umstellung auf regenerative Quellen.

Mit rund 2.000 LVM-Fahrzeugen kommt es auch auf Veränderungen bei der Mobilität an, wenn wir unseren ökologischen Fußabdruck verkleinern wollen. Aktuell wird etwa jeder fünfte PKW im LVM-Fuhrpark der Zentrale elektrisch betrieben; innerhalb der Werbeflotte für die Versicherungsagenturen ist der Anteil etwas höher. Für alle, die in Münster mit dem Fahrrad zur Arbeit kommen, bietet das Unternehmen neben 750 überdachten Fahrradstellplätzen, Umkleiden und Duschen auch Leihfahrräder sowie die Option des Fahrrad-Leasings.

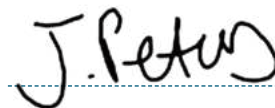
Die Anpassung unserer Reiserichtlinie soll Nachhaltigkeitsaspekte vor allem bei Dienstreisen noch stärker berücksichtigen. Und um die ÖPNV-Nutzung zu steigern, möchten wir Mitarbeitende, Vertrauensleute und ihre Teams noch stärker für die Auswirkungen ihres Mobilitätsverhaltens sensibilisieren.

Fortsetzung des Beitrags folgt hier:

Nach dem Vorbild der Kreislaufwirtschaft wollen wir Ressourcen effizient einsetzen, erneuerbare Materialien bevorzugen und die Lebensdauer von Materialien maximieren. Mit Pfandsystemen reduzieren wir den Abfall in unseren Betriebsrestaurants und optimieren regelmäßig die Portionsgrößen. Bioabfall wird zu 100 Prozent einer Biogasanlage zugeführt. Wir nutzen überwiegend Recyclingpapier und arbeiten an Lösungen, um beim Postversand Papier zu sparen. Zusätzlich arbeiten wir daran, unsere Abfallströme besser digital zu erfassen. Und für den Schutz der Artenvielfalt in Münster setzen wir in unseren Außenanlagen bewusst auf insektenfreundliche Pflanzen und Vogel-Nisthilfen sowie Futter- und Wasserstellen. Die weiteren Arbeitsgruppen Beschaffung, Green IT, Veranstaltungen und Agenturen setzen sich vornehmlich mit Themen auseinander, die nicht primär in Münster verortet sind. Auch hier sollen die Umwelt- und Klimaauswirkungen systematisch erfasst und reduziert werden.



Dr. Mathias Kleuker
Vorstandsvorsitzender



Judith Peters
Bereichsleiterin Nachhaltigkeit

Klimafreundliche Küche und Gerichte mit System



Unternehmen
LWL-Klinik Münster

Ansprechperson
Peter Gillmann

Transformationsziel
Wir wollen bis 2030 klimaneutral sein.

Website
www.lwl-klinik-muenster.de



© LWL-Klinik Münster

Unsere Großküche produziert täglich etwa 800 Mittagessen. Dabei kann zwischen drei verschiedenen Menüs gewählt werden. Mit Hilfe der App Eaternity wurden alle Rezepte unserer Küche auf ihre Klimafreundlichkeit überprüft. Gerichte, bei deren Herstellung besonders viele Treibhausgase entstehen, sollen perspektivisch aus den Speiseplänen gestrichen werden. Wir versuchen durch saisonale, regionale und viele pflanzliche Produkte die Klimabelastung durch unsere Speiseangebote zu verringern. Außerdem sollen durch Hinweise/Icons auf dem Speiseplan Mitarbeitende und Patient*innen auf Bio-Komponenten, klimafreundliche, vegane und vegetarische Gerichte im Speiseplan aufmerksam gemacht werden. Alle mit dem Klima-Icon gekennzeichneten Gerichte verursachen mindestens 40 % weniger CO₂ als der Durchschnitt aller angebotenen Menüs. Durch die Information und Kennzeichnung können Mitarbeitende und Patient*innen für klimafreundliche Gerichte sensibilisiert werden und sie können selbst eine Entscheidung treffen, ohne sich bevormundet zu fühlen.

Thomas Voß
Kaufmännischer Direktor

Klimafreundliche Arbeitsmittel



Unternehmen
M+S Sicherheitstechnik GmbH

Website
www.mssicherheit.com

Ansprechperson
Marius Sommer

Installation einer Wallbox für zukünftige E-Autos.

Mitarbeiter*innen arbeiten überwiegend papierlos und Techniker*innen benutzen Tablets, somit entfallen Stundenzettel.

Das Arbeiten am PC erfolgt in einer Cloud, hierbei können Mitarbeiter*innen im Homeoffice arbeiten.

Marius Sommer
Geschäftsführung



Nachhaltiges Veranstaltungszentrum

Unternehmen

Messe und Congress Centrum Halle Münsterland

Website

www.mcc-halle-muensterland.de

Ansprechperson

Birgit Koch

Wir überprüfen unser Handeln permanent auf Nachhaltigkeit. Seit 2010 ist unser Haus mehrfach erfolgreich Green Globe zertifiziert worden. Für uns ist es eine wichtige Unternehmensaufgabe, zur Entlastung der Umwelt beizutragen, unsere Key Achievements findet man daher auf unserer Homepage.

Natürlich werden wir weiterhin Lösungen für unsere Kund*innen anbieten und mit Partnern zusammenarbeiten, um sicherzustellen, dass das Messe- und Congress Centrum Halle Münsterland auch zukünftig ein wirklich nachhaltiges Veranstaltungszentrum ist, dies schlägt sich auch in unserer Nachhaltigkeitsstrategie bis 2030 nieder.

Informationen über unsere umfassenden vergangenen und laufenden Maßnahmen sowie die Nachhaltigkeitsstrategie finden Sie unter folgendem Link: www.mcc-halle-muensterland.de/de/veranstaltende/nachhaltigkeit.

Dr. Maria Näther
Geschäftsführung

Außerschulischer MINT-Lernort für Kinder und Jugendliche



Institution
MExLab ExperiMINTE an der Universität Münster

Website
www.uni-muenster.de/MExLab

Ansprechperson
Biggy-Nadine Wendt



MExLab ExperiMINTE ist ein außerschulischer MINT-Lernort für Kinder und Jugendliche an der Universität Münster. Die inhaltlichen Schwerpunkte stellen neben den MINT-Fachdisziplinen auch interdisziplinäre MINT-Themen, wie Projekte zur Bildung nachhaltiger Entwicklung (BNE) dar, um naturwissenschaftliche Bildung von jungen Menschen mit der Entwicklung von gesellschaftlicher Verantwortung zu vereinen.

Wir verstehen uns als Schnittstelle zwischen den MINT-Schüler*innenlaboren, Fachbereichen und außerschulischen Lernorten der Universität Münster und einem großen Netzwerk an Schulen, Unternehmen, kommunalen Einrichtungen und Vereinen in Münster und darüber hinaus. So ist das MExLab ExperiMINTE auch im BNE-Netzwerk der Stadt Münster vertreten.

Besonders gefragt ist unser Workshop zum Thema Mikroplastik. Kann man Mikroplastik sehen? Wo finden wir es und wie lässt es sich nachweisen? Experimentell entdecken die Teilnehmer*innen zwei Quellen von Mikroplastik, die direkt mit ihrem Alltag zusammenhängen. So lernen sie naturwissenschaftliches Arbeiten (Schwerpunkt Stofftrennung/

Mikroskopie) entlang eines Forschungszyklus mit einem starken Lebensweltbezug kennen.

In offenen Gruppendiskussionen sprechen wir mit den Jugendlichen über zukunftsorientierte Lösungen für das Plastikproblem, die direkt in die praktische Umsetzung einer plastikfreien Alternative zu einem Alltagsprodukt, zum Beispiel die Herstellung eines eigenen Deos, führt. Zusätzlich werden in diesem Sommer wieder mindestens zwei Feriencamps für Jugendliche angeboten. Hier haben alle Teilnehmer*innen die Gelegenheit, sich noch intensiver mit dem Thema Mikroplastik auseinanderzusetzen. So werden unter anderem auch Wasserproben aus dem heimischen Aasee entnommen, untersucht und ausgewertet. Auch eigene plastikfreie Alternativen können hergestellt werden, darunter Bienenwachstücher, Deos und vegane Gummibärchen. Zum Abschluss arrangiert die Gruppe eine kleine Ausstellung, in der sie ihre Forschungsergebnisse und selbsthergestellten Produkte ihren Familien präsentieren können.

Sowohl bei der Herstellung von Plastik als auch bei der Verbrennung von Kunststoffabfällen entstehen große Mengen von klimaschädlichem CO₂. Laut des Deutschen Instituts für Wirtschaftsforschung entfallen auf eine Tonne Plastik daher knapp fünf Tonnen CO₂. Durch die Reduktion beziehungsweise Vermeidung von Plastik kann also viel CO₂ eingespart werden und dies kann dann wiederum einen Beitrag zur Klimaneutralität der Stadt Münster leisten.

U. Brandt

Ulrike Brandt
 Geschäftsführung

Energieeinsparmaßnahmen und Nutzung erneuerbarer Energien



Unternehmen

Mövenpick Hotel Münster

Ansprechperson

Benjamin Sebastian Schäper

Website

<https://movenpick.accor.com/de/europe/germany/muenster/hotel-muenster.html>



Unser Haus wird dieses Jahr sowohl die Lüftungsanlagen in Restaurant und Küche erneuern als auch den Kaltwassersatz (Klimatisierung, Energieoptimierung) für die Bereiche Küche, Restaurant und Bankett-Küche. 2025 werden wir die Beleuchtung in den Sälen 1 bis 3 und in den Pavillon-Räumen umrüsten auf LED (dies ist aktuell nur in einem Teilbereich umgerüstet). Zusätzlich planen wir eine PV-Anlage für unser Haus. Damit würden wir die Grundlast am Tag erheblich entlasten. Einige Angebote liegen uns vor, die gerade geprüft werden.

Patricia Nilsson
General Manager

Erstellung eines Nachhaltigkeitsberichtes



Unternehmen
Peter Rose Garten- und Landschaftsbau GmbH

Website
www.rose-galabau.de

Ansprechperson
Peter Rose



Der Nachhaltigkeitsbericht dient zudem als Kommunikationsmittel, um bei Stakeholdern wie Kund*innen, Investor*innen und der Öffentlichkeit Transparenz zu schaffen, das Engagement für Nachhaltigkeit zu demonstrieren und Vertrauen zu stärken. Mit diesem Bericht bekräftigt die Peter Rose Garten- und Landschaftsbau GmbH ihr Engagement für die Umwelt und leistet einen wesentlichen Beitrag zur Erreichung der Klimaneutralität in Münster.

Das Unternehmen positioniert sich damit zusätzlich als Vorreiter in der grünen Branche.

Die Peter Rose Garten- und Landschaftsbau GmbH, Trägerin des Umwelt-Zertifikats „ÖKOPROFIT Münster“ für das Jahr 2015/2016, intensiviert ihr Engagement im Umweltschutz durch die Erstellung eines umfassenden Nachhaltigkeitsberichts, der dem Unternehmen als detaillierter Transformationsfahrplan dient.

Dieser Bericht definiert klare Nachhaltigkeitsziele und dokumentiert Fortschritte in ökologischer, sozialer und wirtschaftlicher Hinsicht. Er stellt spezifische Maßnahmen und Projekte vor, die direkt zur Klimaneutralität beitragen, einschließlich der Einführung umweltfreundlicher Arbeitsmethoden und Materialien, der Schulung von Mitarbeitenden und der Bildung von Partnerschaften mit lokalen Akteur*innen zur Förderung des Umweltbewusstseins, beispielsweise durch eine angestrebte Ressourcenreduktion.

Peter Rose
Geschäftsführung

Installation von Solar-Trackern zur Energieerzeugung



Unternehmen

Ratiodata SE

Website

www.ratiodata.de

Ansprechperson

Nadine Hube



Die Ratiodata plant im Jahre 2024 vier Solar-Tracker zur Energieerzeugung auf dem Parkplatz am Gustav-Stresemann-Weg 29 in Münster errichten und installieren zu lassen. Das Projekt zielt darauf ab, eine nachhaltige Energiequelle zu schaffen und die optimale Nutzung von Solarenergie zu ermöglichen. Die Solar-Tracker werden mit hocheffizienten Photovoltaikmodulen ausgestattet, die sich nach der Sonne ausrichten, um eine maximale Sonneneinstrahlung zu gewährleisten. Ein intelligentes Steuerungssystem überwacht die Bewegung der Sonne und steuert die Ausrichtung der Solar-Tracker entsprechend. Die vier Solar-Tracker sollen dabei mind. 60 GWh und damit ca. 10 % des Eigenverbrauchs der Ratiodata mithilfe der Sonnenenergie erzeugen können. Dadurch treibt die Ratiodata den Ausbau der erneuerbaren Energien in Deutschland mit voran. Sollte die Pilotphase erfolgreich verlaufen, sollen vier weitere Solar-Tracker installiert werden.

Klemens Baumgärtel
Vorstandsmitglied

Beteiligung am Ausbau der erneuerbaren Energien



Unternehmen
Schoenergie GmbH

Website
www.schoenergie.de

Ansprechperson
Martin-John Kortmüller



Wir sind ein Unternehmen welches Photovoltaik-Anlagen mit Batteriespeicher-Systemen und Ladeinfrastruktur für Privat-, Gewerbe- und Industriekunden hier in Münster anbietet und schlüsselfertig baut. Zusätzlich wird die vollständige Entwicklung und der Betrieb von Photovoltaik Freiflächen-Anlagen im Raum Münster, realisiert. Somit ist es möglich durch in Münster und Umgebung installierte Photovoltaik-Anlagen, erneuerbare Energie zu erzeugen, direkt vor Ort zu verbrauchen und lokal zu vermarkten. Für 2024 ist es das Ziel, Photovoltaik-Anlagen mit einer Leistung von ca. 1.300 kWp zu installieren. Die erzeugte Strommenge entspricht ca. 1,170 Mio. Kilowattstunden Solarstrom und somit eine Reduktion der fossilen Stromerzeugung und eine Einsparung von ca. 930 Tonnen CO₂.

Als familiengeführtes Unternehmen Schoenergie mit Sitz in Föhren bei Trier, verfolgen wir die Vision und das Leitmotiv jedem Bürger erneuerbare Energie verfügbar zu machen. Ca. 300 Mitarbeiter*innen übernehmen täglich die Aufgabe Kund*innen für Photovoltaik-Anlagen zu beraten, Anlagen zu planen und zu bauen. Von der kleinen Einfamilienhaus PV-Anlage bis zum 214 Megawatt Kraftwerk (Südeifel) kommt alles aus einer Hand. Vor diesem Hintergrund ist es dem Unternehmen wichtig, einen wertvollen Beitrag zur Energiewende beizutragen.

Außerdem werden auch die Arbeitsprozesse und Anlagen des Unternehmens klimafreundlich transformiert:

- Im Januar wurde auf dem Dach der Niederlassung in Münster eine 50 kWp Photovoltaik-Anlage installiert.
- Ergänzend eine Ladeinfrastruktur mit fünf Wallboxen.
- Zum Einsatz kommt ebenso eine Steuerung, welche ein öko-dynamisches Laden ermöglicht.
- Der Fahrzeugpark besteht, nach einer konsequenten Abkehr von Verbrennerfahrzeugen aus vier E-Fahrzeugen und zwei Hybridfahrzeugen.
- Ein weiterer Austausch von Verbrennerfahrzeugen findet in diesem Jahr statt. Durch den Einsatz der Photovoltaik-Anlage wird es möglich sein, den größten Anteil des Strombedarf des Betriebs, der Fahrzeuge, sowie weiterer Mieter des Areals, zu decken.

Ergänzend unterstützt die öko-dynamische Steuerung die priorisierte Nutzung des durch die Photovoltaik-Anlage erzeugten Stroms. Diese Maßnahmen führen zu einer erheblichen Einsparung von CO₂-Emissionen sowie einer entsprechenden Entlastung des Versorgernetzes.

Erik Schöller
Geschäftsführung

Möglichkeitsraum für eine nachhaltige Zukunft



Unternehmen
S!NN – Münsters Kongress für Soziale Innovationen

Ansprechperson
Michael Kortenbrede

Website
www.sinn-kongress.de

S!NN Münsters Kongress für Soziale Innovationen



Eine zukunftsfähige Gesellschaft ist eine sozial gerechte und ökologisch tragfähige Gesellschaft. Sie überwindet die vielfältigen, sich gegenseitig verstärkenden Krisen unserer Zeit. Sie erreicht Engagement, Kreativität und einen tiefgreifenden Wandel unserer Lebens- und Wirtschaftsweise.

S!NN – Münsters Kongress für Soziale Innovationen – lädt Münsteraner*innen dazu ein, diese Zukunftsfähigkeit zu diskutieren. Gemeinsam mit Expert*innen und Multiplikator*innen geht S!NN der Frage nach, welche Rolle Soziale Innovationen für die vielfältigen und zwingend notwendigen Veränderungen zur sozial-ökologischen Transformation spielen und wie wir

diese erreichen können. S!NN bedeutet, mit Neugier, Optimismus, Konstruktivität und Lernbereitschaft eigene Schritte zu gehen. Kritisch und selbstreflexiv, aber immer wertschätzend und neugierig auf Veränderung. Von Wirtschaftsverbänden über Politik und Wissenschaft bis hin zu NGOs – gemeinsam zuhören und diskutieren, voneinander lernen und sich gegenseitig inspirieren. Mit Keynotes, Panel-Talks und interaktiven Workshops. Mit großzügigen Vernetzungslandschaften, mit Kunst & Kultur und in Selbstlernräumen. S!NN ist kein Kongress wie jeder andere. S!NN ist ein Möglichkeitsraum für eine nachhaltige Zukunft. Mit dem S!NN-Kongress vernetzen wir Menschen, die sich die ökosoziale Transformation zur Aufgabe gemacht haben. Von Wirtschaft und Wissenschaft über Politik bis hin zur engagierten Zivilgesellschaft – wir bringen alle zusammen, die mit Neugier und Optimismus an nachhaltigen Lösungen für unsere Zukunft arbeiten. Positive Beiträge zur Klimaneutralität müssen von der Gesellschaft getragen werden. Veranstaltungen wie der S!NN-Kongress sorgen dafür, dass Menschen und Organisationen mitgenommen werden. Sie sind der Nährboden, sie machen mehrheitsfähig und wirken in den Alltag hinein. Hier entstehen Lösungen für den Wandel zur klimaneutralen Stadt. Nicht in einer akademischen Blase, sondern in der Mitte der Gesellschaft.

Björn Fischer
Geschäftsführender Gesellschafter

CO₂-Reduktionen, Nachhaltigkeitsberatung und Förderung von Klimaschutzprojekten



Unternehmen
Sparkasse Münsterland Ost

Website
www.sparkasse-muensterland-ost.de

Ansprechperson
Sebastian Pähler



konzept, die Installation eigener Photovoltaikanlagen oder die Zertifizierung als „Ökoprot-Betrieb“, wirken und sparen CO₂-Emissionen ein. Unsere Klimabilanz zeigt Potenzial vor allem beim Bezug von Wärme.

Das Augenmerk legen wir daher künftig auf die energetische Verbesserung der Gebäudesubstanz unserer BeratungsCenter, Filialen und übrigen Standorte. Deshalb haben wir gemeinsam mit einer Energieberatungsgesellschaft aus Münster den Ist-Zustand bewertet und einen Fahrplan zur Verbesserung der Energiebilanz unseres Gebäudebestandes entwickelt. In 2024 wird die Sparkasse auf dieser Basis damit beginnen, die Energieeffizienz ihrer Immobilien schrittweise mit einem Sanierungsprogramm zu verbessern und den CO₂-Fußabdruck weiter zu minimieren.

Die Sparkasse Münsterland Ost zählt zu den Großsparkassen in Deutschland. Die Nähe zu ihren Kundinnen und Kunden zeichnet sie aus. Vertrauen und Verlässlichkeit sind die Leitplanken ihres Handelns.

Sparkasse Münsterland Ost – aktiv für den Klimaschutz vor Ort in Münster

Die Sparkasse Münsterland Ost versteht es als ihre Aufgabe, die Menschen und die Wirtschaft in ihrem Geschäftsgebiet mit ihren Produkten und Dienstleistungen, ihrem gesellschaftlichen Engagement und ihrem unternehmerischen Handeln auf dem Weg zu mehr Nachhaltigkeit und zu einen besseren Klimaschutz zu unterstützen.

CO₂-Abbau im Geschäftsbetrieb durch erneuerbare Energien und energetische Sanierung

Deshalb engagieren wir uns dafür, den ökologischen Fußabdruck unseres Geschäftsbetriebes so weit wie möglich zu verringern. Maßnahmen wie die Umstellung auf 100 % Ökostrom, ein nachhaltiges Mobilitäts-

Kundinnen und Kunden auf ihrem Transformationspfad begleiten

Als Finanzdienstleistungsunternehmen können wir den wirkungsvollsten Beitrag zum Klimaschutz im Geschäft mit unseren Kundinnen und Kunden vor Ort leisten. Vor allem, indem wir Finanzmittel für klimafreundliche Investitionen bereitstellen – von der energetischen Sanierung privater Wohnhäuser bis hin zur Transformation ganzer Geschäftsmodelle unserer gewerblichen Kundinnen und Kunden. Neben der Vergabe von Krediten und der Vermittlung öffentlicher Fördergelder setzen wir dabei verstärkt auf die Sensibilisierung und Beratung rund um Fragen der Nachhaltigkeit.

Mit einer eigenen Nachhaltigkeitskampagne „Wirtschaftswende. Hier und Jetzt.“ haben wir im letzten Jahr mit großer Außenwirkung und mehr als 1.000 Einzelgesprächen die Nachhaltigkeitsberatung

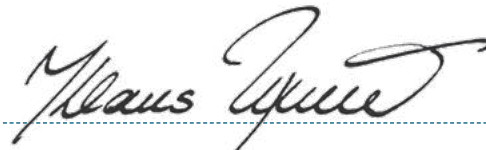
Fortsetzung des Beitrags folgt hier:

gewerblicher Kundinnen und Kunden forciert. Zu unseren aktuellen Top-Beratungsthemen gehören unter anderem die Umstellung auf regenerative Energien, die betriebliche CO₂-Messung, E-Mobilität und energetisches Bauen/Sanieren. In 2024 werden wir die Kampagne wiederholen und unser Nachhaltigkeitsangebot weiter ausbauen: etwa mit einer Nachhaltigkeitssoftware für mittelständische Unternehmen oder durch Kooperationen mit lokalen Netzwerkpartnern zum Beispiel im Bereich Energieberatung oder PV-Anlagentechnik.

Förderaktion „gemeinsam nachhaltig“ mit Klima-Sonderpreis

Mit der Förderaktion „gemeinsam nachhaltig“ unterstützt die Sparkasse in 2024 erneut gemeinnützige Vereine und Initiativen dabei, nachhaltige Ideen Wirklichkeit werden zu lassen. Dafür stehen insgesamt 100.000 Euro zur Verfügung. Gemeinnützige Organisationen bewerben sich im Aktionszeitraum über www.gemeinsam-nachhaltig.org mit ihrem Nachhaltigkeitsprojekt. In der anschließenden öffentlichen Votingphase geht es dann darum, das eigene Projekt bekannt zu machen. Wer 100 Stimmen und mehr erreichen konnte, darf sich bereits über eine Grundförderung von 500 Euro freuen. Eine Fachjury kann die Finanzspritze anschließend auf bis zu 5.000 Euro je Projekt erhöhen. Wegen der besonderen Bedeutung des Klimaschutzes lobt die Sparkasse auch in diesem Jahr zusätzlich einen Klima-Sonderpreis aus. Weitere Infos gibt es online ab Mitte April, die Aktion startet im August.

CO₂-Reduktion im Geschäftsbetrieb, Transformationsberatung von Kundinnen und Kunden und die gezielte Förderung von ehrenamtlichen Klimaschutzprojekten – mit diesem Maßnahmen-Trio leistet die Sparkasse Münsterland Ost ihren Beitrag zum Klimastadt-Vertrag.



Klaus Richter

Vorstandsvorsitzender

Energetische Sanierung und Konzept zur Klimaneutralität



Institution

Studierendenwerk Münster AöR

Website

www.stw-muenster.de

Ansprechperson

Catharina Calvez



Studierendenwerk Münster

Transformationsziel

Wir wollen bis 2030 klimaneutral sein.

1. Umstellung auf LED im Hotel Seezeit und im Wohnheim Bismarckallee 47a (2024). Insgesamt wird das gesamte Studierendenwerk zeitnah auf LED umstellen (Tausch der Leuchtmittel bzw. Leuchten nur bei Defekten).
2. Energetische Sanierung des Wohnheims Gescherweg 50–64: Es wird eine neue Heizungsanlage (bisher steht dort ein BHKW), sowie ein neues Dach, neue Fenster und eine neue Fassade verbaut (Baubeginn voraussichtlich 2025).
3. Implementierung eines durch externe Unterstützung begleiteten Prozesses hin zur Klimaneutralität mit weiteren konkreten Maßnahmen über die folgenden Jahre.

Dr. Christoph Holtwisch

Geschäftsführung

Energie- und Ressourcensparen in den Märkten



Unternehmen
SuperBioMarkt

Website
www.superbiomarkt.de

Ansprechperson
Linus Weistropp



Für uns ist Energiesparen und ein ressourcenschonender Umgang seit jeher in unserer DNA fest verwurzelt.

Um den Stromverbrauch zu senken, haben wir in den vergangenen Jahren nahezu die komplette Beleuchtung in sämtlichen unserer Märkte auf sparsame LED-Technik umgestellt. Darüber hinaus setzen wir – seit es möglich ist – konsequent auf Öko-Strom. Bereits vor über zehn Jahren ging unsere erste eigene Photovoltaikanlage in Betrieb. Den Ausbau „unserer“ Solaranlagen werden wir weiterhin durch die Intensivierung der Gespräche mit Objekteigentümer*innen forcieren.

Das mit Abstand größte Einsparpotenzial bietet jedoch die Kältetechnik. Wir haben die offenen Kühlregale mit Glasdreh Türen nachgerüstet, versuchen die Kühlkapazitäten bedarfsgerecht zu planen, um Überdimensionierungen zu vermeiden und tauschen Altgeräte konsequent gegen effizientere Technik aus. Gute Erfahrungen haben wir mit smarten Timern für Lüftungs- und Klimaanlage sowie CO₂-Fühlern gemacht, die eine bedarfsgesteuerte Lüftung ermöglichen.

Unseren Mitarbeitenden bieten wir ein JobRad an und wir nehmen sie bei unserem ambitionierten Vorhaben mit und motivieren sie, Ideen für noch mehr Effizienz mit uns zu teilen.

Mit einer smarten zum Teil KI-basierten Anbauplanung möchten wir – wo möglich - der Vermeidung von Lebensmittelverschwendung schon am Anfang der Kette begegnen. Auch zur Planung unserer Bestellungen setzen wir vermehrt auf Unterstützung durch Technik. „Food Tracks“ wird uns zukünftig bei der Planung und dem Bestellwesen helfen. Wir gehörten zu den ersten, die mit „toogoodtogo“ und Lebensmittelretter*innen nicht verkaufte, noch gute, Lebensmittel retten.

Michael Radau
Geschäftsführung

Handwerkshöfe als Plattform für zirkuläre Wertschöpfung



Unternehmen
Sustina AG

Website
www.sustina.ag

Ansprechperson
Fabian Bergfort



Wir setzen uns dafür ein, dass zirkuläre Handwerkshöfe in Münster entstehen und treiben damit die regionale Kreislaufwirtschaft voran. Das Projekt soll außerdem dazu beitragen, Menschen für das Handwerk zu begeistern und die urbane Produktion in Münster zu fördern. Der interdisziplinäre Wissensaustausch und die Schaffung von Synergien durch Zusammenarbeit sind wichtige Aspekte der Handwerkshöfe. Mit Sharing-Angeboten für Werkzeuge, Arbeits- und Geschäftsräume sowie mit einer geteilten administrativen Unterstützung, kann ein attraktives Angebot für Handwerker*innen geschaffen werden. So können Kosten gespart und Ressourcen effizienter genutzt werden.

Auch ein integrierter Baumarkt für gebrauchte und aufbereitete Baumaterialien soll Teil des Konzepts sein, um die Kreislaufwirtschaft im Sinne der zirkulären Ansätze Cradle To Cradle (C2C) und Urban Mining voranzubringen.

Bei C2C geht es darum, Materialien von Anfang an im Produktdesign sowie im Nutzungszyklus so einzusetzen, dass sie am Ende ihres Lebenszyklus wieder in den entsprechenden Materialkreislauf zurückgeführt werden können. Beim Urban Mining geht es darum, die bereits im Umlauf befindlichen Materialien weiter im Kreislauf zu halten und möglichst sinnvoll weiter zu nutzen, statt sie zu Müll werden zu lassen.

Letztlich soll ein Wissenstransfer zu diesen Konzepten die Zirkularität im Handwerk nicht nur fördern, sondern auch befähigen. Dieser Ort hat das Potenzial, eine starke Wirkung im Rahmen der gesamtstädtischen Kreislaufstrategie für Münster zu entfalten, indem von dort aus auch kommunale Material- und Stoffströme von der öffentlichen Hand organisiert werden können. Insgesamt bieten die Handwerkshöfe eine inspirierende Plattform für zirkuläre Wertschöpfung. So können der schonende und zirkuläre Umgang mit Ressourcen sowie der interdisziplinäre Wissensaustausch gefördert werden.

Fabian Bergfort
CEO & CO-Founder

Förderung von sozial-ökologischen Innovationen



Institution
TAFH Münster GmbH / FH Münster

Website
www.fh-muenster.de

Ansprechperson
Timo Adiek



© Frederik Tebbe (FH Münster)

wir eine breite Zielgruppe von Studierenden, Lehrenden, Social Start-Ups, Projekten, Zivilgesellschaft, Unternehmen und weiteren Organisationen und tragen zur Steigerung des Bewusstseins für Umwelt- und Klimaschutzthemen bei. Diese Maßnahmen zielen darauf ab, nicht nur Wissen zu vermitteln, sondern auch zur aktiven Teilnahme am Klimaschutz zu motivieren und zu inspirieren.

Transformationsfahrplan – Integration von SEE in die Lehre

Unser Transformationsfahrplan beinhaltet die feste Verankerung von SEE in den Curricula der Münsteraner Hochschulen. Ziel ist die Entwicklung eines hochschul- und fachbereichsübergreifenden Lehrangebots zu Social Entrepreneurship. Derzeit sind die FH Münster, die Universität Münster und die Katholische Hochschule NRW Abt. Münster mit insgesamt acht curricularen Angeboten beteiligt. Um die Zusammenarbeit zwischen Hochschulen, Praxispartner*innen und Zivilgesellschaft zu organisieren, hat sich in Münster ein Social Entrepreneurship Lehrkollektiv gegründet. Einmal pro Semester tauschen sich Lehrende und Studierende der Münsteraner Hochschulen sowie viele weitere Vertreter*innen des Gründungsökosystems wie beispielsweise die TAFH Münster GmbH, REACH – EUREGIO Start-up Center oder Social Impact Münster e.V. aus, um die gemeinsame Lehre und das Netzwerk weiterzuentwickeln.

Social Entrepreneurship Education:

Social Entrepreneurship Education (SEE) an der FH Münster, Universität Münster und der Katholischen Hochschule NRW Abt. Münster stellt ein ambitioniertes Projekt dar, das einen Beitrag zur Klimaneutralität der Stadt leisten möchte. Durch die Einbindung von SEE in die akademische Ausbildung fördern wir aktiv die Entwicklung und Realisierung von sozialökologischen Geschäftsideen und Initiativen. Die Teilnehmenden erlernen dabei, gesellschaftliche Herausforderungen nicht nur nachhaltig und unternehmerisch, sondern auch systemisch zu bewältigen. Ein besonderer Fokus liegt auf der Verknüpfung und Abwägung der ökologischen, sozialen und ökonomischen Nachhaltigkeit.

Öffentlichkeitsarbeit und Bewusstseinsbildung durch Bildungsangebote

Ein zentraler Aspekt unseres Engagements ist die Sensibilisierung und Bildung der Öffentlichkeit im Bereich des Klimaschutzes. Durch Workshops, Seminare und Vorträge im Rahmen des SEE-Programms erreichen

Transformationsprojekt – Diversität und Transdisziplinarität

Die Realisierung sozial-ökologischer Innovationen erfordert die Einbeziehung der von sozialökologischen Problematiken betroffenen Zielgruppen.

Fortsetzung des Beitrags folgt hier:

Aktuell sind diese durch die Studierenden der verschiedenen Hochschulen nur teilweise vertreten. Ein Ziel des SEEProgramms ist daher die Ausweitung der Beteiligung verschiedener Zielgruppen. Momentan sind zahlreiche Verbände, Unternehmen und andere Organisationen in die Lehre eingebunden. Ziel für die nächsten zwei Jahre ist es, die Beteiligung von Bürger*innen, Stadtverwaltung und weiterer Zielgruppen zu intensivieren, um das Lehrformat zu einem Ort des vielfältigen und transdisziplinären Austauschs zu entwickeln.



Timo Adiek
Bevollmächtigte Person



Umfassende Nachhaltigkeitsstrategie

Institution
Universität Münster

Website
www.uni-muenster.de

Ansprechperson
Nico Schäfer



Die Universität Münster begreift Nachhaltigkeit als eine verbindende Leitidee, die durch alle Angehörigen der Universität getragen wird. In ihrer Rolle als Wissenschafts- und Bildungseinrichtung sowie als integraler Bestandteil des gesellschaftlichen Lebens übernimmt die Universität Verantwortung für die ökologischen, sozialen und ökonomischen Dimensionen ihres Handelns. Als international ausgerichteter Wissenschafts-, Studien- und Arbeitsort sieht die Universität Münster nachhaltiges Handeln als Ausdruck ihrer globalen Verantwortung im Sinne einer zukunftsfähigen Gestaltung unserer Gesellschaft und des Erhalts der natürlichen Lebensgrundlagen. Die Universität Münster orientiert sich dabei an dem umfassenden Verständnis von Nachhaltigkeit, das in den Sustainable Development Goals (SDGs) der Vereinten Nationen und den Zielen des Pariser Klimaabkommens festgehalten ist. Nachhaltigkeit wurde daher in den Organisationsstrukturen der Universität Münster über die Stabsstelle Nachhaltigkeit sowie das Prorektorat „Internationales, Transfer und Nachhaltigkeit“ verankert und zu einem wesentlichen Bestandteil der Universitätskultur. Die gesamtuniversitäre Nachhaltigkeitsstrategie formuliert als Rahmen gemeinsame und übergreifende Ziele für die Universität.

Nachhaltigkeit und Klimaschutz in Betrieb und Administration

In ihrer Nachhaltigkeitsstrategie hat sich die Universität Münster das Ziel gesetzt, Nachhaltigkeit als ein handlungsleitendes Kriterium in den betrieblichen Abläufen und Entscheidungen im eigenen Einflussbereich zu integrieren. Im Fokus steht dabei ein ressourcenschonender Betrieb der Infrastruktur mit dem Ziel

der Klimaneutralität. Deshalb bezieht die Universität bereits seit 2009 Ökostrom und optimiert durch ein zentrales Energiemanagement den gesamtuniversitären Energieverbrauch stetig. Daneben wurden in den letzten Jahren sukzessive infrastrukturelle Maßnahmen umgesetzt (Sanierung von Fernwärmeleitungen, LED-Umrüstung, Installation von Wärmepumpen, etc.). Weiterhin wurden Nutzer*innen am Campus durch Energiesparkampagnen für einen bewussten Umgang mit Energie sensibilisiert. Auch organisatorische Maßnahmen wie eine Betriebsruhe wurden in den Wintern 2022/2023 und 2023/2024 erfolgreich eingeführt. In den nächsten Jahren plant die Universität die Bemühungen im Bereich Photovoltaik-Ausbau und Mobilitätsmanagement weiter zu intensivieren. Gleichzeitig soll bis 2026 ein integriertes Klimaschutzkonzept für die Universität erstellt werden.

Forschung & Lehre

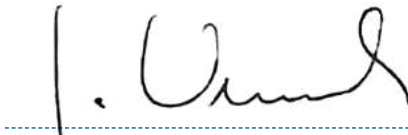
Die Wissenschaftlerinnen und Wissenschaftler der Universität Münster erarbeiten gemeinsam Lösungen für die komplexen Herausforderungen der Gegenwart und leisten damit unter anderem auch einen Beitrag zur klimaneutralen und nachhaltigen Transformation der Gesellschaft. In aktuell vier Impact Areas verbindet die Universität Münster disziplinäre Stärken und Ressourcen für interfakultäre und interdisziplinäre Spitzenforschung mit gesellschaftlichem Impact. Die Impact Area „Sustainable Futures“ bündelt dabei unter anderem Forschungsprojekte im Bereich Battery Research, Biopolymers sowie inter- und transdisziplinäre Forschung im Bereich „Exploring and Shaping Sustainability“. Darüber hinaus nimmt das Zentrum für interdisziplinäre Nachhaltigkeitsforschung (ZIN) als zentrale wissenschaftliche Einrichtung der Uni-

Fortsetzung des Beitrags folgt hier:

versität die Funktion wahr, Nachhaltigkeitsforschung, -lehre und -transfer fachbereichsübergreifend zu ermöglichen und zu vernetzen. Die Universität Münster versteht Nachhaltigkeit als ein wesentliches Element der Lehre und baut ihr Lehr- und Weiterbildungsangebote stetig aus.

Transfer

Transfer definiert die Universität Münster als Übernahme ihrer zivilgesellschaftlichen Verantwortung in allen Gesellschaftsbereichen. Um diesem Anspruch gerecht zu werden, tritt die Universität Münster in den intensiven Austausch mit gesellschaftlichen Akteur*innen. Transferaktivitäten unter dem Gesichtspunkt der Nachhaltigkeit sind am Gemeinwohl orientiert und liefern einen Beitrag zur partizipativen (Weiter-)Entwicklung der Gesellschaft hin zu einer sozial-ökologisch nachhaltigen Lebensweise. Mit ihrem Transfer leistet die Universität Münster einen Beitrag, Bildung für Nachhaltige Entwicklung auch außeruniversitär zu vermitteln. Ein zentrales Instrument hierfür ist der jährlich stattfindende Nachhaltigkeitstag (Campus Earth) der Universität. Weitere Informationen erhalten Sie unter: www.uni-muenster.de/profil/nachhaltigkeit/strategie/index.html



Prof. Dr. Johannes Wessels
Rektor

Klimaschutz in der Universitätsmedizin



Institution
Universitätsklinikum Münster (UKM)

Website
www.ukm.de

Ansprechperson
Lucienne Usztics



Das UKM hat sich im Rahmen der Nationalen Klimaschutzinitiative und mit einer Förderung durch das Bundesklimaschutzministerium auf den Weg gemacht ein Klimaschutzkonzept für das UKM zu erstellen. Dieses sieht vor, den Ist-Zustand der Energieverbräuche und Treibhausgasemissionen zu erheben, Potentiale zu ermitteln, Ziele, Strategien und Handlungsfelder zu definieren, konkrete Klimaschutzmaßnahmen auszuarbeiten, aufzuzeigen wie Akteure und Akteurinnen einbezogen werden können und wie die Verstetigung, das Controlling sowie die Kommunikation im Klimaschutzmanagement erfolgen sollte. Finale Ziele sind es ein Klimaschutzmanagement aufzubauen, Klimaschutz in der Unternehmenskultur zu verankern und nationale sowie lokale Klimaschutzziele zu unterstützen.



Dr. Christoph Hoppenheit
Kaufmännischer Direktor

Nachhaltigkeitsstrategie mit jährlicher Berichterstattung



Unternehmen
Volksbank im Münsterland eG

Website
www.vbml.de

Ansprechperson
Esther Höggemann



Wir betrachten das Feld der Nachhaltigkeit als essenziellen Bestandteil unserer Geschäftsstrategie. Angetrieben durch die Verantwortung gegenüber unseren Mitgliedern, haben wir bereits 2020 angefangen unseren Beitrag für eine nachhaltige und lebenswerte Entwicklung der Region zu leisten.

Die Nachhaltigkeitsstrategie der Volksbank im Münsterland konzentriert sich auf die Felder Umwelt (Environment), Soziales (Social) und Unternehmensführung (Governance). Folgende Maßnahmen wurden unter anderem bereits umgesetzt:

Umwelt (Environment)

- Für Mitglieder kostenfreie E-Ladesäulen
- Umstellung des Fuhrparks auf E-Mobilität
- Nutzung von 100% Ökostrom
- Initiator zur Gründung einer Bürgerwaldgenossenschaft für das Münsterland
- Angebot an Finanzierungs- und Anlagemöglichkeiten mit Nachhaltigkeitsbezug
- Einsatz von recyceltem PVC bei Girocards

Soziales (Social)

- Internes Projekt zum Thema „Chancengerechtigkeit“
- Trainee- und Nachwuchsführungsprogramme
- Angebot von mobilem Arbeiten

- Breites Angebot an Mitarbeiterbenefits und Präventionsangebote
- Spenden, Sponsoring und eigene Crowdfundingplattform für die Region

Unternehmensführung (Governance)

- Berücksichtigung von Nachhaltigkeitschancen und -risiken bei Entscheidungen
- Verpflichtung von Lieferanten zu ökologischen und sozialen Standards
- Nachhaltigkeitsquoten bei den Eigenanlagen.

Detaillierte Ausführungen der Nachhaltigkeitsbemühungen finden sich im jährlichen Nachhaltigkeits- und Geschäftsbericht (<https://jahresbericht.vbmn.de>).

Friedhelm Beuse
Mitglied des Vorstands

Esther Höggemann
Referentin Nachhaltigkeitsmanagement

Umfangreiche Klimamaßnahmen in vielen Bereichen



Unternehmen
WEICON GmbH & Co. KG

Website
www.weicon.de

Ansprechperson
Henning Voß



Verantwortungsvoller Umgang mit Energie

- Unser Hauptsitz in Münster nutzt seit Anfang 2022 ausschließlich Ökostrom.
- Zusätzlich befinden sich auf einem Großteil unserer Gebäude Photovoltaikanlagen.
- Eine weitere Photovoltaikanlage (ca. 1000 m²) wird auf einer neuen geplanten Lagerhalle installiert.
- Fast alle Bereiche sind mit LED-Beleuchtung und Bewegungsmeldern ausgestattet und die Betriebszeiten werden kontinuierlich optimiert.
- Energieeffiziente Gebäude und Einsatz von energieeffizienten Geräten.
- Durch flexible Arbeitszeitgestaltungen (Homeoffice) Vermeidung von Arbeitswegen.

Klimaneutralität

- WEICON Hauptsitz in Münster klimaneutral (durch Optimierungen intern und Klimazertifikate für Ausgleich unvermeidlicher Verbräuche).
- 3-Jahres Projekt mit FH Münster zur weiteren Aufstellung und möglichen Verbesserungen im Bereich Nachhaltigkeit für WEICON Münster und weltweit.

Fahrrad-Leasing & E-Mobilität

- Bike-Leasing- Angebot für unsere Mitarbeitenden.
- 15 E-Ladesäulen für Mitarbeitende und die eigene Fahrzeugflotte in Deutschland, wo wir vermehrt auf E-Antrieb setzen.

Produkte

- Unsere Werkzeuge werden seit Anfang 2020 in recyclefähige Umverpackungen verpackt. Dadurch sparen wir im Jahr mehr als sechs Tonnen Kunststoff ein.
- Bei unserer Green Line Werkzeugreihe verzichten wir komplett auf konventionellen Kunststoff und produzieren sie stattdessen aus sogenanntem Biopolymer – einem Biokunststoff. Die Werkzeuge bestehen aus bis zu 97 % nachwachsenden und natürlichen Rohstoffen.
- Die Green Line wird wie all unsere Werkzeuge in Deutschland hergestellt.

Weitere Projekte

- Digitalisierung von vielen Prozessen im Betrieb (Papiereinsparung)
- Regenwasserzisterne zur Speicherung von Wasser; Einbau von speziellen Perlatoren zur Verringerung von Wasserverbräuchen
- Akkus statt Einmal-Batterien im gesamten Standort
- FSC-zertifizierte Papierhandtücher
- Verzicht auf Werbemittel, alternativ jährliche Spenden an soziale Projekte (lokal und international)
- Eigene rein vegetarische Kantine für Mitarbeitende und benachbarte Firmen

Ann-Katrin Weidling
Geschäftsführung

Klimafreundliche Angebote und weitere Maßnahmen



Unternehmen
Westfalen AG

Website
www.westfalen.com

Ansprechperson
Christin Wessels



Westfalen

Transformationsziel
Wir wollen bis 2045 klimaneutral sein.

Als Familienunternehmen denken wir seit jeher in Generationen und übernehmen Verantwortung für die Gesellschaft. Dabei stellen wir uns auch gesellschaftlichen Herausforderungen und treiben eine nachhaltige Entwicklung voran. Nachhaltigkeit ist für uns Teil der Unternehmensstrategie, mit derer wir uns am Markt verstärkt differenzieren wollen. Dabei verfolgen wir das Ziel, unsere Kund:innen auf dem Weg zu nachhaltigem Fortschritt mit unseren Produkten und Dienstleistungen zu unterstützen.

So gestalten wir als Westfalen-Gruppe aktiv die Mobilitätswende mit. Dabei gehen wir technologieoffen vor und investieren in verschiedene zukunftsfähige Antriebsenergien wie Bio-CNG und -LNG, Wasserstoff und E-Mobilität. Gerade an unserem Unternehmenssitz in Münster bauen wir das Angebot von alternativen Antriebsenergien für unsere Kund:innen an unseren Tankstellen stetig aus. CO₂-neutrale Wäschensysteme runden das Angebot im Mobilitätsmarkt ab, wodurch wir weitere Emissionen einsparen.

Auch im Wärmemarkt treiben wir die Energiewende voran: Wir bieten neben biogenen Flüssiggas die Planung, Installation und Wartung von Wärmepumpen für Haushalte und Gewerbe an und begleiten so unsere Kund:innen durch die Wärmewende.

Aber auch an unseren eigenen Standorten versuchen wir, unsere Treibhausgase zu reduzieren: Durch unsere zertifizierten Umwelt- und Energiemanagementsysteme gehen wir unsere Auswirkungen auf die Umwelt systematisch an und versuchen, diese so gering wie möglich zu halten. Unsere Werke in Deutschland

werden mit Grünstrom betrieben, außerdem haben wir die ersten Photovoltaik-Anlagen installiert. Durch die Sanierung unseres Hauptgebäudes an unserem Firmensitz in Münster reduzieren wir den Wärmeverbrauch auch im Verwaltungsbereich und vermeiden somit weitere Emissionen. Zusätzlich sind wir dabei, unseren Fuhrpark mehr und mehr zu elektrifizieren.

Nicht nur in unserem Tun und bei unseren Produkten haben wir begonnen, nachhaltiger zu handeln. Wir als Westfalen Gruppe denken heute schon an morgen – und dabei sind unsere Jüngsten uns besonders wichtig. So haben wir eine eigene Bildungsinitiative ins Leben gerufen, in welcher wir MINT-Fächer an Schulen durch Projekte fördern, um für eine Nachhaltige Entwicklung bereits in jüngeren Jahren zu sensibilisieren. In einem jährlichen Ideenwettbewerb entwickeln Schüler:innen aus Münster Ideen zu Themen wie Mobilität/Wärme der Zukunft.

Ebenfalls Teil der Bildungsinitiative ist die Partnerschaft mit dem Fachbereich EGU (Energie/Gebäude/Umwelt) der Fachhochschule Münster. Die Zusammenarbeit mit dem Fachbereich EGU umfasst auch den technischen Bereich, insbesondere im Kontext der strombasierten Wärme. Westfalen fördert eine Forschungsgruppe, die sich vor dem Hintergrund der Wärmewende mit effizienter Wärmeplanung für Unternehmen und Kommunen befasst. Gemeinsames Ziel ist es, die Attraktivität des Standortes Münster als Wissenschafts- und Wirtschaftszentrum im Bereich Erneuerbare Energien, Bioenergie und effiziente und nachhaltige Wärmeversorgung zu steigern.

Fortsetzung des Beitrags folgt hier:

Zusätzlich haben wir letztes Jahr die Nachhaltigkeitsinitiative für unsere Auszubildenden unter dem Namen „Youth Lab: Let’s do future!“ ins Leben gerufen, in welcher unsere Auszubildenden zu Nachhaltigkeit sensibilisiert und eigene Projekte mit Nachhaltigkeitsfokus durchführen.



Dr. Thomas Perkmann
Vorstandsmitglied



Christin Wessels
Nachhaltigkeitsmanagerin

Energiesparmaßnahmen und smarte Lösungen



Unternehmen

Westdeutsche Lotterie GmbH & Co. OHG

Website

www.westlotto.de

Ansprechperson

Dr. Roman Kersting



1. Austausch der Hardware am Point-of-Sale (Terminals) und Abschaffung von DIN A4-Druckern in allen Lotto-Aannahmestellen. Ersatz der druckerbasierten Prozesse durch digitale Lösungen und Digital-Signage-Technik anstatt Informationsträgern auf Papier (reduzierte Logistik).
2. Weiterer Ausbau der Photovoltaik-Anlage auf 240 kWp (Kilowatt-Peak)
3. Austausch von Altanlagen im Gebäude (zum Beispiel Verteiler, Lüftungen)
4. Weiterer Ausbau der Infrastruktur für E-Mobilität, Fahrrad und ÖPNV-Nutzung
5. Temperaturanpassung in den Rechenzentren
6. Abbau von IT-Infrastruktur (zum Beispiel Virtualisierung; Cloud-Lösungen)
7. Weiterentwicklung der Gebäudeleittechnik zur effizienteren Steuerung von
8. Gebäudeinfrastruktur-Komponenten (zum Beispiel intelligente Heizungs-, Lüftungs- und Klimasteuerungen)
9. Umstellung der Beleuchtung auf LED-Technik und intelligente Steuerung
10. Mitarbeitersensibilisierungen zum Energiesparen
11. Prüfung der Nutzung weiterer regenerativer Energieformen

Andreas Kötter

Sprecher der Geschäftsführung

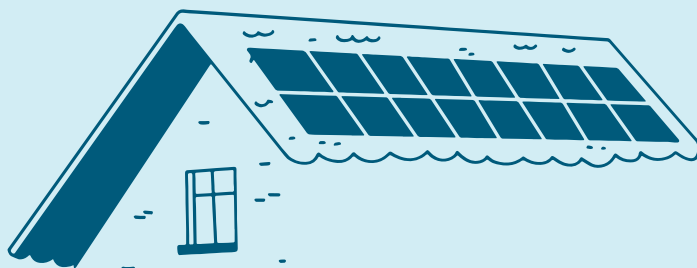
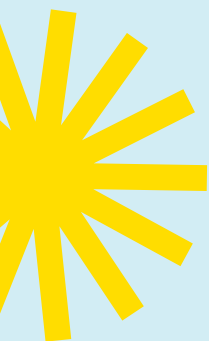
Christiane Jansen

Geschäftsführerin



Beiträge für den Klimastadt-Vertrag

Beiträge Initiativen, Vereine & Bürger*innen



Handwerklicher Umweltbildungsort



Verein

B-Side Kultur e.V. mit der Hansawerkstatt

Ansprechperson

Maike Grabowski

Die Hansawerkstatt soll als handwerklicher Umweltbildungsort in Zukunft allen Münsteraner*innen offenstehen. Dort können Nutzer*innen im Sinne einer Bildung für nachhaltige Entwicklung wertvolle Kompetenzen erwerben, die zum Selbermachen befähigen, zum nachhaltigen Umgang mit Ressourcen anregen und Eigeninitiative und Unabhängigkeit in Konsumententscheidungen ermöglichen. Durch die Zurverfügungstellung von Reparaturmöglichkeiten können wir das Recht auf Reparatur vorantreiben.

Hier sehen wir auch eine große Schnittstelle zur Kinder- und Jugendbildung. Wir denken, dass die Hansawerkstatt ein wichtiger neuer Akteur in der außerschulischen BNE-Bildungslandschaft der Modellkommune Münster werden kann. Mit unseren Angeboten in der offenen Werkstatt für jedermann (Holz- und Metallverarbeitung, 3D-Druck, Fahrrad-reparaturmöglichkeiten), einem Repaircafé, sowie verschiedenen Workshopformaten für unterschiedlichste Zielgruppen, wollen wir zur Umsetzung der städtischen Nachhaltigkeitsstrategie, notwendigen Klimaanpassungsmaßnahmen und der angestrebten Klimaneutralität der Stadt beitragen. Unsere Räumlichkeiten wollen wir auch interessierten Gruppen der Zivilgesellschaft zur Nutzung zur Verfügung stellen.

Experimentierumgebung für digitale Klimaschutzlösungen

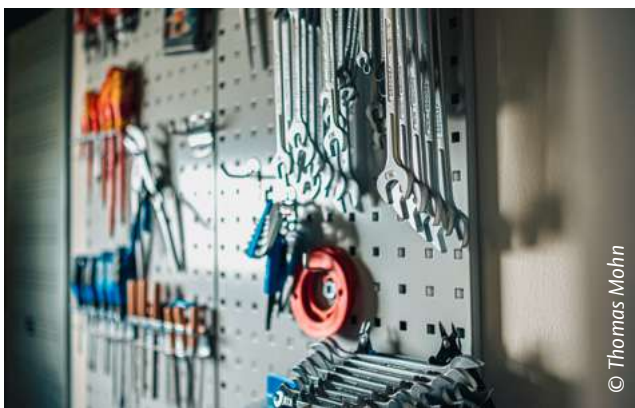


Verein
Digital Hub münsterLAND / FabLab Münster

Website
www.digitalhub.ms

Ansprechperson
Dr. Sebastian Köffer

Digital Hub
 münsterLAND 



© Thomas Mohr

Der Digital Hub münsterLAND mit seinem angeschlossenen FabLab Makerspace bietet eine offene Experimentier- und Testumgebung für digitale Projekte und Vorhaben. Das Ganze ist eingebettet in eine regionale Community zur Vernetzung von Startups, Unternehmen und Hochschulen und bietet die physische und digitale Infrastruktur für Innovationsprojekte, eigene Ideen und einen Anlaufpunkt zum Austausch mit anderen Vordenker*innen und Macher*innen. Auf diese Weise trägt die offene Werkstatt zur Förderung einer Kultur der Nachhaltigkeit und Innovation bei, die für das Erreichen der Klimaneutralität in Großstädten unerlässlich ist. Unter anderem lassen sich folgende Beiträge festhalten:

Förderung von Recycling und Upcycling

Der Makerspace bietet Werkzeuge und Ressourcen, um aus alten Materialien neue Produkte zu erstellen. Dies reduziert Abfall und fördert einen nachhaltigeren Konsum. Durch digitales Prototyping werden zudem Ressourcen im Entwicklungsprozess von Innovationen eingespart.

Verbreitung von Wissen über Nachhaltigkeit

Durch Workshops und Veranstaltungen wie den Open Lab Day oder Informationsreihen zum zirkulären Wirtschaften können Bürger*innen lernen, wie sie nachhaltige Praktiken in ihrem Alltag umsetzen können.

Entwicklung nachhaltiger Technologien

Hackathons wie der jährlich stattfindende MÜNSTERHACK und andere Veranstaltungen können dazu beitragen, innovative Lösungen aus der CivicTech-Szene für städtische Herausforderungen zu entwickeln wie Energieeffizienz, nachhaltige Mobilität oder Abfallmanagement.

Unterstützung lokaler Initiativen

Unser Maker- und Coworking Space kann von lokalen Initiativen kostenlos für öffentliche Events genutzt werden, die auf technologische Lösungen für mehr Nachhaltigkeit abzielen.

Förderung des Teilens von Ressourcen

Anstatt dass jeder einzelne Haushalt oder kleinere und mittlere Unternehmen teure Werkzeuge oder Maschinen kaufen muss, ermöglichen diese Räume das Teilen von Ressourcen, was zur Reduzierung des Gesamtressourcenverbrauchs beiträgt.

Plattform für lokale nachhaltige Startups

Der Digital Hub bietet einen Raum, in dem Startups, die sich auf technologisch-nachhaltige Produkte oder innovative Dienstleistungen konzentrieren, in ihrem Entwicklungsprozess unterstützt werden.

Reduktion von Lebensmittelverschwendung



Verein
foodsharing Münster

Website
www.foodsharing.de

Ansprechperson
Anton Ballmaier

foodsharing Münster:

Gemeinsam gegen Lebensmittelverschwendung: Mindestens ein Drittel aller produzierten Lebensmittel wird nie gegessen, sondern landet im Müll. Damit einher geht eine enorme Ressourcenverschwendung, die wir uns in Zeiten globaler Ungerechtigkeiten und des Klimawandels nicht erlauben dürfen. Die Lebensmittelverschwendung zu reduzieren, ist laut Expert*innen eine der wichtigsten Beiträge zum Klimaschutz (Quelle: <https://drawdown.org/solutions/table-of-solutions>).

Als engagierte Initiative in Münster setzen wir uns von foodsharing aktiv und direkt für die Reduktion der Lebensmittelverschwendung ein. Mit unserem Netzwerk von Foodsaver*innen und Fairteilern tragen wir dazu bei, dass Lebensmittel, die sonst im Müll landen würden, sinnvoll genutzt werden. In den vergangenen 10 Jahren seit der Gründung foodsharings in Münster haben wir diesbezüglich schon viel erreicht, aber müssen - auch unter Mithilfe der Stadt - noch vieles mehr ins Rollen bringen. So heißt es in den Sustainable Development Goals der Vereinten Nationen im Ziel 12.3, „bis 2030 die Lebensmittelverluste zu halbieren und die Lebensmittelabfälle zu reduzieren.“ Ein Ziel, zu dessen Erreichen sich noch vieles verändern muss.

Mehr gerettete, weniger entsorgte Lebensmittel:

Lokal engagieren sich bei foodsharing Münster ca. 300 Foodsaver*innen, in dem sie regelmäßig Lebensmittel in unseren Kooperationsbetrieben vor der Tonne retten. Mit einem wachsenden Bewusstsein und hoffentlich auch von der Politik gesetzten Anreizen, sollen mehr und mehr Betriebe ihre Lebensmittelüberschüsse spenden, statt zu entsorgen - gerne an die Tafeln oder foodsharing, die diese Lebensmittel weiterverteilen. Die Zweitverwertung aufwendig produzierter und verarbeiteter Lebensmittel als

Futtermittel oder Biogas darf nur noch als Notlösung gegenüber dem Verzehr durch Menschen gesehen werden.

Fairteiler in allen Stadtteilen:

Fairteiler sind Regale und Kühlschränke an öffentlichen Orten, die Alle nutzen können, um überschüssige Lebensmittel einfach zugänglich zu machen. Solche Fairteiler müssen in allen Stadtteilen flächendeckend aufgebaut und beworben werden. Öffentliche und städtische Gebäude wären optimal. Es muss eine Selbstverständlichkeit für alle werden, Überschüsse zu verschenken, statt zu entsorgen. Projekte müssen gefördert werden, die eine bessere Verteilung von Lebensmitteln in der Nachbarschaft ermöglichen, um Haushaltsabfälle zu reduzieren.

Bildungsangebote:

Auch im Bereich Ernährung und Lebensmittelverschwendung ist Bildung essenziell, um die Situation zu verbessern. Workshops in Kindergärten und Schulen sowie für den Umgang mit Lebensmitteln im Haushalt oder im Gastrobereich sollten flächendeckend angeboten werden. Organisationen wie foodsharing oder die fairTEilBAR, die solche Angebote schon jetzt umsetzen, brauchen dafür finanzielle Unterstützung.

Politische Anreize:

Allzu oft lohnt sich momentan die Überproduktion von Lebensmitteln aus wirtschaftlicher Sicht. Es müssen Anreize gesetzt werden, um die Lebensmittelverschwendung unattraktiv zu machen. So könnten beispielsweise die Gebühren der Biomüllentsorgung von Lebensmittelbetrieben erhöht, und die zusätzlichen Einnahmen zur Subventionierung (pflanzlicher) Grundnahrungsmittel genutzt werden.

Fortsetzung des Beitrags folgt hier:

foodsharing Münster ist bereit, aktiv zur Klimaneutralität Münsters beizutragen. Wir freuen uns darauf, gemeinsam mit der Stadt und anderen Initiativen an konkreten Maßnahmen zu arbeiten, um unser Ziel einer nachhaltigen und klimagerechten Lebensmittelversorgung zu erreichen.

Unterstützung von Entsiegelungsprojekten



Verein

Grün statt Grau e.V.

Ansprechperson

Christine Langkamp

Die Stadt Münster hat bisher weder ein flächendeckendes Konzept für Entsiegelungsmaßnahmen und naturbasierte Lösungen zur Anpassung an den Klimawandel, noch ist die Sensibilisierung und die aktive Einbindung der Stadtbevölkerung in die Thematik ausreichend. Der Verein Grün statt Grau e. V. möchte daher unterschiedliche Akteur*innen zusammenbringen und innovative Bürger*innenbeteiligung ermöglichen, um Flächen für Entsiegelungs- und anschließende Begrünungsmaßnahmen zu identifizieren. Mit der Umsetzung soll die Adaptionfähigkeit an Hitzewellen, Starkregen und urbane Sturzfluten erhöht, die Biodiversität im urbanen Raum und die CO₂-Aufnahmekapazität von Boden und Pflanzen verbessert und zudem positive Wirkungen auf das Mikroklima sowie die Gesundheit und dass Mobilitätsverhalten der Bürger*innen erzielt werden. Teil des Prozesses sind eine breite Öffentlichkeitskampagne und ein Ideen-Wettbewerb, in dem die Bevölkerung aufgerufen wird, Orte in ihrer Nachbarschaft für Entsiegelung vorzuschlagen. Aus den Einreichungen wählt eine interdisziplinäre Jury aus Stadtverwaltung, Wissenschaft und Praktiker*innen – anhand von ihnen im Projekt zu entwickelnden ökologischen, sozialen und ökonomischen Kriterien - die am besten geeigneten Orte aus. Als Ergebnis des Projekts entsteht ein Leitfaden zu Bürger*innenbeteiligung und klimagerechter Stadtentwicklung mit dem Fokus auf Entsiegelung als eine Möglichkeit zur Klimaanpassung und Aufwertung des urbanen Raums, die auf andere Kommunen übertragbar ist.

Fahrradfahren lernen für und von Frauen



Verein
Move and Meet e. V.

Ansprechperson
Laura Verweyen



Das Projekt „Bike and Meet“ läuft seit Sommer 2022. Es wird vom Verein Move and Meet e. V. geleitet und in Kooperation mit der AWO/Stadtteilbüro Coerde und dem Verein Bike Bridge e. V. durchgeführt. Das Projekt umfasst:

- 2 bis 3 Anfängerinnen-Fahrradkurse für Frauen pro Jahr (über je 10 Termine - ein Termin pro Woche á 2 h; 10 bis 12 TN/Kurs, 4 bis 6 Trainerinnen pro Kurs),
- eine Einweisung in die Straßenverkehrsordnung pro Kurs (ab 2024 durch die Polizei Münster),
- ein Reparaturworkshop pro Kurs,
- zwei bis drei Schulungen zu Fahrradtrainerinnen pro Jahr,
- Einbindung in Freizeit- und Begegnungsangebote des Vereins Move and Meet wie Fahrradtouren etc.
- Kommunikation des Projektes in die Communities über Netzwerk-, Gremien- und Öffentlichkeitsarbeit

„Bike and Meet“ möchte v. a. Frauen mit Migrations- oder Fluchterfahrung dabei unterstützen, das Fahrradfahren zu erlernen und/oder sich selbst (im Anschluss) als Trainerinnen oder Trainerinnenassistenten

zu engagieren. Die Freude am Fahrradfahren soll vermittelt und mehr Selbständigkeit in Alltag und in der Freizeit ermöglicht werden.

Erfolgreiche Kursteilnehmerinnen werden durch eine Schulung dabei unterstützt, im Anschluss selbst als Fahrradtrainerinnen im Projekt tätig zu werden. Ziel ist es, dass die Teilnehmerinnen zu aktiven Gestalterinnen ihres physischen und psychischen Wohlbefindens werden. Durch das Radfahren werden die Frauen ein Teil der Münsteraner Gesellschaft und erobern den öffentlichen Raum. Sie erleben Selbstwirksamkeit, u.a. durch das Reparieren ihrer eigenen Räder und der ihrer Kinder. Sie erweitern ihren sozialen und räumlichen Radius und lernen Münster und ihre direkte Lebensumgebung durch Radtouren kennen (Wege, StVO). Als Trainerinnen geben sie ihr erworbenes Können und Wissen weiter, sie sind Gestalterinnen von Kursen und Vorbilder für die Teilnehmerinnen und ihre Kinder.

„Bike and Meet“ fokussiert unter anderem das Thema der gendergerechten Mobilität und der Mobilitätsarmut vulnerabler Gruppen, denn: Frauen jeden Alters und unterschiedlichster Herkunftsländer, Religionen und Religiosität nutzen das Fahrrad nicht gleichermaßen wie Männer. Bei Frauen mit niedrigem ökonomischem Status und generell bei Frauen ab dem jungen bis ins mittlere Erwachsenenalter zeigt sich die Mobilitätsarmut (unter anderem in Bezug auf das Fahrrad) in besonderem Maße (MiD 2017: 51). Um Frauen Mobilität und die damit verbundene Selbstwirksamkeit, Unabhängigkeit und Erleichterung des Alltags zu gewährleisten, ist es eine zentrale gesellschaftliche Aufgabe, Frauen eine niedrigschwellige und auf ihre Bedarfe angepasste Möglichkeit zu bieten, das Fahrrad als kostengünstiges (und

Fortsetzung des Beitrags folgt hier:

nachhaltiges) Transport- und Freizeitmittel nutzen zu können. Nur auf diese Weise können ungleiche Voraussetzungen und fehlende Zugangsmöglichkeiten zur Mobilität ausgeglichen werden und Teilhabe gewährleistet werden (SDG 5 und SDG 10).

Durch die Steigerung der eigenständigen Mobilität der Frauen erfolgt eine Verlagerung von Bus- und Autofahrten auf das nachhaltige Transportmittel des Fahrrads. Regelmäßige Reparaturworkshops stellen sicher, dass die Teilnehmerinnen ihre Räder selbst reparieren können. Auch werden die Teilnehmerinnen auf den kostengünstigen und nachhaltigen Erwerb gebrauchter Räder bei Fahrradflohmärkten oder bei einem befreundeten Verein verwiesen. Die in unserem Projekt genutzten Räder sind zum Teil neue, zum Teil gebrauchte und gespendete Räder, die von einem Engagierten auf ehrenamtlicher Basis regelmäßig gewartet werden, damit sie langfristig genutzt werden können (SDG 12 und SDG 13).

Das Projekt „Bike and Meet“ wurde 2022 und 2023 mit verschiedenen Preisen ausgezeichnet: mit dem WestfalenBeweger 2022/2023 der Stiftung Westfalen Initiative, mit dem Aktivpreis der Bundeszentrale für politische Bildung in 2023 und mit dem Mobilitätspreis Münster 2023.

Psychologische Beratung zur Transformation



Verein

Psychologists4Future

Ansprechperson

Anna Hessel

Um das gesetzte Ziel der Klimaneutralität zu erreichen, wird es eine unangenehme, aber notwendige Anstrengung aller Beteiligten brauchen. Der gewählte Titel „weil es uns alle braucht“ macht das deutlich. Wir sehen dabei vor allem die Kommunalpolitik in der Aufgabe, Unternehmen für klimafreundliches Handeln in die Pflicht zu nehmen und individuellen Bürger*innen klimafreundliches Handeln durch klimafreundliche Infrastruktur und Anreize zu erleichtern und ermöglichen. Wir bringen uns aus psychologischer Sicht in diese Transformation ein und steuern aus dieser Perspektive folgende Gedanken bei: Um zu erreichen, dass die äußerst herausfordernden, unangenehmen und dennoch notwendigen Veränderungen von der Breite der Bevölkerung unterstützt werden, braucht es psychologisch fachlich gut fundierte Beratung und Ausrichtung. Die Stadt benötigt ein Konzept, um konstruktiv mit Vermeidungs- und Abwehrmechanismen umzugehen. Dazu gehört öffentliche Kommunikation, die politische Informiertheit und freien Meinungs austausch garantiert und Verzögerungsdiskurse, Manipulation und Fehlinformationen verhindert. An diesen Punkt möchten wir ansetzen und stellen dafür gerne unser Netzwerk zur Verfügung, um der Kommunalpolitik fachliche Beratung anzubieten, wie sie die nötigen Veränderungen intern und extern anregen, fördern und kommunizieren kann.

Die Stadtverwaltung sollte gleichzeitig die katastrophalen Folgen von Untätigkeit ehrlich kommunizieren und die Vorteile und Chancen einer klimafreundlichen Umgestaltung der Gesellschaft betonen.

Förderung gesellschaftlicher Teilhabe für Klimaschutz



Initiative

Initiative Demokratie-Update Münster

Ansprechperson

Andreas Schiel

Wir von Demokratie-Update Münster setzen uns ein für die verantwortungsvolle Koproduktion von Stadtpolitik und eine moderne kommunale Demokratie in unserer Stadt. Auf unsere Initiative hin hat der Stadtrat die Einrichtung eines ersten Bürger*innenrates beschlossen, für den wir auch schon über 250 Themenvorschläge gesammelt haben. Bürgerräte mit ausgelosten Teilnehmenden können helfen, in strittigen Fragen der ökologischen Transformation und Klimaanpassung gute und gerechte Lösungen mit hoher Akzeptanz zu finden. Und auch darüber hinaus ist viel mehr konkretes und direktes Engagement von allen Einwohner*innen Münsters für einen guten Umgang mit dem Klimawandel nötig und möglich. Hier stehen wir gerne mit Rat und Tat zur Seite!



Durchführung von KlimaTrainings

Initiative

KlimaTrainer*innen der Stadt Münster

Ansprechperson

Julia von Hayn

Website

www.stadt-muenster.de/klima/klimafreundlich-leben



Der Klimaschutz ist eine gesellschaftliche Aufgabe, für die jede*r Einzelne Verantwortung trägt und zu der alle einen Beitrag leisten können und müssen. Viele Bürger*innen möchten nachhaltiger leben, deshalb ist es so wichtig, dies bestenfalls allen Menschen zu ermöglichen. Oftmals fehlt im persönlichen Umfeld der Impuls oder eine konkrete Strategie, um vom Wollen ins Handeln zu kommen. Das ist jedoch zwingend notwendig, um Klimaschutz auch im persönlichen Alltag umsetzen zu können.

Das Klimatraining zielt darauf ab, den Teilnehmer*innen auf einfachem Wege die Möglichkeit zu eröffnen, Klimaschutz in die persönlichen Entscheidungen des Alltags zu integrieren. In Kleingruppen, die durch KlimaTrainer*innen begleitet werden, definieren die Teilnehmer*innen in unterschiedlichen Themenfeldern des Alltagslebens ihre persönlichen Ziele, die sie im Rahmen des KlimaTrainings erreichen möchten. Das führt zu einer erhöhten intrinsischen Motivation, diese Ziele auch zu erreichen.

Ziele der Teilnehmer*innen sind zum Beispiel, das eigene Auto abzuschaffen und auf klimafreundlichere Mobilität umzusteigen, Energie einzusparen oder nachhaltiger zu konsumieren. Im Austausch mit der Kleingruppe und den KlimaTrainer*innen werden konkrete Maßnahmen entwickelt, mit denen die jeweiligen persönlichen Ziele erreicht werden können. Im Rahmen einer „Ausprobierphase“ werden Angebote und Hilfsmittel vorgestellt, die bei der Zielerreichung unterstützend wirken können. Dabei können die Teilnehmer*innen zum Beispiel die Carsharing- und Lastenrad-Angebote in Münster ausprobieren, eine Energieberatung in Anspruch nehmen, an veganen Koch- und Backkursen teilnehmen, gemeinsam Kleidungsstücke oder Elektrogeräte reparieren oder bei einer Führung über den Deponie-Erlebnispfad der Abfallwirtschaftsbetriebe Münster (awm) mehr über Abfall- und Kreislaufwirtschaft erfahren.

Durch eine enge Vernetzung der Gruppe und eine gezielte Reflexion der Erfolge bei der persönlichen Zielerreichung soll die Motivation, Klimaschutzmaßnahmen in den Alltag zu integrieren, auch über das KlimaTraining hinaus aufrechterhalten werden. Gerade der persönliche Austausch in der Gruppe wird bei jedem KlimaTraining als besonders wertvoll wahrgenommen.

Die Aufgabe der ehrenamtlich bei der Stadt beschäftigten KlimaTrainer*innen besteht vorrangig darin, die Teilnehmer*innen im Prozess zu begleiten und zu motivieren. Darüber hinaus bieten sie wertvolle Alltagstipps und Hilfestellungen.

Fortsetzung des Beitrags folgt hier:

Alle KlimaTrainer*innen haben bereits mindestens ein KlimaTraining als Teilnehmer*innen durchlaufen und engagieren sich so als Multiplikator*innen im Klimaschutz. Die KlimaTrainer*innen der Stadt Münster verpflichten sich im Rahmen des Klimastadt-Vertrages gemeinsam mit der Stabsstelle Klima, regelmäßig Klimatrainings für alle interessierten Bürger*innen anzubieten. Auf diesem Wege soll das bürgerschaftliche Engagement und die Bereitschaft, im Alltag klimafreundlich zu handeln, in der Stadt Münster noch weiter in die Breite getragen werden.



Vernetzung für den Klimaschutz

Initiative

Klima- und Umweltschutzgruppen

www.Muenster-klima.info

Das Bündnis KlimaEntscheid Münster hat den Ratsbeschluss vom August 2020 zur Klimaneutralität 2030 vorbereitet: <https://muenster-klima.info/2020/08/19/160/>. Das Bündnis besteht aus 40 aktiven Klima- und Umweltgruppen der Stadt. Alle Stellungnahmen und Beschlüsse werden mit diesen Gruppen gemeinsam geschrieben und abgestimmt. Wir begleiten den Prozess der Umsetzung des Ratsbeschlusses von 2020 seitdem kritisch. Wir halten fest, dass er immer noch nicht umgesetzt wird. Unsere zuletzt verfasste Stellungnahme dazu findet sich unter <https://muenster-klima.info/2023/06/15/muenster-wird-klimastadt/>. Die aktuellen Zahlen der Energie- und Treibhausgasbilanz der Stadt Münster zeigen, dass mit den derzeitigen Maßnahmen die Stadt erst 2090 klimaneutral würde. (vgl <https://www.klimabeirat-muenster.de/pressemitteilungen/>). Wir erwarten deshalb, dass die Kommune im Bereich Umweltschutz ihre Aufgaben erfüllt sowie einen konkreten Plan entwickelt, der dem Klimaschutz den legitimen Rahmen gibt. Nur durch wirksames politisches Handeln kann der Energie-, Flächen- und Ressourcenverbrauch auf Dauer reduziert werden. Dazu möchten wir die Politik ermutigen. Als Bürgergruppen können wir das alleine nicht durchsetzen. Wir treffen uns alle 14 Tage (zumeist online). Wir freuen uns auf Menschen, die sich beteiligen wollen.



Einsatz für urbane Begrünung

Initiative

Platanenpower

Ansprechperson

Dorothee Speich

Hiermit bitten wir, die Nachbarschaftsinitiative Platanenpower, das Grundstück an der Wolbecker Straße 140 (frühere Aral Tankstelle) zu entsiegeln und dort einen Tiny Forest nach der Methode von Akira Miyazaki anzulegen. 2019 rief die Stadt Münster den Klimanotstand aus und setzte sich zum Ziel bis 2030 Klimaneutralität zu erreichen. Die Stadt ging damit eine Selbstverpflichtung ein, in Zukunft bei allen Entscheidungen den Klimaschutz stärker zu berücksichtigen. Jetzt steht eine Entscheidung an, wie dieses Grundstück weiter genutzt wird. Hier an diesem Grundstück kann die Stadt Münster deutlich machen, wie ernst sie ihrer Verpflichtung nachkommen wollen. In einem Beschluss des Ausschusses für Umwelt, Klima und Bauen Anfang 2021 haben die Fraktionen für neue Baugebiete festgelegt, dass Vorgärten grundsätzlich als bepflanzte Fläche zu gestalten sind. Die Stadt Münster hielt fest, dass die klimatischen Unterschiede zwischen grünen Vorgärten und versiegelter Fläche/Schotter kein subjektives Empfinden, sondern auch Ergebnis einer Modelluntersuchung des Landes Hessen ist. Tagsüber lagen hierbei auf Schotterflächen die Temperaturen meist um 10 Grad höher als über der Pflanzfläche. Jetzt hat die Stadt Münster eine großartige Gelegenheit ihr Engagement und die Ernsthaftigkeit für den Klimaschutz zu beweisen. Es geht nicht um einen Vorgarten, es geht um eine Fläche von über 600 qm. Gerade dort gibt es ein sehr hohes Verkehrsaufkommen, eine dichte Besiedlung / Versiegelung. Wir bitten darum, dass die Stadt Münster den Mut hat, wie auch andere Städte, zum Beispiel Herford oder Almere in den Niederlanden, genau dort wo man aus dem Grundstück viel Profit erzielen könnte, den Bewohnenden eine kleine,

ökologisch wichtige Oase zu geben. Nein, keine fünf Stadtbäume für je 2.000 €, sondern eine Fläche, die nach der Anlage und zwei bis drei Jahren leichter Pflege keine weiteren laufenden Kosten erzeugt. Wir benötigen innerhalb der Stadt Flächen für Grün und Lebensqualität, keine Ausgleichsflächen. Hier könnte etwas bislang Neues entstehen, dass die Lebensqualität, dem Klimaschutz, der biologischen Vielfalt, der Luftreinhaltung und dem Gewässerschutz zuträglich ist. 2019 hat der Rat die Stadt Münster verpflichtet, sich regelmäßig mit den Auswirkungen und Folgen der CO₂-Emissionen zu befassen, und sich über die Maßnahmen zur Verringerung informieren zu lassen. Daher fordern wir die Stadt Münster auf jetzt uns Bürgern und Bürgerinnen der Stadt Münster anhand dieses Grundstückes zu zeigen, wie ernsthaft und ehrlich Sie der Verpflichtung nach dem Ausruf des Klimanotstandes 2019 nachkommen. Bisher nimmt Münster mit der stärksten Flächenbodenversiegelung in NRW den schlechten vierten Platz* ein. Es wäre jetzt ein guter Zeitpunkt damit zu beginnen das gesteckte Ziel Klimaneutralität 2030 anzugehen.

Unsere persönlichen Beiträge zur Umsetzung des Vorhabens sind folgende:

- Wir nehmen am 7. März 2024 an einer Schulung der Natur- und Umweltschutzakademie NRW, Recklinghausen teil. Thema:
 - „Urbane Wälder – Tiny Forests, Chancen und Grenzen von Miniwäldern in Städten“
 - Ziel: Durch die Fortbildung wollen wir uns in die Lage versetzen, das Konzept in Münster bekannt zu machen und dafür zu werben.

*VdS Schadenverhütung, GDV

Fortsetzung des Beitrags folgt hier:

- Informieren der Anwohner über das Konzept eines Tiny Forests. Es ist geplant eine Abendveranstaltung durchzuführen, in der Fachleute eine Einführung in die Materie geben und anschließend Fragen beantworten. Zeitpunkt: im 2. Quartal 2024
 - Wir werden uns mit Fachexperten in Verbindung setzen, um folgende Schritte zu planen und durchzuführen zu lassen:
 - Bodenanalyse
 - Baumartenauswahl
 - Bodenbearbeitung
 - Partizipative Pflanzenaktion mit den Anwohnerinnen und Anwohnern der umliegenden Viertel (Hansa-/Hafen- und Herz-Jesu-Viertel)
 - Unterstützung bei der Pflege des Wäldchens in den ersten zwei bis drei Jahren. Danach benötigt der Wald keine weitere Pflege/funktioniert autark.
 - Netzwerkpartner für Bildungsaktionen mit den umliegenden Schulen
-

Engagement für den Klimaschutz



Initiative

Students for Future

Ansprechperson

Johanna Stenner

Wir, die Students for Future Münster, setzen uns seit vielen Jahren für Klimagerechtigkeit auf lokaler- und Hochschulebene ein. Im Klimastadt-Vertrag wollen wir uns dazu verpflichten, die Umsetzung des Ratsbeschlusses zur Klimaneutralität bis 2030 der Stadt Münster weiterhin einzufordern. Auch wenn jede*r Bürger*in gefragt ist, ihren oder seinen Beitrag für mehr Klimaschutz zu leisten, darf dies nicht darüber hinwegtäuschen, dass die Politik die dringend notwendigen Rahmenbedingungen dazu schaffen muss. Wir nehmen den 2019 ausgerufenen Klimanotstand ernst und erwarten von politischen Entscheidungsträger*innen, die Klimakrise als solche zu behandeln. Deshalb sehen wir es als unsere Aufgabe, die Politiker*innen an ihre Verantwortung auf dem Weg zu einem lebenswerten, klimaneutralen Münster zu erinnern. Dies wollen wir durch unsere Beteiligung am KlimaEntscheid, Demonstrationen sowie den Dialog mit der Stadt weiterhin aktiv umsetzen.

Klimafreundliche Lebensweise

Bürger

Manfred Josef Berlin

Wir sind als Homo sapiens, wie alle wissen, zu weit gegangen. Also müssen wir richtig auf die Bremse treten: Verzicht ist das Zauberwort! Ich bin Naturschützer seit 1980!

Was habe ich gemacht: Als 1. habe ich mein Auto verschenkt und ein Fahrrad gekauft 2. bin ich aus der Kirche ausgetreten 3. bin ich Vegetarier (ovo-lakto) geworden 4. Habe ich die Grünen mit aufgebaut (Im Ökoläandbau gejobt) 5. Permakultur gelernt 6. Nicht-raucher geworden usw. Heute als Rentner, lebe ich auf 35 m² mein Stromverbrauch beträgt ca: 850 kWh und ich heize nie: „Mittelwohnung“!

Sport: Tischtennis (Mo.) zusätzlich radele ich in die Stadt zum Bioladen. Heute, bei 10 Grad Celsius, sehe ich wie seit Jahren, etliche Läden die Türen sperrangelweit aufhaben und die Fußgängerzone mit heizen!? Was ich tun kann, tue ich.

Bewusster Holzverbrauch



Bürgerin

Monique Eberhardt



Ich verbrauche wenig(er) Holz und will einen Forst zum Naturwald werden lassen. Ich kaufe bevorzugt gebrauchte Möbel aus Holz, nutze ein Reise-Bidet sowie recyceltes Toiletten- und Schreibpapier. Formulare fülle ich gerne online aus und erhalte die Lohnabrechnungen digital. Ich versuche Transport-Kartons wiederzuverwenden oder zu vermeiden. So müssen weniger Bäume gefällt werden und Kohlenstoff in ihrer Biomasse und unter ihnen im Boden bleibt gespeichert. Von Holzplantage zum lebendigem Wald. In Zukunft möchte ich einen Forst kaufen und ihn auch über meinem Tod hinaus naturnah absichern lassen (nur spazieren, Pilze & Beeren & Kräuter sammeln, Survival-Wochenende und Waldbaden), sodass sich langsam ein Naturwald mit vielen Tonnen CO₂ in Stämmen, Totholz und Boden entwickeln kann.

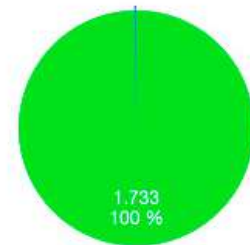
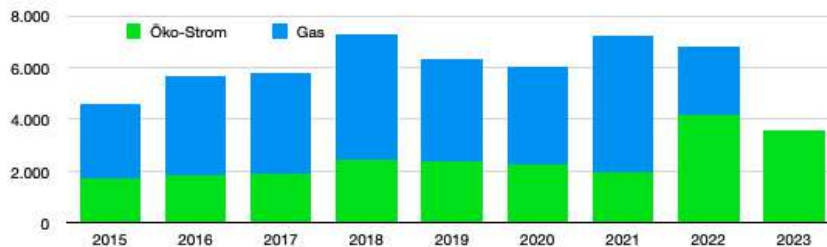
Nachhaltigkeit mit System für Zuhause und darüber hinaus



Bürger
Bernd Genheimer

Dashboard Energie

Mix (kWh)	2015	2016	2017	2018	2019	2020	2021	2022	2023
Öko-Strom	1.733	1.836	1.927	2.423	2.358	2.274	1.934	4.177	3.579
Gas	2.864	3.866	3.866	4.868	3.998	3.736	5.282	2.661	10



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Ein ausgearbeiteter Plan hilft mir mein eigenes zu Hause (und das jedes anderen motivierten Bürgers und jeder anderen motivierten Bürgerin, egal ob gemietet oder im Eigentum) klimaneutral und nachhaltig zu gestalten. Basierend auf den 17 Nachhaltigkeitszielen der UN fokussiere ich mich auf das Machbare, gestalte Strategien und Aktionen, messe deren Erfolg und begeben mich Schritt für Schritt in eine nachhaltige Zukunft.

Erste Maßnahme war die Umstellung auf einen Öko-Strom Vertrag.

Zweite Maßnahme war die Installation von Infrarot-Heizpaneelen. Wir sind bei der Heizung also mittlerweile weg vom Gas. Die Entwicklung dazu können Sie im „Dashboard Energie“ im Anhang sehen.

Für die Umsetzung der Strategie sammeln wir umfangreiche Daten zum Beispiel aus dem Bereich Strom- und Gasverbrauch und bereiten sie mit Hilfe eines Dashboards auf. Die Methode entstammt internationaler Industriemaßstäbe und wird von Firmen auf der ganzen Welt als Managementtool angewandt. Als ein Beispiel möchte ich das Ziel „Bezahlbare, saubere Energie“ herausgreifen.

Als Familie haben wir das für uns auf das konkrete Ziel der Solarenergie mit Speicherung in Form von Wasserstoff und Salz-Batterien herunter gebrochen. Die Strategie für unseren Haushalt heißt also „Elektrifizierung“.

Gasheizung versus Stromheizung

Verbrauch	2021	2022	2023
Gas (kWh)	5.282	2.457	10
Ökostrom (kWh)	1.934	3.588	4.168
CO2 (t)	0,961	0,447	0
Kosten (€) ohne Klimaschäden	1.416,38 €	1.599,78 €	1.543,56 €
zum Vorjahr	0,00 €	183,40 €	-56,22 €
Investition in Infrarotheizung	200 €	600 €	0 €

Umstieg vom Auto aufs Fahrrad



Bürgerinnen

Ulla und Werner Gottbrath

Wir haben im Dezember unseren Pkw verkauft und erledigen unsere Fahrten in Münster nur noch per Rad (und reiner Muskelkraft), bei größeren Einkäufen mit Fahrradanhänger.

Klimafreundliche Lebensweise und Engagement als Solarberater

Bürger

Dirk Schulte-Weber

Permanent klimabewusst leben und auch andere motivieren durch:

- Nutzung von Ökostrom und Heizen mit Wärmepumpe und Solarthermie
- vegetarische Ernährung und möglichst biologisch und regional
- Spenden an Umweltorganisationen wie NABU oder Greenpeace
- selbst aktiv werden mittels Biotoppflege und schattenspendendem biodiversem Garten
- Müllpate in der unmittelbaren Umgebung (in Zusammenarbeit mit der awm)
- Einsatz einer eigenen Solaranlage und als Solarbotschafter
- Autofahren auf ein Minimum reduzieren sowie die selbstgesteckte Höchstgeschwindigkeit nicht überschreiten
- Kurzstrecken möglichst mit dem Fahrrad zurücklegen
- lieber ein hochwertiges Teil anschaffen, das sich lohnt, repariert zu werden, als viele billige Produkte erwerben

Leben ohne Auto



Bürgerin

Eva Schröder

Meine Familie und ich haben aus Überzeugung kein eigenes Auto und bewegen uns nur per Fahrrad oder Lastenrad. Nur wenn es absolut notwendig ist nutzen wir den öffentlichen Personennahverkehr.



Unterstützung Klimastadt-Prozess

Bürger

Michael Tillmann

Als Bürger der Stadt Münster, der sich seit ca. 10 Jahren im lokalen Klimaschutz und in der Klimabewegung mit dem Schwerpunkt Klimakommunikation engagiert, habe ich den Klimastadt-Prozess in unterschiedlicher Weise unterstützt und kritisch begleitet: durch meine Mitarbeit im Klimabeirat der Stadt, durch die Organisation zweier Veranstaltungen im Rahmen der „Münsteraner Klimagespräche“ mit direktem Bezug auf das Ziel „Klimaneutralität 2030“ (u. a. unter Beteiligung von Gästen aus den EU-Mission-Städten Aachen und Mannheim) sowie mehreren Kolumnen im Online-Magazin RUMS. Weil meiner Meinung nach für den Klimastadt-Prozess ein ausformulierter „Münster-Klima-Konsens“, der von breiten Teilen der Stadtgesellschaft getragen wird, nicht nur wünschenswert, sondern eigentlich auch notwendig ist, habe ich einen solchen Klimakonsens skizziert und ihm die Form einer möglichen bzw. denkbaren Präambel zum Klimastadtvertrag gegeben (veröffentlicht in der RUMS-Ausgabe vom 17.09.2023). Trotz vieler zustimmender Bekundungen, u. a. auf dem städtischen Klima-Barcamp am 27.10.2023 setze ich mich dafür ein, dass die Diskussion um einen bürgerschaftlichen Klimakonsens fortgeführt wird. Der u. a. Text ist dafür vielleicht hilfreich.

Wir in Münster sehen in den gegenwärtigen Klimaveränderungen die stärkste Bedrohung für die Zukunft unserer Kinder und Enkel und für das Zusammenleben der Menschen auf unserem Planeten in Frieden und Gerechtigkeit. Wir erkennen in den Waldbränden, den Überflutungen, den Dürren und Hitzerekorden der Gegenwart die Vorboten einer sich schleichend verstärkenden Klimakatastrophe. Wir in Münster bekennen uns zu dem grundgesetzlichen Auftrag des Staates und der Gesellschaft, in Verantwortung für die künftigen Generationen die natürlichen

Lebensgrundlagen zu schützen (Artikel 20a). Dies umfasst auch die völkerrechtliche Verpflichtung aus dem Pariser Klimaabkommens, angemessen dazu beizutragen, die Erderwärmung auf deutlich unter 2 Grad, möglichst unter 1,5 Grad zu begrenzen. Wir in Münster wissen, dass Deutschland derzeit für etwa zwei Prozent der weltweiten Treibhausgasemissionen verantwortlich ist, wir aber nur ein Prozent der Weltbevölkerung stellen. Uns ist auch bewusst, dass die klimabedingten Extremwetterereignisse der Gegenwart zu fünf Prozent auf die von Deutschland im vergangenen Jahrhundert ausgestoßenen Treibhausgase zurückzuführen sind. Wir in Münster erkennen an, dass allen Menschen dieser Erde nur das gleiche Recht auf Belastung der Erdatmosphäre zusteht. Daraus ergibt sich für uns, dass wir in den kommenden Jahren nur noch eine begrenzte Menge an Treibhausgasen ausstoßen dürfen, ein CO₂-Restbudget, das mit den Pariser Klimazielen vereinbar ist. Die Aussagen des Weltklimarates sowie des deutschen Sachverständigenrates für Umweltfragen betrachten wir dafür als maßgebend. Diese anteilig auf Münster zu übertragen ist das, was fairerweise von uns erwartet werden kann. Wir in Münster wissen, dass uns für eine entschiedene Abkehr von Kohle, Öl und Gas nur noch ein kleines Zeitfenster bleibt und dass ein Überschreiten von Kipppunkten die Folgen des Klimawandels vollends unbeherrschbar machen werden. Wir streben deshalb an, für die Bereiche, die wir in alleiniger Verantwortung gestalten können, bis zum Jahr 2030 Klimaneutralität zu erreichen. Wir setzen darauf, dass uns technischer Fortschritt dabei hilft. Aber uns ist gleichzeitig klar, dass es zusätzlich eine Kultur der Selbstbeschränkung und ein anderes Verständnis von Wohlstand und Freiheit braucht. Wir akzeptieren und wünschen, dass Politik und Verwaltung durch entsprechende Regeln ressourcen- und klimaschonende Lebensstile fördern. Wir in Münster

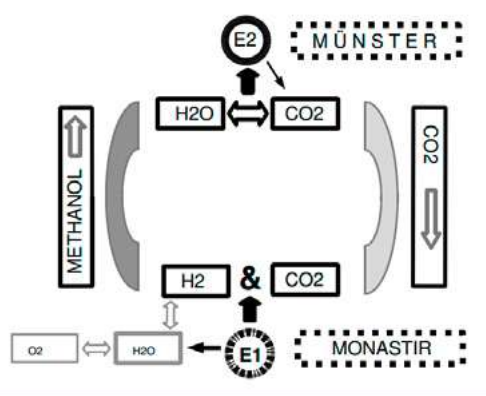
Fortsetzung des Beitrags folgt hier:

möchten, dass unser gemeinsames Eintreten für die Zukunft unserer Kinder und künftiger Generationen den Zusammenhalt in Münster stärkt und unser Gemeinwesen nicht spaltet. Wir erkennen an, dass unter dem Gesichtspunkt der sozialen Gerechtigkeit nicht alle das gleiche Maß an Verantwortung tragen. Höherer materieller Wohlstand geht im Allgemeinen mit einem höheren Ressourcenverbrauch und einer größeren Klimabelastung einher. Das begründet eine besondere Verantwortung der besser Situierten in unserer Stadt. Wir in Münster trauen uns zu, den existenziellen Bedrohungen durch den Klimawandel ins Auge zu sehen. Unser Wissen um die Gefahren verpflichtet uns zu beherzten Taten. Wir machen unser Eintreten für mehr Klimaverantwortung nicht abhängig davon, ob oder dass auch andere Staaten oder Kommunen sich ähnlich dem Klimaschutz verpflichtet fühlen und entsprechend handeln. Nicht zuletzt ist das für uns auch eine Frage der Selbstachtung.

Machbarkeitsstudie Vollversorgung mit Solarenergie



Bürger
Jochen Witt



© Jochen Witt

Projekt-Ziel

Erstellung einer ersten Machbarkeitsstudie, ob der Endenergiebedarf von Münster vollständig mit Solarenergie kompensiert werden kann, die in der Region von Münsters tunesischer Partnerstadt Monastir, resp. Nordafrika/Arabische Halbinsel, geerntet und über stoffliche Umwandlungsprozesse (siehe Abbildung) nach Münster transportiert wird. Geprüft werden sollen technische, logistische und wirtschaftliche Aspekte. Mein Beitrag besteht darin, die lokal vorhandene Expertise aus Wissenschaft, Industrie, Verwaltung und Zivilgesellschaft einzuholen und zusammenzuführen.

Im Folgenden beschreibe ich mein geplantes Vorgehen. Die [#] sind dabei nicht als Quellenhinweise zu verstehen, sondern beziehen sich auf meine Annahmen und Vorschläge und sollen eine Diskussion im Falle einer Kontaktaufnahme erleichtern (siehe unten).

Zunächst soll der Bedarf analysiert werden, der sich meinen Berechnungen zufolge wie folgt darstellt: Münster hat zur Zeit einen jährlichen Endenergiebedarf von 6.156 GWh [#1]. Dies entspricht etwa der Energiemenge, die ein $\frac{2}{3}$ Atomkraftwerk liefert [#2]. Um diese Energiemenge mit Solarpanelen zu decken, bräuchte man für die Solarparks ein Drittel der

gesamten Stadtfläche [#3]. Es fehlt auch die Fläche, um diesen Energiebedarf mit Windkraftanlagen (WKA) zu decken, denn dann bräuchte man pro qkm der Stadtfläche 1 WKA mit 160 m Nabenhöhe, höher als der Kölner Dom [#4]. Missverständnisse entstehen häufig, weil die projektierten „80 % Deckung des Energiebedarfs durch Erneuerbare Energien“ sich nicht auf den Endenergiebedarf beziehen, sondern nur auf Strom – der daran einen Anteil von etwa $\frac{1}{5}$ hat [#5]. Zu lösen ist auch das Problem, dass Sonne und Wind Variabilitäten aufweisen, die sie nicht grundlastfähig machen.

Besonderheit des von mir vertretenen Ansatzes

Wie im beigefügten Chart skizziert, soll die Solarenergie aus dem Raum von Münsters Partnerstadt Monastir in Tunesien, resp. Nordafrika/Arabische Halbinsel, importiert werden. Dort ist die Globalstrahlung etwa $2,3 \times$ so hoch wie in Münster. [#6]. Unter den dortigen Verhältnissen kostet die Produktion von 1 kWh Solarstrom unter 1 Cent [#7].

Weitere Spezifika

Mithilfe des Solarstroms wird aus Meerwasser hochreines Prozesswasser gewonnen [#8]. Im nächsten Schritt wird aus dem H₂O mit Elektrolyseuren H₂ abgeschieden [#9]. H₂ in Verbindung mit CO₂ bildet Methanol, das unter normalen Umgebungsbedingungen – anders als reiner Wasserstoff – transportiert werden kann [#10]. Das Methanol kann Münster per Schiff erreichen – ggf. nach Umschlag in Rotterdam oder einem deutschen Seehafen [#11]. Bei Verbrennung des Methanols in Großanlagen der Industrie oder im Fernwärmekraftwerk zerfällt dieses rückstandsfrei in Energie, H₂O und CO₂ [#12]. Das CO₂ wird abgeschieden [#13] und wieder zurücktransportiert „nach Monastir“ wo es erneut mit H₂ zu Methanol verbunden wird [siehe #10]. Es entsteht ein technischer CO₂-Kreisprozess.

Fortsetzung des Beitrags folgt hier:

Im Unterschied zu den gegenwärtig viel diskutierten Verfahren wird das CO₂ also nicht aus der Umgebungsluft bei viel geringeren Konzentrationen extrahiert, und auch nicht im Boden der Nordsee verpresst (CCS) [#14]. Die prinzipielle Notwendigkeit der Rückgewinnung von CO₂ aus der Atmosphäre ist gegenwärtig wissenschaftlicher Konsens [#15].

Kosten

Der Wissenschaftliche Dienst des Deutschen Bundestages resümierte 2020, dass die Kosten der Gewinnung Grünen Wasserstoffs aus Nordafrika und der Transport zu einem deutschen Seehafen bis 2030 ab 9 Cent/kWh darstellbar sei [#16]. Internet-Recherche weist aus, dass die Kosten der einzelnen Steps des hier beschriebenen Verfahrens zuletzt stark fallen [#17].

Sonstiges

Solarenergie in Monastir oder der Region zu gewinnen, und nebenbei auch Trinkwasser zu produzieren und PV-Agrikultur zu ermöglichen (i.e. Landwirtschaft und Viehzucht im Halbschatten der Solarparks), hat das Potential die dortige Gesellschaft und Ökonomie zu stabilisieren und zu einem verlässlichen Partner zu machen [#18].

Ihre Mitwirkung

In dieser ersten Phase der Machbarkeitsstudie frage ich die lokal vorhandene Expertise aus Wissenschaft, Industrie, Verwaltung und Zivilgesellschaft ab. Beiträge zu diesem Ansatz sind willkommen! Bitte wenden Sie sich für einen ersten Kontakt an die Projekt-eMailadresse solarenergieMS@aol.com. Es ist nützlich, wenn Sie Ihren Impuls nur kurz skizzieren (max. 300 Zeichen), auf die obigen [#] Bezug nehmen, und neben Ihren Kontaktdaten auch ein, zwei Zeilen zu Ihrem Erfahrungs-Hintergrund schreiben. Vielen Dank!

Münster's Alliance for Climate Protection Self-commitment

Münster's Alliance for Climate Protection is committed to the following goals:

- To create a network of companies as a platform for exchange and for development of projects promoting corporate climate protection in order to achieve reductions in both carbon emissions and costs
- To support local companies on their way to climate neutrality and thus make a significant contribution to the city of Münster's climate protection goal
- Positioning climate protection as an economic and locational factor and presenting the network and its achievements to the public

Declaration of accession to Münster's Alliance for Climate Protection

As an alliance partner, the signatory declares that it will play an active part in achieving Münster's climate protection target and will implement energy-saving and CO₂-reducing projects and measures in its area of responsibility.

The signatory undertakes to draw up an internal carbon footprint and to update it annually. In addition, the signatory undertakes to develop and implement climate protection projects and measures in their own company every year within the scope of their respective possibilities - in accordance to the strategic priorities:

1. Reducing energy consumption, 2. Increasing energy efficiency, 3. Expanding renewable energies, 4. Offsetting emissions and using green electricity/gas. The aim is to make the progress made by the companies measurable and tangible and to encourage imitation through the projects and measures implemented.

The members undertake to submit their balance sheets and projects to the City of Münster every year.

Münster's Alliance for Climate Protection offers its members regular professional network meetings on various topics related to corporate climate protection. Accompanying public relations work (e.g. website, flyers, events, press) informs citizens about the progress and successes of the alliance. In addition, all members receive a regular newsletter about current events and information on corporate climate protection.

Name and address of the company

Contact person

E-mail address Contact person

Telephone number Contact person

Name of the management

Date, signature of the management

Participating companies (as of February 2024):

Hüls Catering e.K.
Wohn + Stadtbau Wohnungsunternehmen der Stadt Münster GmbH
Bode Planungsgesellschaft für Energieeffizienz m.b.H.
Handwerkskammer Münster
Voltark GmbH
Ratiodata SE
Carl Nolte Technik GmbH
Cervotec GmbH & Co.KG Fahrradgaragen
Knubel GmbH & Co. KG
Atruvia AG
Sustina AG
Dr. Schengber & Friends GmbH
Messe und Congress Centrum Halle Münsterland GmbH
Alexianer Münster GmbH
AllwetterZoo
Hürter Zweirad GmbH
EBM Ingenieurgesellschaft
encadi GmbH
Druckerei Joh. Burlage GmbH & Co. KG
Eucon Group
future e.V.
Mövenpick Hotel Münster
LWL-Klinik Münster
Westfalen AG
Hotel Schloss Wilkinghege
Brüning Bad&Heizung GmbH
Landwirtschaftsverlag GmbH
Universität Münster
CCC Druck und Medien GmbH
Wirtschaftsförderung Münster GmbH
Stadtteilauto CarSharing Münster GmbH
Provinzial Holding AG
Deutsche Rentenversicherung Westfalen
FIEGE Logistik Stiftung & Co. KG

Stadt Münster · 48127 Münster

Officially adopted Greenhouse Gas (GHG) Emissions reduction target for the future – Council Resolution on the proposal V/0770/2019, decided by majority vote

In December 2019, the City Council Münster adopted a new climate protection target. The aim is to become climate neutral by 2030 (base year 1990). The greatest challenges are to reduce the energy consumption and to speed up the energy transition by the expansion of renewable sources.

Knowing that it is a very ambitious target, the City Council added “if possible”. Many actions are already undertaken and we will do our best to achieve the aim.

Please find at the following link the decision of the City Council Muenster in German that is also attached to this document:

<https://www.stadt-muenster.de/sessionnet/sessionnetbi/getfile.php?id=454393&type=do>

Stadt Münster

Telefon: 0251/492-0
Fax: 0251/492-7700
stadtverwaltung@
stadt-muenster.de
www.stadt-muenster.de

Service für Menschen
mit Behinderung:
www.stadt-muenster.de/
barrierefrei

Niederschrift

über die 43. Sitzung (Verabschiedung Haushalt 2020) (öffentlicher Teil)
des Rates

am Mittwoch, **11.12.2019**, 17:40 Uhr - 00:03 Uhr,
Festsaal, Rathaus, Prinzipalmarkt 8-9, 48143 Münster

Anwesend waren:

von der CDU-Fraktion:

Dr. Maria Becker, Horst Karl Beitelhoff, Olaf Bloch, Peter Laurenz Börgel, Heinz Georg Buddenbäumer, Astrid Bühl, Olaf Dreßen, Dr. Dietmar Erber, Sven Gotthal, Richard-Michael Halberstadt, Gilbert Hartmann, Jens Christian Heinemann, Jan Leiß, Stefan Leschniok, Christel Loschelder, Hans Neumann, Andreas Nicklas, Karin Reismann, Josef Schliemann, Angela Stähler, Walter von Göwels, Stefan Weber, Manfred Wenzel

von der SPD-Fraktion:

Stephan Brinktrine, Doris Feldmann, Philipp Hagemann, Marius Herwig, Dr. Cornelia Jäger, Dr. Michael Jung, Mathias Kersting, Michael Kleyboldt, Katharina Köhnke, Thomas Kollmann, Gabriele Kubig-Steltig, Hedwig Liekefedt, Mustafa Schat, Petra Seyfferth, Ludger Steinmann, Wendela-Beate Vilhjalmsson, Maria Winkel

von der Fraktion Bündnis 90/Die Grünen/GAL:

Dr. Petra Dieckmann, Gerhard Joksch, Christoph Kattentidt, Raimund Köhn, Jutta Möllers, Jörn Möltgen, Dr. Didem Ozan, Carsten Peters, Pascal Powrozniak, Otto Reiners, Sylvia Rietenberg, Klaus Rosenau, Prof. Dr. Rita Stein-Redent, Harald Wölter

von der FDP-Fraktion:

Jörg Berens, Carola Möllemann-Appelhoff, Hans Varnhagen

von der Fraktion DIE LINKE.:

Fatma Kirgil, Ortrud Philipp, Heiko Wischnewski

von der Ratsgruppe Piraten/ÖDP:

Franz Pohlmann, Johannes Schmanck

von der Ratsgruppe Alternative für Deutschland:

Richard Mol, Martin Schiller

von der UWG-MS:

Fritz Pfau

fraktionslos:

Rüdiger Sagel

Vorsitz:

Oberbürgermeister Markus Lewe

von der Verwaltung:

Sarah Braun, Dr. Christina Cappenberg, Robin Denstorff, Klaus Frohne, Patrick Hasenkamp, Matthias Herding, Wolfgang Heuer, Udo Köster, Jörg Krause, Frank Möller, Thomas Möller, Axel Niemeyer, Thomas Paal, Matthias Peck, Alfons Reinkemeier, Axel Remmeke, Michael Schetter, Rainer Uetz, Michael Volmering, Cornelia Wilkens

für die Schriftführung:

Jürgen Kupferschmidt

für die Stenogrammaufnahme:

Heike Krüger

Es fehlte/n:

Frank Baumann (CDU), Annette Kemper (Bündnis 90/Die Grünen/GAL), Bruno Klein-Borgmann (CDU), Marianne Koch (SPD), Jürgen Reuter (FDP), Anne Schulze Wintzler (SPD)

nichtöffentlicher Sitzungsteil

siehe Niederschrift über die 43. Sitzung (Verabschiedung Haushalt 2020) (nichtöffentlicher Teil) des Rates am 11.12.2019

Tagesordnung

- | | |
|---------------------|---|
| <u>EF/0010/2019</u> | <ol style="list-style-type: none"> 1. Fragestunde für Einwohnerinnen und Einwohner 1.1. Verbleibendes globales CO2-Budget 2. Aktuelle Stunde 3. Eingänge und Mitteilungen |
|---------------------|---|

Gegenstimmen (FDP, AfD) und Stimmenthaltungen (DIE LINKE., Piraten/ÖDP, Herr Pfau) beschlossen.

Herr **Lewe** stellte Ziffer 8 des gemeinsamen Antrages der CDU-Fraktion und der Fraktion Bündnis 90/Die Grünen/GAL zur Abstimmung.

Ziffer 8 des gemeinsamen Antrages der CDU-Fraktion und der Fraktion Bündnis 90/Die Grünen/GAL wurde mit Mehrheit (OB, CDU, SPD, Bündnis 90/Die Grünen/GAL, Herr Pfau, Herr Sagel) bei Gegenstimmen (FDP, AfD, Piraten/ÖDP) und Stimmenthaltungen (DIE LINKE.) beschlossen.

Herr **Lewe** stellte die Ziffern 6 bis 8 und „II. Finanzielle Auswirkungen“ der Vorlage V/0770/2019/2 zur Abstimmung.

Die Ziffern 6 bis 8 und „II. Finanzielle Auswirkungen“ der Vorlage V/0770/2019/2 wurden mit Mehrheit (OB, CDU, Bündnis 90/Die Grünen/GAL, DIE LINKE.) bei Gegenstimmen (SPD, FDP, AfD, Herr Pfau) und Stimmenthaltungen (Piraten/ÖDP, Herr Sagel) beschlossen.

Somit beschloss der Rat:

„I. Sachentscheidung:

1. Der Rat bekennt sich zu den beschlossenen Zielen, die CO₂-Emissionen mit Priorität zu senken, den Klimawandel zu stoppen und dazu, dass der Klimaschutz für die heute lebenden Generationen eine Schicksalsaufgabe darstellt (V/0482/2019).
2. Der Rat erkennt an, dass die Ziele des Pariser Klimaabkommens, die Erderwärmung auf möglichst 1,5 °C zu begrenzen, nur dann erreicht werden können, wenn alle Akteure auf staatlichen Ebenen und in Städten und Gemeinden ihre Anstrengungen gegenüber dem bisherigen Masterplan 100% Klimaschutz deutlich verstärken.
3. Der Rat stimmt dem Handlungsprogramm Klimaschutz 2030 (Anlage 1 der Vorlage V/0770/2019 = Anlage 10a der Originalniederschrift) zur Umsetzung des Masterplans 100% Klimaschutz zu. Für die Umsetzung stellt der Rat in den Jahren 2020 – 2023 Finanzmittel im Umfang von mehr als 40 Mio. EUR zusätzlich zu den bereits im Haushalt veranschlagten Positionen zur Verfügung:
 - zur Finanzierung des Handlungsprogramms des Masterplans 100 % Klimaschutz,
 - zur Förderung der energetischen Sanierung privater Gebäude (Aufstockung des bestehenden Förderprogramms),
 - für die energetische Sanierung städtischer Gebäude, insbes. Schulen und Bäder,
 - für die Errichtung von Photovoltaik-Anlagen auf Dächern städtischer Gebäude
 - für die Förderung von Photovoltaik-Anlagen und Batteriespeichersystemen in Privathaushalten und Gewerbebetrieben (Aufstockung des bestehenden PV-Förderprogramms)
 - für die Begrünung öffentlicher Plätze und Gebäude
 - für die Fortführung der Förderung der Lastenfahrräder, inklusiv der Schaffung von Stellplätzen in der Innenstadt
 - für die Anschaffung von neuen Kraftfahrzeugen mit E-Mobilität bei der Stadtverwaltung
 - für die Beschleunigung des ÖPNV und von Modellmaßnahmen für die Umsetzung des Masterplans 2035, um Alternativen zum motorisierten Individualverkehr zu verbessern und zum Umstieg zu motivieren
 - für die Schaffung eines BikeSharing Angebotes in Kooperation mit den Stadtwerken
 - für die Planung von Mobilitätsstationen an den Radialen (Steinfurter-, Warendorfer-, Wolbecker-, Weseler- und Hammer Straße)

- für die Finanzierung des kostenlosen Busfahrens an Advents-Samstagen
4. Über das Handlungsprogramm hinaus bekennt sich der Rat zu dem Ziel, alsbald – möglichst bis 2030 – klimaneutral zu werden. Dazu sollen Gestaltungsmöglichkeiten ausgelotet werden, die wirtschaftlich nachhaltig und sozial ausgewogen zu einer Umsetzungsstrategie geführt werden. Der Rat beauftragt die Verwaltung deshalb,
- für sämtliche mittelbaren und unmittelbaren städtische Handlungsfelder unter Einschluss der städtischen Tochtergesellschaften Handlungsstrategien zu entwickeln, um dieses Ziel zu erreichen,
 - Privathaushalte und Gewerbebetriebe zu informieren und zu motivieren, ihren CO₂-Ausstoß zu senken,
 - dem Rat einen Plan zur CO₂-Reduktion insbesondere für die Bereiche energetische Gebäudesanierung, Ausbau erneuerbarer Energien und klimafreundliche Mobilität vorzulegen.
5. Die Verwaltung wird beauftragt, die im Handlungsprogramm 2030 – Teil 1 (Anlage 2 der Vorlage V/0770/2019 = Anlage 10b der Originalniederschrift) genannten Maßnahmen vorzubereiten und zeitnah in die Umsetzung zu bringen.
Sie umfassen insbesondere Aufwendungen für die Koordination und fachliche Begleitung der Maßnahmenumsetzung, inkl. gutachterliche Begleitung und entsprechender Öffentlichkeitsarbeit.

Änderungsantrag zu EE4

grundsätzlich keine Errichtung PV Anlagen auf landwirtschaftlichen Flächen.
Außerdem soll überprüft werden welche Möglichkeiten für die Errichtung von PV Anlagen auf Dachflächen im Außenbereich vorhanden sind. Bei der Prüfung muss es neben der Erhebung des Potentials auch um die Eruiierung von möglichen Anreizen und Erleichterungen sowohl von Seiten der Stadt als auch städtischen Tochterunternehmen gehen.

Änderungsantrag zu MOB 6

E Mobilität sollte aus regenerativer Energie gespeist werden, Prüfungsauftrag, ob regionale regenerative Energie für E Mobilität ausgebaut werden kann.

6. Die Verwaltung wird beauftragt, für die im Handlungsprogramm 2030 – Teil 2 (Anlage 3 der Vorlage V/0770/2019 = Anlage 10c der Originalniederschrift) genannten Maßnahmen, die Voraussetzungen für die Entscheidungen in den zuständigen Gremien zu schaffen und die entsprechenden Vorlagen zu fertigen.
Bei den Maßnahmen in Teil 2 handelt es sich um Maßnahmen mit zusätzlichen Investitions- und Personalaufwendungen, wie bspw. bei ganzheitlichen energetischen Sanierungen im Gebäudebestand oder bei Entscheidungen, die im Rahmen anderer Prozesse, wie bspw. dem Masterplan Mobilität 2035+ herbeigeführt werden.
7. Die Verwaltung wird beauftragt, einen Sachstandsbericht zur Umsetzung des Handlungsprogramms 2030 alle 2 Jahre vorzulegen.
8. Die Anregung gem. § 24 GO NRW 0043/2016 (Anlage 4 der Vorlage V/0770/2019 = Anlage 10d der Originalniederschrift) ist in die Erarbeitung des Handlungsprogramms 2030 eingeflossen und wird – soweit fachlich und finanziell möglich - bei der Umsetzung berücksichtigt und umgesetzt.

II. Finanzielle Auswirkungen:

Die im Rahmen der Haushaltsberatungen bereitgestellten Haushaltsmittel für die Umsetzung der Maßnahmen des Handlungsprogramms Klimaschutz 2030 zur Umsetzung des Masterplans 100% Klimaschutz werden durch Veränderungsblätter in den Haushaltsplan-Entwurf 2020 ff eingebracht.“

Punkt 27 der Tagesordnung V/0799/2019/1 V/0799/2019	Handlungskonzept Klimaanpassung 2030 zur Umsetzung des Klimaanpassungskonzeptes der Stadt Münster
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Es lag eine Ergänzung zur Vorlage vor.

Frau **Liekfedt** beantragte für die SPD-Fraktion:

„Der Rat möge beschließen:

Beschlussvorschlag:

I. Sachentscheidung:

Ändere wie folgt:

1. Der Rat stimmt dem Handlungskonzept Klimaanpassung 2030 **mit folgender Ergänzung zu: Im Sinne eines verbesserten Klima- und Umweltschutzes, bei dem auch der Erhalt und Schutz von Natur und Grünflächen sowie der Wasserqualität im Vordergrund steht, wird die Verwaltung zudem beauftragt:**
 - **sich selbst dazu zu verpflichten, auf städtischen Flächen auf eine Verwendung von Pestiziden zu verzichten; das gilt auch für verpachtete Flächen und beim Einsatz von Bekämpfungsmitteln gegen den Eichenprozessionsspinner**
 - **in Gesprächen mit der Landwirtschaftskammer und dem Landwirtschaftlichen Kreisverband darauf hinzuwirken, dass landwirtschaftliche Betriebe sich selbst dazu verpflichten, durchweg auf den Einsatz von Pestiziden und (chemischen) Pflanzenschutzmitteln zu verzichten.**
2. Die Verwaltung wird beauftragt, die im Handlungskonzept Klimaanpassung 2030 (Anlage 1) beschriebenen Maßnahmen **einschließlich der in Punkt 1 benannten Maßnahmen** vorzubereiten und zeitnah in die Umsetzung zu bringen. Diese Maßnahmen umfassen insbesondere Informations- und Beratungsangebote, Planungsgrundsätze der Stadt- und Freiraumplanung, Regelungen des ÖPNV bei Extremwetterereignissen durch die Stadtwerke Münster GmbH sowie die Koordination und fachliche Begleitung der Maßnahmenumsetzung.
3. Für die im Handlungskonzept Klimaanpassung 2030 (Anlage 1) genannten Maßnahmen **einschließlich der in Punkt 1 benannten Maßnahmen**, die eines zusätzlichen und weiterführenden politischen Beschlusses bedürfen, wird die Verwaltung beauftragt, die Voraussetzungen für die Entscheidungen in den zuständigen Gremien vorzubereiten und zu schaffen. Dabei handelt es sich insbesondere um Maßnahmen mit zusätzlichen Investitionen in die städtische Infrastruktur, Gebäude und Gewässer, die für den Schutz der Stadtgesellschaft erforderlich sind und die u. a. mit zusätzlichen Ressourcen