Ayuntamiento
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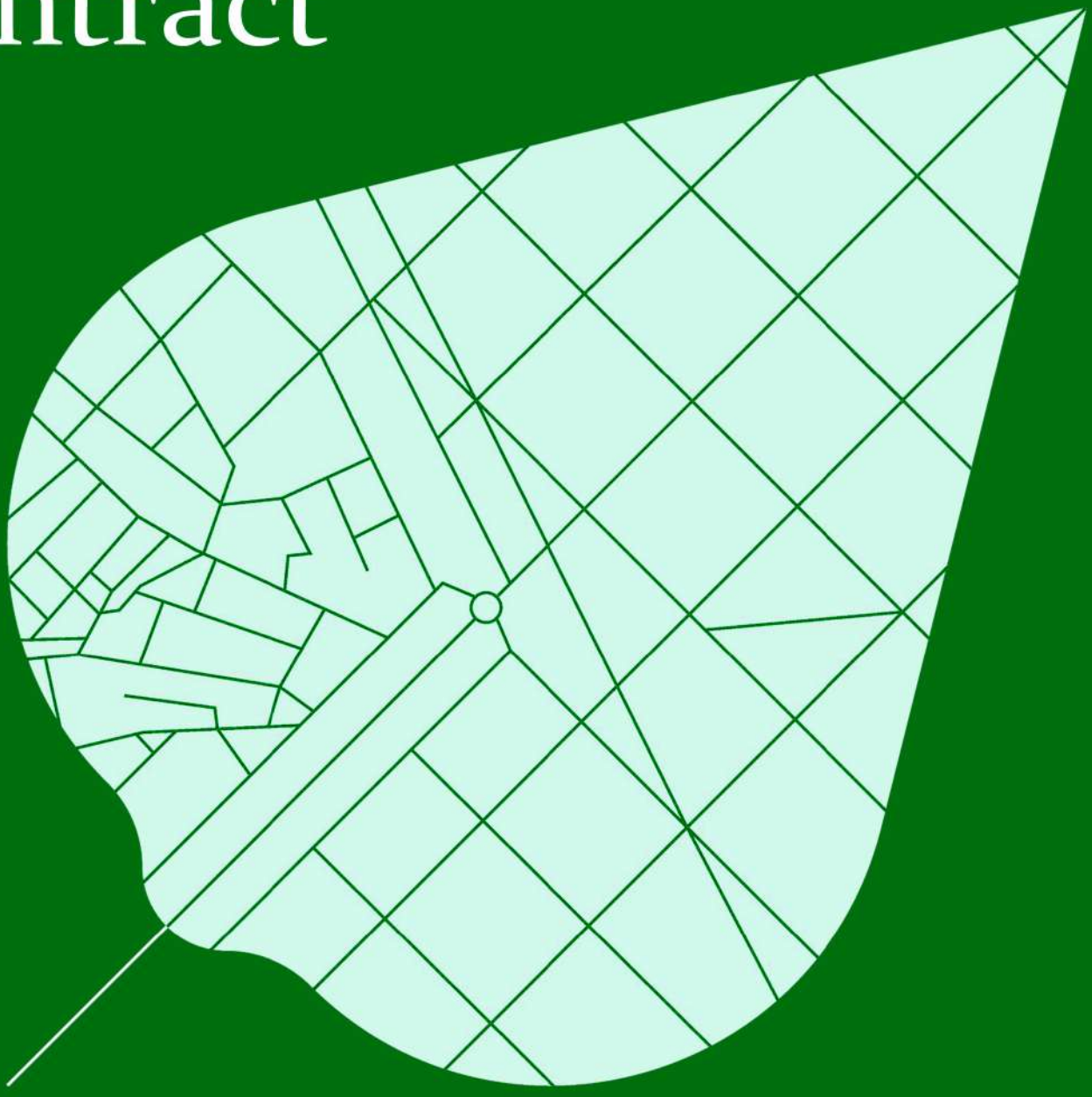
2030

Vitoria-Gasteiz Climate City Contract



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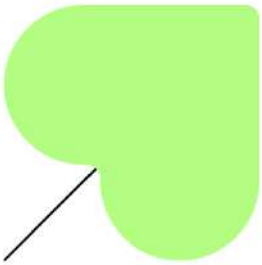


ANNEX 1:
Climate Neutrality Action Plan

ANNEX I

CLIMATE ACTION PLAN FOR THE CITY OF VITORIA-GASTEIZ

INTRODUCTION

The City Council of Vitoria-Gasteiz (AVG) has been working on sustainability for several decades, addressing various territorial, environmental, economic and social challenges. Vitoria-Gasteiz's current Urban Agenda 2030 has determined that one of its strategic challenges is to become a green, climate neutral, resilient and self-sufficient city. To achieve this, the city must carry out a process of energy and circular transition, separating economic growth from the consumption of energy and other raw materials, promoting energy saving, energy efficiency and the use of renewable and non-polluting resources. This transformation must be accompanied by other transitions in the technological, digital, regulatory and ecological fields, as well as innovation processes in economic and social structures. The city of Vitoria-Gasteiz is on its way to meeting these challenges.

Since it undertook its sustainability roadmap more than three decades ago, the city has made constant and consistent progress, setting goals through policies, plans and local strategies to promote sustainability and climate action in the city. Some of these include approving the Local Agenda 21 for Vitoria-Gasteiz (1998), joining the Covenant of Mayors (2008 and ratified in 2020) and awards such as the European Green Capital in 2012 or the Global Green City Award in 2019.

Its more specific energy sustainability policies and climate strategies started to emerge in 2006 when more specific targets were set to promote the city's energy transition and climate action. One step towards achieving these goals was the first Sustainable Energy Action Plan (SEAP), approved in 2010 and stemming from joining the Covenant of Mayors initiative earlier, which led to a reduction of GHG emissions in the city. This plan, called the Vitoria-Gasteiz Plan to Combat Climate Change (2010-2020), established the commitment to reduce GHG emissions from a variety of sectors by 25.7% in 2020 compared to 2006 emissions. In the end, this reduction totalled 31.4%, which means a reduction of more than 1 tonne of equivalent CO_2 per inhabitant per year.

More recently, following a renewal of commitments with the Covenant of Mayors initiative, a Sustainable Energy and Climate Action Plan (SECAP) has been developed and approved, with a time frame of 2030. This plan aims to facilitate the energy and climate transition in Vitoria-Gasteiz; in other words, it will help decarbonise the territory, to ensure that citizens enjoy access to safe, sustainable and affordable energy, and strengthen their capacity to adapt to the inevitable impacts of climate change.

The SECAP has been developed thanks to participation from various institutional agents, as well as private stakeholders and citizens, both from organisations and individuals, right from the initial stages of its preparation. This involved face-to-face workshops (generation of the energy scenario and vision, contrast and debate of actions, etc.) and web technologies, trying to maximise information dissemination among external and internal agents and obtain their contributions.

This SECAP 2030 will be the starting point of the Vitoria-Gasteiz Climate Action Plan, which aims to accelerate the city's decarbonisation.

This Plan, and Vitoria-Gasteiz's participation in the Mission, also includes an **Institutional Declaration of Support for the decarbonisation of the city of Vitoria-Gasteiz within the framework of the European Missions on carbon-neutral and smart cities and adaptation to climate change (2022).** This Declaration was supported by all the political groups in the City Council Plenary, demonstrating that political consensus is a pillar on which Vitoria-Gasteiz has worked intensively over the years.

It is important to highlight that the SECAP follows the Sustainable Development Goals (SDGs), through a process of systemic transformation run by the AVG, which has led it, among other things, to align all its policies with the SDGs, approving a strategic document and an action plan for the Vitoria-Gasteiz Urban Agenda 2030 (AUVG2030). This document also includes an **Institutional Declaration of Support for the Vitoria-Gasteiz Urban Agenda 2030 (AU2030VG) - Vitoria-Gasteiz 2030 Strategy (2022)** supported by all the political groups in the Municipal Plenary.

It is also important to highlight that the SECAP follows Vitoria-Gasteiz's New Urban Development City Plan (UDCP). The strategic objectives on which the basic criteria for the drafting of the UDCP are based, which also match the goals determined for the 17 SDGs and the 2030 Agenda, are as follows: (1) A compact, complex and cohesive city, (2) Promotion and protection of the rural environment and villages, (3) Enhancement of the natural, cultural and landscape heritage, (**4) A sustainable and energy efficient territory,** (5) Economic balance of the territory, and (6) Vitoria-Gasteiz, by and for everyone (strategic objective which cuts across all of the above).

Objective (4) includes transferring the city's energy and climate sustainability objectives to the territory. During the UDCP review, the "Reimagina^{2}" citizen participation process was carried out, in which various activities aimed to introduce people to the document, raising awareness on it (travelling exhibition, explanatory sessions), as well as to debate and gather citizens' opinions (citizen debate forums and thematic workshops) on the contents of the document.

Vitoria-Gasteiz has been actively participating for years in **regional, national, European and international networks with the intention** of **sharing, applying and transferring** the

experiences and lessons learned, thus extending the city's present and future sustainability and climate neutrality activities.

As mentioned above, the document used as a starting point for developing the city's Climate Action Plan within this Climate City Contract is the SECAP 2030. This Plan has been revised based on the results of the Economic Model carried out by *Material Economics*, to firstly reveal the existing gaps in the transport, buildings and heating, electricity and waste sectors to achieve climate neutrality in 2030 for the entire city of Vitoria-Gasteiz, and to plan and develop the actions required to achieve this neutrality.

However, not all actions directly reduce GHG emissions. We would also like to work in sectors that the economic model does not mention, such as industry, which accounts for more than 25% of business in our city.

In addition, large industrial companies in the city of Vitoria-Gasteiz are already working on their own decarbonisation. For example, Mercedes Benz has 2030 a decarbonisation target for its Vitoria-Gasteiz plant. Michelin plans to decarbonise a part of its factory in the city by 2025. PepsiCo and the Eroski supermarket chain, like Michelin, are using their Vitoria-Gasteiz premises to spearhead decarbonisation of their companies and have declared their intention to be decarbonised by 2030.

On the other hand, the Alava Technology Park, which is home to more than 150 companies in the technology sector, has a decarbonisation plan for 2030. All these issues were discussed at the Conference "Decarbonisation, Industry and City" held in Vitoria-Gasteiz on 7 October 2022.

The City Council will work closely with all these companies to reflect these commitments and their specific actions and projects in the successive iterations of this Climate City Contract.

Nevertheless, we will also work with small and medium-sized enterprises through the Green Deal Community of companies and organisations in the Vitoria-Gasteiz business sector that are working on transition to business models which require fewer natural resources and have a lower climate impact. In all cross-cutting areas or lines of action such as governance, data, finance or social innovation, the necessary alliances and support from platforms such as NetZeroCities and CitiES2030 will be sought to find innovative actions that will help us to strengthen the current Action Plan and to honour the commitments acquired through this Contract.

With regard to the University, the Alava Campus of the University of the Basque Country has plans for decarbonisation in 2030, so the City Council will work closely with them to give them the necessary support and impetus.

However, we also want to remain pioneers in the areas of green infrastructure, mobility,

circularity and the agri-food sector, where we are working hard to make steady progress.

Addressing Scope 3 emissions is one of our outstanding issues although this Climate Action Plan already describes some initiatives we are developing in the city.

Finally, we would like to work on all those cross-cutting levers where innovation is key to achieving our objectives, such as governance, regulatory sandboxes, data and social participation. For all of this, the necessary support and assistance will be sought for successive iterations of this Climate Action Plan.

WORK PROCESS

Vitoria-Gasteiz (VG) is working to become a carbon neutral, resilient, metabolically efficient and biodiverse city by 2030. A city with a vibrant and committed social fabric in a safe, healthy and inclusive environment, embedded in an attractive and prosperous economic system. Numerous environmental awards prove this, such as the Civitas Award (2010), EU Green Capital (2012) and Global Green City Award (UNHabitat, 2019).

VG is strongly committed to climate change. Its first Climate Change Plan (2010-2020) targeted a 25.7% reduction in GHG emissions by 2020 (base year 2006). Current emissions represent a 31.4% reduction, well above the original target. The current SECAP (2021-2030) has set GHG emission reduction targets of 61.5% and 83% (with carbon sinks) by 2030 (base year 2006). Like the previous plan, VG has taken up the challenge of achieving higher reduction levels leading to climate neutrality by 2030. Support, such as from the EU Mission, will help VG reach its target.

This goal is being met through ongoing projects. VG aims to be a flagship city in terms of distributed energy production from renewable sources. Fossil fuels will be eliminated in residential buildings, service sector and municipal buildings. Immediate retrofit programmes will follow up on the success story of the Coronación neighbourhood, where 26 buildings, totalling 524 equivalent dwellings, were retrofitted and a district biomass heating system was installed, reducing energy demand and emissions by 3 GWh/year and 1,000 tCO_{2e}/year respectively.

In terms of mobility, VG wants to be recognised for its strong commitment to active mobility, a data-driven (decision-making based on data analysis and interpretation) and an electrified public transport system. The share of private car use dropped from 36.5% in 2006 to 29% in 2019. Public transport use increased by 43% and cycling by 211%. Ongoing and future interventions will help to strengthen this shift. Implementation of eBRT (electric Bus Rapid Transport or BEI - Intelligent Electric Bus) in 2022 will save 1,520 tonnes of CO_{2e}/year. The extension of the tramway by mid-2023 will also lead to a

significant reduction in the use of private vehicles. Other interventions include creating a Low Emission Zone in the city centre (2023), installing disincentive systems for private vehicles (charging systems, etc.) (2023), constructing a last-mile distribution centre for cargo bikes (2024) and a commitment to encourage more sustainable mobility to go to work.

VG also wants to position itself as a role model in addressing Scope 3 GHG emissions. The food systems strategy and action plan (2017-2025) and the materials circularity strategy (ongoing) are pioneering in their own right. The City Food Flows of VG assessment (2021) revealed that more than 95% of unprocessed food consumed in the city is imported. The same might be said for all materials. These plans will estimate indirect emissions and implement actions that contribute to decarbonising both systems.

Carbon sinks will also play an important role, and VG is constantly investigating how to optimise them. Currently, the Green Belt absorbs 3,168 tonnes CO_{2e}/year (i-tree methodology, 2019). The newly built peri-urban park will increase this capacity by 672 t CO_{2e}/year. VG aims to include carbon sequestration criteria in the design of green and blue infrastructure.

Finally, a note on integration and horizontal aspects. VG aspires to become a city with institutions that exercise powerful leadership and act in an exemplary manner, working together with co-responsible Citizens. A city with a high level of awareness, reinforced by a model of community cooperation to face the challenges posed by energy transition at a local level. All this is happening in a thriving, innovative and competitive economic environment that ensures a collaborative social model where no one is left behind. More than 35 letters of support for this mission were signed by local actors, proving that VG is moving in the right direction.

The SECAP 2030 is the main tool that organises all action on energy transition, mitigation and adaptation to climate change in the city. It is composed of two interrelated action plans: the Integrated Energy Transition Action Plan (PATEI) and the Climate Change Adaptation Action Plan (PAACC).

In the field of energy transition and emission mitigation, the SECAP 2030 sets the following targets for 2030 compared to the base year (2006), referring to the various sectors (residential, services and institutional sectors, internal mobility, and primary sector):

- Reduce energy consumption by 29%.
- Reduce direct GHG emissions by 61.5%.
- Reduce net GHG emissions by 83.1%.

It also establishes specific adaptation goals for Vitoria-Gasteiz, defined according to the

results of the impact chains evaluated in the risk diagnosis carried out for the city as a whole:

- Droughts on rural areas: reduce the risk associated with agricultural activities due to the possible effects of climate change by strengthening their adaptive capacity.
- River flooding on the urban environment: reduce flooding associated with extreme events and improve the ecological status of water bodies and the sustainable use of this resource.
- Pluvial flooding on the urban environment: guaranteeing the territorial and urban functionality of the city by increasing the resilience of drainage infrastructures and sustainable territorial planning.
- Heat waves on the health of the population: ensuring thermal comfort and access to comfort zones during extreme temperature episodes.
- Extreme winds on urban, rural and population health: improving knowledge on climate change scenarios of extreme winds.

In total, the SECAP 2030 includes 100 actions in 13 strategic areas for energy transition, mitigation and adaptation to climate change in the city.

This Plan has been revised according to the results of the Economic Model carried out by Material Economics, to firstly reveal the existing gaps in the following sectors, transport, buildings and heating, electricity, and waste, to achieve climate neutrality in 2030 for the entire city of Vitoria-Gasteiz, and to plan and develop the necessary actions to achieve this neutrality.

Based on the SECAP 2030 data and the results of the Economic Modelling, conducted by Material Economics for the first iteration in the development framework of this Climate City Contract, six key priorities or strategies have been identified that must be addressed urgently to achieve the goal of climate neutrality:

1. Integrated regeneration and eco-rehabilitation of the city's neighbourhoods
2. Generation of energy through renewable sources and promotion of Energy Communities (EC).
3. Mobility and sustainable transport
4. Circularity of the local economic system
5. Green Infrastructure and carbon sinks
6. Intelligent data-driven management.

Within these 6 key strategies, and in this first iteration, some lines of action have already been implemented or planned in SECAP 2030 which, due to the new climate neutrality goal, must not only be implemented but also accelerated. Other lines will require additional innovative actions and financing models, for which alliances and

collaborations will be sought among the various local agents involved, and with agents from other geographic areas. These lines of action should be contrasted, modified and updated throughout successive iterations of this Climate City Contract.

There are also cross-cutting priority elements common to all lines such as:

- Governance
- Regulation
- Funding
- Social communication,

requiring a systematic review for successive iterations of this Climate City Contract to be used efficiently as a lever for the desired systemic change.

These strategic lines are detailed below with some specific examples of action areas, which should be accelerated in some cases and in other cases must include new innovative actions.

(1) Integrated regeneration and eco-rehabilitation of neighbourhoods

The aim is to carry out urban, social and environmental regeneration with the following objectives:

- Improve the energy efficiency of residential and tertiary buildings, including publicly-owned buildings.
- Improving universal accessibility and sustainable mobility.
- Connecting households to a high-speed digital network.
- Connect households and commercial premises to a city-wide decarbonised district heating network.
- Improve public space with the introduction of green infrastructure (and other actions, e.g. accessibility).
- Generate low- or zero-emission urban developments and building sites.

Two pilot projects of the Mission have been launched immediately:

- *Urban regeneration, eco-rehabilitation and vitalisation of the Zaramaga neighbourhood (AD) of Vitoria-Gasteiz*
- *Ensanche XIX - Entrepreneurial Eco-District*

The success of these pilot projects can mean real acceleration for the city's progress towards climate neutrality.

Within the scope of action referring to a decarbonised thermal network for the city as a whole, a process has been initiated to assess technical and economic-financial feasibility, as well as its social acceptance, as a preliminary phase for its subsequent definition and development. Future iterations of this Climate City Contract will specify the final model of this decarbonised network.

(2) <u>Generation of energy from renewable sources and promotion of Energy Communities (EC)</u>

This strategic line of work includes the following areas of action:

- Public, private and public-private thermal and electrical power generation.
- Deployment of renewable energy generation projects in municipal buildings and public spaces, mainly based on photovoltaic solar energy, targeting self-consumption.
- Installation of photovoltaic solar energy in residential, tertiary and industrial buildings.
- Promoting the creation of Energy Communities in urban and rural areas.
- Tackling fuel poverty through developing programmes and support schemes for vulnerable groups and encouraging the use of alternative financing systems (e.g. through energy communities or crowdfunding).

We are currently working on a community energy initiative with citizens to co-create an energy project in the rural area of the municipality to define a renewable thermal energy community that uses local resources (forestry and agricultural waste). Once this project has been consolidated, it will be scalable to other rural areas of the municipality. All of this will be incorporated into the successive iterations of this Climate City Contract.

(3) <u>Mobility and sustainable transport</u>

The aim is to transform and decarbonise the city's mobility system by:

- drawing up a new sustainable mobility model which promotes active mobility and an electrified public transport system.
- developing the superblocks model and implementing traffic calming zones
- extending the pedestrian and cycling networks, and extending the public transport network
- reformulating the regulated parking zones
- promoting mobility electrification (private and public, passenger and freight)
- promoting the use of efficient driving techniques.

Ongoing and future interventions will help to reinforce this change.

- Implementation of eBRT (electric Bus Rapid Transit).
- Creation of a Low Emission Zone (LEZ) in the city centre (2023)
- Installation of deterrent systems for private vehicles (charging systems, etc.) (2023)
- Improving urban logistics by building a last-mile centre (2024).
- Etc.

(4) <u>Circularity of the local economic system</u>

Circularity of the production system.

The objective is to progressively modify the urban economic-productive system from the currently prevailing linear economic model to a circular model, which keeps materials in circulation indefinitely, obtains the highest possible value before and after disposal, and prioritises the sustainable use of resources through transition to renewable energies, among other possibilities.

- Boosting the circular transition of economic activity sectors.
- Boosting circular entrepreneurship.
- New headquarters for the Basque Circular Hub in Vitoria-Gasteiz

Municipal waste management

The Urban Waste Prevention and Management Plan (2016-2030) encompasses the current situation, and a series of objectives and measures have been planned to prevent waste generation (reduction of more than 15% in weight compared to 2016), prepare for reuse and recycling of waste (reaching at least 60% by weight of total waste), and reduce the waste sent to landfill (below 15%), to substantially improve current ratios and significantly contribute to lowering emissions. Within this framework, a number of projects are already underway:

- New bulky waste collection service with a circular economy approach, provided by a third-sector company that collects, sorts, prepares for reuse and markets the collected bulky waste. In addition, a shop has been set up selling decoration, furniture, toys and other reused products at affordable prices, obtained through this service and which have passed quality standards for sale.
- The Konpondu Project seeks to promote a change in the current consumption model of citizens with the aim of prolonging the useful life of products through the local repair sector.
- Reutilizagune is a service for individuals promoting reuse and second life of appliances and household goods.
- Collection of used vegetable oil by containerisation on the public highway.
- Selective organic matter collection and composting.

Vitoria-Gasteiz Circularity Strategy 2030

A local Circularity Strategy 2030 and an initial action plan with a time frame of 4 years (2023-2026) are currently being developed. Its planning scope covers materials and waste linked in one way or another to all sectors of the city (imports, exports, generation, etc.), and its general objective is to make local economic activities more competitive in terms of the circular economy. Initially, 3 lines of action have been determined: *(1) Promotion and development of the circular industrial, construction, services, commerce*

and hotel and catering sectors; (2) Promotion of a responsible consumption model among citizens; (3) Development of efficient waste collection and management services that allow high levels of recycling.

This strategy will be aligned with the Mission objectives and may be the start of the path to tackle lowering Scope 3 emissions, an area in which Vitoria-Gasteiz would also like to become a benchmark model.

There are two particularly relevant areas for the Mission, insofar as they are related to proposed or future actions to reduce and/or absorb emissions in the Climate Action Plan: on the one hand, construction and especially renovation of buildings and circularity of the materials to be used, and on the other, the measures to be applied in the primary sector in relation to food.

- Circularity of construction materials. The refurbishment of buildings or other refurbishment and new construction works represent a key opportunity to apply circular economy criteria in the construction sector and work will be carried out with the different actors in this sector to decarbonise it.
- Agri-food Strategy of Vitoria-Gasteiz. The Vitoria-Gasteiz Agri-Food Strategy and its action plan (2017-2025) are going to be re-edited to achieve a strategy built on a shared vision by the key agents of the production and distribution sector, as well as an intersectoral and multi-stakeholder action plan. These plans estimate indirect emissions and implement actions that contribute to decarbonising both systems. The implementation of the Municipal Organic Farmers' Seedbed (Basaldea), which aims to attract and settle new organic farmers in the municipality, helping to diversify and increase local production as well as providing a solution to the problem of flooding in the area.

(5) Green Infrastructure and carbon footprint reduction

The Urban Green Infrastructure of Vitoria-Gasteiz is made up of the Green Belt, parks and gardens, tree-lined streets and squares, green sports areas, urban orchards, streams, central reservations and roundabouts, vacant plots and other less conventional elements such as façades and green roofs. The ***Vitoria-Gasteiz Urban Green Infrastructure Strategy*** is being developed to improve the ecological, environmental and social functions of urban green spaces. This plan defines a system of chief areas on which to act, and a set of projects and interventions aiming to increase urban biodiversity (through naturalisation actions, creation of ponds and bird shelters...), improve water drainage (through the laying of permeable paving, the creation of rain gardens...), improve fixation of CO_2 and other atmospheric pollutants (through the planting of trees...), etc. The estimated carbon sequestration capacity of urban trees is currently 2,295 tonnes of CO_2/year. In addition, this green infrastructure will be promoted as an element that generates urban climate refuges, incorporating shading, evotranspiration and permeable surface objectives when planning and designing this structure.

- The **Green Belt** (827 ha) is a semi-natural area comprising forests, rivers, wetlands, meadows, woodlands and hedgerows. The aim is to incorporate new degraded areas and/or areas with great potential to act as carbon sinks in the peri-urban environment into the multifunctional Green Belt project, through creating new parks and agri-ecological spaces (Larragorri, Mendebaldea, Idiazabal Project, etc.).
- Reissue of the **Urban Tree Master Plan** with the aim of highlighting the benefits of trees, in addition to being a tool for thermal regulation of public spaces and a carbon sink.
- **Naturalisation of school playgrounds.** The project aims to transform the outdoor spaces at schools to adapt them to climate change and incorporate them into the urban green infrastructure system, with active participation from the educational community.
- **Naturalisation of the old town**: project to drive naturalisation of the old town. Possible actions include the planting of trees, climbing plants, landscaping, installation of flowerpots, etc. The project aims to co-create and test mechanisms to enable public-private management of the green infrastructure in the public space.

6) Intelligent data-driven management

The Vitoria-Gasteiz City Council is committed to promoting smart data-based management by facilitating the sharing and transparency of data. To this end, it will use the Geographic Information System built for the city and the digital model built within the framework of the European SmartEnCity project for the Coronación neighbourhood of the city. It will promote use, extension and adaptation of these digital tools in decision-making in an attempt to achieve climate neutrality. In the future, the ultimate goal would be to create a Digital Twin of Vitoria-Gasteiz, a virtual replica of the main elements of the city and its critical infrastructure, connected to databases and sensors, which will enable analysis, modelling, simulation and prediction of scenarios, and develop hypotheses to support better decision-making processes. It will also be necessary to work on a new innovative data governance and management model, by setting up a "Data Office".

This Climate Action Plan, set out below, is part of an iterative process together with the other documents/annexes of this Climate City Contract that will be subject to biennial monitoring, review and updating, to effectively contribute to climate neutrality in the city. A timeline of the steps to be taken until the next iteration is included in the *Perspectives and Next Steps* section of this Annex I.

The investment costs presented throughout the Vitoria-Gasteiz Climate City Contract respond to the economic model for decarbonising cities. This model estimates the incremental cost of the decarbonisation actions as a whole, in the sectors analysed by the Economic Model, presented in the action plan instead of their total cost. Thus, the incremental cost is the additional cost of a specific decarbonisation action compared to the cost of a reference scenario, such as the Business as Usual (BAU) scenario for the year 2030, in which it is assumed that current trends and policies remain unchanged and that no measures are taken to reduce greenhouse gas emissions in the city. Therefore, the cost presented throughout the document is an incremental cost, not a total cost, which reflects the additional cost required to carry out the decarbonisation actions in the action plan.

PART A - CURRENT STATE OF CLIMATE ACTION

MODULE A-1

Greenhouse Gas Emissions Baseline Inventory

A-1.1: Final energy use by sector of origin				
Base year	2019			
Unit	MWh/year (SECAP sector consumption + industrial consumption)*			
Issuing sector	**Scope 1**	**Scope 2**	**Scope 3**	**Total**
Transport	810,858	4,038		814,896
(Type of fuel/energy used)	Petroleum products (petrol, diesel)	Electricity		
Buildings and heating	1,147,709	672,071		1,819,780
(Type of fuel/energy used)	Natural gas / Gasoil C / LPG	Electricity		
Waste	17,193	2,079		19,272
(Type of fuel/energy used)	Natural gas / Oil derivatives (diesel / petrol)	Electricity		
Industrial processes and product use	591,064	638,634		1,229,698
(Type of fuel/energy used)	Natural gas / Petroleum products (diesel)	Electricity		
Agriculture, forestry and land use	85,401	-		85,401
(Type of fuel/energy used)				

* Table A-1.1 shows the final energy consumption data from the 2019 energy consumption inventory of the sectors included in the Vitoria-Gasteiz Climate and Sustainable Energy Plan (SECAPVGG2030), residential building, tertiary, institutional, internal mobility, waste management and primary sector, to which the consumption of the industrial sector has been added. Final energy consumption amounted to 3,969 GWh/year. Less than 1% of this energy consumption comes from renewable sources.

A-1.2 (a): Applied emission factors						
To calculate primary energy in t or MWh						
Covenant of Mayors for Climate and Energy Methodology.						
Primary energy/ source of energy	Carbon dioxide (g CO_{2e} /kWh)	Methane (CH_4)	Nitrous oxide (N_2O)	Hydrofluorocarbons and Perfluorocarbons	Sulphur hexafluoride (SF_6)	Nitrogen trifluoride (NF_3)
Natural gas	203					
Diesel	270					
Petrol	255					
LPG	238					
Biodiesel	184					
Bioethanol	139					
Electricity	192					

Table A-1.2(a) contains the emission factors applied in the Vitoria-Gasteiz Climate and Sustainable Energy Plan (SECAP 2030 VG). All but the factor associated with electricity are taken from the IPCC. The electricity factor corresponds to the electricity mix in 2019.

A-1.2(b): Applied emission factors						
To calculate primary energy in t or MWh						
Emission factors used in the economic model (Economic Case)						
Sectors	Carbon dioxide equivalent (CO_{2e})	Methane (CH_4)	Nitrous oxide (N_2O)	Hydrofluorocarbons and Perfluorocarbons	Sulphur hexafluoride (SF_6)	Nitrogen trifluoride (NF_3)
Average passenger car fleet (g CO_{2e} /km)	175					
Average bus fleet (g CO_{2e}/km)	1.289					
Average van fleet (<3.5 tn) (g CO_{2e} /km)	253					
Average truck fleet (>3.5 tn) (g CO_{2e} /km)	751					
District heating heat production (g CO_{2e}/kWh)	200					
Local heating heat production (g CO_{2e} /kWh)	201					
Electricity generation (g CO_{2e} /kWh)*	222					

* Emission factor of the national electricity generation mix in 2019.

Table A-1-2(b) contains the emission factors applied in the Economic Model.

A-1.3: Activities by sector of origin (economic model input data)			
Base year	**2019**		
	Scope 1	**Scope 2**	**Scope 3**
Transport (private vehicle demand)	**765**		
(Activity)	Millions of kilometres per year in private vehicles		
Transport (bus demand)	**5**		
(Activity)	Millions of bus kilometres per year		
Transport (tram demand)		**1**	
(Activity)		Millions of tram kilometres per year	
Transport (commercial transport demand (< 3.5 t))	**28**		
(Activity)	Million kilometres light commercial vehicles (<3.5 t)		
Transport (commercial transport demand (> 3.5 t))	**158**		
(Activity)	Million kilometres heavy commercial vehicles (>3.5 t)		
Buildings and heating	**1,165**		
(Activity)	Heating and DHW demand (GWh/year)		
Energy (electricity)		**1,316**	
(Activity)		Electricity demand (GWh/year)	
Waste	**38,484**	**65,088**	**103,578**
(Activity)	Tonnes collected separately at source	Tons treated in mechanical-biological treatment plant	Total tonnes collected within the city
Other	-		
(Activity)	Data pending. To be provided in the next iteration of the CAP.		

A-1.4(a): GHG emissions by sector of origin (data source: SECAP + industrial sector)				
Base year	2019			
Unit	t CO_2 equivalent/year			
	Scope 1	**Scope 2**	**Scope 3**	**Total**
Transport	211,245	774		212,019
Buildings and heating	240,704	119,440		360,144
Waste	3.885	399	1.633	5.917
Industrial processes	121,215	122,426		243,641
Primary sector	76,086			76,086
Total	653,117	243,039	1,633	897,789

Table A-1.4(a) shows the emissions from sectors included in the SECAPVG2030, to which emissions from the industrial sector have been added.

A-1.4(b): GHG emissions by sector of origin (data source Economic Case)				
Base year	2019			
Unit	t CO_2 equivalent/year			
	Scope 1	**Scope 2**	**Scope 3**	**Total**
Transport	197,262			197,262
Buildings and heating	230,177			230,177
Energy (electricity)	-	292,832		292,832
Waste*			7,063	7,063
Other	198,030			198,030
Total	625,469	292,832	7,063	925,364

** Includes Scope 1 emissions (waste produced and processed in the city) and Scope 3 emissions (waste produced by the city but processed outside).*

A-1.4(c): GHG emissions by sector of origin (data source: Economic Case)				
Base year	**BAU 2030**			
Unit	**t CO_2 equivalent/year**			
	Scope 1	**Scope 2**	**Scope 3**	**Total**
Transport	142,702			142,702
Buildings and heating	226,083			226,083
Energy (electricity)		323,552		323,552
Waste*			22,719	22,719
Other	198,030			198,030
Total	566,815	323,552	22,719	913,086

** Includes Scope 1 emissions (waste produced and processed in the city) and Scope 3 emissions (waste produced by the city but processed outside).*

A-1.5: Graphs and tables

Figure A-1.1(1) Final energy use by sectors in 2019 (MWh/year).

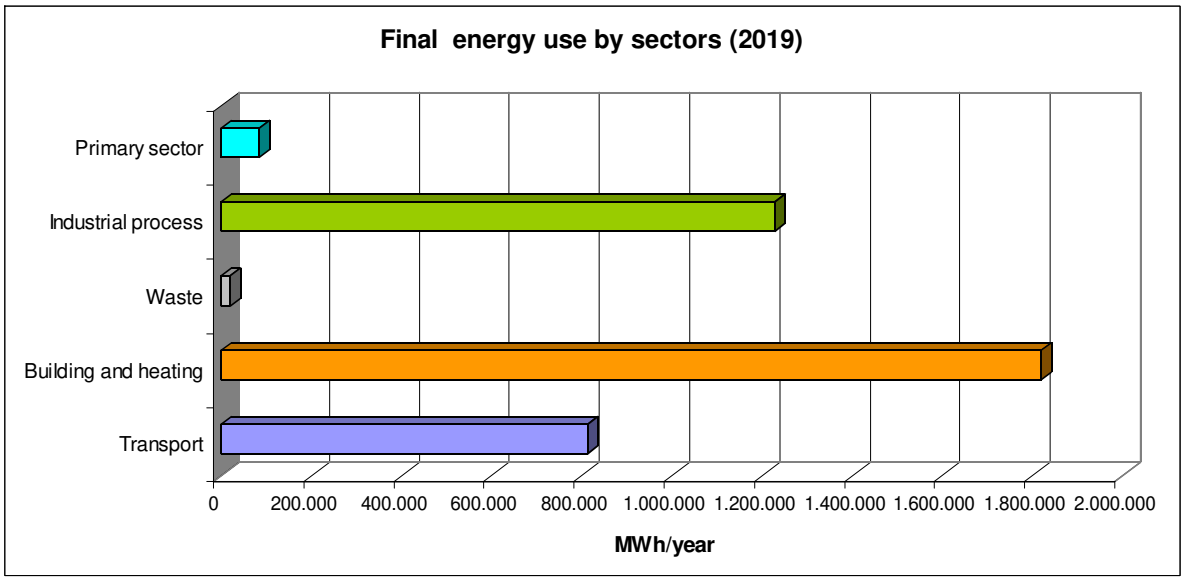


Figure A-1.1(2) Final energy use by sectors in 2019 (%).

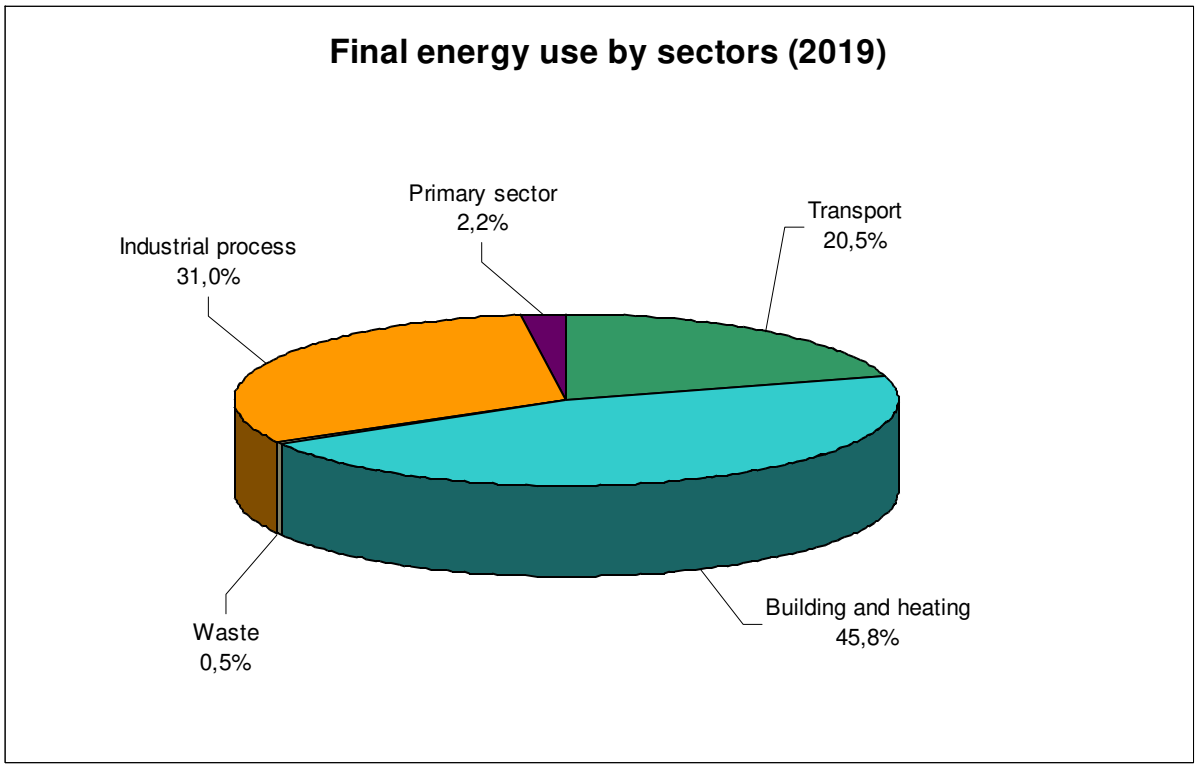


Figure A-1.4(a)(1) Greenhouse Gas (GHG) Emissions in 2019 by sectors in tonnes of CO_{2e}.

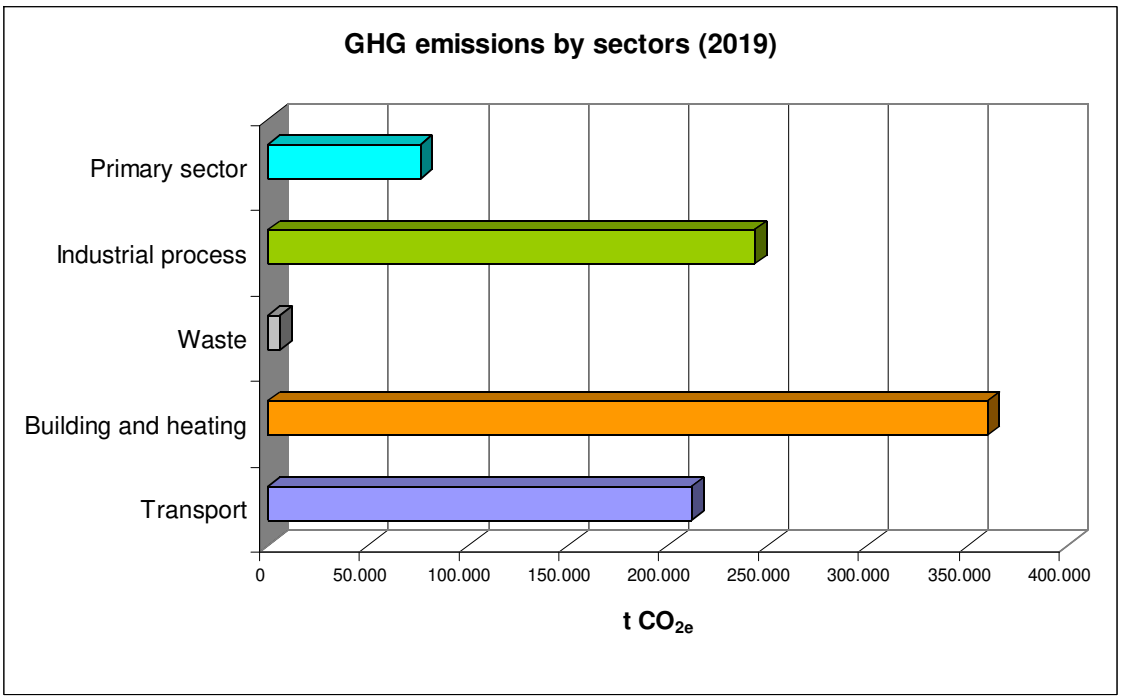


Figure A-1.4(a)(2) Greenhouse Gas (GHG) Emissions in 2019 by sectors (%).

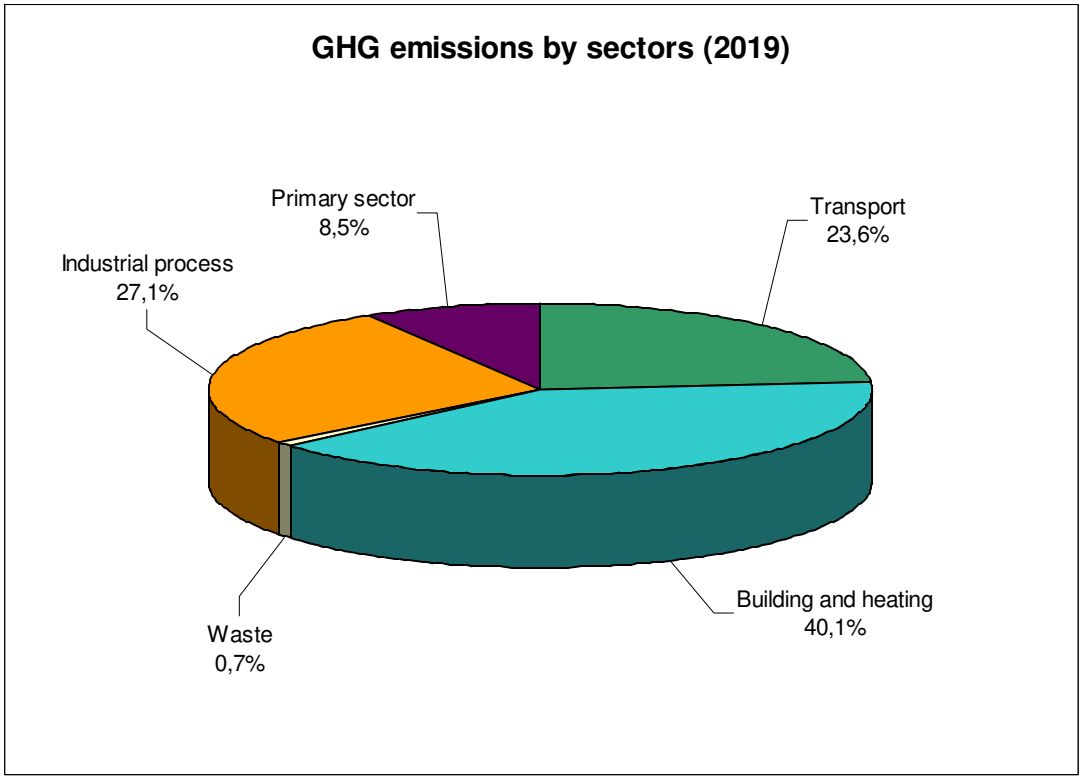


Figure A-1.4(c)(1) Greenhouse gas (GHG) emissions in the BAU2030 scenario (baseline) by sectors in tonnes CO_{2e}.

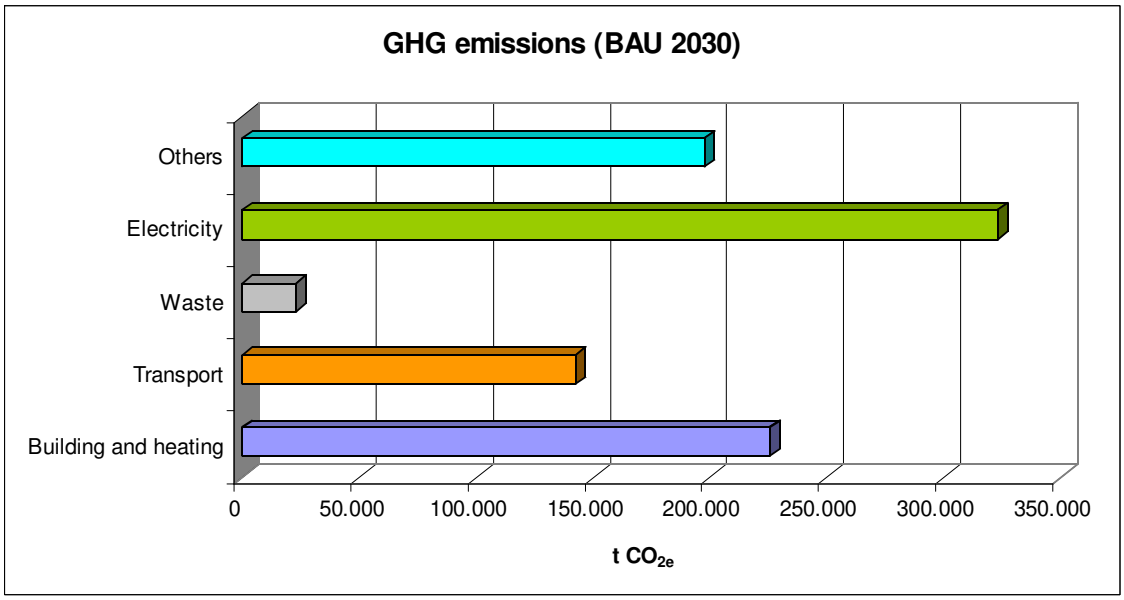
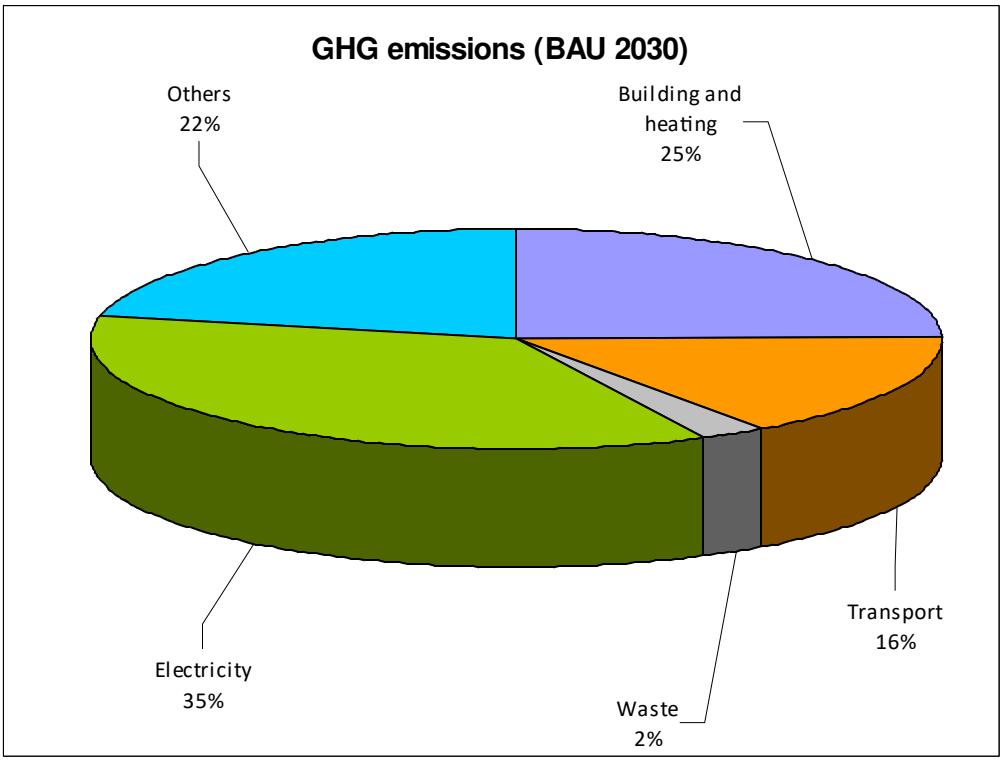


Figure A-1.4(c)(2) Greenhouse Gas (GHG) emissions in the BAU2030 scenario (baseline) for each sector (%).



A-1.6: Description and assessment of the Baseline GHG Inventory

As a step prior to drafting the Vitoria-Gasteiz SECAP 2030, an emissions inventory was drawn up as a reference to understand the sources and magnitude of GHG emissions in the city. This inventory includes data on energy consumption and Scope 1 and 2 emissions from the various sectors of the city: public and private internal mobility, residential sector, tertiary sector, municipal facilities and services, including waste management, and the agricultural and livestock sector. The geographical boundary of the reference inventory is the entire city of Vitoria-Gasteiz.

The inventory accounts for emissions of carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O) (expressed in CO_2 equivalents). Emissions of the following gases have not been considered: hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF_6) and nitrogen trifluoride (NF_3) because no data are currently available on these gases.

The Economic Model produced for Vitoria-Gasteiz by Material Economics uses a "systemic" approach to account for the city's GHG emissions, which examines the entire urban system, including buildings and heating, transport, electricity and waste, and identifies emission sources and pathways. The model considers not only Scope 1 and 2 emissions, but also some Scope 3 emissions (from waste management, when this takes place outside the city limits).

Therefore, although both instruments share certain similarities, the Economic Model and the SECAP emissions inventory estimate GHG emissions differently. These different approaches to calculating emissions lead to a different quantification of the city's emissions between the two calculation methodologies, so that although the final results are similar, the different approaches of the two methodologies result in two different emission inventories.

To develop a comprehensive understanding of the city's emissions profile and identify the most cost-effective, efficient ways to reduce GHG emissions, the Vitoria-Gasteiz Climate City Contract will make extensive use of the emissions data provided by the Economic Model, so that the investments, costs and benefits presented in the model are consistent with the emissions resulting from it. Likewise, and given that the SECAP2030VG emissions inventory represents the starting point for calculating the Economic Model emissions, it has been considered appropriate to include some tables in this section to present the SECAP2030VG emissions inventory data. Thus, tables A-1.1, A-1.2(a) and A-1.4(a) correspond to the SECAP emissions inventory (which includes energy consumption and emissions from the industrial sector of the city), while the remaining tables (A-1.2(b), A-1.4(b) and A-1.4(c)) correspond to the Economic Model. It should also be noted that the remaining quantitative tables included in this Climate City Contract, starting with table A-2.3, present the data provided by the Economic Model.

It has been decided to take 2019 as the reference year, as the 2020 data are affected by the health crisis during the COVID-19 pandemic.

Table A-1.1 shows the final energy consumption data from the 2019 energy consumption inventory for the sectors included in SECAP2030VG, residential building, tertiary, institutional, internal mobility, waste and primary sector, to which the consumption of the industrial sector has been added.

Table A-1.2(a) contains the emission factors applied in SECAP2030VG, while table A-1.2(b) contains the emission factors applied in the Economic Model.

Table A-1.3 shows the activity data by sector of origin used in the Economic Model.

Table A-1.4(a) shows the emissions of the sectors included in the SECAP2030VG, to which emissions of the industrial sector have been added, calculated from the data contained in tables A-1.1 and A-1.2(a) above.

Table A-1.4(b) shows the emissions estimated by sector by the Economic Model for 2019. Finally, table A-1.4(c) shows the **reference inventory** resulting from the projection of these emissions to 2030 (Business as Usual, BAU scenario) carried out with the Economic Model. This scenario represents a projection of what the city's emissions trajectory would look like if no additional decarbonisation measures were implemented beyond those already planned or underway.

Thus, the GHG emission reductions in 2030 will be calculated in relation to the emissions from the BAU 2030 scenario.

In the BAU2030 Economic Model scenario, the sector with the highest emissions is the electricity sector, with 35% of the total, followed by the building and heating sector, with 25%. The transport sector accounts for 16% of emissions, while the waste sector accounts for 2%. Finally, the model incorporates a sector called *Other*, which includes other sectors not modelled in the Economic Model, which in the case of Vitoria-Gasteiz are the industrial and primary sectors, together accounting for 22% of emissions.

The calculation is performed with the activity data in Table A-1.3. Activities by sector of origin (economic model input data) and the emission factors in Table A-1.2(b). Emission factors applied (economic model).

The Economic Model considers both the population variation in 2030 and all actions with an impact on the BAU2030 scenario, referring to an improvement in efficiency in the different building sectors (new buildings following a more demanding standard, thermal installations and efficient lighting), and mobility (cars, lorries and buses with lower consumption, etc.).

One important difference in the 2019 inventory of SECAP2030VG + Industry mentioned in the Economic Model is that in the latter, electricity becomes a sector in its own right, as its emissions are unbundled from other sectors (the Economic Model has used an electricity emission factor of 222 g CO_{2e}/kWh compared to 197 g CO_{2e}/kWh used in SECAP2030VG).

In addition, the Economic Model does not separately consider the Industrial Processes and Product Use (IPPU) and Agriculture, Forestry and Land Use (AFOLU) sectors, which are included in "***Other"***, for which no emission reduction actions have been modelled. Further iterations of this Climate City Contract will include additional actions to those already considered in this first iteration to reduce emissions from the "Others" sector for the above sectors.

Finally, a series of graphs are provided to allow visualisation of the final energy use and GHG emissions data tables:

Figure A-1.1(1) Final energy use by sectors in 2019 (MWh/year).

Figure A-1.1(2) Final energy use by sectors in 2019 (%).

Figure A-1.4(a)(1) Greenhouse Gas (GHG) Emissions in 2019 by sectors in tonnes of CO_{2e}.

Figure A-1.4(a)(2) Greenhouse Gas (GHG) Emissions in 2019 by sectors (%).

Figure A-1.4(c)(1) Greenhouse gas (GHG) emissions in the BAU2030 scenario (baseline) by sectors in tonnes CO_{2e}.

Figure A-1.4(c)(2) Greenhouse Gas (GHG) emissions in the BAU2030 scenario (baseline) for each sector (%).

In order to have a complete GHG inventory, which includes gases not considered up to now (HFCs, PFCs, SF_6 and NF_3) for all sectors and scopes considered in the Mission, annual final energy consumption and GHG emissions inventories will be prepared for the period 2021-2030 for the municipality as a whole.

In the next iteration of this Climate City Contract will include the complete inventories corresponding to the years 2021-2023.

MODULE A-2

Current policies and strategies assessment

A-2.1: List of relevant policies, strategies and regulations					
Type	**Level**	**Name and/or title**	**Description**	**Relevance**	**Need for action**
Strategy / Action Plan	Local	Vitoria-Gasteiz 2030 Strategy: Action Plan of the Urban Agenda 2030 of Vitoria-Gasteiz (AU2030VG)	Strategic framework and action plan for the sustainable development of the City; it includes 5 strategic challenges and 4 cross-cutting levers, which articulate a total of 98 actions. Challenge no. 3 is stated as a green, climate-neutral, resilient and self-sufficient VG.	One of the cross-cutting levers included is participation in European climate neutrality and adaptation missions.	Establishment of the CTI-ODS - AU2030VG Technical Steering Committee Creation of 5P Teams - Interdepartmental working teams related to the 5Ps of the SDGs (Planet, People, Prosperity, Peace and Partnership).
Action Plan	Local	Sustainable Climate and Energy Action Plan of Vitoria-Gasteiz (SECAP 2030)	It includes actions in the field of building, mobility, management of municipal services (waste, sewage, public lighting, etc.), and installation of RES-E to reduce GHG emissions in the city.	Highest relevance: it is the starting point for the city's climate action. It sets out the roadmap for decarbonisation of the city council's performance.	Creation of the Energy Sustainability Committee Creation of the Energy Sustainability Task Force Climate Change Adaptation Working Group. Integration in urban planning.
Action Plan	Local	Plan for Sustainable Mobility and Public Space (PMSyEP) 2021-2025	Promoting active and safe mobility and efficient and universal public transport, as well as rationalising the use of private cars. It establishes a commitment to the decarbonisation of urban mobility through electrification and rationalisation of the municipal vehicle fleet, development of a charging infrastructure for electric vehicles, promotion of the electrification of private and business vehicle fleets, and promotion of cargo bicycles as a mobility alternative.	Very relevant as it sets out actions in the field of sustainable mobility and its decarbonisation.	To specify the measures and projects to be developed, the main political participation body is the political-technical commission, in which all the political groups and municipal technicians from the different services related to mobility and public space are represented. At the technical level, a commission has been set up to monitor the various reviews and at this level it actively participates in the political-technical commission. It will be led by the municipal technicians from the different departments involved in the process of revising the plan. Technicians from other institutions with direct involvement in the plan also take part. Citizen participation will be mainly channelled through the Elkargune Mobility Forum and the thematic committees that may be set up to deal with more sectoral issues. A website will be set up to report on the PMSEP commitments, the progress made in its development and where the indicators for monitoring and evaluating the planning will be published. In addition, a biennial report will be published on the state of mobility and public space.

A-2.1: List of relevant policies, strategies and regulations					
Type	**Level**	**Name and/or title**	**Description**	**Relevance**	**Need for action**
Policy / Strategy	Local	Urban regeneration, eco-rehabilitaion and revitalisation of vulnerable neighbourhoods in Vitoria - Gasteiz (2021-2030)	Ekobarrios: actions to be carried out within the framework of the Basque Government's Opengela Programme "Zero energy balance neighbourhoods: Incorporation of active and passive measures aimed at producing buildings (residential and tertiary) with almost zero or positive energy balance with lower fire risks, in vulnerable neighbourhoods."	Very important, as it affects the decarbonisation of the building sector.	Setting up Neighbourhood Offices. In the Zaramaga neighbourhood, an office called *Oficina de Proximidad* has already been set up. Creation of a financial group to design and implement a financial instrument to facilitate renovation for vulnerable people, complementary to the calls for non-refundable grants. Coordination Group with the Department of Territory and Climate Action and, in particular, with the Planning and Urban Development Enforcement Service to review urban development conditions in the Old Town of Vitoria-Gasteiz and the regulations to be applied to protected buildings to facilitate energy rehabilitation. Plus, providing the general urban development plan with instruments to enable rehabilitation operations to be undertaken in degraded areas that do not meet economic sustainability criteria.
Action Plan	Local	Araba-Álava Urban Waste Prevention and Management Plan, 2017-2030	Aimed at waste prevention at source, preparation for reuse and recycling of as many fractions of municipal waste as possible, minimising the amount of waste deposited in landfill.	Highly relevant in terms of reducing the environmental (GHG emissions) and health impact of the urban waste management system in VG and Araba/Álava.	Setting up an Observatory with a set of monitoring and evaluation indicators. Annual monitoring and four-yearly evaluation of the degree of progress in achieving the objectives of the Plan and its actions. It will encourage participation from citizens and stakeholders.
Strategy / Action Plan	Local	Circularity Strategy 2030 of Vitoria-Gasteiz (in preparation)	It will establish the strategic framework and a 4-year action plan for the promotion of the circular economy in the city, accelerating this transition from the scope of municipal competences. It covers materials and waste linked in one way or another to the city (imports, exports, generation, etc.).	Relevant, as it promotes and develops the circular industrial, construction, services, commerce and hotel and catering sectors; promoting a responsible consumption model among citizens.	Interdepartmental and interdisciplinary working team from the departments of economics, waste management, sustainability and climate, and the Centre for Environmental Studies.
strategy and Action Plan	Local	Air Quality Strategy 2030 and Action Plan to Improve Air Quality in VG 2023-2026 (in preparation).	Determining strategic lines an actions to improve Air Quality in VG.	Relevant due to its relationship with air pollutant emissions.	Setting up an Air Quality Strategy Working Group. Holding a workshop with Air Quality Strategy stakeholders.

A-2.1: List of relevant policies, strategies and regulations					
Type	**Level**	**Name and/or title**	**Description**	**Relevance**	**Need for action**
Action Plan	Local	Vitoria-Gasteiz Urban Green Infrastructure Plan (2015)	It defines a system of chief areas on which to act, and a set of projects and interventions aiming to increase urban biodiversity (through naturalisation actions, creation of ponds and bird shelters...), improve water drainage (through the laying of permeable paving, creation of rain gardens...), and improve the fixation of CO2 and other atmospheric pollutants (through planting trees...), etc.	Crucial to favour the environmental sustainability of the city and contribute to the absorption of CO2 by the municipal sinks of those direct emissions that cannot be avoided in the coming years.	Integration in urban planning. Setting up a periodic monitoring system that reveals the benefits provided by the Green Infrastructure System and to evaluate the effectiveness of the measures and actions carried out. Innovation will be essential when developing evaluation instruments. To this end, we will try to develop prospecting and analysis of innovative and successful solutions associated with good practices to support decision-making at a local level. It is interesting to establish collaboration frameworks with R+D+i entities, research centres, universities, knowledge networks, etc.
Action Plan	Local	Municipal Action Plan 2017-2025 of the Vitoria-Gasteiz Agri-Food Strategy	Framed within the Agri-Food Strategy, its objective is to connect local production of quality food with consumption of these products in the city. It addresses various actions related to sustainable production and quality food, seeking a comprehensive vision of the different processes involved.	Relevant for the involvement and collaboration with the different agents (local farmers and stockbreeders, consumer associations, traders...) who are committed to other forms of sustainable production and consumption.	A governance structure should be created for it.
Policy / Regulations	Local	New Urban Development City Plan for Vitoria-Gasteiz (Initial Approval Document)	Basic instrument to formulate municipal urban planning policies, which aim to establish the classification of the city's land and its compatible or non-permitted uses.	Fundamental, e.g. for the balanced development of renewable energies, rational use of land, etc.	VG UDCP development technical team. Territorial Commission: political body where the documents of the UDCP of VG are contrasted with the rest of the political parties in the AVG Plenary. These teams must coordinate with the teams in charge of developing other strategies such as mobility, energy or green infrastructure that are reflected at territorial level so that they are integrated into the UDCP.
Regulations	Local	Tax Ordinance Regulating Property Tax (IBI)	IBI tax rebates.	For residential properties, 50% rebate for homes with energy certification A and 25% for energy certification B for 3 years.	Finance Committee Work is ongoing to establish regular coordination with the Department of Finance.
Regulations	Local	Regulatory Ordinance of the Tax on Constructions, Installations and Works (ICIO)	ICIO tax rebates.	95% rebate on the ICIO for the implementation of solar energy systems. 85% rebates for complete refurbishment works (energy and accessibility) of regular dwellings that achieve an A and B energy	Work should be done to establish regular coordination with the Department of Finance.

A-2.1: List of relevant policies, strategies and regulations					
Type	**Level**	**Name and/or title**	**Description**	**Relevance**	**Need for action**
				label.	
Regulations	Local	Mechanical Traction Vehicles Tax (IVTM)	IVTM tax rebates.	90% bonus for zero-emission vehicles: battery electric vehicles (BEV), range-extended electric vehicles (REEV), plug-in hybrid electric vehicles (PHEV). 50% bonus for vehicles with ECO label: plug-in hybrid vehicles with a range of less than 40 km, non-plug-in hybrid vehicles (HEV), vehicles powered by natural gas (CNG and LNG) or liquefied petroleum gas (LPG).	Work should be done to establish regular coordination with the Department of Finance.
Regulations	Local	Energy Transition and Renewable Energy Ordinance (under preparation)	Local regulations to promote a just energy transition, energy efficiency in urban sectors (building, mobility, urban services), as well as renewable energies, regulating their installation conditions.	Basic local regulations to establish conditions and obligations regarding energy efficiency and renewable energies.	A working team has been established to develop this new ordinance and support external legal-technical assistance. This work should be continued and coordinated with the UDCP team.
Policy	Local	Declaration of climate emergency by the City Council of Vitoria-Gasteiz (27 September 2019)	The AVG commits to put in place the necessary policy, regulatory and resource commitments to ensure greenhouse gas reductions reach net zero by 2040 and ideally by 2035.		
Action Plan	Local / Province of Alava	Araba Klima Strategy 2050	It comprises more than 70 multi-sectoral actions, developed through 24 lines of action, aimed at achieving 10 goals, including the decarbonisation of the economic and energy model in Alava, the promotion of sustainable mobility and public transport and making the foral public administration an exemplary entity in terms of energy efficiency and sustainability.	Significant in that it will affect the province's energy and economic model as a whole.	Coordinate the Araba 2050 Klima Strategy with the Climate City Contract Action Plan. Adhesions to the Vitoria-Gasteiz Climate City Contract must also be sought from the institutional agencies in charge of drawing up, implementing and monitoring these strategies, reflecting commitments between both parties. This work will be carried out in successive iterations of this Action Plan.

A-2.1: List of relevant policies, strategies and regulations					
Type	**Level**	**Name and/or title**	**Description**	**Relevance**	**Need for action**
Action plan	Local	II Industry Support Plan 2021-2024	The Industry Support Plan is the instrument with which the City Council is equipped to promote industrial activity in the city of Vitoria-Gasteiz, and it does so through determining six strategic objectives	Industry provides around 30% of local employment and 26% of GDP. Its survival is key to the future of the city and its competitiveness and capacity is key to the change of model we are facing.	Continue to promote the Industry Round Table: a forum for relations between business associations, companies located in different industrial areas and the Vitoria-Gasteiz City Council.
Action plan	Local	Integral Support Plan for Entrepreneurship	It is the instrument with which the City Council contributes to and complements the local entrepreneurial ecosystem.	It is in development.	Continue with training actions to support local entrepreneurship.
Strategy	Regional	Basque Climate Change Strategy 2050 (Klima 2050)	Integrate climate change mitigation and adaptation into public planning. Support innovation and technological development, enabling GHG emission reductions in all sectors.	Important, as the Autonomous Community regulates matters and implements key actions for decarbonisation.	Coordinate the Basque Climate Change Strategy 2052 (Klima 2050) with the Action Plan of the Climate City Contract and its successive iterations. Adhesions to the Vitoria-Gasteiz Climate City Contract must also be sought from the institutional agencies in charge of drawing up, implementing and monitoring these strategies, reflecting commitments between both parties. This work will be carried out in successive iterations of this Action Plan.
Strategy	Regional	Basque Circular Economy Strategy	To promote the Basque Country's transition towards a more circular economy through innovation, entrepreneurship and a public-private collaboration model that involves citizens, companies and administrations towards achieving a common goal.	The Basque Circular Economy Strategy sets three strategic objectives: Increase material productivity by 30%. Increase the rate of use of circular material by 30%. Reduce the rate of waste generation per unit of GDP by 30%.	Coordinate the Basque Circular Economy Strategy with that of Vitoria-Gasteiz and with the Action Plan of the Climate City Contract and its successive iterations. Adhesions to the Vitoria-Gasteiz Climate City Contract must also be sought from the institutional agencies in charge of drawing up, implementing and monitoring these strategies that reflect commitments between both parties. This work will be carried out in successive iterations of this Action Plan.
Regulations	Regional	Law 4/2019, on Energy Sustainability in the Basque Country	Law 4/2019, on Energy Sustainability in the Basque Country	Very important, as it establishes legal obligations for the city in terms of energy efficiency and renewable energies in its facilities and in the provision of services targeting energy transition and reduction of emissions. It also includes obligations from the point of view of the mobility system.	The SECAP, and therefore also the Climate City Contract, already follow Law 4/2019 on Energy Sustainability in the Basque Country and are even more ambitious than the latter. Work must be done to set up regulatory Sandboxes to promote decarbonisation among all towns in the Basque Country. Adhesions to the Vitoria-Gasteiz Climate City Contract should also be sought from the institutional agencies responsible for drawing up, implementing and monitoring these regulations, reflecting commitments

A-2.1: List of relevant policies, strategies and regulations					
Type	**Level**	**Name and/or title**	**Description**	**Relevance**	**Need for action**
					between both parties. This work will be carried out in successive iterations of this Action Plan.
Action Plan	National	National Integrated Energy and Climate Plan (PNIEC) (2021-2030)	It defines the targets for reducing greenhouse gas emissions, the penetration of renewable energies and energy efficiency, as well as the lines of action to achieve them.	It is of vital importance for the European Mission as they should be aligned.	City strategies must be aligned with the Plan's objectives. At the local level, and due to the distribution of competences, no actions can be taken that really reflect change in this Plan. Because the objectives are not as ambitious as those established by the Mission, the necessary actions in this case must be taken at state and European level so that coordination is more direct and effective, and to provide cities with the necessary tools to be able to act. For all this work, the necessary support must be sought from the corresponding agencies and the Platforms that work within and outside the Mission so that progress can be made in line with the Mission's objective.
Strategy	National	Long Term Decarbonisation Strategy (ELP 2050)	It shows a pathway towards decarbonisation that will guide investments in the coming years, underpinning the model shift towards an emission-free economy.	Imposes obligations on local authorities and other actors	Local administrations must comply with the obligations imposed. At the local level and due to the distribution of competences, no actions can be taken that really reflect change in this Plan. Because the objectives are not as ambitious as those established by the Mission, the necessary actions in this case must be taken at state and European level so that coordination is more direct and effective, and to provide cities with the necessary tools to be able to act. For all this work, the necessary support must be sought from the corresponding agencies and the Platforms that work within and outside the Mission so that progress can be made in line with the Mission's objective.
Regulations	National	Law 7/21 on Climate Change and Energy Transition	It establishes minimum targets for the year 2030 for the reduction of GHG emissions, the penetration of RES-E in final energy consumption, its minimum participation in the electricity system, and the reduction of primary energy consumption. It includes the PNIEC and ELP2050 as instruments.	It is one of the key legal tools for the reduction of GHG emissions, as well as obligations from a mobility system point of view.	At the local level and due to the distribution of competences, no actions can be taken that really reflect change in this Plan. Because the objectives are not as ambitious as those established by the Mission, the necessary actions in this case must be taken at state and European level so that coordination is more direct and effective, and to provide cities with the necessary tools to

A-2.1: List of relevant policies, strategies and regulations					
Type	**Level**	**Name and/or title**	**Description**	**Relevance**	**Need for action**
					be able to act. For all this work, the necessary support must be sought from the corresponding agencies and the Platforms that work within and outside the Mission so that progress can be made in line with the Mission's objective.
Strategy	National	Spanish Circular Economy Strategy (EEEC)	The EEEC lays the foundations for moving beyond the linear economy and promoting a new model of production and consumption in which the value of products, materials and resources is retained in the economy for as long as possible; in which waste generation is minimised and waste that cannot be avoided is used as much as possible.	It sets targets for 2030 that will, among other things, reduce national material consumption by 30%, improve water efficiency by 10% and cut waste generation by 15% compared to 2010, making it possible to bring greenhouse gas emissions from the waste sector below 10 million tonnes in 2030.	The Circularity Strategy of Vitoria-Gasteiz must be aligned with this National Strategy. At a local level and due to the distribution of competences, no actions can be taken that really reflect change in this Plan. Because the objectives are not as ambitious as those established by the Mission, the necessary actions in this case must be taken at state and European level so that coordination is more direct and effective, and to provide cities with the necessary tools to be able to act. For all this work, the necessary support must be sought from the corresponding agencies and the Platforms that work within and outside the Mission so that progress can be made in line with the Mission's objective.
Strategy	National	National Strategy for Green Infrastructure and Ecological Connectivity and Restoration	It is the strategic planning document that regulates the implementation and development of Green Infrastructure in Spain.	It establishes a series of lines of action aimed at ensuring that the development of green infrastructure contemplates global change scenarios, with the objectives of contributing to the adaptation and mitigation of the effects of climate change.	The Vitoria-Gasteiz Green Infrastructure Strategy must be aligned with this National Strategy. At a local level and due to the distribution of competences, no actions can be taken that really reflect change in this Plan. Because the objectives are not as ambitious as those established by the Mission, the necessary actions in this case must be taken at state and European level so that coordination is more direct and effective, and to provide cities with the necessary tools to be able to act. For all this work, the necessary support must be sought from the corresponding agencies and the Platforms that work within and outside the Mission so that progress can be made in line with the Mission's objective.

A-2.2: Description and evaluation of policies

Vitoria-Gasteiz has a long tradition in drafting and implementing policies, strategies and action plans on environmental, economic and social sustainability, and other sectorial areas, such as mobility, waste management, air quality, etc.

Following a co-creation process, the Vitoria-Gasteiz Urban Agenda 2030 was approved in 2022 as a new strategic framework for the city's sustainable development. It includes 5 strategic challenges and 4 cross-cutting levers, and an action plan that articulates a total of 98 actions in terms of sustainability. Challenge 3 is to make Vitoria-Gasteiz green, climate-neutral, resilient and self-sufficient, through promoting energy transition, the circular economy and green infrastructures. One of its transversal levers is support and participation in European Missions, particularly regarding climate neutrality and adaptation.

In the field of climate action, the main tool available to promote energy transition and mitigate emissions is the Vitoria-Gasteiz Sustainable Energy and Climate Action Plan (SECAP 2030). SECAP 2030 establishes a prior greenhouse gas (GHG) emission reduction target for the diffuse sectors of 61.5% in 2030 in relation to the base year (2006) and a net GHG emission reduction target of 83%. The diffuse sectors covered by the target are: residential, services and institutional sectors, internal mobility, and the primary sector. The plan also aims to achieve climate neutrality by 2050. However, the plan schedules its own review within two years, in conjunction with other strategic planning instruments, such as the Urban Development City Plan (UDCP) or the Vitoria-Gasteiz Urban Agenda 2030 (AUVG2030), and sectoral planning, such as strategies and/or plans for mobility and public space, waste management, innovation and smart city, public procurement, etc., as well as the development of new regulations (e.g., the development of new legislation (e.g., the Urban Agenda 2030 of Vitoria-Gasteiz), as well as developing new regulations (energy ordinance, low emission zones, etc.), to adapt the ambition of climate neutrality and the quantitative targets to a more ambitious objective such as climate neutrality in 2030. The Economic Model used for Vitoria-Gasteiz actually implies this type of review to adjust the SECAP2030 target to climate neutrality in 2030.

The most significant actions in the energy field would be related to residential, tertiary and institutional building, through the renovation/rehabilitation of existing buildings (envelopes and heating and DHW installations), the electrification of demand, the integration of renewable energy systems, with mobility, through implementation of superblocks and their electrification, the efficient and decarbonised management of municipal services (public lighting, water cycle management, waste management, etc.). There is also the generation of renewable energy *in situ* and nearby, by promoting citizen energy communities and renewable energies, and installing photovoltaic self-consumption systems on building roofs and in public spaces, as well as extending a decarbonised heat network to all the city's neighbourhoods.

The strategies and actions already contemplated in the SECAP2030 should be accelerated, and additional ones incorporated, based on the results of the Economic Model.

As mentioned above, SECAP 2030 feeds into and complements other policy and/or planning tools at strategic and sectoral level such as spatial planning, building, mobility, circularity, innovation, green infrastructure, etc.

Within the framework of its Sustainable Mobility and Public Space Plan (PMSyEP), Vitoria-Gasteiz is already applying a new requalification and reorganisation of public space and an integrated approach to managing the local mobility system that provides more appropriate conditions to promote more efficient, sustainable and safe urban mobility, with a greater role for active travel and public transport. This formulation is based on a new road hierarchy, establishing a series of urban cells (superblocks), alongside integrating a wide range of actions over the whole urban mobility system and public space: electrification and improvement of collective public transport (Intelligent Electric Bus, Tram), traffic calming, pedestrian and cycle routes, parking regulation, micro-logistics solutions, secure bicycle parking, etc.

The PMSyEP, approved in October 2022 for the period 2021-2025, defines a long term (2030) scenario for private mobility, known as E3SM, derived, on the one hand, from implementing large public transport infrastructures (putting the railway underground, extending the tram lines, etc.), and on the other hand, from implementing superblocks throughout the urban area. Based on this scenario, a traffic reduction target of 33% has been set, which in terms of GHG emissions reduction represents a drop of 40%, which, together with progressive renewal of the fleet and introduction of electric vehicles, could mean lowering emissions by more than 56% in 2030 due to internal mobility in the city. This scenario has been assumed as the target scenario for SECAP 2030 in the field of mobility.

The 2021-2025 action plan establishes 9 strategic objectives among which we can highlight a commitment to climate change on the one hand, with the decarbonisation of mobility, and greater public awareness and governance committed to sustainable mobility on the other hand.

The most significant mobility actions that would affect lowering energy consumption and emissions in the mobility sector would be related to enhancement and electrification of public transport (buses and trams), improvement and extension of infrastructures to favour a modal shift to cycling and walking, rationalisation of the use of the private vehicle and creation of infrastructure to develop private electric vehicles, both for passenger and freight transport, improvement of logistics and urban freight transport and labour mobility, plus regulation-based measures, such as vehicle access regulations in Low Emission Zones (LEZs).

With regard to improving public transport and electrification projects, it should be noted that by implementing the Intelligent Electric Bus (BEI), 13 electric buses have been brought in, linking 14 districts, with a potential of 3 million users per year (reduction of 1,520 t CO2e/year). Extending the tram to the districts of Salburua in 2023, and subsequently to Zabalgana, should lead to a significant reduction in the use of private cars as both districts represent 20% of the total population of the city.

In relation to building policies and strategies, there is the Ekobarrios plan - Urban regeneration, eco-rehabilitation and revitalisation of vulnerable neighbourhoods in Vitoria-Gasteiz (2021-2030), which stems from a framework document called

"Master Plan for Urban Regeneration, Eco-Rehabilitation and Vitalisation of the Neighbourhoods of Vitoria-Gasteiz", which is expected to be the roadmap to follow over a twenty-year horizon (period 2021-2040). It is part of the project formulated by the Department of Territorial Planning, Housing and Transport of the Basque Government: "Nearly Zero Energy Neighbourhood (NZEN) - Opengela Programme: Incorporation of active and passive measures aimed at achieving buildings (residential and tertiary) with almost zero or positive energy balance and safer against the risk of fire, in vulnerable neighbourhoods."

Ekobarrios proposes the urban, social and environmental regeneration of the Medieval Quarter (Integrated Restoration Area) and the Degraded Areas (DA) declared in 9 neighbourhoods, built between the 1950s and 1970s in the city. The actions proposed seek to assist decarbonisation of the city and to this end the energy rehabilitation of its building stock (both public and private), improvement of accessibility, incorporation of green infrastructure and support for more sustainable mobility in the oldest areas of the city are fundamental, seeking to improve living conditions for residents in less favourable situations.

The experience amassed in the energy refurbishment project in the Coronación neighbourhood, part of the Horizon 2020 SmartandCity programme - creating carbon-neutral smart cities, is key to future action on energy improvements in residential and tertiary buildings. In the Coronación neighbourhood, a total of 524 equivalent dwellings were targeted to reduce energy demand and emissions (-3,054 MWh/year and -998 tCO2e/year) and increase the use of renewable energy by replacing fossil fuels with a district heating network, operating on biomass, with the capacity to power 1,300 homes. One of the most important lessons learned is the need to integrate neighbourhood participation in the project from the very beginning.

The Ekobarrios project is going to be initially deployed in the Zaramaga neighbourhood, by implementing the *Urban Regeneration, Eco-rehabilitation and Vitalisation of the Zaramaga neighbourhood* in Vitoria-Gasteiz. It consists of the urban, social and environmental regeneration of this neighbourhood, which was declared a Degraded Area. It is predominantly residential and most of the blocks of flats were built between the 60s and 70s using traditional construction systems. The proposed actions seek to assist decarbonisation of the city and therefore focus on energy rehabilitation for its building stock (both public and private), improving accessibility, incorporating green infrastructure, supporting more sustainable mobility as well as the basic infrastructure for a heating network at neighbourhood level. Refurbishment is proposed with energy efficiency criteria on envelopes and heating and DHW systems, interior ventilation of the dwellings with heat recovery systems, incorporation of renewable electricity generation resources. The refurbishment is accompanied by actions to renew public lighting, to promote active mobility (pedestrianisation of streets and reconversion of infrastructures for pedestrian use), to promote sustainable mobility and electric mobility infrastructures, construction and refurbishment of parks, installation of sustainable urban drainage systems (SDUs), as well as energy installations on a neighbourhood scale, such as the basic infrastructure for a district heating network.

In relation to urban waste management, the Álava Waste Prevention and Management Plan (2017-2030) is developed on the basis of ten strategic objectives, which define and budget for 80 actions, split into three action programmes:

i. Governance and Strategic Measures, which brings together the cross-cutting measures, applicable to all municipal waste streams.

ii. infrastructure, which brings together measures affecting the infrastructure supporting waste management, and

iii. other support measures to improve prevention and manage priority flows, bringing together specific measures to improve prevention and management of certain specific flows, such as organic matter, food waste, light packaging and bulky waste.

The plan's strategic objectives revolve around prevention, with a target of reducing the weight of municipal waste by more than 15% in 2030 compared to 2015, preparation for reuse, reaching a minimum of 5% by weight of the total municipal waste produced, recycling, reaching a minimum of 65%, and finally, safe disposal, reducing the percentage of waste ending its life cycle in landfill to a maximum of 15%. Finally, another strategic objective revolves around environmental sustainability, reducing the environmental and health impact of the municipal waste management system, especially its GHG emissions.

The Vitoria-Gasteiz City Council's Industry Plan includes a specific line of work to promote the transition of the city's productive sector towards circular business models with a low climate impact. It works at three levels: company, sector and productive area.

- Business: the municipal resources available to local companies include financial aid for circular economy projects (eco-design, servitisation, remanufacturing, recovery of secondary materials), the advisory service on circular business models and the carbon footprint calculation and reduction service, the Laboratory City programme to facilitate testing in real environments of developments at high levels of technological maturity (TRL) or the Basque Circular Hub (the result of collaboration with Ihobe - the Basque Government's Public Society for Environmental Management).
- Sector: development of projects anchoring milestones with sectors such as tourism, the repair sector, urban businesses (commerce-hospitality-personal services), etc.
- Productive zone: bringing the circular perspective into management of industrial zones based on an ecosystemic approach to productive zones, analysing the flows of materials in and out of them, and estimating the potential to develop industrial symbiosis initiatives.

All in all, the aim is for local companies to become active agents contributing to the objectives of circularity of materials and decarbonisation of Vitoria-Gasteiz's economy.

Vitoria-Gasteiz has a Conservation of Biodiversity strategy, an exhaustive analysis-diagnosis of the aquatic, agricultural, livestock and forestry environments of the city and, to a lesser extent, the artificialized environment, and proposes a good number

of measures and actions aimed at their protection, conservation and improvement. With specific reference to the urban environment, the document's action plan includes "drafting a Green Infrastructure Plan specifically for the urban environment, which defines its elements and determines the necessary actions to conserve or promote its biodiversity and ensure its multifunctionality, including its appropriate integration into urban planning."

The Vitoria-Gasteiz Urban Green Infrastructure System or Plan (2015) pursues a series of general objectives, such as enhancing biodiversity in the city, increasing spatial and functional connectivity between urban and peri-urban green spaces, increasing ecosystem services, favouring urban metabolism processes closer to natural processes, reducing the consumption of natural resources, integrating ecological and hydrological processes and flows into the urbanised fabric through appropriate planning, mitigation of urban heat islands, slowing down climate change, and improving the conditions and processes of adapting to it, increasing the resilience of the territory and reducing its vulnerability. Other general objectives would be to promote compatible public use of green spaces, increasing opportunities for leisure and recreation, increasing accessibility and rural-urban connections, preserving cultural heritage and traditional landscapes, creating environments that favour health, collective well-being and the city's general liveability. Finally, the plan seeks to assist local economic development through green employment and to raise awareness on the nature-biodiversity-society relationship, particularly regarding ecosystem goods and services, including their economic valuation.

One of the city's most important green infrastructure systems is its Green Belt (827 ha), a semi-natural space made up of forests, rivers, wetlands, meadows, groves and hedges, which surrounds the city centre and brings nature closer to the city. It has more than 265,000 trees, a total leaf area of 12.11 km^2 and more than 12,000 tonnes of carbon stored in plant tissue. In addition, it has an estimated carbon sequestration capacity of 3,168 tonnes of CO_2/year and eliminates 564 tonnes of air pollution (PM).

Alava is over 80% forest land, with more than 100 million tonnes of CO_2 amassed and an absorption rate of 600,000 t CO_2/year. Vitoria-Gasteiz has almost 8,600 hectares of forest land, contributing significantly to CO_2 accumulation. It is estimated that around 8% of the total accumulated CO_2 in the province is found in the city's forests.

An initial conservative estimate stated that the CO_2 fixation rate of the forest mass in the city is around 40,000 tonnes of CO_2/year. Another 4,900 tonnes of CO_2/year should be added to that, fixed by the area of crops and pastures in the city. If the sink effect of urban greenery (Green Belt and trees in parks and streets) is also considered, more than 4,000 tonnes of CO_2/year can be added.

Other sink absorption projects are also envisaged, such as carbon sequestration in farmland (2020-22): ongoing quantification with the Neiker R&D centre and the Municipal Incubator for organic farmers (Basaldea) aims to attract and settle new organic farmers in the city, helping to diversify and increase local production.

A strategy for residual emissions is developed in section B-2.3.

A-2.3: Emissions Gap								
	Reference/Baseline Emissions BAU 2030 (percentage)		***Residual emissions[1]***		***Emission reduction target[2]***		***Emissions gap (to achieve net zero emissions)***	
	(absolute value) kt CO_{2e}	*(%)*	*(absolute value) kt CO_{2e}*	*(% of BAU 2030)*	*(absolute value) kt CO_{2e}*	*(% of BAU 2030))*	*(absolute value) kt CO_{2e}*	*(% of BAU 2030))*
Transport	*143*	*16*	*48*	*33*	*95*	*67*	*0*	*0*
Buildings and heating	*226*	*25*	*26*	*11*	*201*	*89*	*0*	*0*
Energy	*324*	*35*	*49*	*15*	*275*	*85*	*0*	*0*
Waste	*23*	*2*	*5*	*22*	*18*	*78*	*0*	*0*
Other[2]	*198*	*22*	*35*	*18*	*163*	*82*	*0*	*0*
Total	*913*	*100*	*162*	*18*	*751*	*82*	*0*	*0*

[1] *Residual emissions are emissions that cannot be reduced through climate action and are offset. Residual emissions can amount to a maximum of 20%, as indicated in the Mission Info Kit.*

[2] *The target for emission reductions in the "Others" sector is assumed to be the same as for the other 4 sectors*

MODULE A-3

Systemic barriers and opportunities to 2030 climate neutrality

A-3.1: System and stakeholder mapping				
System description	**Stakeholders**	**Network**	**Influence**	**Interest**
Public Sector - Institutional	European municipalities (and cities)	NZC - European Platform of Climate Neutral Cities.	Driving Agent / Facilitator Its participation is necessary	High. Development of urban public policies for safe, sustainable and inclusive energy transition, mitigation of emissions and increasing resilience to climate change.
	National government and General Government Administration	Ministries IDAE (Institute for Energy Diversification and Saving), Fundación Biodiversidad (Biodiversity Foundation), Spanish Climate Change Office (OECC), etc.	Driving Agent / Facilitator Its participation is necessary	High. Compliance with local, regional, national, European and international regulations, commitments and agendas.
	Spanish municipalities	FEMP - Federación de Española de Municipios y Provincias (Spanish Federation of Municipalities and Provinces) National Platform of Cities for Climate Neutrality	Driving Agent / Facilitator Its participation is necessary	High. Development of urban public policies for safe, sustainable and inclusive energy transition, mitigation of emissions and increasing resilience to climate change.
	Regional government and Basque institutional sector	Basque Government Departments. EVE (Basque Energy Agency), IHOBE (Basque Government Environmental Management Company), SPRI (Basque Business Development Agency), URA (Basque Water Agency), VISESA (Basque Housing and Land Public Company), ETS (Euskal Trenbide Sarea), Parke Araba - Alava Technology Park, CTV Intermodal Transport and Logistics Centre of Vitoria-Gasteiz, etc.	Facilitator/ Facilitating Agent Its participation is necessary	High. Compliance with local, regional, national, European and international regulations, commitments and agendas.
	Basque Town Councils	EUDEL - Association of Basque Municipalities	Driving Agent / Facilitator Its participation is necessary	High. Development of urban public policies for safe, sustainable and inclusive energy transition, mitigation of emissions and increasing resilience to climate change.

A-3.1: System and stakeholder mapping				
System description	**Stakeholders**	**Network**	**Influence**	**Interest**
	Alava Provincial Council	Departments of Alava Provincial Council ENARGI Araba S.A., ARABA Development Agency	Driving Agent / Facilitator Its participation is necessary	High. Development of urban public policies for safe, sustainable and inclusive energy transition, mitigation of emissions and increasing resilience to climate change.
	Vitoria-Gasteiz City Council, agencies, companies and public companies	Municipal Departments, Public Companies, Autonomous Agencies and companies: (Ensanche 21-Zabalgunea: Rehabilitation Society, (CEA: Environmental Studies Centre, TUVISA (Urban Buses), AMVISA (Municipal Water of Vitoria), GILSA (Industrial Land Management), etc.).	Driving Agent Its participation is necessary	High. Development of urban public policies for safe, sustainable and inclusive energy transition, mitigation of emissions and increasing resilience to climate change.
Economic-financial sector	Business and trade union associations	Alava Chamber of Commerce and Industry, SEA - Alava Business-owners, Ajebask- Alava Young Business Owner Association, AENKOMER-Alava Trade and Services Business Owners, AMPEA-Alava Association of Female Professional and Business Owner, Sectoral business associations (Gasteiz on, ADEADA (Alava automotive business association), ...), Workers' Trade Unions, Hiru (Basque haulage company trade union)	Driving Agent Its participation is necessary	High. Sustainable (local) economic development and quality employment. Attracting innovative private investment
	Labour cooperatives and foundations	Mondragón Group, Irizar e-mobility (Irizar Group), Orbea, Eroski, S-Coop., Goiener (Cooperative for the management and production of renewable energy), KREAN S.Coop., UDAPA (Production and marketing of potatoes from Alava), Konfekoop - Confederation of Basque Cooperatives, San Prudencio Labour Foundation, ASLE Association of Basque Labour Foundations, etc.	Driving Agent Its participation is necessary	High. Development of decarbonisation and awareness-raising projects for cooperative members.
Economic-financial sector	Financial Institutions	Kutxabank, Laboral Kutxa, CaixaBank, BBVA, etc.	Driving Agent Its participation is necessary	High. Financing decarbonisation and sustainability projects.

A-3.1: System and stakeholder mapping				
System description	**Stakeholders**	**Network**	**Influence**	**Interest**
	Manufacturing, construction, maintenance and technology companies	Mercedes Benz España, S.A.U., PEPSICO, Araba TUBO, Michelin Spain-Portugal, etc. Green Deal companies (A&B Laboratorios de Biotecnología, Aernova Aerospace, etc.) Construction companies (Grupo Basalde, Pérez-San Román, Construcciones Urrutia, etc.)	Driving Agent Its participation is necessary	High. Development of decarbonisation projects in the private industrial sector, construction, services, ...
	Urban services and infrastructure companies	Concessionary companies for the management of urban services and infrastructures (waste management, water treatment, energy services, etc.). Utilities	Driving agent Its participation is necessary	High Development of decarbonisation projects for public utilities and infrastructures
	Entrepreneurs / Star-ups, Innovation Centres	BIC- CEIA (Centro de Empresas e Innovación de Álava, S.A.), Hibridalab - Centre for Open Innovation and Creative Transfer of Alava Lehendakari Agirre Center (LAC)	Driving Agent Its participation is necessary	High. Promotion of innovative entrepreneurial initiatives and generation of innovative culture in business and society
	Logistics and distribution operators	Companies located in the CTV (DHL, ID Logistics, NACEX, SEUR, etc.). EROSKI S.Coop., MERCADONA S.A., etc.	Driving Agent Its participation is necessary	High. Development of decarbonisation projects in the logistics and distribution sector.
	Clusters and Associations Professions	Aclima (Environment Cluster), Energy Cluster of the Basque Country, Eraikune (Construction Industry Cluster of the Basque Country), Mobility and Logistics Cluster of the Basque Country, UNEF (Spanish Photovoltaic Union), etc.	Facilitating Agent Its participation is desirable	Medium. Collaboration and partnership between companies to increase innovation capacity and develop more profitable and sustainable projects.
	Professional Associations	COAVN (Basque-Navarre Association of Architects), COITA (Association of Technical Agricultural Engineers), Official Association of Forestry Engineers, Official Association of Agricultural Engineers, Association of Industrial Engineers, Association of Doctors, Association of Economists, etc.	Facilitating Agent Its participation is necessary	Medium Training and awareness-raising on sustainability and decarbonisation for professionals working in different sectors of urban activity.

A-3.1: System and stakeholder mapping				
System description	**Stakeholders**	**Network**	**Influence**	**Interest**
	Technology, Research and R&D&I Centres	Basque Science and Technology and Innovation Network: BC3 (Basque Centre for Climate Change), TECNALIA, CIC Energigune, IK4 Research Alliance, NEIKER (Basque Institute for Agricultural Research and Development, etc.).	Driving Agent Its participation is necessary	High. Development of R&D&i projects in energy transition, climate neutrality and adaptation and digitalisation.
Primary Sector	Activities and associations	UAGA- Unión de agricultores y ganaderos de Álava, Basaldea, BIOALAI -Organic consumption association, Alava association of organic farming, Slow Food Araba, Mercado Santa Bárbara, individual farmers and stockbreeders, etc.	Driving Agent Its participation is necessary	High. Promotion of initiatives towards an ecological, regenerative and attractive primary sector for future generations.
Education Sector	University Centres	UPV-EHU (University of the Basque Country), University of Mondragón, University of Deusto, EUNEIZ University, etc.	Driving Agent Its participation is necessary	High. Training, education and awareness-raising Capacity building for green transformation
	Vocational Training Centres	Egibide, Construction Institute, Gamarra Cooking School, etc.	Driving Agent Its participation is necessary	High. Training, education and awareness-raising
	Primary and secondary schools and high schools	Consorcio Haurreskolas, Public Schools, AIF Arabako Ikastolen Elkartea, Kristau Eskola, etc.	Driving Agent Its participation is necessary	High. Training, education and awareness-raising
Social Sector	Third-sector entities	REAS (Red de Entidades de Economía Alternativa), Koopera Innovación social y ambiental, etc.	Driving Agent Its participation is necessary	High. Development of decarbonisation and social innovation projects
Social Sector	Foundations, Associations and NGOs	Fundación Vital, Jóvenes por el Clima, ANPIER (National Association of Energy Producers), UNESCO ETXEA, Cáritas Diocesanas de Vitoria, Red Cross, Elkagune de Movilidad y de Medio Ambiente, Auzogunes, etc.	Driving Agent Its participation is necessary	High. Promoting training, awareness-raising, public awareness and participation in sustainability and decarbonisation.

A-3.1: System and stakeholder mapping				
System description	**Stakeholders**	**Network**	**Influence**	**Interest**
Social Sector	Neighbourhood Associations	Federation of Neighbourhood Associations of Alava. Neighbourhood Associations in each of the neighbourhoods of Vitoria-Gasteiz (around 30), Ensanche XIX - Neighbourhood Association, etc.	Driving Agent Its participation is necessary	High. Awareness-raising for citizen action on decarbonisation.
Social sector	Citizenship	People of recognised prestige in the city Climate change and energy transition influencers	Driving Agent. Its participation is desirable	High. Positive influence on society in terms of sustainability and decarbonisation.
Social sector	Citizenship	Vulnerable groups (social, economic and cultural)	Its participation is desirable	Medium Encouraging their participation, training and capacity building.
Social sector	Sectors negatively affected by decarbonisation	Energy, building, transport, transport, agriculture, tourism, etc. sectors (fossil fuel distributors, manufacturers of fossil energy equipment / goods, etc.)	Disincentive agent	Medium Just facilitation of their necessary transition.
Cultural Sector	Culture, Sports, etc.	Jazz Vitoria Festival, Fundación Estadio, Baskonia Alavés Group, Artium Museoa, Museo de Bellas Artes, BIBAT Museoa, Ortzai theatre school and company, etc.	Facilitating Agent Its participation is desirable	Medium Development of decarbonisation projects in their sectors.
Communication sector	Media	Radio, television, written and digital press and social media (EFE Agencia, Radio Vitoria. Onda Vasca, Ser Vitoria. EITB, Diario de Noticias de Álava (newspaper), Hamaika Telebista, Gara, Gasteiz Berri, etc.).	Disseminating Agent Its participation is necessary	High Sensitisation and social awareness
City Networks	Regional level	UDALSAREA 2030 (Network of Basque Municipalities for Sustainability), Alavesa Alliance for Sustainable Development 2030	Disseminating Agent Its participation is desirable	High. Facilitating the exchange of experiences and good practices in decarbonisation Support for developing collaborative projects between cities.

A-3.1: System and stakeholder mapping				
System description	**Stakeholders**	**Network**	**Influence**	**Interest**
	State level	Cities for Climate Network, RECI - Spanish Network of Smart Cities, CitiES2030, etc.	Disseminating Agent Its participation is desirable	High. Facilitating the exchange of experiences and good practices in decarbonisation Support for developing collaborative projects between cities.
	European level	ICLEI, Civitas Forum Network, European Green Capital Network, WHO-European Health Cities Network, European Covenant of Mayors, etc.	Disseminating Agent Its participation is desirable	High. Facilitating the exchange of experiences and good practices in decarbonisation Support for developing collaborative projects between cities.
	International level	SDG Cities (UN-Habitat Initiative), CoM (Global Covenant of Mayors), WHO Global Network of Age-Friendly Cities and Communities, etc.	Disseminating Agent Its participation is desirable	High. Facilitating the exchange of experiences and good practices in decarbonisation Support for developing collaborative projects between cities.

A-3.2: Description of systemic barriers

A number of cross-cutting systemic barriers have been identified, related to insufficient skills, inefficient processes and/or procedures, lack of infrastructure or economic funds, or the need for collaboration between public and private stakeholders, which could hinder progress towards climate neutrality:

- **Insufficient administrative and/or operational capacity**. On the one hand, this is due to a lack of personnel and the existing difficulty of bringing in additional staff, including temporary staff. On the other hand, there is a need for specialised technical staff, who can adapt to new professional profiles, incorporate a cross-cutting vision of the administration and public policies, and work with a project mentality.
- **Regulatory bureaucracy**. On the one hand, a proliferation of regulations and standards has been detected, and on the other hand, some procedures are too cumbersome and too restrictive, which do not facilitate the efficiency and timely response required by the different agents' problems and demands. The need to seek a balance between security/efficiency and transparency.
- **Lack of consolidated and unified monitoring and verification procedures**
- **Low digitalisation**, which prevents or delays digital transformation. Resistance to change. Cost. Lack of skills. Lack of supply adapted to the market (infrastructure, devices and solutions, etc.). Security. Legal uncertainty. Lack of management commitment. In many organisations, the biggest barrier to digital transformation is legacy thinking, coupled with a lack of willingness from IT departments already exhausted by radical change.
- **Fragmentation of responsibilities**: Silo functioning between different departments or between different institutions. Multidimensional/systemic and complex problems require innovative governance models, which facilitate multi-level relationships, policy integration, and project work, beyond the current departmental structure.
- **Difficulties in building public-private partnerships**. A well-established and innovative legal framework is needed. Different perspective on expectations. New ideas, innovative clauses, as well as overcoming the traditional "public" concept are needed. Difficulty in finding the balance between public and private.
- **Lack of funding/financing schemes**: need for new thinking beyond subsidies
- **Prohibitive investment costs**: New technologies, new solutions for climate action require very high and sometimes prohibitive costs.
- **Difficulty in accessing specialised knowledge**.

From a sectoral point of view, a number of barriers are also identified in the main strategies being proposed.

Specifically, for example, in **urban regeneration and energy rehabilitation** of dwellings, the

main problem is that the vast majority of residential buildings are **privately owned**, forming communities of owners. This makes it **difficult to reach agreements** to refurbish common elements, as this cannot be done without a majority agreement. Another important barrier is that owners must make a **significant initial outlay** for the refurbishment, making it difficult to start such projects, with high costs for the renovation of the envelopes and difficulty to accurately predict the renovation outcome. Another barrier might be the need for assistance in **identifying the representatives** of the various owners' associations, through contacts with the city's *Administradores de Fincas*, to whom they can report directly. The difficulty of dealing with the renovation of **protected buildings** is evident. Citizen assistance facilities should also be able to explain the benefits, costs, procedures and necessary grants so that it is perceived as easy, affordable and feasible.

In relation to heating systems, decarbonisation through heat pump substitution requires upfront financing, with the associated risk that extensive electrification of heat could severely strain the electricity grid.

In **mobility** policies, the greatest risk or barrier is **resistance** from the population **to change habits** and the role of the private car in our society, plus the risk of implementing relatively unpopular political decisions. Several areas would be affected by the required behavioural changes, such as change to the working model to accept a new way of working, such as working from home (in addition to the possible physical and technological limitations of remote access to information or the availability of a laptop). There are also changes related to car-sharing, to resolve any queries concerning sharing a car with strangers, in addition to the limited number of existing platforms. Similarly, perceived disadvantages must be overcome, such as distrust or additional travel time, by people who want to change their mode of transport and use public transport on a daily basis.

There may also be **an economic barrier** to accessing electric vehicles in certain social sectors, due to their higher cost compared to combustion vehicles. There is also a perception that the charging infrastructure for electric vehicles falls short. Subsidies for certain fuels do not facilitate the transition towards decarbonisation.

In relation to the decarbonisation of **freight transport**, the main barrier to reducing and optimising logistics is the need for **intense collaboration** between the municipal administration and the numerous private agents, plus the need for a change in behaviour among people and organisations with regard to managing freight distribution. In addition, the electrification of distribution vehicles implies a **significant investment** in renewing fleets (in addition to the limited range of existing electric vehicles) and of charging infrastructures in distribution centres, which will require financing formulas.

In the case of the **energy sector**, and fundamentally in the case of energy generation facilities, and specifically for renewable installations, several barriers to their implementation have been detected, such as **restrictions on their location and construction**, limitations in current **regulations**, as well as the **high capital costs** necessary to undertake the investment, and therefore the **need for financing**. The existence of subsidies for certain fuels does not

facilitate the transition to decarbonisation either. Another barrier to the necessary energy transition would concern **the citizens' lack of** energy **empowerment**, and the difficulty of getting them involved in the energy system by setting up energy communities.

In the case of **waste management**, the main barrier is the **insufficient participation** of citizens and businesses in selective separation of waste at source, which leads, on the one hand, to insufficient waste separation, and on the other hand, to low quality separated waste, which makes recycling processes inefficient and leads to downcycling. In addition, some waste prevention actions are ineffective due to low reuse rates.

Finally, some of the systemic opportunities for climate action in the city's ecosystem are outlined in section C of this Action Plan.

A-3.3: Description or visualisation of the city's participatory model for climate neutrality


5
POLITICAL GOVERNANCE
Commitment, support, approval y follow-up
SUSTAINABILITY, ENERGY AND CLIMATE UNIT
LAND AND CLIMATE ACTION, MOBILITY & PUBLIC SPACE MUNICIPAL AREA
MISSIONS´ COORDINATION TEAM
1
EUROPEAN MISSIONS 2030 COORDINATION
Missions´ coordination and monitorization
ENERGY SUSTAINABILITY COMMISSION
OTHER INSTITUTIONS
MAYOR & MUNICIPAL PLENARY
CLIMATE NEUTRALITY OFFICE
EUROPEAN MISSIONS 2030
MULTILEVEL-MULTIACTOR PLATFORM
GTT-CSE
5P PLANET TEAM
GTACC
2
TECHNICAL ADMINISTRATIVE GOVERNANCE
GTT-CSE: Energy Sustainability Working Team. Development and monitoring of mitigation actions
GTACC: Climate Change Adaptation Working Team: Developing and Monitoring Adaptation Actions
5P-Planet Team – AU2030VG: Cross-cutting in the development and monitoring of mitigation and adaptation actions
4
STAKEHOLDERS
Private-Public Collaboration and Participation
UNIVERSITIES, TECHNOLOGIC, RESEARCH & INNOVATION CENTERS
ECONOMIC, SOCIAL, EDUCATIONAL STAKEHOLDERS ...
CITIZENSHIP
UDALSAREA 2030 ...
NETZEROCITIES
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VITORIA 20 GASTEIZ 30

PART B - PATHWAYS TOWARDS CLIMATE NEUTRALITY BY 2030

MODULE B-1

Climate Neutrality Scenarios and Impact Pathways

B-1.1: Impact pathways					
Sector and sub-sector	***Systemic levers***	***Short-term changes (1-2 years)***	***Long-term changes (3-4 years)***	***Direct impacts (emission reductions)***	***Indirect impacts*** *(co-benefits)*
SECTOR: *Transport* ***SUBSECTOR:*** *Reduction of the need for motorised passenger transport*	Technology / Infrastructure	Change in mobility through urban redevelopment using the superblock model. Generation of low emission zones (LEZs) and new limited traffic zones.	Compatibility of urban functionality and universal accessibility and favouring and promoting more efficient, sustainable and safer mobility.	*32 ktCO_{2e}*	Reducing the number and distance of journeys. Improving urban and universal accessibility. Promoting local mobility and shared mobility. Reduction of air and noise pollution. Health improvement. Enhancing quality of life. Fostering social relationships.
	Technology / Infrastructure	Improving and extending the network of cycle lanes, extending the network of bike racks, improving the bicycle registration system.	Facilitating cycling, increasing safety between different modes of travel		Reducing the proportion of km travelled by car and shifting towards cycling. Reduction of air and noise pollution. Health improvement. Enhancing quality of life.
	Governance / Policy Democracy / Participation Technology / Infrastructure Finance / Financing	Reduction of surface parking spaces through the implementation of a regularisation plan and an increase in the number of regulated parking spaces and their tariffs.	Increase in the regulated surface area and its tariffs, which entails a reduction in parking spaces, access and circulation limitations by zones, type of transport and fuel. Possibility of using new income for policies and actions directly related to reducing GHG emissions and achieving climate neutrality.		Promoting the use of public transport. Reduction in the number of journeys made in own vehicles. Reduction of air and noise pollution. Health improvement. Enhancing quality of life.
	Learning / Skills	Promotion of sustainable mobility by developing Training and Awareness Plans.	Getting citizens and all the city's agents involved in changing behavioural patterns in terms of sustainable mobility. Consensus and political leadership on sustainable mobility.		Citizen empowerment. Promoting the use of public transport. Shifting to walking and cycling modes. Reduction in the number of journeys made in own vehicles. Reduction of air and noise pollution. Health improvement. Enhancing quality of life.
	Governance / policy Social innovation	Promotion and implementation of measures that help to avoid travel by motorised transport,	Involvement of citizens and all the city's agents in changing behavioural patterns in terms		Reduction in the number of journeys made in own vehicles. Reduction of air and noise pollution.

B-1.1: Impact pathways					
Sector and sub-sector	***Systemic levers***	***Short-term changes (1-2 years)***	***Long-term changes (3-4 years)***	***Direct impacts*** *(emission reductions)*	***Indirect impacts*** *(co-benefits)*
		such as promoting digital meetings working from home.	of sustainable mobility. Consensus and political leadership on sustainable mobility. Ease of remote access to a digital communication network.		Health improvement. Enhancing quality of life.
	Governance / Policy	Adequacy of urban planning and regulatory instruments related to reducing the need for motorised passenger transport.	Regulatory development to enable all actions related to reducing the need for motorised passenger transport. Regulation of Personal Mobility Vehicles (PMV).		Improving universal and urban accessibility. Improved management of administration/administration relationships. Promoting the use of public transport. Shift to the cycle routes by bike or PMV. Reduction of air and noise pollution. Health improvement. Enhancing quality of life.
SECTOR: *Transport* ***SUBSECTOR:*** *Modal Shift to Public Transport*	Technology / Infrastructure	Promoting the use of public transport by extending tram lines.	Enhancement of high-capacity public transport modes	*8 $ktCO_{2e}$*	Promoting the use of public transport. Improving universal and urban accessibility. Reduction in the number of journeys made in own vehicles. Reduction of air and noise pollution. Health improvement. Enhancing quality of life.
	Technology / Infrastructure	Optimisation of the public transport service in urban buses.	Improvement and modernisation of public transport in Vitoria-Gasteiz, increasing supply and optimising demand. Increase in the number of users of the public transport network.		Promoting the use of public transport. Improving universal and urban accessibility. Reduction in the number of journeys made in own vehicles. Reduction of air and noise pollution. Health improvement. Enhancing quality of life.
	Democracy / Participation Social Innovation Governance / Policy	Promoting the use of public transport for work and school mobility through Mobility Plans for Work and Education.	Promotion of an integrated discretionary public transport service to industrial areas or sites. Promotion of public transport to schools and universities.		Reducing the number and distance of journeys. Reduction in the number of journeys made in own vehicles. Reduction of traffic and congestion. Improving universal and urban accessibility. Reduction of air and noise pollution. Health improvement.

B-1.1: Impact pathways					
Sector and sub-sector	***Systemic levers***	***Short-term changes (1-2 years)***	***Long-term changes (3-4 years)***	***Direct impacts*** *(emission reductions)*	***Indirect impacts*** *(co-benefits)*
					Enhancing quality of life.
SECTOR: *Transport* ***SUBSECTOR:*** *Car sharing*	Technology / Infrastructure Democracy / Participation Learning / Skills	Encouraging shared mobility through the creation of a Shared Mobility Services Programme and awareness-raising and training programmes.	Promoting creation of platforms to manage and use car sharing. Overcoming prejudices against car sharing and the use of a shared car.	*5 $ktCO_{2e}$*	Promoting shared mobility. Reduction in the number of journeys made in own vehicles. Fostering social relationships. Reduction of traffic and congestion. Reduction of air and noise pollution. Health improvement. Enhancing quality of life.
SECTOR: *Transport* ***SUBSECTOR:*** *Electrification of Passenger Cars*	Technology / Infrastructure	Deployment of an electric vehicle charging infrastructure.	Progressive increase of private electric mobility and public service vehicles such as taxis.	*10 $ktCO_{2e}$*	Renewal of the vehicle fleet. Reduction of air and noise pollution. Health improvement. Enhancing quality of life.
	Technology / Infrastructure	Progressive electrification of the municipal vehicle fleet, including a reduction in the number of motorised journeys.	Creation of a favourable environment to adopt electric mobility, especially in municipal services as an exemplary action.		Renewal of the municipal vehicle fleet. Reducing the number and distance of journeys. Reduction of air and noise pollution. Health improvement. Enhancing quality of life.
	Learning / Skills	Promoting the use of electric cars through awareness-raising and training plans and programmes.	Progressive increase in the fleet of electric vehicles.		Renewal of the vehicle fleet. Reduction of air and noise pollution. Health improvement. Enhancing quality of life.
	Financing / Investment	Development of financing and/or subsidy models to cover the additional cost of purchasing electric vehicles compared to combustion vehicles.	Demonstration of the economic profitability of electric vehicles.		New business models and an increase in green and quality employment. Renewal of the vehicle fleet. Reduction of air and noise pollution. Health improvement. Improving quality of life
SECTOR: *Transport* ***SUBSECTOR:*** *Bus Electrification*	Technology / Infrastructure Governance / Policy	Progressive incorporation of electric buses in the urban transport bus fleet.	Increasing high-capacity lines and electrification of the bus fleet, generating a more sustainable, attractive and functional public transport service.	*9 $ktCO_{2e}$*	Promoting the use of sustainable public transport. Renovation of the municipal bus fleet. Reduction of air and noise pollution. Health improvement. Enhancing quality of life.

B-1.1: Impact pathways					
Sector and sub-sector	***Systemic levers***	***Short-term changes (1-2 years)***	***Long-term changes (3-4 years)***	***Direct impacts*** *(emission reductions)*	***Indirect impacts*** *(co-benefits)*
	Technology / Infrastructure	Adaptation of the infrastructure for electric buses with the construction and commissioning of the new depot building.	Adaptation of the urban public transport service infrastructure to electric mobility.		Increased investment in recharging infrastructure. Creation of green and quality jobs. Reduction of air and noise pollution. Health improvement. Enhancing quality of life.
SECTOR: *Transport* ***SUBSECTOR:*** *Optimisation of logistics*	Technology / Infrastructure Learning / Skills	Implementation of a logistics node as a pilot project for the optimisation of urban micro-logistics.	Extension of logistics nodes with the establishment of Urban Distribution Centres (UDCs) for goods in other locations in the city.	*21 ktCO$_{2e}$*	Optimisation of routes, distances and number of goods delivery journeys. Creation of green and quality jobs. Reduction of air and noise pollution. Health improvement. Enhancing quality of life.
	Technology / Infrastructure Social Innovation Learning / Skills	Promotion of cargo bicycles as an alternative to vans and trucks in intra-municipal parcel transport.	Boosting the management of logistics and the delivery of smaller parcels in a more efficient, sustainable and safe way through the use of cargo bicycles (electric or non-electric).		Promoting the use of sustainable transport. Creation of green and quality jobs. Reduction of air and noise pollution. Health improvement. Enhancing quality of life.
	Technology / Infrastructure Learning / Skills. Governance / Policy	Boosting public-private cooperation in logistics and mobility with the launch of the "Vitoria-Gasteiz Araba Mobility Lab".	Creation and development of an exploratory physical space to develop and test innovation in logistics and mobility in real conditions.		Enhancing multi-stakeholder and multi-level relationships. Generation of real solutions to implement projects on innovation in logistics and mobility of goods and people. Creation of high quality, green jobs. Reduction of air and noise pollution. Health improvement. Enhancing quality of life.
SECTOR: *Transport* ***SUBSECTOR:*** *Truck Fleet Electrification*	Technology / Infrastructure Learning / Skills Governance / Policy	Promotion of electric vans and trucks for the progressive electrification of freight vehicles.	Phasing out the use of light and heavy-duty vehicles powered by fossil fuels.	*9 ktCO$_{2e}$*	Optimisation of routes, distances and number of goods delivery journeys. Creation of green and quality jobs. Renewal of the goods delivery/logistics fleet. Reduction of air and noise pollution. Health improvement. Enhancing quality of life.

B-1.1: Impact pathways					
Sector and sub-sector	***Systemic levers***	***Short-term changes (1-2 years)***	***Long-term changes (3-4 years)***	***Direct impacts*** *(emission reductions)*	***Indirect impacts*** *(co-benefits)*
SECTOR: *Buildings and Heating* ***SUBSECTOR:*** *Building Renovation*	Governance / Policy Social Innovation Technology / Infrastructure Learning / Skills	Progressive renovation of the building stock through the implementation of the Master Plan for Urban Regeneration, Eco-rehabilitation and Vitalisation of the Neighbourhoods of Vitoria-Gasteiz (2020-2040). Integral Master Plan for Housing Renovation.	Progressive energy eco-rehabilitation of existing buildings and public spaces in the declared Degraded Areas and in the rest of the city. Improvement of the thermal performance in buildings.	*32 $ktCO_{2e}$*	Improvement of the thermal comfort of dwellings. Improving public spaces. Job creation in the field of eco-rehabilitation. Reduction of household expenditure on energy bills. Alleviating energy poverty. Reduction of air and noise pollution. Enhancing quality of life. Health improvement. Increase in the value of buildings.
	Governance / Policy Social Innovation Technology / Infrastructure Learning / Skills	Progressive energy rehabilitation of tertiary buildings.	Reduction of energy consumption in tertiary buildings and premises.		Improvement of thermal comfort in tertiary buildings and premises. Job creation in the field of eco-rehabilitation. Reduction of energy bill expenditure. Reduction of air pollution. Enhancing quality of life. Health improvement.
	Governance / Policy Social Innovation Technology / Infrastructure Learning / Skills	Progressive renovation of municipal buildings through implementing a Municipal Building Renovation Plan.	Reducing energy consumption and promoting the use of renewable energies in municipal buildings		Improvement of thermal comfort in municipal buildings. Job creation in the field of eco-rehabilitaiton. Reduction of municipal expenditure on energy bills. Reduction of air pollution. Enhancing quality of life. Health improvement.
	Governance / Policy Social Innovation Technology / Infrastructure Learning / Skills	Progressive renovation of the industrial building stock through implementing urban plans such as the Northern Industrial District.	Reducing energy consumption and promoting implementation of renewable energies on industrial areas.		Job creation in the field of eco-rehabilitation. Reduction of energy bill expenditure. Rise in the value of buildings in the industrial park. Reduction of air pollution. Enhancing quality of life. Health improvement.

B-1.1: Impact pathways					
Sector and sub-sector	***Systemic levers***	***Short-term changes (1-2 years)***	***Long-term changes (3-4 years)***	***Direct impacts*** *(emission reductions)*	***Indirect impacts*** *(co-benefits)*
	Governance / Policy Social Innovation Technology / Infrastructure Learning / Skills	Integral revitalisation of the city centre district through the Ensanche XIX Project: Entrepreneurial Eco District.	Integral revitalisation of the city centre district, the *Ensanche XIX,* and its area of influence by merging, in this area, the city's sustainable character.		Job creation in the field of eco-rehabilitation. Reduction of energy bill expenditure. Increase in the value of buildings. Reduction of air pollution. Enhancing quality of life. Health improvement.
	Governance / Policy Social Innovation Democracy / Participation Learning / Skills Building Funding / Investment	Promoting massive housing renovation through transformation of the public company *Ensanche 21* into a renovation agent for the city.	Management of initiatives in cooperation with citizens, promoting its work as an interlocutor between citizens, trade unions and banks, plus a renovation/refurbishment agent or delegated promoter.		Promoting the renovation/refurbishment of the city's building stock. Citizen empowerment. Improved management of administration/ administration relations. Job creation in the field of eco-rehabilitation. Reduction of air pollution. Enhancing quality of life. Health improvement.
	Governance / Policy	Adaptation of urban planning and regulatory instruments to favour the renovation of the building stock.	Regulatory development to enable energy and accessibility renovation and retrofitting of buildings and public space.		Promoting the renovation/refurbishment of the city's building stock. Improvement of the thermal comfort of dwellings and buildings. Improving public spaces. Improved management of administration/ administration relations. Job creation in the field of eco-rehabilitation. Reduction of energy bill expenditure. Increase in the value of buildings. Reduction of air and noise pollution. Enhancing quality of life. Health improvement.
	Financing and Finance	Innovation in the public-private financing system, by developing initiatives using the concession tool or other public-private collaboration formulas.	Increased public-private partnership investments in projects in the areas of energy efficiency improvement in building renovation and renewable energy supply in the residential, industrial and		Encouraging public-private partnerships. Promoting the integrated energy refurbishment of the city's building stock. Job creation in the field of eco-rehabilitaiton. It appeases the possible reluctance of the public due to the necessary initial high-cost investments.

B-1.1: Impact pathways					
Sector and sub-sector	***Systemic levers***	***Short-term changes (1-2 years)***	***Long-term changes (3-4 years)***	***Direct impacts*** *(emission reductions)*	***Indirect impacts*** *(co-benefits)*
			commercial sectors.		Reduction of household expenditure on energy bills. Reducing energy poverty. Improving the thermal comfort in buildings. Reduction of air pollution. Enhancing quality of life. Health improvement.
SECTOR: *Buildings and Heating* ***SUBSECTOR:*** *New Energy Efficient Buildings*	Governance/Policy Learning/Skills Technology/Infrastructure	Promotion of constructing new buildings with an energy efficiency certificate that exceeds standards required by the Spanish Technical Building Code by developing the regulations and contracts (administrative parameters) as required to construct buildings with low or zero energy consumption.	Encouraging construction of low or zero energy buildings.	*1 $ktCO_{2e}$*	Promoting new technologies and forms of sustainable construction. Employment generation and skills in the construction of low or zero energy buildings. Reduction of energy bill expenditure. Reduction of air and noise pollution. Enhancing quality of life. Health improvement.
	Technology/ Infrastructure Finance and Finance	Improvement in the control of the energy and thermal demand of buildings through implementing an energy management programme to measure and control electrical and thermal demand with the possibility of grants or incentives for private building.	Proliferation of buildings with real-time control of energy and thermal demand. Improvement in management of energy and thermal demand of buildings.		Reduction of energy bill expenditure. Improving the thermal comfort of buildings. Creation of green and high quality jobs. Reduction of air pollution. Enhancing quality of life. Health improvement.
SECTOR: *Buildings and Heating* ***SUBSECTOR:*** *Efficient Lighting and Household Appliances*	Technology/ Infrastructure Finance and Finance	Modernisation of the domestic appliance fleet and installation of efficient lighting in the residential and tertiary sector by encouraging replacement of domestic appliances with energy-efficient devices and LED technology.	Progressive replacement of current appliances (low energy efficiency) with high efficiency devices. Replacement of lighting with LEDs.	*24 $ktCO_{2e}$*	Reduction of energy bill expenditure. Renewal of the domestic appliances. Creation of green and high quality jobs. Reduction of air and light pollution. Enhancing quality of life. Health improvement.

B-1.1: Impact pathways					
Sector and sub-sector	***Systemic levers***	***Short-term changes (1-2 years)***	***Long-term changes (3-4 years)***	***Direct impacts*** *(emission reductions)*	***Indirect impacts*** *(co-benefits)*
SECTOR: *Buildings and Heating* ***SUBSECTOR:*** *Decarbonising Heating*	Technology / Infrastructure Financing / Investment	Progressive replacement of individual boilers in households through a demand-side electrification programme.	Electrification of heat generation through progressive changeover to very high efficiency heat pumps, partially or fully subsidised.	*143 $ktCO_{2e}$*	Reduction of energy bill expenditure. Creation of green and high quality jobs. Reduction of air pollution. Enhancing quality of life. Health improvement.
	Technology / Infrastructure Governance / Policy Financing / Investment	Development of a decarbonised heat network for the city.	Progressive change of the city's energy model by adding dwellings and residential, tertiary and industrial buildings, etc., to the decarbonised heat network.		Encouraging public-private partnerships. Reduction of energy bill expenditure. Reducing energy poverty. Improvement of the thermal comfort of dwellings. Creation of green and high quality jobs. Reduction of air pollution. Enhancing quality of life. Health improvement.
SECTOR: *Energy* ***SUBSECTOR:*** *Electricity*	Governance / Policy Technology / Infrastructure Learning / kills	Progressive increase of renewable energy power generation installations in municipal buildings and public space, residential, tertiary and industrial buildings.	Deployment of renewable energy generation projects mainly with photovoltaic solar panel installations in municipal infrastructures, residential, tertiary and industrial buildings.	*275 $ktCO_{2e}$*	Promotion of renewable energies for electricity generation. Reduction of external energy dependence. Promotion of energy self-sufficiency. Reduction of energy bills. Creation of green and high quality jobs. Reduction of air pollution. Enhancing quality of life. Health improvement.
	Finance / Investment	Boosting public-private collaboration through developing new formulas for collaboration in the field of energy.	Increased investment in mixed public-private projects in renewable electricity generation.		Encouraging public-private partnerships. Promotion of renewable energies for electricity generation. Overcoming possible reluctance from the public due to necessary initial high-cost investments. Reduction of energy bills. Promotion of energy self-sufficiency. Creation of green and high quality jobs. Reduction of air pollution. Enhancing quality of life. Health improvement.

B-1.1: Impact pathways					
Sector and sub-sector	***Systemic levers***	***Short-term changes (1-2 years)***	***Long-term changes (3-4 years)***	***Direct impacts*** *(emission reductions)*	***Indirect impacts*** *(co-benefits)*
	Technology/ Infrastructure	Improvement of public lighting through the progressive implementation of high-efficiency lighting.	Replacement of existing lighting with LED technology.		Reduction of energy bills. Creation of high quality, green jobs. Reduction of air and light pollution. Enhancing quality of life. Health improvement.
	Governance/Policy Social Innovation Technology/Infrastructure Learning/Skills	Development of community energy projects associated with setting up Energy Communities driven through a Community Transformation Office.	Creation of a wide network of Energy Communities in urban neighbourhoods and rural areas of the city.		Citizen empowerment. Promotion of renewable energies for electricity generation. Reduction of energy bills. Promotion of energy self-sufficiency. Creation of high quality, green jobs. Reduction of air pollution. Enhancing quality of life. Health improvement.
	Learning / Skill	Increasing citizens' energy culture through developing a programme for training, education, dissemination and citizen involvement in the energy transition.	Greater citizen involvement in energy transition issues.		Citizen empowerment. Promotion of renewable energies for electricity generation. Reduction of energy bills. Promotion of energy self-sufficiency. Creation of high quality, green jobs. Reduction of air pollution. Enhancing quality of life. Health improvement.
	Governance / Policy	Adequacy of urban planning and regulatory instruments.	Regulatory development to enable all actions related to implementing renewable energy installations and Energy Communities.		Promotion of renewable energies for electricity generation. Reduction of energy bills. Promotion of energy self-sufficiency. Creation of high quality, green jobs. Reduction of air pollution. Enhancing quality of life. Health improvement.
	Governance / Policy / Finance / Financing	Encouraging energy supply implementation based on renewable resources through a Green Taxation programme	Development of tax regulations that encourage energy supply implementation based on		Promotion of renewable energies for electricity generation. Reduction of energy bills. Promotion of energy self-sufficiency.

B-1.1: Impact pathways					
Sector and sub-sector	***Systemic levers***	***Short-term changes (1-2 years)***	***Long-term changes (3-4 years)***	***Direct impacts*** *(emission reductions)*	***Indirect impacts*** *(co-benefits)*
		with social justice criteria.	renewable resources.		Creation of high quality, green jobs. Reduction of air pollution. Enhancing quality of life. Health improvement.
SECTOR: *Waste* ***SUBSECTOR:*** *Major Waste Recycling*	Governance / Policy Social Innovation Technology / Infrastructure Learning / Skills	Acceleration of the transition from the local linear economy to a local circular model by drawing up and implementing a Circularity Strategy for the City.	Reduced consumption of virgin raw materials. Increased reuse and recycling rate of materials/waste. Increased economic activity and local employment.	*18 ktCO_{2e}*	Promoting industrial ecology and the circular economy. Increase in the reuse of materials, decrease in the generation of urban waste. Reduction of energy consumption on obtaining raw materials. Improved landfill management. Reduction of landfill disposal and reduction of landfill investments. Reduction of energy bill expenditure. Reduction of air pollution. Enhancing quality of life. Health improvement. Job creation in the field of the circular economy.
	Governance / Policy Learning / Skills Social Innovation	Advances in the circular economy through the action of the Basque Circular Hub in Vitoria-Gasteiz.	Development of technical circular economy projects in the business fabric of Alava with the participation of young professionals trained in the Hub itself.		Promoting industrial ecology and the circular economy. Increase in the reuse of materials, decrease in the generation of household and forestry waste. Improved landfill management. Reduction of energy consumption on obtaining raw materials. Reduction of landfill disposal and reduction of landfill investments. Reduction of energy bill expenditure. Reduction of air pollution. Enhancing quality of life. Health improvement. Job creation in the field of the circular economy.

B-1.1: Impact pathways					
Sector and sub-sector	***Systemic levers***	***Short-term changes (1-2 years)***	***Long-term changes (3-4 years)***	***Direct impacts*** *(emission reductions)*	***Indirect impacts*** *(co-benefits)*
	Technology / Infrastructure Learning / Skills	Increased prevention and recycling of municipal waste. Improving energy efficiency and increasing the use of renewable energies in waste management	Increased quantity of eco-designed goods and services. Progressive electrification in waste management		Reduction of energy consumption on obtaining raw materials. Promotion of renewable energies for electricity generation. Reduction of energy bill expenditure. Reduction of air pollution. Enhancing quality of life. Health improvement. Job creation in the field of the circular economy.
	Technology / Infrastructure Learning / Skills	Improving energy efficiency and increasing the use of renewable energies in water cycle management.	Reduction of water consumption at all levels, domestic, industrial and institutional.		Promotion of renewable energies for electricity generation. Reduction of energy bill expenditure. Reduction of air pollution. Enhancing quality of life. Health improvement. Job creation in the field of the circular economy.
	Technology / Infrastructure Learning / Skills	Making the city more energy self-sufficient using local biomass (waste and forest offsets).	Developing projects to use waste and clean local biomass forestry to help self-supply the city's energy demand.		Promoting industrial ecology and the circular economy. Increase in the reuse of materials, decrease in the generation of forestry waste. Promotion of renewable energies for electricity generation. Reduction of energy bill expenditure. Reduction of air pollution. Enhancing quality of life. Health improvement. Job creation in the field of the circular economy.

B-1.1: Impact pathways					
Sector and sub-sector	***Systemic levers***	***Short-term changes (1-2 years)***	***Long-term changes (3-4 years)***	***Direct impacts*** *(emission reductions)*	***Indirect impacts*** *(co-benefits)*
	Technology / Infrastructure Learning / Skills	Promoting decarbonisation of the economy by obtaining hydrogen from the recovery of rejected fractions of urban waste.	Introduction of the hydrogen vector in energy-intensive sectors or processes that are difficult to electrify.		Technological innovation in the local industrial sector Local job creation Increase in waste recovery Reduction of landfill disposal and reduction of landfill investments. Reduction of air pollution. Enhancing quality of life.

B-1.1: Impact pathways					
Sector and sub-sector	***Systemic levers***	***Short-term changes (1-2 years)***	***Long-term changes (3-4 years)***	***Direct impacts (emission reductions)***	***Indirect impacts*** *(co-benefits)*
SECTOR: *Forestry*	Governance / Policy Learning / Skills	Increasing the adaptive capacity of the territory in the face of climate change and its capacity as a carbon sink through the development of the Green Infrastructure Strategy of Vitoria-Gasteiz.	Enhancing green infrastructure.		Increase in the area of carbon sinks in the city. Conservation and enhancement of biodiversity. Reduction of the urban heat island. Improving the health and well-being of citizens. Improving Public Spaces.
SUBSECTOR: Forestry * (not covered by the Economic Model)	Democracy / Participation Technology / Infrastructure Learning / Skills Social Innovation	Increasing the adaptive capacity to climate change and its capacity as a carbon sink through the development of urban greening action plans (Urban Tree Master Plan, naturalisation of the Old Town Quarter, naturalisation of school playgrounds, etc.).	Transformation and naturalisation of urban spaces for increased climate resilience and emission absorption.		Increase in the area of carbon sinks in the city. Conservation and enhancement of biodiversity. Reduction of the urban heat island. Improving the health and well-being of citizens. Improving Public Spaces.
SECTOR: **OTHERS** ***SUBSECTOR:*** *Industry * (not covered by the Economic Model)*	Governance / Policy	Boosting the energy-climate transformation of the city's industrial sector to adopt carbon neutrality as a basic criterion for competitiveness through the II Industry Support Plan 2021-2024.	Making the industrial sector more competitive by reducing its dependence on fossil energy through efficiency measures and the use of renewable energies.		Promoting industrial ecology. Promotion of renewable energies. Reduction of external energy dependence. Promotion of energy self-sufficiency. Reduction of air pollution. Enhancing quality of life. Health improvement. Job creation in the field of circular economy and renewable energies.
SECTOR: *OTHERS* ***SUBSECTOR:*** *Agri-food * (not covered by the Economic Model)*	Technology / Infrastructure Learning / Skills	Promotion of conservation agriculture through reduced tillage to reduce emissions in the city's largest crops.	Direct seeding in larger crops.		Improvement in the management of production processes. Reduction of air pollution. Enhancing quality of life.

B-1.1: Impact pathways					
Sector and sub-sector	***Systemic levers***	***Short-term changes (1-2 years)***	***Long-term changes (3-4 years)***	***Direct impacts (emission reductions)***	***Indirect impacts*** *(co-benefits)*
	Technology / Infrastructure Learning / Skills	Promotion of organic farming by optimising fertiliser use.	Proliferation of the use of livestock waste as organic fertiliser and optimisation of fertiliser use.		Improvement in the management of production processes. Improvement in the organic production of agricultural and food products. Reduction of air pollution. Enhancing quality of life. Health improvement.
	Technology / Infrastructure Learning / Skills	Promotion of extensive livestock farming and silvopastoral systems.	Decrease in annual feed requirements.		Improvement in the management of production processes. Improvement in the organic production of agricultural and food products. Reduction of air pollution. Enhancing quality of life. Health improvement.
	Technology / Infrastructure Learning / Skills Governance / Policy	Promoting the use of sustainable biodiesel (2nd generation) in agricultural machinery	Increasing use of sustainable biodiesel (2nd generation) in agricultural machinery		Reduction of air pollution. Enhancing quality of life. Health improvement. Job creation in the field of organic agri-food.
	Governance / Policy Social Innovation Learning / Skills	Promoting local production and consumption of quality food through the development of the Agri-Food Strategy.	Increasing sustainable production and quality food, with the involvement and collaboration from the different agents (local farmers and stockbreeders, consumer associations, traders, etc.) who are committed to other forms of sustainable production and consumption.		Improvement in the organic production of agricultural and food products. Promoting healthy and local food. Improvement in the management of production processes. Job creation in the field of organic agri-food. Promotion of food self-sufficiency. Reduction of air pollution. Enhancing quality of life. Health improvement.

B-1.2: Description of the impact pathways

An assessment of the impact pathways used has been carried out and linked to the systemic levers to obtain the number of levers used and their proportion within the impact pathways and the total reductions per Sector.

The result is as follows:

NZC SYSTEMIC LEVERS - no. of changes in each systemic lever								
TOTAL CHANGES	21	13	7	6	2	1	5	
	Transport Sector	Sector Buildings/Heating	Electricity Sector	Waste Sector	Forestry Sector	Industrial sector	Agri-food sector	TOTAL
Technology / Infrastructure	14	10	3	5	1	0	4	37
Governance / Policy	7	9	4	2	1	1	2	26
Social innovation	3	6	1	2	1	0	1	14
Democracy and participation	3	1	0	0	1	0	0	5
Finance / Financing	2	6	2	0	0	0	0	10
Learning / Skills	7	6	3	6	2	0	5	29
TOTAL Projects / Actions	21	15	9	6	4	2	6	63
TOTAL GHG REDUCTIONS $ktCO_{2e}$	94	200	275	18				587

MODULE B-2

Climate Neutrality Portfolio Design

B-2.1: Description of the portfolios of transformative actions		
Sector and sub-sector	**Description of the portfolio of transformative actions**	
	List of actions	**General description**
Transport - Reducing the need for motorised passenger transport	TR-01: Implementation of the Superblocks model. Creation of Low Emission Zones (LEZ) and new limited traffic zones.	Generating compatibility of urban functionality and universal accessibility, plus favouring and promoting more efficient, sustainable and safer mobility.
	TR-02: Improvement and extension of the bicycle lane network, extension of the bicycle parking network, improvement of the bicycle registration system.	Redefinition and development of the basic cycling mobility network, maintenance and improvement programme for cycling infrastructures.
	TR-03: Parking regularisation plan: widening of the regulated parking area and parking fees.	Increase of the regulated surface area -OTA- and its fees, and reduction of parking spaces, also contemplating limiting access and circulation according to zones and type of transport and fuel. Disincentive / Restriction of the movement of private vehicles without environmental badges.
	TR-04: Training and Awareness Raising Plans to avoid trips by motorised transport.	Its aim is to raise awareness and educate to avoid resistance when promoting and implementing measures to avoid journeys using motorised transport. Reduction of motorised transport in institutional-public action as an exemplary action.
	TR-05: Implementation of measures to help reduce the number of motorised transport journeys	Implementation and promotion of digital meetings and working from home.
	TR-06: Adaptation of urban planning and regulatory instruments. New Urban Development City Plan (UDCP) of Vitoria-Gasteiz. New mobility by-laws.	Regulatory development to enable all actions related to reducing the need for motorised passenger transport. New UDCP currently in Initial Approval Document. Regulation of Personal Mobility Vehicles.
Transport - Modal shift to public transport	TR-07: Extension of tram lines.	Construction and putting into service of new tram lines that will reinforce the connection between the Salburúa and Zabalgana neighbourhoods.
	TR-08: Improvement and modernisation of public transport.	Increasing supply and optimising demand. Optimisation of the operation of the public transport network. Improving intermodality between lines of the public transport network. Improving connections with the city's rural area.
	TR-09: Mobility Plan to Work and Education Centres.	Promotion of an integrated discretionary collective transport service to industrial areas. Improved intermodality when commuting to workplaces.

B-2.1: Description of the portfolios of transformative actions		
Sector and sub-sector	**Description of the portfolio of transformative actions**	
	List of actions	**General description**
		Promoting collective transport to schools and universities. Programme to promote and develop safe school roads.
Transport - Car Sharing	TR-10: Shared Mobility Services Programme, accompanied by an awareness-raising and training plan.	Development of a car-share pilot project, incorporating feasibility analysis, dissemination campaigns, project implementation and evaluation.
Transport - Electrification of passenger cars	TR-11: Deployment of an electric vehicle charging infrastructure.	Programme to fit charging points to promote and use electric vehicles (cars, bicycles, micro-mobility) in both residential and industrial areas. Creating a favourable environment to embrace electric mobility.
	TR-12: Electrification of the municipal vehicle fleet	Technological improvements in the municipal vehicle fleet and promotion of electric mobility. Rationalisation of the fleet.
	TR-13: Awareness-raising and training programmes to promote the use of electric vehicles	These programmes aim to raise awareness and educate to overcome possible resistance to promoting and implementing measures to encourage the use of electric vehicles, such as the economic and environmental benefits of using electric vehicles or information on possible subsidies.
	TR-14: Enhancing financing and/or subsidy models to cover the additional cost of acquiring electric vehicles and the taxation linked to them.	Promoting current models for financing/subsidising electric vehicles at regional level. Encouraging purchase and use of electric vehicles through municipal taxation.
	TR-15: Promotion of the progressive electrification of private vehicles providing public services (taxis, ambulances, etc.).	Technological improvements in the vehicle fleet and promotion of electric mobility. Demonstrating the economic profitability of electric vehicles.
Transport - Electrification of Buses	TR-16: Electrification of the urban transport bus fleet.	Increase of high-capacity lines and progressive incorporation of electric buses in the urban transport bus fleet.
	TR-17: Installation of charging infrastructure for electric buses.	Putting into service of the new Functional Charging Unit and transit recharging infrastructures.
Transport - Optimisation of	TR-18: Optimising urban logistics	Logistics node pilot project to assess urban micro-logistics and subsequent establishment of Urban Distribution Centres (UDCs) for goods in other locations in the city.

B-2.1: Description of the portfolios of transformative actions		
Sector and sub-sector	**Description of the portfolio of transformative actions**	
	List of actions	**General description**
Logistics	TR-19: Change in the intra-municipal parcel delivery model through promoting cargo bicycles as a mobility alternative to vans and cars.	Promoting mobility and managing logistics and smaller parcel delivery more efficiently, sustainably and safely through the use of electric and non-electric bicycles.
	TR-20: Start-up of the "Vitoria-Gasteiz Araba Mobility Lab".	Creation and development of an exploratory public-private physical space to develop and test innovation in logistics and mobility in real conditions.
Transport - Truck Fleet Electrification	TR-21: Promoting electric vans and trucks.	Seeking and promoting agreements with logistics companies to facilitate the transport sector's energy transition and urban logistics in the city.
Buildings and heating: Building renovation	EC-01: Master Plan for Urban Regeneration, Eco-rehabilitation and Vitalisation of the Neighbourhoods of Vitoria-Gasteiz (2020-2040).	Energy eco-rehabilitation of existing buildings and public spaces in the areas declared as Degraded Areas of the city. Improvement of the thermal performance of buildings.
	EC-02: Zaramaga's Urban Regeneration Project: "Zaramaga's Mission".	Urban regeneration, eco-rehabilitation and vitalisation of Zaramaga's neighbourhood. Pilot project integrated in the Master Plan for Urban Regeneration, Eco-rehabilitation and Vitalisation of Vitoria-Gasteiz's Neighbourhoods
	EC-03: Integral Master Plan for Housing Renovation	Developing a plan to refurbish the existing housing stock, both in the Old Town Quarter and in the rest of the city (outside the so-called Degraded Areas).
	EC-04: Ensanche XIX: Entrepreneurial Eco-District	Integral revitalisation of the city centre district, the 19th century *Ensanche* and its area of influence by merging the city's sustainable character (through eco-design and eco-innovation) with its relevant industrial and business activity (services related to industry, urban services and creative industries) and the talent and knowledge generated by the University.
	EC-05: Plan to lower energy consumption in the Tertiary Sector	Energy refurbishment of tertiary buildings including the improvement of the building envelope, replacement of installations and infrastructures.
	EC-06: Plan for Energy Renovation of Municipal Buildings	Progressive energy refurbishment of the municipal building stock.
	EC-07: DIN: Industrial District North Vitoria-Gasteiz	Project for the transformation and urban revitalisation of the industrial areas of Arriaga, Gamarra

B-2.1: Description of the portfolios of transformative actions		
Sector and sub-sector	**Description of the portfolio of transformative actions**	
	List of actions	**General description**
		and Betoño-Larragana.
	EC-08: Adapting urban planning and regulatory instruments.	Regulatory development to enable all actions related to the renovation and energy rehabilitation and accessibility of buildings and public space. New UDCP, Municipal Heritage Catalogue, Special Plan for the Integral Renovation of Vitoria-Gasteiz Old Town.
	EC-09: Promoting public-private collaboration, by developing new initiatives.	Running initiatives at municipal or private level where investments can be developed through the concession tool or other public-private collaboration formulas, such as designing and implementing a financial instrument that facilitates refurbishment for vulnerable people, complementary to the calls for non-refundable aid.
Buildings and heating: Energy efficient new buildings	EC-10: Promotion of the construction of new energy efficient buildings.	Regulatory development necessary to enable the promotion of the construction of low or zero energy buildings with an energy efficiency marking that exceeds the standards proposed by the Technical Building Code.
	EC-11: Energy management programme to measure and control electricity and heat demand.	Improved control of the energy and thermal demand of buildings with the possibility of subsidies or incentives for private building.
Buildings and heating: Efficient lighting and appliances	EC-12: Promoting replacement of household appliances with energy-efficient ones.	Subsidise replacing inefficient household appliances with energy class B or higher appliances.
	EC-13: Promoting replacement of incandescent and halogen bulbs with LED technology.	Encouraging replacement of residential and tertiary lighting with LEDs
Buildings and heating: Decarbonising heating	EC-14: Demand-side electrification programme.	Changeover to very high efficiency heat pump systems.
	EC-15: Design and implementation of a decarbonised thermal network for the city	Currently, heating of residential buildings in the city is mostly based on natural gas and to a lesser extent on other sources (oil, LPG): a city-wide heat network would greatly accelerate and facilitate the process of energy transition to renewable sources.
Energy	EE-01: Projects to implement renewable generation in municipal buildings and infrastructures and public spaces.	Promoting deployment of renewable energy generation projects, mainly through fitting photovoltaic solar panels in municipal infrastructures.

B-2.1: Description of the portfolios of transformative actions		
Sector and sub-sector	**Description of the portfolio of transformative actions**	
	List of actions	**General description**
	EE-02: Plan to implement self-consumption Installations	Encouraging deployment of renewable energy generation projects mainly with photovoltaic solar panel installations in residential, commercial, industrial buildings and areas of opportunity throughout the city.
	EE-03: Generating new formulas for public-private partnerships	Generation of new formulas for public-private collaboration to bring about the necessary mechanisms and actions to bring renewable energies into the city.
	EE-04: Progressive implementation of high efficiency lighting.	Progressive replacement of existing street lighting with LED technology.
	EE-05: Promoting the creation of Energy Communities	Developing community energy projects associated with setting up Energy Communities driven through a Community Transformation Office.
	EE-06: Training, education, dissemination and citizen involvement programme on energy transition.	Progress in the training, awareness-raising and dissemination actions required to get all agents, citizens, business organisations, social agents, etc. involved in the field of energy transition and climate change.
	EE-07: Awareness-raising among municipal workers	Training and awareness-raising campaigns aimed at municipal administration staff to improve their technical skills, knowledge and awareness of energy and its efficient use.
	EE-08: Adapting urban planning and regulatory instruments.	Regulatory development to enable all actions related to the implementation of renewable energy installations and setting up Energy Communities.
	EE-09: Green Taxation Programme	Favouring implementation of energy supplies based on renewable resources.
Waste	RE-01: Elaboration and implementation of a City-wide Circularity Strategy	Accelerating the transition from the local linear economy to a local circular model for the city.
	RE-02: Basque Circular Hub in Vitoria-Gasteiz	Progress in the circular economy through developing technical circular economy projects in the Alava business world with participation from young professionals trained in the Hub itself.
	RE-03: Improved municipal waste management	Increased prevention and recycling of urban waste. Electrification of waste management and increase

B-2.1: Description of the portfolios of transformative actions		
Sector and sub-sector	**Description of the portfolio of transformative actions**	
	List of actions	**General description**
		in its energy efficiency.
	RE-04: Energy Efficiency Plan for the Water Cycle	Improving the energy efficiency of water and wastewater treatment and purification processes in the city.
	RE-05: Use of forestry waste and forest management as an energy source	Use and good management of waste and local biomass forestry that will make the city's energy demand more self-sufficient.
	RE-06: Production of hydrogen from recovered urban waste.	High-value project to produce hydrogen from recovering urban waste from the Jundiz mechanical-biological treatment plant outlet (Vitoria-Gasteiz) using a pyrolysis process.
Afforestation	FO-01: Green Infrastructure Strategy of Vitoria-Gasteiz.	Increase in the carbon sink capacity (increase in carbon stocks) of the Municipal District, both through the fixation of carbon in biomass and soils derived from forestry and agricultural activities and through absorption of CO2 by green and blue urban and peri-urban infrastructures.
	FO-02: Urban Tree Master Plan.	Exploiting the benefits of trees to turn them into a living heritage element of the city, plus a tool for thermal regulation of public spaces and a carbon sink. Planting new urban trees.
	FO-03: Naturalisation of school playgrounds	Transforming the outdoor spaces of schools to incorporate them into the city's green infrastructure system.
	FO-04: Naturalisation of the Old Town Quarter	Generation of green infrastructure projects in the historic city centre. Promotion, co-creation and testing of mechanisms to enable public-private management.
Other	OTI-01: Industry Support Plan 2021-2024	Promotion of industrial activity in the city and its decarbonisation. Local entrepreneurship plan.
	OTI-02: Energy transition plan in the industrial sector	Technical support to companies to diagnose and define solutions to reduce energy consumption.
	OTA-03: Reducing emissions from agricultural production	Harnessing the capacity of regenerative agriculture and organic fertilisation to improve pastures and crops as carbon sinks and increase the energy efficiency of the agricultural sector in terms of emissions (bioenergy use).

B-2.1: Description of the portfolios of transformative actions		
Sector and sub-sector	**Description of the portfolio of transformative actions**	
	List of actions	**General description**
	OTA-04: Promotion of conservation agriculture	Reducing tillage to reduce CO_2 emissions in the city's largest crops
	OTA-05: Promotion of biodiesel in agricultural machinery.	Boosting the use of biodiesel from waste fuel and 2nd generation biodiesel
	OTA-06: Optimisation of fertiliser use	Proliferation of the use of livestock waste as organic fertiliser and optimisation of fertiliser use.
	OTA-07: Decrease in annual feed requirements.	Promoting extensive livestock farming and silvopastoral systems
	OTA-08: Deployment of the Vitoria-Gasteiz Agrifood Strategy	Improving production and consumption practices working towards local self-sufficiency.

The investment costs presented throughout the Vitoria-Gasteiz Climate City Contract are based on the Economic Model for city decarbonisation. This model estimates the incremental cost of all decarbonisation actions within the sectors it addresses rather than their total cost. Thus, the incremental cost is the additional cost of a specific decarbonisation action compared to the cost of a reference scenario, such as the Business as Usual (BAU) scenario for the year 2030, in which current trends and policies are assumed to remain unchanged. Therefore, the cost presented throughout the document is an incremental cost, not a total cost, reflecting the additional cost required to carry out the plan's decarbonisation actions in the sectors covered by the Economic Model. However, an estimate of the total costs per sector has been included in the action sheets.

B-2.2: Individual Action Schemes		
***TR-01:* Implementation of the Superblock model.**		
Action plan	**Name of the action**	Implementation of the Superblock model. Generation of Low Emission Zones (LEZs) and new traffic calming zones
	Type of action	Strategic
	Description of the action	Generating compatibility of urban functionality and universal accessibility and favouring and promoting more efficient, sustainable and safer mobility. To declare new Low Emission Zones (LEZ), in which traffic restrictions are defined, with the aim of reducing polluting emissions, improving air quality and reducing noise levels, and increasing the safety and quality of life of citizens. To promote more efficient, sustainable and safe mobility by reorganising the road hierarchy and establishing a series of urban cells (superblocks), plus integration of a wide range of actions on the urban mobility system as a whole (traffic calming, pedestrian routes, cycling network, reorganisation of regulated parking, access control, micro-logistics, etc.).
Reference to the impact pathway	**Sector-Subsector**	Transport - Reducing the need for motorised passenger transport
	Systemic lever	Technology / Infrastructure
	Result (according to module B-1.1) short- and medium-term changes	Change in mobility through urban redevelopment using the superblock model. Setting up Low Emission Zones (LEZ) and new limited traffic zones. Compatibility of urban functionality and universal accessibility and favouring and promoting more efficient, sustainable and safer mobility.
Implementation	**Agencies/Department responsible for implementation**	Vitoria-Gasteiz City Council (AVG) - Mobility and Public Space Department Municipal stakeholders: Vitoria-Gasteiz City Council - Sustainability, Climate and Energy Service, Environmental Studies Centre, TUVISA- Mobility and Public Space Department. Municipal stakeholders: Vitoria-Gasteiz City Council - Sustainability, Climate and Energy Service, Centre for Environmental Studies, TUVISA

B-2.2: Individual Action Schemes		
	Scale of action and target entities	Municipal - Citizenship
	Stakeholders	Vitoria-Gasteiz City Council (AVG), Citizenship, Elkargune de Movilidad (Mobility Elkargune)
	Comments on implementation	Action within SECAP that has been identified as needing to be **accelerated to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Transport Sector, Subsector: **Reduction of the need for motorised passenger transport**, which as a whole has an expected emissions reduction of: **32 ktCO$_{2e}$.**
	Total costs and costs per unit of CO$_{2e}$	This action is included in the Transport Sector, Subsector: **Reduction of the need for motorised passenger transport**, which has a total cost of €21 million, of which the incremental cost is €0 million.

B-2.2: Individual Action Schemes		
TR-02: **Improvement and extension of the cycle lane network.**		
Action plan	**Name of the action**	TR-02: Improvement and extension of the bicycle lane network, extension of the bicycle parking network, Improvement of the bicycle registration system.
	Type of action	Technological
	Description of the action	Maintenance and improvement of cycling infrastructures on both the main and secondary networks. Consolidation and extension of the VGbiziz safe parking network. Improving the connectivity of the existing network and extending coverage to areas where there are very few cycle lanes, such as the Jundiz industrial estate. Incorporation of an active mechanism into the current bicycle register in an attempt to limit bicycle theft on public roads.
Reference to the impact pathway	**Sector-Subsector**	Transport - Reducing the need for motorised passenger transport
	Systemic lever	Technology / Infrastructure
	Result (according to	Improving and extending the network of cycle lanes, extending the bike rack

B-2.2: Individual Action Schemes		
	module B-1.1) short- and medium-term changes	network, improving the bicycle registration system. Facilitating cycling, increasing safety between different modes of travel.
Implementation	**Agencies/Department responsible for implementation**	AVG - Mobility and Public Space Department
	Scale of action and target entities	Municipal - Citizenship
	Stakeholders	Vitoria-Gasteiz City Council (AVG), Citizenship, Elkargune de Movilidad (Mobility Elkargune)
	Comments on implementation	Action within the SECAP and in the PMSyEP (Sustainable Mobility and Public Space Plan) that has been identified as requiring **acceleration to achieve Mission's objective**. This intends to accelerate the improvement and expansion of cycling infrastructures.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Transport Sector, Subsector: **Reduction of the need for motorised passenger transport**, which as a whole is expected to reduce emissions by: **32 ktCO 2e .**
	Total costs and costs per unit of CO 2e	This action is included in the Transport Sector, Subsector: **Reducing the need for motorised passenger transport**, which has a total cost of €21 million, of which the incremental cost is €0 million.

B-2.2: Individual Action Schemes		
TR-03: Increase in regulated parking area		
Action plan	**Name of the action**	Parking regularisation plan: increase in regulated parking space and parking fees
	Type of action	Regulations
	Description of the action	Reorganisation and extension of the regulated parking area to all the superblocks inside the old ring road and modernisation of its management structure. Implementation of a regularisation plan (increase of the regulated area and its fees) and reduction of parking spaces, also contemplating access

B-2.2: Individual Action Schemes		
		and circulation limitations according to zones, type of transport and fuel. Disincentive / Restriction of the movement for private vehicles without environmentally-friendly badges.
Reference to the impact pathway	**Sector-Subsector**	Transport - Reducing the need for motorised passenger transport
	Systemic lever	Governance/Policy Democracy / Participation Technology / infrastructure Finance / Financing
	Result (according to module B-1.1) short- and medium-term changes	Reduction of surface parking spaces through implementing a regularisation plan and an increase in the number of regulated parking spaces and their fees. Increase of the regulated surface and its fees, which entails fewer parking spaces, access and circulation limitations by zones, transport typology and fuel. Possibility of using new income for policies and actions directly related to reducing GHG emissions and achieving climate neutrality.
Implementation	**Agencies/Department responsible for implementation**	AVG - Department of Mobility and Public Space / Municipal stakeholders: TUVISA
	Scale of action and target entities	Municipal - citizenship
	Stakeholders	Vitoria-Gasteiz City Council (AVG), Citizenship, Elkargune for Mobility
	Comments on implementation	Action within SECAP that has been identified requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is one included in the Transport Sector, Subsector: **Reduction of the need for Motorised passenger transport**, which as a whole is expected to reduce emissions by: **32 ktCO$_{2e}$.**
	Total costs and costs per unit of CO$_{2e}$	This action is included in the Transport Sector, Subsector: **Reducing the need for motorised passenger transport**, which has a total cost of €21 million, of which the incremental cost is €0 million.

B-2.2: Individual Action Schemes		
TR-04: Training and Awareness Plans to avoid journeys using Motorised Transport.		
Action plan	**Name of the action**	Training and Awareness Raising Plans to avoid journeys using motorised transport
	Type of action	Training
	Description of the action	Producing training and awareness-raising plans to avoid motorised transport journeys, including promoting use of bicycles (conventional or electric). Targeting the work and school sectors (commuting to and from work and school) as well as the general public. Including the reduction of motorised transport in institutional-public action as an exemplary action. Communication and public awareness-raising on sustainable mobility. Training in efficient and safe traffic for specific groups, with special emphasis on energy aspects.
Reference to the impact pathway	**Sector-Subsector**	Transport - Reducing the need for motorised passenger transport
	Systemic lever	Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Promotion of sustainable mobility through developing Training and Awareness Plans. Involvement of citizens and all the city's agents in changing the necessary behavioural patterns in terms of sustainable mobility. Consensus and political leadership on sustainable mobility.
Implementation	**Agencies/Department responsible for implementation**	CEA - Centre for Environmental Studies (autonomous body of the AVG) AVG - Mobility and Public Space Department Basque Government
	Scale of action and target entities	Municipal, citizenship
	Stakeholders	AVG, Basque Government, Elkargune for Mobility
	Comments on implementation	Action within the SECAP that has been identified as requiring **further work and expansion to achieve the Mission's objective**. The aim is to complement and extend this action, as the SECAP only focuses on cycling. Social innovation should also be included, seeking the necessary support and designing actions with new approaches in successive iterations of this Climate City Contract (CCC).
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable
	Energy removed/replaced, fuel volume or fuel	*

B-2.2: Individual Action Schemes		
	type	
	Estimated GHG emission reductions (total)	This action is included in the Transport Sector, Subsector: **Reduction of the need for motorised passenger transport**, which as a whole is expected to reduce emissions by: **32 ktCO . 2e**
	Total costs and costs per unit of CO 2e	This action is included in the Transport Sector, Subsector: **Reducing the need for motorised passenger transport**, which has a total cost of €21 million, of which the incremental cost is €0 million.

B-2.2: Individual Action Schemes		
TR-05: Implementation of measures to reduce the number of motorised transport journeys		
Action plan	**Name of the action**	Implementation of measures to reduce the number of journeys by motorised transport.
	Type of action	Training / Organisation
	Description of the action	Promote measures that help to avoid motorised transport journeys, such as encouraging digital meetings, community co-working spaces (coworking) and working from home (telecommuting). Innovative measures should be explored, defined, designed and implemented in future iterations.
Reference to the impact pathway	**Sector-Subsector**	Transport - Reducing the need for motorised passenger transport
	Systemic lever	Governance / Policy Social innovation
	Result (according to module B-1.1) short- and medium-term changes	Promotion and implementation of measures that avoid using motorised transport, such as encouraging digital meetings or working from home (telecommuting). Getting citizens and all the city's agents involved in changing the necessary behavioural patterns in terms of sustainable mobility. Consensus and political leadership on sustainable mobility. Ease of remote access to a digital communication network.
Implementation	**Agencies/Department responsible for implementation**	AVG - Mayor's Office and Institutional Relations Department, Human Resources Department Stakeholders: Public Sector - Institutional, Economic and Financial Sector, Social Sector.
	Scale of action and target entities	Municipal, Regional, National. Public Entities, Companies, Citizenship.
	Stakeholders	AVG: Department of the Mayor's Office and Institutional Relations, Human Resources Department Public Sector - Institutional, Economic and Financial Sector, Social Sector.

B-2.2: Individual Action Schemes		
	Comments on implementation	This is a **new action** that has been considered necessary **to achieve the Mission's objective**. This type of action should be cross-cutting with an innovative vision. Support will be sought from the NetZeroCities and CitiES2030 platforms and entities such as the Aguirre Lehendakari Center, both to design new actions and consider the best way to implement them.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable.
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Transport Sector, Subsector: **Reduction of the need for motorised passenger transport**, which as a whole has an expected emissions reduction of: **32 ktCO .** **2e**
	Total costs and costs per unit of CO 2e	This action is included in the Transport Sector, Subsector: **Reducing the need for motorised passenger transport**, which has a total cost of €21 million, of which the incremental cost is €0 million.

B-2.2: Individual Action Schemes		
TR-06: Adapting urban planning and regulatory instruments.		
Action plan	**Name of the action**	Adapting urban planning and regulatory instruments. New Urban Development City Plan of Vitoria-Gasteiz.
	Type of action	Regulations
	Description of the action	Development of the regulatory framework to enable implementation of the Mission's objectives, making the necessary changes in the municipal urban planning regulations to develop the planned actions with a direct implication on reducing the need for motorised passenger transport. One of the main urban planning and regulatory instruments is the Urban Development City Plan of Vitoria-Gasteiz which is currently in the phase following its Initial Approval and the revised Sustainable Mobility and Public Space Plan (approved by the Local Government Board in 2022). Drafting of an Ordinance to regulate Personal Mobility Vehicles (PMV).
Reference to the impact pathway	**Sector-Subsector**	Transport - Reducing the need for motorised passenger transport
	Systemic lever	Governance / Policy
	Result (according to module B-1.1) short-	Adapting urban planning and regulatory instruments related to reducing the need for motorised passenger transport.

B-2.2: Individual Action Schemes		
	and medium-term changes	Regulatory development to enable all actions related to reducing the need for motorised passenger transport. Regulation of Personal Mobility Vehicles (PMV).
Implementation	**Agencies/Department responsible for implementation**	AVG - Department of Territory and Climate Action and Department of Mobility and Public Space.
	Scale of action and target entities	Municipal, Citizenship.
	Stakeholders	Vitoria-Gasteiz City Council, Elkargune for Mobility, Citizenship.
	Comments on implementation	Action within the SECAP that has been identified as **requiring further work and extension** to achieve the Mission's objective. This action should be added to and extended as it only focuses in the SECAP and should be extended to all actions and projects included in this Action Plan. Due to lengthy timescales for modifications to urban planning regulations, these changes and modifications must begin as soon as possible. In this type of action, collaboration and support from other institutional levels will be key, as cohesion and coordination in urban planning matters is essential at all levels of governance.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable.
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Transport Sector, Subsector: **Reduction of the need for motorised passenger transport**, which as a whole has an expected emissions reduction of: **32 ktCO .** **2e**
	Total costs and costs per unit of CO 2e	This action is included in the Transport Sector, Subsector: **Reduction of the need for motorised passenger transport** which has a total cost of €21 million, of which the incremental cost is €0 million.

B-2.2: Individual Action Schemes		
TR-07: Tram line extensions		
Action plan	**Name of the action**	Extension of tram lines.
	Type of action	Strategic (Technological)
	Description of the	Construction and putting into service of new tram lines that will reinforce the

B-2.2: Individual Action Schemes		
	action	connection between the Salburúa and Zabalgana neighbourhoods.
Reference to the impact pathway	**Sector-Subsector**	Transport - Modal shift to public transport
	Systemic lever	Technology / Infrastructure
	Result (according to module B-1.1) short- and medium-term changes	Promoting use of public transport by extending tram lines. Promotion of high-capacity public transport.
Implementation	**Agencies/Department responsible for implementation**	Basque Government ETS: Euskal Trenbide Sarea
	Scale of action and target entities	Municipal, Citizens, especially residents in the Salburúa and Zabalgana neighbourhoods. AVG / ETS: Euskal Trenbide Sarea
	Stakeholders	Vitoria-Gasteiz City Council
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Transport Sector, Subsector: **Modal shift to public transport,** which as a whole has an expected emissions reduction of: **8 ktCO .** **2e**
	Total costs and costs per unit of CO **2e**	**This action is included in the Transport Sector, Subsector: Modal Shift to Public Transport**, which has a total cost of €174 million, of which the incremental cost is €30 million.

B-2.2: Individual Action Schemes		
TR-08: Improvement and modernisation of public transport in Vitoria-Gasteiz		
Action plan	**Name of the action**	Improvement and modernisation of public transport in Vitoria-Gasteiz
	Type of action	Strategic
	Description of the	Optimisation of the operation of the TUVISA (Vitoria Urban Transport) bus

B-2.2: Individual Action Schemes		
	action	network. Reorganisation of the offer of urban bus lines. Improvement of intermodality between new public transport network lines. Review of the public transport service to rural areas.
Reference to the impact pathway	**Sector-Subsector**	Transport - Modal shift to public transport
	Systemic lever	Technology / Infrastructure
	Result (according to module B-1.1) short- and medium-term changes	Optimisation of the public transport service on city buses. Improvement and modernisation of public transport in Vitoria-Gasteiz, increasing supply and optimising demand. Increase in the number of public transport network users.
Implementation	**Agencies/Department responsible for implementation**	TUVISA - Transportes Uurbanos de Vitoria (Vitoria Urban Transport) - Municipal Company AVG: Department of Mobility and Public Space
	Scale of action and target entities	Municipal, Citizenship
	Stakeholders	Vitoria-Gasteiz City Council / TUVISA - Transportes Urbanos de Vitoria-Empresa Municipal / Elkargune Movilidad / Economic Sector - companies supplying elements related to public transport.
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve the Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Transport Sector, Subsector: **Modal shift to public transport,** which as a whole has an expected emissions reduction of: **8 ktCO$_{2e}$.**
	Total costs and costs per unit of CO$_{2e}$	**This action is included in the Transport Sector, Subsector: Modal Shift to Public Transport**, which has a total cost of €174 million, of which the incremental cost is €30 million.

B-2.2: Individual Action Schemes
TR-09: Mobility Plan to Work and School.

B-2.2: Individual Action Schemes		
Action plan	**Name of the action**	Mobility Plans to Work and School.
	Type of action	Planning / Regulations
	Description of the action	This action is structured according to five specific objectives: (1) Preparation of a diagnosis on how workers commute to these areas every day (routes, modes of transport, preferences, etc.), as a preliminary step to drafting a Mobility Plan for the Industrial Areas (PMPI) in Vitoria-Gasteiz. (2) Drafting and implementing a Transport to Work Plan (TWP) for AVG staff and activity. (3) Programme to promote and develop safe school routes: characterisation of the mobility habits of the educational community and the quality of the access routes to and around the educational centres and preparation of a proposal to promote a network of safe routes to encourage a change in daily travel habits in favour of walking, cycling or public transport. (4) Development of a communication, education and participation programme to develop and promote active and autonomous mobility on journeys to school with the educational communities. (5) Drawing up a mobility plan for industrial areas and technology parks.
Reference to the impact pathway	**Sector-Subsector**	Transport - Modal shift to public transport
	Systemic lever	Governance / Policy Democracy / Participation Social Innovation
	Result (according to module B-1.1) short- and medium-term changes	Promoting the use of public transport for work and study mobility through Mobility Plans for Work and Education Centres. Promotion of an integrated discretionary public transport service to industrial areas. Promotion of public transport to educational centres.
Implementation	**Agencies/Department responsible for implementation**	AVG - Department of Mobility and Public Space, Department of Culture and Education, Department of Economic Promotion, Employment, Trade and Tourism. CEA: Centre for Environmental Studies (autonomous municipal body). Basque Government - Department of Education
	Scale of action and target entities	Municipalities, citizens in general and especially workers, and school children.
	Stakeholders	Parties involved: Basque Government - Dept. of Education Education Sector Economic-Financial Sector
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable

B-2.2: Individual Action Schemes		
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Transport Sector, Subsector: **Modal shift to public transport,** which as a whole has an expected emissions reduction of: **8 ktCO 2e .**
	Total costs and costs per unit of CO 2e	**This action is included in the Transport Sector, Subsector: Modal Shift to Public Transport**, which has a total cost of €174 million, of which the incremental cost is €30 million.

B-2.2: Individual Action Schemes		
TR-10: Shared Mobility Services Programme		
Action plan	**Name of the action**	Shared Mobility Services Programme with awareness-raising and training programmes.
	Type of action	Strategic
	Description of the action	Development of a car-sharing pilot project, incorporating feasibility analysis, dissemination campaign, project implementation and evaluation.
Reference to the impact pathway	**Sector-Subsector**	Transport - Car Pooling
	Systemic lever	Technology / Infrastructure Learning/Skills
	Result (according to module B-1.1) short- and medium-term changes	Encourage shared mobility through devising a Shared Mobility Services Programme and awareness-raising and training programmes. Promoting setting up platforms to manage and use car sharing. Overcoming prejudices against car-sharing and the use of a shared car.
Implementation	**Agencies/Department responsible for implementation**	AVG -Department of Mobility and Public Space Basque Government - EVE (Basque Energy Agency) Aguirre Lehendakari Center
	Scale of action and target entities	Municipal, Citizenship.
	Stakeholders	AVG- Department of Territory and Climate Action, Department of Finance / Basque Government - EVE (Ente Vasco de la Energía) / Citizenship / Economic Sector - Automotive companies / Financial Sector
	Comments on implementation	Action within the SECAP that has been identified as requiring **acceleration, further work and expansion to achieve the Mission's objective**. The aim is to

B-2.2: Individual Action Schemes		
		complement and expand this action, as the training and awareness-raising part was not considered in the SECAP. Furthermore, implementation of the pilot project and the corresponding awareness and training campaigns should be accelerated, working on the issue of social innovation, for which the necessary support will be sought for innovative design of new actions to be developed in successive iterations of this CCC.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Transport Sector, Subsector: **Car Pooling,** which as a whole has an expected emissions reduction of: **5 ktCO .. 2e**
	Total costs and costs per unit of CO 2e	This action is included in the Transport Sector, Subsector: **Car Pooling** which has a total cost of €0.1 million (not including the cost of subsequent private developments), of which the incremental cost is €0 million.

B-2.2: Individual Action Schemes		
TR-11: Deployment of an electric vehicle charging infrastructure.		
Action plan	**Name of the action**	Deployment of an electric vehicle charging infrastructure
	Type of action	Technological
	Description of the action	Programme for installing charging points to promote and use electric vehicles (cars, bicycles, micro mobility) in both residential and industrial areas. Creation of a favourable environment to adopt electric mobility. Deployment of a network of around 90 recharging points in public spaces for electric vehicles to meet recharging needs and serve as an opportunity to complement the related home-charging infrastructure.
Reference to the impact pathway	**Sector-Subsector**	Transport: Electrification of passenger cars
	Systemic lever	Technology / Infrastructure
	Result (according to module B-1.1) short- and medium-term changes	Deployment of an electric vehicle charging infrastructure. Progressive increase of private electric mobility and public service vehicles, such as taxis.
Implementation	**Agencies/Department**	AVG -Department of Mobility and Public Space

B-2.2: Individual Action Schemes		
	responsible for implementation	
	Scale of action and target entities	Municipal, Citizenship.
	Stakeholders	Vitoria-Gasteiz City Council / Basque Government - EVE (Ente Vasco de la Energía) / Citizenship / Economic Sector - automotive companies
	Comments on implementation	Action within the SECAP that has been identified that requires **acceleration to achieve Mission's objective**. The recharging infrastructure should be built as soon as possible to achieve Mission's objective.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Transport Sector, Subsector: **Electrification of Passenger Cars**, which as a whole has an expected emission reduction of: **10 ktCO 2e .**
	Total costs and costs per unit of CO 2e	This action is included in the Transport Sector, Subsector: **Electrification of Passenger Cars**, which has a total cost of €274 million, of which the incremental cost is €19 million.

B-2.2: Individual Action Schemes		
TR-12: Electrification of the municipal vehicle fleet		
Action plan	**Name of the action**	Electrification of the municipal vehicle fleet
	Type of action	Technological
	Description of the action	Electrification of 100% of the municipal vehicle fleet, also intending to reduce the number of motorised journeys and to rationalise the fleet.
Reference to the impact pathway	**Sector-Subsector**	Transport: Electrification of passenger cars
	Systemic lever	Technology / Infrastructure
	Result (according to module B-1.1) short- and medium-term changes	Progressive electrification of the municipal vehicle fleet, including a reduction in the number of motorised journeys. Creation of a favourable environment to adopt electric mobility, especially in municipal services as an exemplary action.

B-2.2: Individual Action Schemes		
Implementation	**Agencies/Department responsible for implementation**	AVG - Department of Contracting and Purchasing / Basque Government - EVE (Basque Energy Agency)
	Scale of action and target entities	Municipal, Vitoria-Gasteiz City Council
	Stakeholders	Vitoria-Gasteiz City Council / Basque Government - EVE (Ente Vasco de la Energía) / Citizens / Economic sector - automotive business sector
	Comments on implementation	Action within SECAP that **has been accelerated to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Transport Sector, Subsector: **Electrification of Passenger Cars**, which as a whole has an expected emission reduction of: **10 ktCO .** **2e**
	Total costs and costs per unit of CO 2e	This action is included in the Transport Sector, Subsector: **Electrification of Passenger Cars**, which has a total cost of €274 million, of which the incremental cost is €19 million.

B-2.2: Individual Action Schemes		
TR-13: Awareness-raising and training programmes to promote the use of electric vehicles		
Action plan	**Name of the action**	Awareness-raising and training programmes to promote the use of electric vehicles.
	Type of action	Formative
	Description of the action	Awareness raising and education of the public to overcome possible resistance to the promotion and implementation of measures encouraging use of electric vehicles, such as providing information on possible subsidies or the economic and environmental advantages of using electric vehicles.
Reference to the impact pathway	**Sector-Subsector**	Transport: Electrification of passenger cars
	Systemic lever	Learning / Skills
	Result (according to	Promoting use of electric cars through awareness-raising and training plans

B-2.2: Individual Action Schemes		
	module B-1.1) short- and medium-term changes	and programmes. Progressive increase in the electric vehicle fleet.
Implementation	**Agencies/Department responsible for implementation**	AVG -Department of Mobility and Public Space CEA (Centre for Environmental Studies) Parties involved: Basque Government - EVE (Basque Energy Agency)
	Scale of action and target entities	Municipal, Citizenship,
	Stakeholders	Vitoria-Gasteiz City Council Basque Government - EVE (Basque Energy Agency) Citizenship Economic sector - automotive companies
	Comments on implementation	This is a **new action** that has been considered necessary **to achieve Mission's objective**. Awareness-raising actions must also work on social innovation, for which alliances will be sought with external agents.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Transport Sector, Subsector: **Electrification of Passenger Cars**, which as a whole has an expected emission reduction of: **10 ktCO$_{2e}$.**
	Total costs and costs per unit of CO$_{2e}$	This action is included in the Transport Sector, Subsector: **Electrification of Passenger Cars**, which has a total cost of €274 million, of which the incremental cost is €19 million.

B-2.2: Individual Action Schemes		
TR-14: Financing and/or subsidy models to purchase electric vehicles		
Action plan	**Name of the action**	Enhancing financing and/or subsidy models to cover the additional cost of acquiring electric vehicles and the taxation linked to them.
	Type of action	Taxation
	Description of the action	Promote the models for financing/subsidising electric vehicles at regional level that are already in place. Promoting the purchase and use of electric vehicles through municipal taxation. We will also work on possible

B-2.2: Individual Action Schemes		
		development of new innovative financing models with the support of platforms such as NetZeroCities, CitiEs2030 and local companies in the financial sector.
Reference to the impact pathway	**Sector** **Subsector**	Transport: Electrification of passenger cars
	Systemic lever	Financing / Investment
	Result (according to module B-1.1) short- and medium-term changes	Development of financing and/or subsidy models to cover the additional cost of purchasing electric vehicles compared to fossil fuel vehicles. Demonstration of the economic profitability of electric vehicles.
Implementation	**Agencies/Department responsible for implementation**	AVG - Treasury Department / Basque Government: EVE
	Scale of action and target entities	Municipal, Citizenship
	Stakeholders	Vitoria-Gasteiz City Council / Basque Government - EVE (Ente Vasco de la Energía) / Citizens / Economic Sector - automotive companies and the banking sector
	Comments on implementation	This is a **new action** that has been deemed necessary **to achieve Mission's objective**. Assistance will be sought from the Mission support platform, NetZeroCities and CitiES2030, and from other local stakeholders in the Economic and Social Sector to develop and work on these new models that are intended to be designed for future iterations of this Action Plan.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Transport Sector, Subsector: **Electrification of Passenger Cars**, which as a whole has an expected emission reduction of: **10 ktCO$_{2e}$.**
	Total costs and costs per unit of CO$_{2e}$	This action is included in the Transport Sector, Subsector: **Electrification of Passenger Cars**, which has a total cost of €274 million, of which the incremental cost is €19 million.

B-2.2: Individual Action Schemes		
TR-15: Promotion of the progressive electrification of private vehicles providing public services (taxis, ambulances, etc.).		
Action plan	**Name of the action**	Promotion of the progressive electrification of private vehicles providing public services (taxis, ambulances, etc.).
	Type of action	Management
	Description of the action	Technological improvements in the vehicle fleet and promotion of electric mobility. Demonstration of the economic profitability of electric vehicles.
Reference to the impact pathway	**Sector-Subsector**	Transport: Electrification of passenger cars
	Systemic lever	Technology / Infrastructure Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Progressive electrification of the city's taxi service. Demonstration of the economic profitability of electric vehicles.
Implementation	**Agencies/Department responsible for implementation**	AVG: Department for Mobility and Public Space / Basque Government / Taxi Drivers' Association of Vitoria-Gasteiz
	Scale of action and target entities	Municipal / Collective of taxi drivers in the city
	Stakeholders	AVG: Department for Mobility and Public Space / Basque Government: Department to be defined / Collective of taxi drivers of Vitoria-Gasteiz / Automotive business sector
	Comments on implementation	This is an **action that is partly underway and** should be expanded to **achieve Mission's objective.** Private vehicle groups providing public services, such as taxis, should be involved from the outset.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Transport Sector, Subsector: **Electrification of Passenger Cars**, which as a whole is expected to reduce emissions by: **10 ktCO 2e .**
	Total costs and costs	This action is included in the Transport Sector, Subsector: **Electrification of**

B-2.2: Individual Action Schemes		
	per unit of CO_{2e}	**Passenger Cars**, which has a total cost of €274 million, of which the incremental cost is €19 million.

B-2.2: Individual Action Schemes		
TR-16: Electrification of the Urban Transport Bus Fleet.		
Action plan	**Name of the action**	Electrification of the urban transport bus fleet.
	Type of action	Strategic
	Description of the action	Increase in high-capacity lines and the progressive incorporation of electric buses in the urban transport bus fleet with the aim of achieving 100% electrification of the TUVISA (Transportes Urbanos de Vitoria, Empresa Municipal) bus fleet.
Reference to the impact pathway	**Sector-Subsector**	Transport: Electrification of buses
	Systemic lever	Governance / Policy Technology / Infrastructure
	Result (according to module B-1.1) short- and medium-term changes	Progressive incorporation of electric buses in the urban transport bus fleet. Increase in high-capacity lines and electrification of the bus fleet, generating a more sustainable, attractive and functional public transport service.
Implementation	**Agencies/Department responsible for implementation**	TUVISA (Transportes Urbanos de Vitoria, Empresa Municipal) / Vitoria-Gasteiz City Council
	Scale of action and target entities	Municipal, TUVISA and Citizenship.
	Stakeholders	TUVISA
	Comments on implementation	
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Transport Sector, Subsector: **Electrification of Buses,** which as a whole has an expected emissions reduction of: 9 **$ktCO_{2e}$**.

B-2.2: Individual Action Schemes		
	Total costs and costs per unit of CO 2e	This action is included in the Transport Sector, Subsector: **Electrification of Buses**, which has a total cost of €35 million, of which the incremental cost is €5 million.

B-2.2: Individual Action Schemes		
TR-17: Installation of charging infrastructure for electric buses.		
Action plan	**Name of the action**	Installation of charging infrastructure for electric buses.
	Type of action	Strategic
	Description of the action	Entry into operation of the new Functional Charging Unit for night-time recharging of electric buses. Start-up of in-transit recharging infrastructures. Increased investment in recharging infrastructures. Increase in the electrification capacity of the city's bus fleet.
Reference to the impact pathway	**Sector-Subsector**	Transport: Electrification of buses
	Systemic lever	Technology - Infrastructure
	Result (according to module B-1.1) short- and medium-term changes	Adaptation of the electric bus infrastructure by building and putting into service the new depot building. Adaptation of the urban public transport service infrastructure to electric mobility.
Implementation	**Agencies/Department responsible for implementation**	TUVISA (Transportes Urbanos de Vitoria, Empresa Municipal) / Vitoria-Gasteiz City Council / Basque Government
	Scale of action and target entities	Municipal, TUVISA and Citizenship.
	Stakeholders involved	TUVISA
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Transport Sector, Subsector: **Electrification of Buses,** which as a whole has an expected emissions reduction of: **9 ktCO 2e .**

B-2.2: Individual Action Schemes		
	Total costs and costs per unit of CO 2e	This action is included in the Transport Sector, Subsector: **Electrification of Buses**, which has a total cost of €35 million, of which the incremental cost is €5 million.

B-2.2: Individual Action Schemes		
TR-18: Optimising urban logistics		
Action plan	**Name of the action**	Optimisation of urban freight distribution logistics
	Type of action	Management
	Description of the action	Logistics node pilot project to assess urban micro-logistics and subsequently set up Urban Distribution Centres (UDCs) for goods in other locations in the city.
Reference to the impact pathway	**Sector-Subsector**	Transport: Optimisation of logistics
	Systemic lever	Technology / Infrastructure Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Implementation of a logistics node as a pilot project to optimise urban micro-logistics.
Implementation	**Agencies/Department responsible for implementation**	AVG - Department of Mobility and Public Space / Basque Government: EVE
	Scale of action and target entities	Municipalities, citizens, the economic and business sector, logistics companies.
	Stakeholders	Vitoria-Gasteiz City Council / Economic-Business Sector / Citizens / Logistics and Transport Companies
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions	This action is included in the Transport Sector, Subsector: **Optimisation of logistics**, which as a whole has an expected emissions reduction of: **21**

B-2.2: Individual Action Schemes		
	(total)	**ktCO . 2e**
	Total costs and costs per unit of CO 2e	This action is included in the Transport Sector, Subsector: **Optimisation of Logistics**, which has a total cost of €1.4 million (without considering the investment of the private Logistics Sector), of which the incremental cost is €0 million.

B-2.2: Individual Action Schemes		
TR-19: Change in the intra-municipal parcel-transport model.		
Action plan	**Name of the action**	Change in the intra-municipal parcel-delivery model through promoting cargo bikes as a mobility alternative to vans and cars.
	Type of action	Management
	Description of the action	Promoting mobility and managing logistics and smaller parcel delivery more efficiently, sustainably and safely by using electric and non-electric bicycles as a mobility alternative to vans and cars.
Reference to the impact pathway	**Sector- Subsector**	Transport: Optimisation of logistics
	Systemic lever	Technology / Infrastructure Social innovation Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Promoting cargo bikes as an alternative to vans and trucks in intra-municipal parcel transport. Promoting logistics management and delivery of smaller parcels in a more efficient, sustainable and safe way using cargo bicycles (electric or non-electric).
Implementation	**Agencies/Department responsible for implementation**	AVG - Mobility and Public Space Department
	Scale of action and target entities	Municipalities, citizens, the economic and business sector, logistics companies.
	Stakeholders involved	Vitoria-Gasteiz City Council / Economic-Business Sector / Citizenship Logistics and transport companies.
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable

B-2.2: Individual Action Schemes		
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Transport Sector, Subsector: **Optimisation of logistics**, which as a whole is expected to reduce emissions by: **21 ktCO 2e .**
	Total costs and costs per unit of CO 2e	This action is included in the Transport Sector, Subsector: **Optimisation of Logistics**, which has a total cost of €1.4 million (without considering investment in the private Logistics Sector), of which the incremental cost is €0 million.

B-2.2: Individual Action Schemes		
TR-20: Launch of the "Vitoria-Gasteiz Araba Mobility Lab".		
Action plan	**Name of the action**	Launch of the "Vitoria-Gasteiz Araba Mobility Lab".
	Type of action	Management
	Description of the action	Creation and development of a physical exploratory space, a public-private initiative, to develop and test innovation in logistics and mobility in real conditions.
Reference to the impact pathway	**Sector-Subsector**	Transport: Logistics optimisation
	Systemic lever	Technology / Infrastructure Learning / Skills Governance / Policy
	Result (according to module B-1.1) short- and medium-term changes	Promotion of public-private cooperation in logistics and mobility with the launch of the "Vitoria-Gasteiz Araba Mobility Lab". Setting up and developing a physical exploratory space to develop and test innovation in logistics and mobility in real conditions.
Implementation	**Agencies/Department responsible for implementation**	Vitoria-Gasteiz City Council / Provincial Council of Alava
	Scale of action and target entities	Municipal, Citizenship
	Stakeholders	Vitoria-Gasteiz City Council / Provincial Council of Alava / Mercedes-Benz / Michelin / Talgo / CIC energiGUNE / Tecnalia / Mobility and Logistics Cluster of the Basque Country / Alava Technology Park / UPV/EHU / Basque Government / Sernauto

B-2.2: Individual Action Schemes		
	Comments on implementation	
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Transport Sector, Subsector: **Optimisation of logistics**, which as a whole has an expected emissions reduction of: **21 ktCO$_{2e}$.**
	Total costs and costs per unit of CO$_{2e}$	This action is included in the Transport Sector, Subsector: **Optimisation of Logistics**, which has a total cost of €1.4 million (without considering the investment of the private Logistics Sector), of which the incremental cost is €0 million.

B-2.2: Individual Action Schemes		
TR-21: Promotion of electric vans and trucks.		
Action plan	**Name of the action**	Search for and promotion of agreements with logistics companies to facilitate energy transition for the city's transport and urban logistics sector.
	Type of action	Technology Policy/Management
	Description of the action	Promotion of electric vans and trucks by seeking and promoting agreements with logistics companies to facilitate energy transition for the transport sector and urban logistics in the city.
Reference to the impact pathway	**Sector-Subsector**	Transport: Fleet electrification of vans and trucks
	Systemic lever	Technology / Infrastructure Learning / Skills Governance / Policy
	Result (according to module B-1.1) short- and medium-term changes	Promotion of electric vans and trucks for the progressive electrification of freight vehicles. Progressive reduction in the use of light and heavy vehicles powered by fossil fuels.
Implementation	**Agencies/Department responsible for implementation**	Vitoria-Gasteiz City Council / Basque Government / Provincial Council of Álava / Companies in the Transport and Logistics Sector

B-2.2: Individual Action Schemes		
	Scale of action and target entities	Municipal / Regional
	Stakeholders	Vitoria-Gasteiz City Council / Basque Government / Provincial Council of Alava / Companies in the Transport and Logistics Sector
	Comments on implementation	This is a **new action** that has been deemed necessary **to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Transport Sector, Subsector: **Electrification of the truck fleet,** which as a whole is expected to reduce emissions by: **9 ktCO$_{2e}$.**
	Total costs and costs per unit of CO$_{2e}$	This action is included in the Transport Sector, Subsector: **Electrification of the lorry fleet**, with total costs of €103 million, of which the incremental cost is €33 million.

B-2.2: Individual Action Schemes		
EC-01: Master Plan for Urban Regeneration, Eco-rehabilitation and Vitalisation of Vitoria-Gasteiz´s Neighbourhoods (2020-2040).		
Action plan	**Name of the action**	Master Plan for Urban Regeneration, Eco-rehabilitation and Vitalisation of Vitoria-Gasteiz´s Neighbourhoods (2020-2040).
	Type of action	Technological / Strategic / Management / Formative
	Description of the action	The action involves the energy refurbishment of existing buildings within the Degraded Areas (DA), located in 9 of the neighbourhoods developed from the 1960s onwards (Abetxuko, Adurza-San Cristobal, Arana, Ariznabarra, Coronación, El Anglo, Judimendi and Zaramaga). Improvements have been planned for thermal performance of buildings constructed prior to the NBE-79 (national building regulation), based on the refurbishment of the envelope and the introduction of efficient installations, such as the aerothermal heat pump, which will also allow the electrification of demand. The objective is to act on a total of 11,335 dwellings (10,858 collective and 477 single-family dwellings). It is expected that the rehabilitated buildings will achieve at least energy rating C, with an estimated reduction in GHG emissions of around 87% compared to the current situation. This objective

B-2.2: Individual Action Schemes		
		will help reduce energy poverty for the most vulnerable households.
Reference to the impact pathway	**Sector-Subsector**	Buildings / Heating: Building renovation
	Systemic lever	Technology / Infrastructure Governance / Policy Social innovation Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Progressive renovation of the building stock implementing the Master Plan for Urban Regeneration, Eco-rehabilitation and Vitalisation of Vitoria-Gasteiz´s Neighbourhoods (2020-2040). Progressive energy eco-rehabilitation of existing buildings and public spaces in the declared Degraded Areas. Improvement of the thermal performance of buildings.
Implementation	**Agencies/Department responsible for implementation**	Ensanche 21: AVG Renovation Society / Basque Government / EVE (Ente Vasco de Energía) / VISESA (Vivienda y Suelo de Euskadi S.A.)
	Scale of action and target entities	Municipal / Public / Economic-Business Sector: Construction and renovation sector
	Stakeholders	Vitoria-Gasteiz City Council / Citizens - preferably from areas declared Degraded Areas / Economic-Business Sector: Construction and rehabilitation sector.
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Buildings/Heating Sector, Subsector: **Renovation of Buildings,** which as a whole has an expected emission reduction of: **32 ktCO .** **2e**
	Total costs and costs per unit of CO 2e	This action is included in the Buildings/Heating Sector, Subsector: **Building Renovation** which has a total cost of €859 million, of which the incremental cost is €631 million.

B-2.2: Individual Action Schemes		
EC-02: Zaramaga Urban Regeneration Project: "Zaramaga´s Mission".		
Action plan	**Name of the action**	Zaramaga Urban Regeneration Project: "Zaramaga´s Mission".
	Type of action	Technological / Strategic / Management / Formative
	Description of the action	Revitalisation and integrated eco-rehabilitation of the Zaramaga neighbourhood of the city. This Project contains actions such as **renovation of 500 dwellings with energy efficiency and accessibility criteria, or redevelopment of** public space with nature-based solutions to update lighting, improve streets and squares, drainage systems, urban green infrastructure. It also includes setting up a **new day care centre**, a **care centre** and adapting the **BIZAN Zaramaga**. Finally, the project also promotes **energy communities**, **electromobility** actions (charging points and last mile distribution), plus **digitalisation of the neighbourhood**, **inclusive employment** projects aimed at refurbishment and renovation and **cultural and landscape co-creation** initiatives linked to the history of the neighbourhood to complete a plan that will also include a **neighbourhood site office.**
Reference to the impact pathway	**Sector-Subsector**	Buildings / Heating: Building renovation
	Systemic lever	Technology / Infrastructure Governance / Policy Social innovation Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Progressive integral renovation of the Zaramaga neighbourhood park as a pilot neighbourhood for the city's integral regeneration.
Implementation	**Agencies/Department responsible for implementation**	Ensanche 21: AVG Renovation Society / Basque Government / EVE (Ente Vasco de Energía) / VISESA (Vivienda y Suelo de Euskadi S.A.)
	Scale of action and target entities	Municipal / Public / Economic-Business Sector: Construction and renovation sector
	Stakeholders	Vitoria-Gasteiz City Council / Citizens - preferably from areas declared Degraded Areas / Economic-Business Sector: Construction and renovation sector.
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable

B-2.2: Individual Action Schemes		
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Buildings/Heating Sector, Subsector: **Renovation of Buildings,** which as a whole has an expected emission reduction of: **32 ktCO 2e .**
	Total costs and costs per unit of CO 2e	This action is included in the Buildings/Heating Sector, Subsector: **Building Renovation,** which has total costs of €859 million, of which the incremental cost is €631 million.

B-2.2: Individual Action Schemes		
EC-03: Integral Master Plan for Housing Renovation		
Action plan	**Name of the action**	Integral Master Plan for Housing Rehabilitation
	Type of action	Strategic
	Description of the action	Plan covering the short-, medium- and long-term rehabilitation of the residential stock. It would encompass the following specific objectives: (1) Integral rehabilitation of 20,000 dwellings by 2030 (including the 11,335 dwellings of the Master Plan of action EC-01) to improve the thermal performance of buildings constructed prior to CTE-2006 (National Building regulation), based on rehabilitation of the building envelope. (2) Change of heating and DHW system in 50,000 dwellings (including those featured in the Master Plan action EC-01) by 2030: replacement of equipment with higher efficiency equipment, prioritising high efficiency heat pumps, such as aerothermal heat pumps, and geothermal as far as possible based on site and ground conditions. Evaluation of thermal energy storage. (3) Incorporation of 20 MW of photovoltaic solar energy for self-consumption or within energy communities (EC). (4) Connection of 5,700 dwellings to district networks powered by biomass. (5) D Incorporation of waste heat from other sectors.
Reference to the impact pathway	**Sector- Subsector**	Buildings / Heating: Building renovation
	Systemic lever	Governance / Policy Social innovation Technology / Infrastructure Learning / Skills
	Result (according to module B-1.1) short- and medium-term	Progressive rehabilitation of the building stock through implementing the Integral Housing Rehabilitation Plan. Improvement of the thermal performance of buildings.

B-2.2: Individual Action Schemes		
EC-03: Integral Master Plan for Housing Renovation		
	changes	
Implementation	**Agencies/Department responsible for implementation**	Ensanche 21: AVG Rehabilitation Society / Basque Government / EVE (Ente Vasco de Energía) / VISESA (Vivienda y Suelo de Euskadi S.A.)
	Scale of action and target entities	Municipal / Public / Economic-Business Sector: Construction and renovation sector
	Stakeholders	Vitoria-Gasteiz City Council / Citizens - preferably from areas declared Degraded Areas / Economic-Business Sector: Construction and renovation sector.
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Buildings/Heating Sector, Subsector: **Renovation of Buildings,** which as a whole has an expected emission reduction of: **32 ktCO .** **2e**
	Total costs and costs per unit of CO 2e	This action is included in the Buildings/Heating Sector, Subsector: **Building Renovation,** which has total costs of €859 million, of which the incremental cost is €631 million.

B-2.2: Individual Action Schemes		
EC-04: Ensanche XIX: Entrepreneurial Eco-District		
Action plan	**Name of the action**	**Ensanche XIX: Entrepreneurial Eco District**
	Type of action	Management
	Description of the action	Integrated revitalisation of the city centre district, the Ensanche Furthermore, the whole project has been generated with the New European Bauhaus values in mind: quality of experience, including style/aesthetics and health and safety of living environments, sustainability, including circularity and inclusivity, including accessibility and affordability.

B-2.2: Individual Action Schemes		
Reference to the impact pathway	**Sector- Subsector**	Buildings/Heating: Building Renovation
	Systemic lever	Governance / Policy Social innovation Technology / Infrastructure Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Integral revitalisation of the city centre district through the Ensanche XIX Project: Entrepreneurial Eco District. Integral revitalisation of the city centre district, the Ensanche XIX and its area of influence through the fusion in this environment of the city's sustainable character.
Implementation	**Agencies/Department responsible for implementation**	Vitoria-Gasteiz City Council / Ensanche XIX Association Vitoria-Gasteiz
	Scale of action and target entities	Municipal, Citizens of the Ensanche XIX neighbourhood / Ensanche XIX Association
	Stakeholders	Vitoria-Gasteiz City Council, citizens of the Ensanche neighbourhood, Ensanche XIX Association
	Comments on implementation	New action identified that would need to be **accelerated to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Buildings/Heating Sector, Subsector: **Renovation of Buildings,** which as a whole has an expected emission reduction of: **32 ktCO 2e .**
	Total costs and costs per unit of CO 2e	This action is included in the Buildings/Heating Sector, Subsector: **Building Renovation,** which has a total cost of €859 million of which the incremental cost is €631 million.

B-2.2: Individual Action Schemes		
EC-05: Plan to reduce energy consumption in the Tertiary Sector		
Action plan	**Name of the action**	**Plan to reduce electricity consumption in the Tertiary Sector**
	Type of action	Strategic

B-2.2: Individual Action Schemes		
	Description of the action	Progressive energy refurbishment of tertiary buildings including improvements to the building envelope, replacement of fittings (boilers, windows, domestic appliances and efficient lighting) and infrastructure, installation of renewable self-consumption systems and, where possible, electrification of demand; with the aim of achieving a zero-emission building stock.
Reference to the impact pathway	**Sector-Subsector**	Buildings/Heating: Building Renovation
	Systemic lever	Governance / Policy Social innovation Technology / Infrastructure Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Progressive energy refurbishment of tertiary buildings. Reduction of energy consumption in tertiary buildings and premises.
Implementation	**Agencies/Department responsible for implementation**	Vitoria-Gasteiz City Council
	Scale of action and target entities	Municipal, Tertiary sector
	Stakeholders	Vitoria-Gasteiz City Council, tertiary sector
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Buildings/Heating Sector, Subsector: **Renovation of Buildings,** which as a whole has an expected emission reduction of: **32 ktCO .** **2e**
	Total costs and costs per unit of CO 2e	This action is included in the Buildings/Heating Sector, Subsector: **Building Renovation,** which has total costs of €859 million, of which the incremental cost is €631 million.

B-2.2: Individual Action Schemes		
EC-06: Energy Renovation Plan for Municipal Buildings		
Action plan	**Name of the action**	Energy Renovation Plan for Municipal Buildings
	Type of action	Technological
	Description of the action	Definition of projects to be carried out to improve energy consumption in municipal buildings and facilities and the generation of renewable energy.
Reference to the impact pathway	**Sector-Subsector**	Buildings / Heating: Building renovation
	Systemic lever	Governance / Policy Social innovation Technology / Infrastructure Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Progressive refurbishment of municipal buildings through implementing a Municipal Building Refurbishment Plan. Lowering energy consumption and boosting implementation of renewable energies in municipal buildings.
Implementation	**Agencies/Department responsible for implementation**	AVG - Sustainability, Climate and Energy Service, Maintenance Service, Planning and Projects Service
	Scale of action and target entities	Municipal. Vitoria-Gasteiz City Council
	Stakeholders	Vitoria-Gasteiz City Council / Basque Government / EVE
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is part of those included in the Buildings/Heating Sector, Subsector: **Renovation of Buildings,** which as a whole has an expected emission reduction of: **32 ktCO$_{2e}$.**
	Total costs and costs per unit of CO$_{2e}$	This action is included in the Buildings/Heating Sector, Subsector: **Building Renovation,** which has a total cost of €859 million of which the incremental cost is € 631 million.

B-2.2: Individual Action Schemes		
EC-07: DIN: North Industrial District of Vitoria-Gasteiz		
Action plan	**Name of the action**	**Northern Industrial District of Vitoria-Gasteiz**
	Type of action	Management / Technology / Strategic
	Description of the action	Project for transformation and urban revitalisation of the industrial areas of Arriaga, Gamarra and Betoño-Larragana.
Reference to the impact pathway	**Sector-Subsector**	Buildings/Heating: Building Renovation
	Systemic lever	Governance / Policy Social innovation Technology / Infrastructure Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Progressive renovation of the industrial building stock through implementing urban plans such as the Northern Industrial District. Lowering energy consumption and promoting implementation of renewable energies on industrial areas.
Implementation	**Agencies/Department responsible for implementation**	Vitoria-Gasteiz City Council
	Scale of action and target entities	Municipal, Arriaga, Gamarra and Betoño-Larragana industrial areas / Vitoria-Gasteiz City Council
	Stakeholders	Vitoria-Gasteiz City Council / Companies located in the industrial areas of Arriaga, Gamarra and Betoño-Larragana.
	Comments on implementation	**New action** that has been identified that should be implemented **to achieve Mission's objective**. To implement this action, support will be sought from the consortium formed by the NetZeroCities platforms, CitiES2030, as well as other city networks that can help us to design and implement all the necessary actions to carry out this project. This is a project that will have to be defined in successive iterations of this Climate City Contract as many of the actions considered in it require social, governance, financial and legal innovation actions.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG	This action is included in the Buildings/Heating Sector, Subsector: **Building**

B-2.2: Individual Action Schemes		
	emission reductions (total)	**Renovation,** which as a whole has an expected emission reduction of: **32 ktCO 2e .**
	Total costs and costs per unit of CO 2e	This action is included in the Buildings/Heating Sector, Subsector: **Building Renovation,** which has total costs of €859 million, of which the incremental cost is €631 million.

B-2.2: Individual Action Schemes		
EC-08: Adapting urban planning and regulatory instruments.		
Action plan	**Name of the action**	Adapting urban planning and regulatory instruments.
	Type of action	Regulations
	Description of the action	Regulatory development to enable all actions related to the renovation and energy rehabilitation and accessibility of buildings and Public Space. New UDCP, Municipal Heritage Catalogue, Special Plan for the Integral Renovation of the Historic Centre of Vitoria-Gasteiz.
Reference to the impact pathway	**Sector-Subsector**	Buildings/Heating: Building Renovation
	Systemic lever	Governance / Policy
	Result (according to module B-1.1) short- and medium-term changes	Adaptation of urban planning and regulatory instruments to favour renovation of the building stock. Increase public-private partnership investments in projects in the areas of energy efficiency improvement in building renovation and energy supply using renewable resources in the residential, industrial and commercial sectors.
Implementation	**Agencies/Department responsible for implementation**	AVG - Department of Territory and Climate Action Basque Government
	Scale of action and target entities	Municipal / Citizenship / Construction and renovation sector
	Stakeholders	AVG - Department of Territory and Climate Action / Basque Government
	Comments on implementation	Action within SECAP that has been identified to be **accelerated to achieve the Mission's objective**. Due to the long deadlines for modifications to urban planning regulations, these changes and modifications must begin as soon as possible. In this type of action, collaboration and support from other institutional levels will be key, as cohesion and coordination in urban planning matters is essential at all levels of governance.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable

B-2.2: Individual Action Schemes		
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Buildings/Heating Sector, Subsector: **Building Renovation,** which as a whole has an expected emission reduction of: **32 ktCO 2e .**
	Total costs and costs per unit of CO 2e	This action is included in the Buildings/Heating Sector, Subsector: **Building Renovation,** which has total costs of €859 million, of which the incremental cost is €631 million.

B-2.2: Individual Action Schemes		
EC-09: Promotion of public-private collaboration, through the development of new initiatives.		
Action plan	**Name of the action**	Development of initiatives at municipal or private level in which investments can be developed through the concession tool or other public-private partnership formulas.
	Type of action	Financial
	Description of the action	Promoting public-private collaboration. Developing new initiatives, seeking support from platforms such as NetZeroCities, CitiES2030 and local financial institutions.
Reference to the impact pathway	**Sector-Subsector**	Buildings/Heating: Building Renovation
	Systemic lever	Financing / Finance
	Result (according to module B-1.1) short- and medium-term changes	Innovation in the public-private financing system, developing initiatives through the concession tool or other public-private partnership formulas. Increased public-private partnership investments in projects in the areas of energy efficiency improvement in building renovation and energy supply through renewable resources in the residential, industrial and commercial sectors.
Implementation	**Agencies/Department responsible for implementation**	Vitoria-Gasteiz City Council / Financial Sector / Energy Services Companies / Utilities
	Scale of action and target entities	Municipal, Citizenship
	Stakeholders	AVG / Financial sector / Citizenship

B-2.2: Individual Action Schemes		
	Comments on implementation	Action within SECAP identified to require acceleration to achieve Mission's objective. This is an action that requires a very strong innovation and governance component, seeking support from platforms such as NetZeroCities, CitiES2030 and the local economic-financial sector will be sought.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Buildings/Heating Sector, Subsector: **Renovation of Buildings,** which as a whole has an expected emission reduction of: **32 ktCO 2e .**
	Total costs and costs per unit of CO 2e	This action is included in the Buildings/Heating Sector, Subsector: **Building Renovation,** which has total costs of €859 million, of which the incremental cost is €631 million.

B-2.2: Individual Action Schemes		
EC-10: Encouraging construction of new buildings with an energy efficiency certificate		
Action plan	**Name of the action**	Encouraging construction of new buildings with an energy efficiency certificate.
	Type of action	Regulations
	Description of the action	Use necessary regulatory development to boost construction of buildings with low or zero energy consumption with an energy efficiency certificate that exceeds the standards proposed by the Technical Building Code (national Building Regulation).
Reference to the impact pathway	**Sector-Subsector**	Buildings/Heating: Energy efficient new buildings
	Systemic lever	Governance / Policy Learning / Skills Technology / Infrastructure
	Result (according to module B-1.1) short- and medium-term changes	Boosting construction of new buildings with an energy efficiency certificate that exceeds the standards proposed by the Technical Building Code through the necessary regulatory development to construct buildings with low or zero energy consumption. Promoting the construction of buildings with low or zero energy consumption.

B-2.2: Individual Action Schemes		
Implementation	**Agencies/Department responsible for implementation**	AVG - Department of Territory and Climate Action / Ensanche 21 / Basque Government
	Scale of action and target entities	Municipal / Citizens / Economic and business sector
	Stakeholders	AVG - Department of Territory and Climate Action / Basque Government / Economic-Business sector
	Comments on implementation	This is a **new action** that has been deemed necessary **to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Buildings/Heating Sector, Subsector: **New energy efficient buildings,** which as a whole has an expected emission reduction of: **1 ktCO 2e .**
	Total costs and costs per unit of CO 2e	This action is included in the Buildings/Heating Sector, Subsector: **Energy Efficient New Buildings** which has a total cost of €26 million of which the incremental cost is €26 million.

B-2.2: Individual Action Schemes		
EC-11: Energy management programme to measure and control electricity and heat demand.		
Action plan	**Name of the action**	Energy management programme to measure and control electricity and heat demand.
	Type of action	Technological
	Description of the action	Carry out an analysis of the current availability of energy demand meters in buildings (public and private). Define strategy to cover shortfalls in public buildings in the short term. Define strategy and possibilities for subsidies or incentives in the case of private building. This project/action intends to cover both new buildings and the existing building stock.
Reference to the impact pathway	**Sector-Subsector**	Buildings / Heating: Energy efficient new buildings
	Systemic lever	Technology / Infrastructure

B-2.2: Individual Action Schemes		
		Financing / Finance
	Result (according to module B-1.1) short- and medium-term changes	Improvement in control of the energy and thermal demand of buildings through implementing an energy management programme to measure and control electrical and thermal demand with the possibility of subsidies or incentives for private building. Proliferation of buildings with real-time control of energy and thermal demand. Improvement in the management of the energy and thermal demand of buildings.
Implementation	**Agencies/Department responsible for implementation**	AVG - Sustainability, Climate and Energy Service, Maintenance Service, Planning and Projects Service Municipal Competence Basque Government, Ensanche 21, energy service companies.
	Scale of action and target entities	Municipal
	Stakeholders	Basque Government, Ensanche 21
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Buildings/Heating Sector, Subsector: **New energy efficient buildings,** which as a whole has an expected emission reduction of: **1 ktCO 2e .**
	Total costs and costs per unit of CO 2e	This action is included in the Buildings/Heating Sector, Subsector: **Energy Efficient New Buildings** which has a total cost of €26 million of which the incremental cost is €26 million.

B-2.2: Individual Action Schemes		
EC-12: Encouraging replacing household appliances with energy-efficient ones.		
Action plan	**Name of the action**	Encouraging replacing household appliances with energy-efficient ones.
	Type of action	Technological
	Description of the action	Subsidise the purchase of class B or higher household appliances.
Reference to the	**Sector-**	Buildings and heating: Efficient lighting and electrical appliances

B-2.2: Individual Action Schemes		
impact pathway	**Subsector**	
	Systemic lever	Technology / Infrastructure Financing / Finance
	Result (according to module B-1.1) short- and medium-term changes	Modernisation of the domestic appliance stock and installation of efficient lighting in the residential and tertiary sector by encouraging replacing domestic appliances with energy-efficient ones and LED technology. Gradual replacement of current household appliances (low energy efficiency) with high efficiency ones. Replacement with LED lighting.
Implementation	**Agencies/Department responsible for implementation**	Basque Government / EVE (Basque Energy Board)
	Scale of action and target entities	Municipal / Citizenship
	Stakeholders	Basque Government / AVG / EVE
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Buildings/Heating Sector, Subsector: **Lighting and efficient household appliances,** which as a whole has an expected emission reduction of: **24 ktCO 2e .**
	Total costs and costs per unit of CO 2e	This action is one of the actions included in the Buildings/Heating Sector, Subsector: **Lighting and efficient household appliances**, which has a total cost of €201 million of which the incremental cost is €175 million.

B-2.2: Individual Action Schemes		
EC-13: Encouraging replacing incandescent and halogen bulbs with LED technology		
Action plan	**Name of the action**	Encouraging replacing incandescent bulbs with energy-saving bulbs (LED technology).
	Type of action	Technological

B-2.2: Individual Action Schemes		
	Description of the action	Encouraging replacing residential and tertiary lighting with LEDs
Reference to the impact pathway	**Sector-Subsector**	Buildings and heating: Efficient lighting and appliances
	Systemic lever	Technology / Infrastructure Financing / Finance
	Result (according to module B-1.1) short- and medium-term changes	Modernisation of the domestic appliance fleet and installation of efficient lighting in the residential and tertiary sector by promoting replacement of domestic appliances with energy-efficient ones and LED technology. Progressive replacement of current appliances (low energy efficiency) with high efficiency ones. Replacement of lighting with LEDs.
Implementation	**Agencies/Department responsible for implementation**	Basque Government
	Scale of action and target entities	Municipal / Citizenship
	Stakeholders	Vitoria-Gasteiz City Council / Basque Government
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Buildings/Heating Sector, Subsector: **Lighting and efficient household appliances,** which as a whole has an expected emission reduction of: **24 ktCO .** **2e**
	Total costs and costs per unit of CO 2e	This action is included in the Buildings/Heating Sector, Subsector: **Lighting and efficient household appliances**, which has a total cost of €201 million of which the incremental cost is €175 million.

B-2.2: Individual Action Schemes		
EC-14: Demand-side electrification programme.		
Action plan	**Name of the action**	Demand-side electrification programme.

B-2.2: Individual Action Schemes		
	Type of action	Technological
	Description of the action	The deployment of high-efficiency technologies on the demand side aims to reduce energy consumption and, where possible, switch energy carriers to more renewable options, thereby lowering emissions (direct and indirect). The programme is limited to changing to very high efficiency heat pump systems, which allow cooling heat to be recovered while prioritising hydronic systems that use a smaller volume of refrigerant to achieve the minimum Global Warming Potential (GWP) of the installation in its life cycle.
Reference to the impact pathway	**Sector-Subsector**	Buildings / Heating: Decarbonising heating
	Systemic lever	Technology / Infrastructure Financing / Finance
	Result (according to module B-1.1) short- and medium-term changes	Progressive replacement of individual boilers in households through a demand-side electrification programme. Electrification of heat generation through a progressive switch to very high efficiency heat pumps, partially or fully subsidised.
Implementation	**Agencies/Department responsible for implementation**	AVG
	Scale of action and target entities	Municipal / Citizenship
	Stakeholders	Vitoria-Gasteiz City Council / Basque Government - EVE / IDAE
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Buildings/Heating Sector, Subsector: **Decarbonise heating,** which as a whole has an expected emission reduction of **143 ktCO .** **2e**
	Total costs and costs per unit of CO 2e	This action is included in the Buildings/Heating Sector, Subsector: **Decarbonising heating** which has total costs of €548 million of which the incremental cost is €548 million.

B-2.2: Individual Action Schemes		
EC-15: Design and implementation of a decarbonised thermal network for the city		
Action plan	**Name of the action**	Design and implementation of a decarbonised thermal network for the city
	Type of action	Technological
	Description of the action	Currently, heating of residential buildings in the city is mostly based on natural gas and to a lesser extent on other sources (oil, LPG). A city-wide heat network **would** greatly **accelerate** and facilitate the **process of energy transition** to renewable sources.
Reference to the impact pathway	**Sector-Subsector**	Buildings / Heating: Decarbonising heating
	Systemic lever	Technology / Infrastructure Governance / Policy Financing / Finance
	Result (according to module B-1.1) short- and medium-term changes	Development of a decarbonised heat network for the city. Progressive change of the city's energy model through dwellings and residential, tertiary, industrial buildings, etc. joining the decarbonised heat network.
Implementation	**Agencies/Department responsible for implementation**	AVG - Sustainability, Climate and Energy Service**,** Department of Finance, Department of Mobility and Public Space, etc.
	Scale of action and target entities	Municipal / Citizenship
	Stakeholders	Vitoria-Gasteiz City Council / Basque Government - EVE / IDAE / Energy services companies
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Buildings/Heating Sector, Subsector: **Decarbonise heating,** which as a whole has an expected emission reduction of 1**43 ktCO . 2e**
	Total costs and costs	This action is included in the Buildings/Heating Sector, Subsector: **Decarbonising heating** which has total costs of €548 million of which the

B-2.2: Individual Action Schemes		
	per unit of CO_{2e}	incremental cost is €548 million.

B-2.2: Individual Action Schemes		
EE-01: Projects for implementing renewable generation in municipal buildings and infrastructures and public spaces.		
Action plan	**Name of the action**	Projects for implementing renewable generation in municipal buildings and infrastructures and public spaces.
	Type of action	Technological
	Description of the action	Deployment of renewable energy generation projects mainly with photovoltaic solar panel installations in municipal buildings and infrastructures.
Reference to the impact pathway	**Sector-Subsector**	Energy: Electricity
	Systemic lever	Governance / Policy Technology / Infrastructure Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Progressive increase of renewable energy power generation installations in municipal buildings and public space. Deployment of renewable energy generation projects mainly with photovoltaic solar panel installations in municipal infrastructures.
Implementation	**Agencies/Department responsible for implementation**	AVG - Sustainability, Climate and Energy Service, Maintenance Service, Architectural Service
	Scale of action and target entities	Municipal buildings / Vitoria-Gasteiz City Council
	Stakeholders	Vitoria-Gasteiz City Council / Economic-business sector: Energy sector
	Comments on implementation	Action within SECAP that has been identified as needing to be **accelerated to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG	This action is included in the Energy Sector, Subsector: **Electricity,** which as a

B-2.2: Individual Action Schemes		
	emission reductions (total)	whole is expected to reduce emissions by **275 ktCO 2e .**
	Total costs and costs per unit of CO 2e	This action is included in the Energy Sector, Subsector: **Electricity**, which has a total cost of #337 million of which the incremental cost is €191 million.

B-2.2: Individual Action Schemes		
EE-02: Plan to Implement Self-Consumption Installations		
Action plan	**Name of the action**	Plan to implement self-consumption installations
	Type of action	Regulations
	Description of the action	Encouraging deployment of renewable energy generation projects mainly with photovoltaic solar panel installations in residential, commercial, industrial buildings and areas of opportunity throughout the city.
Reference to the impact pathway	**Sector-Subsector**	Energy: Electricity
	Systemic lever	Governance / Policy
	Result (according to module B-1.1) short- and medium-term changes	Progressive increase of renewable-energy power generation installations in municipal buildings and public space, residential, tertiary and industrial buildings. Deployment of renewable energy generation projects mainly with photovoltaic solar panel installations in municipal infrastructures, residential, tertiary and industrial buildings.
Implementation	**Agencies/Department responsible for implementation**	AVG / Communities of Owners /EVE / Tertiary Sector / Industrial Sector / Renewable Energy Installers
	Scale of action and target entities	Municipal / Citizens / Economic and business sector
	Stakeholders	Citizens / Economic-business sector / City Council of Vitoria-Gasteiz
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*

B-2.2: Individual Action Schemes		
	Estimated GHG emission reductions (total)	This action is included in the Energy Sector, Subsector: **Electricity**, which as a whole is expected to reduce emissions by **275 ktCO .** **2e**
	Total costs and costs per unit of CO **2e**	This action is included in the Energy Sector, Subsector: **Electricity**, which has a total cost of €337 million of which the incremental cost is €191 million.

B-2.2: Individual Action Schemes		
EE-03: Generating new formulas for public-private partnerships		
Action plan	**Name of the action**	Generating new formulas for public-private partnerships
	Type of action	Financial
	Description of the action	Generation of new formulas for public-private collaboration to bring about the mechanisms and actions necessary to advance renewable energies in the city. This action will seek support from platforms such as NetZeroCities, CitiES2030 and the local economic-financial sector, as this type of action has a clear innovation component that must be addressed in its design and subsequent implementation. This action will be further specified in the successive iterations of this Contract.
Reference to the impact pathway	**Sector-Subsector**	Energy: Electricity
	Systemic lever	Finance/ Financing
	Result (according to module B-1.1) short- and medium-term changes	Boosting public-private collaboration through developing new formulas for collaboration in the field of energy. Increased investment in mixed public-private projects in renewable electricity generation.
Implementation	**Agencies/Department responsible for implementation**	Vitoria-Gasteiz City Council
	Scale of action and target entities	Municipal / Citizenship / Financial sector
	Stakeholders	Vitoria-Gasteiz City Council / Citizens / Economic-business sector / Financial sector
	Comments on implementation	This is a **new action** that has been considered necessary **to achieve Mission's objective**. This action will seek support from platforms such as NetZeroCities, CitiES2030 and the local economic-financial sector, as this type of action has a clear innovation component that needs to be addressed in its design and subsequent implementation. This action will be further specified in the successive iterations of this Contract.

B-2.2: Individual Action Schemes		
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Energy Sector, Subsector: **Electricity**, which as a whole is expected to reduce emissions by **275 ktCO 2e .**
	Total costs and costs per unit of CO 2e	This action is included in the Energy Sector, Subsector: **Electricity**, which has a total cost of €337 million of which the incremental cost is €191 million.

B-2.2: Individual Action Schemes		
EE-04: Progressive implementation of high efficiency lighting.		
Action plan	**Name of the action**	Progressive implementation of high-efficiency lighting.
	Type of action	Technological
	Description of the action	Progressive replacement of existing lighting with LED technology.
Reference to the impact pathway	**Sector-Subsector**	Energy: Electricity
	Systemic lever	Technology / Infrastructure
	Result (according to module B-1.1) short- and medium-term changes	Improvement of public lighting through the progressive implementation of high-efficiency lighting. Replacement of existing lighting with LED technology.
Implementation	**Agencies/Department responsible for implementation**	AVG - Mobility and Public Space Department
	Scale of action and target entities	Municipal / Citizenship
	Stakeholders	AVG - Department of Mobility and Public Space / Business and Economic Sector: Lighting and Technology Companies
	Comments on implementation	Action within SECAP identified as requiring **acceleration to achieve Mission's objective**.

B-2.2: Individual Action Schemes		
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Energy Sector, Subsector: **Electricity**, which as a whole is expected to reduce emissions by **275 ktCO 2e .**
	Total costs and costs per unit of CO 2e	This action is included in the Energy Sector, Subsector: **Electricity**, which has a total cost of €337 million of which the incremental cost is €191 million.

B-2.2: Individual Action Schemes		
EE-05: Encouraging Energy Communities		
Action plan	**Name of the action**	Encouraging Energy Communities
	Type of action	Management
	Description of the action	Set up the necessary collaboration framework for energy transition by creating Energy Communities in the city with participation from citizens, SMEs, associations, public administrations, etc.
Reference to the impact pathway	**Sector-Subsector**	Energy: Electricity
	Systemic lever	Governance / Policy Social innovation Technology / Infrastructure Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Development of community energy projects associated with the setting up Energy Communities driven through a Community Transformation Office. Creation of a wide network of Energy Communities in the neighbourhoods and rural areas of the municipality.
Implementation	**Agencies/Department responsible for implementation**	Citizenship / AVG - Sustainability, Climate and Energy Service
	Scale of action and target entities	Citizenship / Municipal
	Stakeholders	Citizens / Support companies, cooperatives / Vitoria-Gasteiz City Council

B-2.2: Individual Action Schemes		
	Comments on implementation	Action within the SECAP that has been identified as requiring **acceleration to achieve Mission's objective**. Setting up these energy communities should be accelerated by searching for innovative elements to break down the regulatory, economic and social barriers that slow down their implementation. Through successive iterations of this CCC, new innovative actions will be identified to help overcome any barriers detected.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Energy Sector, Subsector: **Electricity**, which as a whole is expected to reduce emissions by **275 ktCO .** **2e**
	Total costs and costs per unit of CO **2e**	This action is included in the Energy Sector, Subsector: **Electricity**, which has a total cost of €337 million of which the incremental cost is €191 million.

B-2.2: Individual Action Schemes		
EE-06: Training, education, dissemination and citizen involvement programme on energy transition		
Action plan	**Name of the action**	Training, education, dissemination and citizen involvement programme on energy transition
	Type of action	Training / Awareness raising
	Description of the action	Implementation of training and employment programmes on the generation of energy using renewable resources and the circular economy; environmental and technological education and action programme in schools at all educational levels and citizen education programmes; producing communication and dissemination actions; setting up forums for observation and experience exchange; a programme to get young people to commit to energy transition; public recognition for citizens and social agents.
Reference to the impact pathway	**Sector-Subsector**	Energy: Electricity
	Systemic lever	Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Increasing citizens' energy culture by developing a programme of training, education, dissemination and citizen involvement in the energy transition. Greater citizen involvement and awareness in energy transition issues.

B-2.2: Individual Action Schemes		
Implementation	**Agencies/Department responsible for implementation**	AVG - Sustainability, Climate and Energy Service / Department of Citizen Participation and Civic Centres
	Scale of action and target entities	Municipal / Citizenship
	Stakeholders	AVG / CEA: Centro de Estudios Ambientales (Centre for Environmental Studies) / Ensanche 21
	Comments on implementation	Action within the SECAP that has been detected as requiring **acceleration to achieve Mission's objective**. Training and dissemination programmes and actions must reach as many citizens as possible but must also use media, social networks and languages focused on their target audience. Given that the target audience in this type of programme is the general public, a wide range of actions must be sought that help get past obstacles standing in the way of this scope. To this end, and in successive iterations of this CCC, help and support will be sought from platforms and organisations such as NetZeroCities, CitiES2030, etc. to help us design and implement these actions.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Energy Sector, Subsector: **Electricity**, which as a whole has an expected emissions reduction of: **275 ktCO .** **2e**
	Total costs and costs per unit of CO **2e**	This action is included in the Energy Sector, Subsector: **Electricity**, which has a total cost of €337 million of which the incremental cost is €191 million.

B-2.2: Individual Action Schemes		
EE-07: Awareness-raising of municipal workers		
Action plan	**Name of the action**	Awareness-raising of municipal workers
	Type of action	Training
	Description of the action	Development of a training and awareness-raising plan for a fair energy transition. Energy awareness within organisations is an effective tool to change attitudes towards a responsible use of resources, aware of the negative impact of inefficient use and how energy efficiency improves performance for administrations. The training plan will provide the necessary

B-2.2: Individual Action Schemes		
		competences for people working in areas that affect energy performance, with the aim of eradicating bad practices, unnecessary consumption and inefficiencies in energy consumption.
Reference to the impact pathway	**Sector- Subsector**	Energy: Electricity
	Systemic lever	Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Increasing the energy culture among municipal workers through developing a programme of training, education, dissemination and citizen involvement in the energy transition.
Implementation	**Agencies/Department responsible for implementation**	AVG, municipal companies and autonomous agencies.
	Scale of action and target entities	Municipal, municipal workers
	Stakeholders	AVG, municipal companies and autonomous agencies.
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**. This type of action must start immediately to achieve Mission's objective.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Energy Sector, **Electricity** Subsector, which as a whole is expected to reduce emissions by **275 ktCO 2e .**
	Total costs and costs per unit of CO 2e	This action is included in the Energy Sector, Subsector: **Electricity**, which has a total cost of €337 million of which the incremental cost is €191 million.

B-2.2: Individual Action Schemes		
EE-08: Adapting urban planning and regulatory instruments.		
Action plan	**Name of the action**	Adapting urban planning and regulatory instruments.
	Type of action	Regulations

B-2.2: Individual Action Schemes		
	Description of the action	Regulatory development to enable all actions related to implementing renewable energy installations and creating Energy Communities.
Reference to the impact pathway	**Sector-Subsector**	Energy: Electricity
	Systemic lever	Governance / Policy
	Result (according to module B-1.1) short- and medium-term changes	Adaptation of urban planning and regulatory instruments. Regulatory development to enable all actions related to implementing renewable energy facilities and Energy Communities.
Implementation	**Agencies/Department responsible for implementation**	AVG
	Scale of action and target entities	Municipal / Citizenship / Economic-financial sector / Energy sector
	Stakeholders	Vitoria-Gasteiz City Council / Basque Government
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**. Due to the long timeframes for regulatory modifications, these changes and modifications must begin as soon as possible. In this type of action, collaboration and support from other institutional levels will be key, as cohesion and coordination in this area is essential at all levels of governance.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Energy Sector, Subsector: **Electricity**, which as a whole has an expected emissions reduction of: **275 ktCO .** **2e**
	Total costs and costs per unit of CO 2e	This action is included in the Energy Sector, Subsector: **Electricity**, which has a total cost of €337 million of which the incremental cost is €191 million.

B-2.2: Individual Action Schemes
EE-09: Green Taxation Programme

B-2.2: Individual Action Schemes		
Action plan	**Name of the action**	Green Taxation Programme
	Type of action	Financial
	Description of the action	The objective is to develop aspects related to taxation, through ordinances or other legal and regulatory instruments, to enable, promote and encourage implementation of actions and achieve climate neutrality objectives, also incorporating grants or subsidies for organised society and citizens.
Reference to the impact pathway	**Sector-Subsector**	Energy: Electricity
	Systemic lever	Funding / Finance
	Result (according to module B-1.1) short- and medium-term changes	Encouraging implementation of renewable energy through implementing a Green Taxation programme with social justice criteria. Development of tax ordinances that favour implementation of energy supply based on renewable resources.
Implementation	**Agencies/Department responsible for implementation**	Vitoria-Gasteiz City Council
	Scale of action and target entities	Municipal / Citizenship / Economic and business sector / Financial sector
	Stakeholders	Vitoria-Gasteiz City Council / Citizenship / Economic-business sector / Financial sector
	Comments on implementation	Action within SECAP that has been identified requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Energy Sector, Subsector: **Electricity**, which as a whole is expected to reduce emissions by **275 ktCO$_2$e**.
	Total costs and costs per unit of CO$_2$e	This action is included in the Energy Sector, Subsector: **Electricity**, which has a total cost of €337 million of which the incremental cost is €191 million.

B-2.2: Individual Action Schemes		
RE-01: Drafting and implementing a City-wide Circularity Strategy		
Action plan	**Name of the action**	Drafting and implementing a City-wide Circularity Strategy
	Type of action	Strategic
	Description of the action	Acceleration of the transition from the local linear economy to a local circular model through developing and implementing a Circularity Strategy for the City of Vitoria-Gasteiz.
Reference to the impact pathway	**Sector-Subsector**	Waste: Increased waste recycling
	Systemic lever	Governance / Policy Social innovation Technology / Infrastructure Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Acceleration of the transition from the local linear economy to a local circular model through developing and implementing a Circularity Strategy for the City. Lowering consumption of virgin raw materials. Increase in the rate of reuse and recycling of materials/waste. Increased economic activity and local employment.
Implementation	**Agencies/Department responsible for implementation**	AVG- Sustainability, Climate and Energy Service, Environmental Management Service, Business Service, CEA (Centre for Environmental Studies)
	Scale of action and target entities	Municipal / Citizenship
	Stakeholders	Vitoria-Gasteiz City Council / Citizenship / Economic-business sector / Financial sector / Agri-food sector, etc.
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Waste Sector, Subsector: **Increased waste recycling,** which as a whole has an expected emission reduction of: **18 ktCO 2e .**
	Total costs and costs	This action is included in the Waste Sector, Subsector: **Increased waste**

B-2.2: Individual Action Schemes		
	per unit of CO 2e	**recycling** which has a total cost of €17 million of which the incremental cost is €-2 million.

B-2.2: Individual Action Schemes		
RE-02: Basque Circular Hub in Vitoria-Gasteiz		
Action plan	**Name of the action**	Basque Circular Hub in Vitoria-Gasteiz
	Type of action	Technological
	Description of the action	Progress in the circular economy through developing technical circular economy projects in the Alava business environment with participation from young professionals trained in the Hub itself.
Reference to the impact pathway	**Sector-Subsector**	Waste: Increased waste recycling
	Systemic lever	Governance / Policy Social innovation Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Progress in the circular economy through the Basque Circular Hub in Vitoria-Gasteiz. Development of technical circular economy projects in the Alava business environment with participation from young professionals trained in the Hub itself.
Implementation	**Agencies/Department responsible for implementation**	Vitoria-Gasteiz City Council IHOBE
	Scale of action and target entities	Municipal
	Stakeholders	Vitoria-Gasteiz City Council / IHOBE Basque Government Department of Economic Development, Sustainability and Environment / Universities of Deusto, Basque Country UPV/EHU and Mondragón, plus the Euskadi -Tknika VET Applied Research Centre, and the Novia Salcedo Foundation. Citizenship.
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced,	*

B-2.2: Individual Action Schemes		
	fuel volume or fuel type	
	Estimated GHG emission reductions (total)	This action is included in the Waste Sector, Subsector: **Increased waste recycling,** which as a whole has an expected emissions reduction of: **18 ktCO .** **2e**
	Total costs and costs per unit of CO **2e**	This action is included in the Waste Sector, Subsector: **Increased waste recycling** which has a total cost of €17 million, of which the incremental cost is €-2 million.

B-2.2: Individual Action Schemes		
RE-03: Improving Urban Waste Management		
Action plan	**Name of the action**	Improving Urban Waste management.
	Type of action	Management
	Description of the action	The Urban Waste Prevention and Management Plan (2016-2030) considers the current situation, planning a series of objectives and measures aimed at preventing waste generation (reduction of more than 15% in weight compared to 2016), preparing generated waste for reuse and recycling (attaining at least 60% by weight of total waste), and reducing waste sent to landfill (below 15%), to substantially improve current ratios and significantly lower emissions. Electrification of waste management and increase in waste energy efficiency.
Reference to the impact pathway	**Sector-Subsector**	Waste: increased waste recycling
	Systemic lever	Technology / Infrastructure Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Increased prevention and recycling of municipal waste. Improved energy efficiency and increased use of renewable energy in waste management. More eco-designed goods and services. Progressive electrification of waste management
Implementation	**Agencies/Department responsible for implementation**	AVG - Department of Territory and Climate Action
	Scale of action and target entities	Municipal, Vitoria-Gasteiz City Council, Environmental Management Service
	Stakeholders	Municipal, Vitoria-Gasteiz City Council, Environmental Management Service
	Comments on	Action within SECAP that has been identified as requiring **acceleration to**

B-2.2: Individual Action Schemes		
	implementation	**achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Waste Sector, Subsector: **Increased waste recycling,** which as a whole has an expected emissions reduction of: **18 ktCO .** **2e**
	Total costs and costs per unit of CO **2e**	This action is included in the Waste Sector, Subsector: **Increased waste recycling** which has a total cost of €17 million, of which the incremental cost is €-2 million.

B-2.2: Individual Action Schemes		
RE-04: Water Cycle Energy Efficiency Plan		
Action plan	**Name of the action**	Water Cycle Energy Efficiency Plan
	Type of action	Management
	Description of the action	Improve management of water supply, water consumption, sanitation and wastewater treatment in the city.
Reference to the impact pathway	**Sector-Subsector**	Waste: increased waste recycling
	Systemic lever	Technology / Infrastructure Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Improved energy efficiency and increased use of renewable energies in water cycle management. Lower water consumption at all levels: domestic, industrial and institutional.
Implementation	**Agencies/Department responsible for implementation**	AMVISA, Aguas Municipales Vitoria-Gasteiz S.A.
	Scale of action and target entities	Municipal, Citizenship
	Stakeholders	AMVISA, Citizenship

B-2.2: Individual Action Schemes		
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Waste Sector, Subsector: **Increased waste recycling,** which as a whole has an expected emissions reduction of: **18 ktCO 2e .**
	Total costs and costs per unit of CO 2e	This action is included in the Waste Sector, Subsector: **Increased waste recycling** which has a total cost of €17 million, of which the incremental cost is €-2 million.

B-2.2: Individual Action Schemes		
RE-05: Use of forestry waste and forestry management as an energy source		
Action plan	**Name of the action**	Use of forestry waste and forestry management as an energy source**.**
	Type of action	Management
	Description of the action	This action targets decarbonisation of the economy through integrated use of resources, both waste and forest biomass, while opening up opportunities related to the circular economy (employment, new business models, resilient infrastructures, etc.). Use and good management of waste and clean local forest biomass that will help make the city's energy demand self-sufficient.
Reference to the impact pathway	**Sector-Subsector**	Waste: Increased waste recycling
	Systemic lever	Technology / Infrastructure Learning / Skills
	Result (according to module B-1.1)short- and medium-term changes	Improvement of the city's energy self-sufficiency using local biomass (waste and forest cleanings). Development of projects to use waste and clean local biomass forestry to help make the city's energy demand self-sufficient.
Implementation	**Agencies/Department responsible for implementation**	AVG - Department of Territory and Climate Action, Councils of Vitoria-Gasteiz.

B-2.2: Individual Action Schemes		
	Scale of action and target entities	Municipal, Vitoria-Gasteiz City Council, Vitoria-Gasteiz City Councils, Agri-food Sector
	Stakeholders	Vitoria-Gasteiz City Council, Vitoria-Gasteiz Councils, Agri-Food Sector, Citizenship.
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Waste Sector, Subsector: **Increased waste recycling,** which as a whole has an expected emissions reduction of: **18 ktCO 2e .**
	Total costs and costs per unit of CO 2e	This action is included in the Waste Sector, Subsector: **Increased waste recycling** which has a total cost of 17 million €, of which the incremental cost is €-2 million.

B-2.2: Individual Action Schemes		
RE-06: Production of hydrogen from recovery of urban waste.		
Action plan	**Name of the action**	Production of hydrogen from recovery of municipal waste
	Type of action	Technological
	Description of the action	New upcycling production process based on an innovative circular business model to valorize urban waste streams to generate high-quality hydrogen.
Reference to the impact pathway	**Sector-Subsector**	Waste: Increased recycling (recovery) of waste
	Systemic lever	Technology / Infrastructure Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Promoting decarbonisation of the economy by obtaining hydrogen from the recovery of urban waste rejection fractions. Introducing the hydrogen vector into energy-intensive sectors or processes that are difficult to electrify.
Implementation	**Agencies/Department responsible for**	Private companies (Tubacex, Novargi) Basque administrations (Basque Government, Provincial Council of Alava, City

B-2.2: Individual Action Schemes		
	implementation	Council of Vitoria-Gasteiz, Basque Government, Provincial Council of Alava)
	Scale of action and target entities	Public and heavy transport / Energy-intensive industries
	Stakeholders	Companies in the Basque Hydrogen Corridor (BH2C), an association for Basque public and private organisations, with more than 70 associated entities.
	Comments on implementation	The first phase of the project, scheduled to start in 2024, is designed to convert 12,000 tonnes of the mechanical-biological treatment reject waste stream into 1,6000 tonnes of H_2.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	This action is included in the Waste Sector, **Major Waste Recycling** Subsector, which as a whole has an expected emissions reduction of: **18 ktCO_{2e}**
	Total costs and costs per unit of CO 2e	This action is included in the Waste Sector, Subsector: **Increased waste recycling** which has a total cost of €17 million, of which the incremental cost is €-2 million.

* Energy removed/replaced, volume or type of fuel in those actions where calculation would be appropriate: this will be worked on in successive iterations of this Climate City Contract.

The actions described below are not included in the Economic Model actions and therefore their costs, which will appear in these sheets, are not reflected in the Economic Model so these costs are not included in the Investment Plan.

B-2.2: Individual Action Schemes		
FO-01: Green Infrastructure Strategy for Vitoria-Gasteiz.		
Action plan	**Name of the action**	Green Infrastructure Strategy for Vitoria-Gasteiz.
	Type of action	Strategic
	Description of the action	Increasing the adaptive capacity of the territory in the face of climate change through setting up climate refuges and itineraries and increasing the City's carbon sink capacity (increase in carbon stocks), both through carbon fixation

B-2.2: Individual Action Schemes		
		in biomass and in soils derived from forestry and agricultural activities and through the CO2 absorption by green and blue urban and peri-urban infrastructures.
Reference to the impact pathway	**Sector-Subsector**	Forestation
	Systemic lever	Governance / Policy Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Increasing the territory's capacity to adapt to climate change and its capacity as a carbon sink through developing the Vitoria-Gasteiz Green Infrastructure Strategy. Enhancement of the city's green infrastructure.
Implementation	**Agencies/Department responsible for implementation**	AVG - Mobility and Public Space Department CEA: Centre for Environmental Studies
	Scale of action and target entities	Municipal, Citizenship
	Stakeholders	AVG - Mobility and Public Space Department CEA: Centre for Environmental Studies Citizenship
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	
	Total costs and costs per unit of CO 2e	**This action is included in the Forestation Sector**, which has a total cost of €72 million.

B-2.2: Individual Action Schemes		
FO-02: Urban Tree Master Plan.		
Action plan	**Name of the action**	Urban Tree Master Plan.
	Type of action	Strategic
	Description of the action	Exploiting the benefits of trees, which have become a living heritage element, as well as a tool for the thermal regulation of public spaces and a carbon sink. Planting new trees.
Reference to the impact pathway	**Sector-Subsector**	Forestation
	Systemic lever	Democracy / Participation Technology / Infrastructure Learning Skills
	Result (according to module B-1.1) short- and medium-term changes	Increasing capacity to adapt to climate change and its capacity as a carbon sink through developing urban greening action plans. Transformation and naturalisation of urban spaces for increased climate resilience and emission absorption.
Implementation	**Agencies/Department responsible for implementation**	AVG - Mobility and Public Space Department CEA: Centre for Environmental Studies
	Scale of action and target entities	Municipal, Citizenship
	Stakeholders	AVG - Department of Mobility and Public Space / CEA: Centre for Environmental Studies / Citizenship
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable
	Energy removed/replaced, Fuel volume or fuel type	
	Estimated GHG emission reductions (total)	
	Total costs and costs per unit of CO_{2e}	**This action is included in the Forestation Sector**, which has a total cost of €72 million.

B-2.2: Individual Action Schemes		
FO-03: Renaturalisation of school playgrounds		
Action plan	**Name of the action**	Renaturalisation of school playgrounds
	Type of action	Strategic
	Description of the action	Transforming the outdoor spaces of schools to adapt them to climate change and incorporate them into the city's green infrastructure system.
Reference to the impact pathway	**Sector-Subsector**	Forestation
	Systemic lever	Democracy / Participation Technology / Infrastructure Learning / Skills Social Innovation
	Result (according to module B-1.1)c short and medium-term objectives	Increasing the capacity to adapt to climate change and its capacity as a carbon sink through developing urban greening action plans. Transformation and naturalisation of urban spaces to improve climate resilience and emission absorption.
Implementation	**Agencies/Department responsible for implementation**	AVG - Department of Education and Culture, Department of Mobility and Public Space / CEA: Environmental Studies Centre
	Scale of action and target entities	Municipal, Citizenship, specifically children and the primary and secondary education sector.
	Stakeholders	AVG - Department of Education and Culture, Department of Mobility and Public Space / CEA: Centre for Environmental Studies / Citizenship, Education Sector
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	
	Total costs and costs per unit of CO 2e	**This action is included in the Forestation Sector**, which has a total cost of €72 million.

B-2.2: Individual Action Schemes		
FO-04: Naturalisation of the Old Town Quarter		
Action plan	**Name of the action**	Naturalisation of the Old Town Quarter
	Type of action	Strategic
	Description of the action	Promotion, co-creation and testing of mechanisms to enable public-private management of green infrastructure in public space.
Reference to the impact pathway	**Sector** **Subsector**	Forestation
	Systemic lever	Democracy / Participation Technology / Infrastructure Learning / Skills Social Innovation
	Result (according to module B-1.1) short- and medium-term changes	Increasing capacity to adapt to climate change and its capacity as a carbon sink through developing urban greening action plans. Transformation and naturalisation of urban spaces for increased climate resilience and emission absorption.
Implementation	**Agencies/Department responsible for implementation**	AVG - Mobility and Public Space Department CEA: Centre for Environmental Studies
	Scale of action and target entities	Municipal, Citizenship, specifically the residents of the city's Old Town Quarter.
	Stakeholders	AVG - Department of Mobility and Public Space / CEA: Centre for Environmental Studies / Citizens, residents of the city's Historic Centre
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	
	Total costs and costs	**This action is included in the Forestation Sector**, which has a total cost of €72 million.

	per unit of CO 2e	

B-2.2: Individual Action Schemes		
OTI-01: Industry Support Plan 2021-2024		
Action plan	**Name of the action**	Industry Support Plan 2021-2024
	Type of action	Strategic
	Description of the action	Boosting industrial activity in the city. The transition towards the circular economy will involve a change in the production model for all sectors (industry and services) based on servitisation, eco-design, introduction of new reused materials, minimising consumption of raw materials, etc. Support will be sought for the other sectors to avoid creating gaps between them and types of companies, seeking the necessary public-private alliances to develop the new economic model. **Entrepreneurship Plan**. Support these new business models, both in terms of entrepreneurship and intra-entrepreneurship.
Reference to the impact pathway	**Sector-Subsector**	Industry (Other)
	Systemic lever	Governance/Policy
	Result (according to module B-1.1) short- and medium-term changes	Boosting the energy-climate transformation of the city's industrial sector to adopt carbon neutrality as a basic criterion for competitiveness through the II Industry Support Plan 2021-2024. Making the industrial sector more competitive by reducing its dependence on fossil fuel energy through efficiency measures and use of renewable energies**.**
Implementation	**Agencies/Department responsible for implementation**	AVG - Department of Economic Promotion, Employment, Trade and Tourism.
	Scale of action and target entities	Municipal, Economic - industrial sector.
	Stakeholders	AVG - Department of Economic Promotion, Employment, Trade and Tourism, Economic - industrial sector.
	Comments on implementation	Action that has been identified as requiring **acceleration to achieve Mission's objective**. Successive iterations of this Contract will work closely with the Industrial Sector on its own decarbonisation.
Impacts and costs	**Renewable energy generated (if applicable)**	Not applicable
	Energy removed/replaced,	*

B-2.2: Individual Action Schemes		
	fuel volume or fuel type	
	Estimated GHG emission reductions (total)	
	Total costs and costs per unit of CO 2e	**This action is included in the Other Sector** with total costs of €0.4 million.

B-2.2: Individual Action Schemes		
OTI-02: Energy transition plan in the industrial sector		
Action plan	**Name of the action**	Energy transition plan in the industrial sector
	Type of action	Strategic
	Description of the action	Technical support for companies regarding diagnosis and definition of solutions to reduce energy consumption.
Reference to the impact pathway	**Sector-Subsector**	Industry (Other)
	Systemic lever	Governance / Policy Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Boosting the energy-climate transformation of the city's industrial sector to adopt carbon neutrality. Making the industrial sector more competitive by reducing its dependence on fossil energy through efficiency measures and use of renewable energies.
Implementation	**Agencies/Department responsible for implementation**	AVG - Department of Economic Promotion, Employment, Trade and Tourism.
	Scale of action and target entities	Municipal, Economic - industrial sector.
	Stakeholders	AVG - Department of Economic Promotion, Employment, Trade and Tourism, Economic - industrial sector.
	Comments on implementation	Action within SECAP that has been identified as requiring **acceleration to achieve Mission's objective**. Successive iterations of this Contract will work closely with the Industrial Sector for its own decarbonisation.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	
	Total costs and costs per unit of CO 2e	**This action is included in the Other Sector** with total costs of €0.4 million.

B-2.2: Individual Action Schemes		
OTA-03: Reducing emissions from agricultural production		
Action plan	**Name of the action**	Reducing emissions from agricultural production
	Type of action	Technological
	Description of the action	Harnessing the capability of regenerative agriculture and organic fertilisation to improve pastures and crops as carbon sinks and increase the energy efficiency of the agricultural sector in terms of emissions (harnessing bio-energy**).**
Reference to the impact pathway	**Sector** **Subsector**	Agri-food (Other)
	Systemic lever	Technology / infrastructure Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Several of the short and medium-term changes introduced for the agri-food sector.
Implementation	**Agencies/Department responsible for implementation**	AVG - Department of Economic Promotion, Employment, Trade and Tourism, Department of Territory and Climate Action, Rural Area Service, CEA (Centre for Environmental Studies), Agri-food Sector.
	Scale of action and target entities	Municipal, Agri-food sector
	Stakeholders	AVG - Department of Economic Promotion, Employment, Trade and Tourism, Department of Territory and Climate Action, Rural Area Service, CEA (Centre for Environmental Studies), Agri-food sector.
	Comments on implementation	New action identified that should be **taken to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	
	Total costs and costs per unit of CO 2e	**This action is included in the Other Sector** with total costs of €0.4 million.

B-2.2: Individual Action Schemes		
OTA-04: Promotion of conservation agriculture		
Action plan	**Name of the action**	Promotion of conservation agriculture
	Type of action	Strategic
	Description of the action	Reduction of tillage to reduce CO2 emissions in the city's major crops. An initial scenario is suggested which consists of reducing tillage in the city's major crops: cereal crops, fodder crops and industrial crops. Reducing tillage involves moving from conventional tillage to minimum tillage, where surface tillage is carried out and mechanical weeding is reduced by applying herbicides with low environmental impact. A second scenario is proposed, which consists of moving from minimum tillage to direct sowing of the city's major crops. Direct seeding consists of reducing actions to a minimum, the soil is not worked from the crop harvest until the next crop is sown, weed control is carried out by applying herbicides with low environmental impact.
Reference to the impact pathway	**Sector-Subsector**	Agri-food (Other)
	Systemic lever	Technology / infrastructure Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Promotion of conservation agriculture by reducing tillage to reduce emissions in the largest crops in the city. Direct sowing in the largest crops.
Implementation	**Agencies/Department responsible for implementation**	AVG - Department of Economic Promotion, Employment, Trade and Tourism, Department of Territory and Climate Action, Rural Area Service, CEA (Centre for Environmental Studies), Agri-food Sector.
	Scale of action and target entities	Municipal, Agri-food sector
	Stakeholders	AVG - Department of Economic Promotion, Employment, Trade and Tourism, Department of Territory and Climate Action, Rural Area Service, CEA (Centre for Environmental Studies), Agri-food sector.
	Comments on implementation	Action within the Climate Plan that has been identified that should be **accelerated to achieve Mission's objective.**
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy	*

B-2.2: Individual Action Schemes		
	removed/replaced, fuel volume or fuel type	
	Estimated GHG emission reductions (total)	
	Total costs and costs per unit of CO 2e	**This action is included in the Other Sector** with total costs of €0.4 million.

B-2.2: Individual Action Schemes		
OTA-05: Promotion of biodiesel in agricultural machinery		
Action plan	**Name of the action**	Promotion of biodiesel in agricultural machinery
	Type of action	Technological
	Description of the action	It is proposed to promote the use of biodiesel made from recycled waste oils in agricultural machinery and transport in the city (2nd generation biodiesel). The nearest biodiesel plant, Bionor, is located in the town of Berantevilla (Álava) and it produces enough to meet the farming sector's diesel consumption.
Reference to the impact pathway	**Sector-Subsector**	Agri-food (Other)
	Systemic lever	Technology / infrastructure Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Promotion of the use of sustainable biodiesel (2nd generation) in agricultural machinery. Progressive increase in the use of sustainable biodiesel (2nd generation) in agricultural machinery.
Implementation	**Agencies/Department responsible for implementation**	Vitoria-Gasteiz City Council, Department of Economic Promotion, Employment, Trade and Tourism, Department of Territory and Climate Action, Rural Area Service, CEA (Centre for Environmental Studies), Agri-food Sector.
	Scale of action and target entities	Municipal, agri-food sector
	Stakeholders	ACG - Department of Economic Promotion, Employment, Trade and Tourism, Department of Territory and Climate Action, Rural Area Service, CEA (Centre for Environmental Studies), Agri-food sector.
	Comments on implementation	Action within the Climate Plan identified as requiring **acceleration to achieve Mission's objective.**

B-2.2: Individual Action Schemes		
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	
	Total costs and costs per unit of CO 2e	**This action is included in the Other Sector** with total costs of €0.4 million.

B-2.2: Individual Action Schemes		
OTA-06: Optimisation of fertiliser use		
Action plan	**Name of the action**	Optimisation of fertiliser use
	Type of action	Technological
	Description of the action	Efficient use of mineral fertilisers is a key point to reduce emissions in the primary sector. It is estimated that one third of emissions in the agricultural sector can be attributed to chemical fertilisers. It is proposed to adjust the applied doses of chemical fertilisers to reduce GHG emissions and save money.
Reference to the impact pathway	**Sector-Subsector**	Agri-food (Other)
	Systemic lever	Technology / Infrastructure Learning / Skills Governance / Policy
	Result (according to module B-1.1) short- and medium-term changes	Promoting organic farming through optimisation of fertiliser use. Widespread increased use of livestock waste as organic fertiliser and optimisation of fertiliser use.
Implementation	**Agencies/Department responsible for implementation**	ACG - Department of Economic Promotion, Employment, Trade and Tourism, Department of Territory and Climate Action, Rural Area Service, CEA (Centre for Environmental Studies), agri-food sector.
	Scale of action and target entities	Municipal, Agri-food sector

B-2.2: Individual Action Schemes		
	Stakeholders	AVG - Department of Economic Promotion, Employment, Trade and Tourism, Department of Territory and Climate Action, Rural Area Service, CEA (Centre for Environmental Studies), Agri-food sector.
	Comments on implementation	Action within the Climate Plan that has been identified as requiring **acceleration to achieve Mission's objective.**
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	
	Total costs and costs per unit of CO 2e	**This action is included in the Other Sector** with total costs of €0.4 million.

B-2.2: Individual Action Schemes		
OTA-07: Decrease in annual feed requirements.		
Action plan	**Name of the action**	Decrease in annual feed requirements.
	Type of action	Technological
	Description of the action	It is proposed to feed sheep and cattle extensively, using grassland. It is estimated that 5% of the pasture area could be used to feed all the sheep and cattle in the city with mixed grazing. It is proposed that this forest area be used for grazing horses and goats.
Reference to the impact pathway	**Sector-Subsector**	Agri-food (Other)
	Systemic lever	Technology / infrastructure Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Promotion of extensive livestock farming and silvopastoral systems. Decrease in annual feed requirements.
Implementation	**Agencies/Department responsible for**	Vitoria-Gasteiz City Council, Department of Economic Promotion, Employment, Trade and Tourism, Department of Territory and Climate

B-2.2: Individual Action Schemes		
	implementation	Action, Rural Area Service, CEA (Centre for Environmental Studies), Agri-food Sector.
	Scale of action and target entities	Municipal, Agri-food sector
	Stakeholders	Vitoria-Gasteiz City Council, Department of Economic Promotion, Employment, Trade and Tourism, Department of Territory and Climate Action, Rural Area Service, CEA (Centre for Environmental Studies), Agri-food sector.
	Comments on implementation	Action within the Climate Plan that has been identified as requiring **acceleration to achieve Mission's objective.**
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	
	Total costs and costs per unit of CO 2e	**This action is included in the Other Sector** with total costs of €0.4 million.

B-2.2: Individual Action Schemes		
OTA-08: Deployment of the Vitoria-Gasteiz Agri-Food Strategy		
Action plan	**Name of the action**	Deployment of the Vitoria-Gasteiz Agri-Food Strategy
	Type of action	Strategic
	Description of the action	Improving production and consumption practices, working towards local self-sufficiency.
Reference to the impact pathway	**Sector-Subsector**	Agri-food (Other)
	Systemic lever	Governance / Policy Social Innovation Learning / Skills
	Result (according to module B-1.1) short- and medium-term changes	Promotion of local production and consumption of quality food through developing the Agri-Food Strategy. Increasing sustainable production and quality food, with involvement and collaboration from the different agents

B-2.2: Individual Action Schemes		
		(local farmers and stockbreeders, consumer associations, traders...) who are committed to other forms of sustainable production and consumption.
Implementation	**Agencies/Department responsible for implementation**	Vitoria-Gasteiz City Council / CEA: Centre for Environmental Studies
	Scale of action and target entities	Municipal, agri-food sector, economic and business sector, citizens.
	Stakeholders	AVG - Department of Economic Promotion, Employment, Trade and Tourism, Department of Territory and Climate Action, Rural Area Service, CEA (Centre for Environmental Studies), Agri-food sector.
	Comments on implementation	Action within SECAP that has been identified requiring **acceleration to achieve Mission's objective**.
Impacts and costs	**Renewable energy generated (if applicable)**	
	Energy removed/replaced, fuel volume or fuel type	*
	Estimated GHG emission reductions (total)	
	Total costs and costs per unit of CO_2e	**This action is included in the Other Sector** with total costs of €0.4 million.

B-2.3: Summary of residual emissions strategy

According to data from the Basque Statistics Institute (EUSTAT), the forested area in Alava totals 141,211 ha, of which 28% are conifers and 72% broadleaved. One distinctive feature is the large area occupied by natural masses, practically 80% of the total wooded surface area. In addition, 76% of the forests are protected as Montes de Utilidad Pública (Public Utility Forests).

Alava's forests are an excellent carbon sink, accumulating more than 100 million tonnes of CO_2, according to the Mugarri Plan for the Promotion of Renewable Energy in Alava. In addition, the almost 100 million existing trees absorb 600,000 tonnes of CO_2 per year.

The city of Vitoria-Gasteiz, capital of the Historical Territory of Alava, represents 9.1% of the total surface area of Alava (although in terms of population it represents more than 75%). Likewise, the forests of Vitoria-Gasteiz have important potential as CO_2 sinks.

In fact, the city of Vitoria-Gasteiz has almost 8,600 ha of forest land, contributing significantly to CO_2 accumulation. It is estimated that around 8% of the total CO_2 accumulated in Alava is found in forests of the city of Vitoria-Gasteiz.

The dominant forest formation in the municipality is the gall oak groves, which occupy more than 2,500 ha, the second largest being the kermes oak groves, which occupy 2,000 ha; beech groves are also well-represented in the municipality, occupying more than 1,000 ha, as well as oak groves, which occupy some 400 ha, extending over different forest formations. In addition, the city is home to more than 600 ha of forest plantations, both hardwood and coniferous.

In addition, the city has a cultivated area of just over 13,000 ha, which represents almost half of the municipal surface area (47%), plus an area dedicated to pastureland of over 3,300 ha, which represents 12% of the total.

Cultivated plants fix CO_2 as they grow, but they do not accumulate it in the soil when removed; only a small proportion from roots and crop residues can be incorporated into agricultural soils (0.33 tCO2/ha). Although grassland has low capacity to fix CO_2 and incorporate it into the soil (0.17 tCO2/ha), it can also contribute to some extent as a sink.

An initial, conservative estimate has put the annual absorption capacity of the city's forests at around 40,000 tonnes of CO_2, which, when added to the almost 4,900 tonnes of CO_2 absorbed by crops and pastures, would amount to around 45,000 tonnes of CO_2 absorbed per year.

While playing a more modest role in terms of its potential as a sink, urban greenery is not negligible. The Green Belt, with an area of more than 827 ha, has been calculated to absorb 3,168 tonnes of CO_2 per year. In addition, the city has a park and garden area of approximately 275 ha and urban trees (49 ha), which could absorb an additional 1,000 tonnes of CO_2.

Considering all of the above, the total CO_2 absorption capacity of the city was initially estimated at around 49,000 tonnes of CO_2.

The residual GHG emissions to be offset annually according to the targets of this Climate Action Plan amount to 162,000 tonnes of CO_2 in 2030, these are emission sources that cannot be fully mitigated by 2030 due to lack of technological availability or economic resources.

However, the natural geographical scope for offsetting these GHG emissions would not be the municipal territory but should be extended to the bioregion which includes Vitoria-Gasteiz (Central Alava), since bioregions can become the spaces from which to deploy the new paradigms/strategies of sustainability, in general terms, and of climate neutrality in particular.

Specifically, Vitoria-Gasteiz is part of the so-called Llanada Alavesa, which in turn is one of the three counties in the bioregion of Central Alava. With 27,630 ha, Vitoria-Gasteiz represents just over a third of the surface area of the Llanada Alavesa, but is home to over 93% of its population.

The surface area of forests in the Llanada Alava amounts to 28,806 ha (12% coniferous and 88% broadleaved), including forest in the city of Vitoria-Gasteiz.

On the one hand, this would be a matter of increasing the current sink capacity due to urban and peri-urban green areas and crops and pastures respectively in the city. On the other hand, it would increase the forested area. The remaining emissions would be offset by taking advantage of the absorption capacity of the forests that form part of the Llanada Alavesa, which can provide an absorption capacity of around 130,000 tonnes of CO_2.

Therefore, the strategy to compensate Vitoria-Gasteiz's emissions aims to increase the city’s carbon sink capacity, both through fixing carbon in biomass and in soils derived from forestry and agricultural activities and by absorbing CO_2 through green and blue urban and peri-urban infrastructures.

Forest areas, as already mentioned, have the greatest potential for CO_2 fixation and accumulation. Certain land use activities and change in land use, such as agricultural land management (conservation agriculture, etc.) and pastures, as well as forestry activities, such as afforestation and reforestation, through tree plantations, restoration of degraded areas, and sustainable forest management, are intended to be promoted as sinks. In addition, the aim is to increase the sink capacity of urban greenery and urban green infrastructure, either by enhancing the use of tree species that capture more CO_2 and consume fewer water resources, or by promoting nature-based solutions (NBS), such as green roofs and facades, urban orchards, edible forests and gardens, pollinator meadows, etc.

In relation to the decarbonisation of the agricultural sector, the main strategy should be to harness the capacity of regenerative agriculture and organic fertilisation to improve pastures and crops as carbon sinks and to increase the energy efficiency of the agricultural sector in terms of emissions (bioenergy use).

Through the Community Urban Gardens Programme, actions will be carried out to consolidate and expand the network of urban gardens in various neighbourhoods of the city, with the aim of providing people, groups and non-profit organisations with a space in which to develop the practice of ecological urban horticulture. These gardens, in addition to densifying the current urban green infrastructure, with the significant benefits that this entails, are proposed as spaces in which to carry out various educational and training activities and programmes aimed at a wide range of people and groups, including specific activities related to raising public awareness on the threats and impacts of climate change. The action also contemplates analysing the possibilities of locating new urban ecological gardens in the city's various neighbourhoods to give continuity to existing gardens (Zabalgana, Salburua, Lakua, Abetxuko, etc.).

Given that the precise determination of carbon sinks and storage is currently a challenge, it will be necessary to have the methodological guidance and technical support of the Mission's support platform (NetZeroCities) or other expert support.

In the same way, it will be necessary to study and assess the role that carbon credits can play in offsetting residual emissions, for which it will be necessary to have the support of expert knowledge.

MODULE B-3

Indicators for monitoring, evaluation and learning

In the next iteration of the Climate City Contract, the Comprehensive Indicator Set to be developed by NetZeroCities will be taken into account.

B-3.1: Impact pathways						
Outcomes / impacts addressed Changes (short and long term)	**Actions**	**Indicator no.**	**Indicator name**	**Target values**		
				2025	**2027**	**2030**
Change in mobility through urban redevelopment using the superblock model.	TR-01	1	Area for pedestrian use			20
Facilitating cycling, improving safety between different modes of travel	TR-02	2	Network of cycle paths			8
Reduction of surface parking spaces through implementing a regularisation plan and an increase in the number of regulated parking spaces and their tariffs.	TR-03	3	Number of surface and underground parking spaces in relation to the number of vehicles in circulation			0.7
Improving and modernising public transport, increasing supply and optimising demand. Increasing the number of users of the public transport network.	TR-07 TR-08	4	Number of passengers using urban public transport			28 million
Promoting shared mobility through the creation of a Shared Mobility Services Programme and awareness and training programmes.	TR-04 TR-05	5	Average private vehicle occupancy			1.4
Progressive increase of private electric mobility and public service vehicles, such as taxis.	TR-12	6	Electric vehicle fleet			45
Deployment of an electric vehicle charging infrastructure.	TR-11	7	Electric vehicle charging points			35
Adaptation of the urban public transport service infrastructure to electric mobility.	TR-16 TR-17	8	Percentage of electric buses in the urban public transport fleet			100
Extension of logistics nodes by setting up Urban Distribution Centres (UDCs) for goods in other locations in the city.	TR-18	9	Urban Distribution Centres (UDCs) for goods			2

B-3.1: Impact pathways						
Outcomes / impacts addressed Changes (short and long term)	**Actions**	**Indicator no.**	**Indicator name**	**Target values**		
				2025	**2027**	**2030**
Promotion of electric vans and trucks for the progressive electrification of freight vehicles.	TR-21	10	Fleet of electric vans and trucks			2,000
Progressive energy eco-rehabilitation of existing buildings and public spaces in the declared Degraded Areas.	EC-01 EC-02 EC-03 EC-04	11	Number of energy rehabilitated dwellings			2,750
Improving the thermal performance of buildings	EC-01 EC-02 EC-03 EC-04	12	Energy efficiency in housing and buildings			9
Progressive change of the city's energy model through dwellings and residential, tertiary, industrial buildings, etc., joining the decarbonised heat network.	EC-01 EC-03 EC-10 EC-14	13	Residential and tertiary sector heat energy consumption			750
Progressive change of the city's energy model through dwellings and residential, tertiary, industrial buildings, etc., joining the decarbonised heat network.	EC-14	14	Housing connected to a decarbonised heat network			20,000
Increasing the energy culture of citizens through developing a programme of training, education, dissemination and citizen involvement in the energy transition.	EC-11 EC-12	15	Electricity consumption in the residential sector per inhabitant per year			1,000
Increasing the energy culture of citizens through developing a programme of training, education, dissemination and citizen involvement in the energy transition.	EC-11 EC-12 EE-04	16	Total electricity consumption per inhabitant per year			5,000
Increased investment in mixed public-private projects in	EE-01	17	Renewable energy production in the city			225,000

B-3.1: Impact pathways						
Outcomes / impacts addressed Changes (short and long term)	**Actions**	**Indicator no.**	**Indicator name**	**Target values**		
				2025	**2027**	**2030**
renewable electricity generation.	EE-02 EE-05					
Increased prevention and recycling of municipal waste.	SR-03	18	Total generation of household and commercial waste			0.92
Increase in the rate of reuse and recycling of materials/waste.	SR-03	19	Separate collection from household or commercial sources			0.65
Enhancing green infrastructure	FO-01 FO-02 FO-03 FO-04	20	Area occupied by parks, gardens and urban green areas			20
Promoting the energy-climate transformation of the city's industrial sector to adopt carbon neutrality as a basic criterion for competitiveness.	OTI-2	21	Energy consumption in the industrial sector			1,050
Increasing sustainable production and quality food, with the involvement and collaboration of the different agents (local farmers and stockbreeders, consumer associations, traders, etc.) who are committed to other forms of sustainable production and consumption.	OTA-04	22	Organic crop and livestock farms			50
Increasing sustainable production and quality food, with the involvement and collaboration of the different agents (local farmers and stockbreeders, consumer associations, traders, etc.) who are committed to other forms of sustainable production and consumption.	OTA-04	23	Organic crop and livestock area			500
	All (except OTI + OTA)	24	GHG emission of the city per capita per year (without industry and without primary sector)			0.48

B-3.1: Impact pathways						
Outcomes / impacts addressed Changes (short and long term)	**Actions**	**Indicator no.**	**Indicator name**	**Target values**		
				2025	**2027**	**2030**
	All	25	GHG emissions for the city per inhabitant per year			0.62
	TR-08 / TR-12 / TR-16 / TR-17 / EC-05 / EE-01 / EE-04 / EE-07/ RE-03/ RE-04 / RE-06	26	GHG emissions from the City Council per inhabitant per year			0.02

B-3.2: Indicator metadata	
Indicator name	Area for pedestrian use
Indicator unit	Square metres per inhabitant
Definition	Area of zones reserved exclusively for pedestrian mobility
Calculation method	Cartographic measurement of the surface
Context	Mobility in active modes
Does the indicator measure direct impacts (i.e. reduction of greenhouse gas emissions)?	No
If so, to which area of emission is the co-benefit linked?	-
Does the indicator measure indirect impacts (i.e. co-benefits)?	Yes
If so, what co-benefit does it measure?	Improvement of quality of life / Reduction of air and noise pollution / Fostering of social relationships
Can the indicator be used to monitor impact pathways?	Yes
If so, for which impact pathway?	Change in mobility through urban redevelopment using the superblock model.
Is the indicator captured by existing CDP/SCIS/Mayors' Covenant platforms?	[yes/no]
Additional information	
Planned data source	Municipal / Udalsarea 2030
Planned availability	Yes
Planned collection interval	2020 - 2030
References	
Results describing the indicator	
Other indicator systems using this indicator	

B-3.2: Indicator metadata	
Indicator name	Network of cycle paths
Indicator unit	km/ 10,000 inhabitant
Definition	Length of specific urban and inter-urban cycle lanes in the city
Calculation method	(Bike lane length/Total population of the city)*10,000
Context	Mobility in active modes
Does the indicator measure direct impacts (i.e. reduction of greenhouse gas emissions)?	No
If so, to which area of emission is the co-benefit linked?	-
Does the indicator measure indirect impacts (i.e. co-benefits)?	Yes
If so, what co-benefit does it measure?	Improvement of health / Reduction of accidents
Can the indicator be used to monitor impact pathways?	Yes
If so, for which impact pathway?	Facilitating cycling, increasing safety between different modes of travel
Is the indicator captured by existing CDP/SCIS/Mayors' Covenant platforms?	[yes/no]
Additional information	
Planned data source	Municipal / Udalsarea 2030
Planned availability	Yes
Planned collection interval	2020 - 2030
References	
Results describing the indicator	
Other indicator systems using this indicator	

B-3.2: Indicator metadata	
Indicator name	Number of surface and underground parking spaces in relation to the number of vehicles in circulation
Indicator unit	number of parking spaces / total number of cars
Definition	Number of public surface or underground parking spaces, regulated (OTA, etc.) or unregulated.
Calculation method	Number of existing parking spaces / Passenger car fleet
Context	Reducing the need for motorised passenger transport
Does the indicator measure direct impacts (i.e. reduction of greenhouse gas emissions)?	No
If so, to which area of emission is the co-benefit linked?	-
Does the indicator measure indirect impacts (i.e. co-benefits)?	Yes
If so, what co-benefit does it measure?	Reduction in number of journeys by private vehicle / Reduction of air and noise pollution
Can the indicator be used to monitor impact pathways?	Yes
If so, for which impact pathway?	Reduction of surface parking spaces through the implementation of a regularisation plan and an increase in the number of regulated parking spaces and their tariffs.
Is the indicator captured by existing CDP/SCIS/Mayors' Covenant platforms?	[yes/no]
Additional information	
Planned data source	Municipal
Planned availability	Yes
Planned collection interval	2020 - 2030
References	
Results describing the indicator	
Other indicator systems using this indicator	

B-3.2: Indicator metadata	
Indicator name	Number of passengers using urban public transport
Indicator unit	number of annual travellers
Definition	Number of passengers using the city bus and tram in a year
Calculation method	Number of passengers using the city bus and tram in a year
Context	Modal shift to public transport
Does the indicator measure direct impacts (i.e. reduction of greenhouse gas emissions)?	No
If so, to which area of emission is the co-benefit linked?	-
Does the indicator measure indirect impacts (i.e. co-benefits)?	Yes
If so, what co-benefit does it measure?	Reduction in the number of journeys in private vehicles / Reduction of air and noise pollution / Improved quality of life
Can the indicator be used to monitor impact pathways?	Yes
If so, for which impact pathway?	Improving and modernising public transport, increasing supply and optimising demand. Increasing the number of users of the public transport network.
Is the indicator captured by existing CDP/SCIS/Mayors' Covenant platforms?	[yes/no]
Additional information	
Planned data source	Municipal
Planned availability	Yes
Planned collection interval	2020 - 2030
References	
Results describing the indicator	
Other indicator systems using this indicator	

B-3.2: Indicator metadata	
Indicator name	Average private vehicle occupancy
Indicator unit	number
Definition	Average number of occupants in each private car
Calculation method	Average number of occupants in each private car
Context	Private mobility / car sharing
Does the indicator measure direct impacts (i.e. reduction of greenhouse gas emissions)?	No
If so, to which area of emission is the co-benefit linked?	-
Does the indicator measure indirect impacts (i.e. co-benefits)?	Yes
If so, what co-benefit does it measure?	Reduction of traffic and congestion / Reduction of air and noise pollution
Can the indicator be used to monitor impact pathways?	Yes
If so, for which impact pathway?	Promoting shared mobility through the creation of a Shared Mobility Services Programme and awareness and training programmes.
Is the indicator captured by existing CDP/SCIS/Mayors' Covenant platforms?	[yes/no]
Additional information	
Planned data source	Municipal / Udalsarea 2030
Planned availability	Yes
Planned collection interval	2020 - 2030
References	
Results describing the indicator	
Other indicator systems using this indicator	

B-3.2: Indicator metadata	
Indicator name	Electric vehicle fleet
Indicator unit	number of electric vehicles / 1,000 inhabitant
Definition	Number of electric vehicles registered in the city per 1,000 inhabitants.
Calculation method	(Electric vehicles registered in the city / Total population of the city)*1,000
Context	Electrification of mobility
Does the indicator measure direct impacts (i.e. reduction of greenhouse gas emissions)?	No
If so, to which area of emission is the co-benefit linked?	-
Does the indicator measure indirect impacts (i.e. co-benefits)?	Yes
If so, what co-benefit does it measure?	Reduction of air and noise pollution / Renewal of the vehicle fleet
Can the indicator be used to monitor impact pathways?	Yes
If so, for which impact pathway?	Progressive increase of private electric mobility and public service vehicles, such as taxis.
Is the indicator captured by existing CDP/SCIS/Mayors' Covenant platforms?	[yes/no]
Additional information	
Planned data source	Municipal / Udalsarea 2030
Planned availability	Yes
Planned collection interval	2020 - 2030
References	
Results describing the indicator	
Other indicator systems using this indicator	

B-3.2: Indicator metadata	
Indicator name	Electric vehicle charging points
Indicator unit	number of charging points /1,000 inhabitant
Definition	Number of public charging points for electric vehicles in the city per 1,000 inhabitants.
Calculation method	(Electric vehicle charging point / Total population of the city)*1,000
Context	Electrification of mobility
Does the indicator measure direct impacts (i.e. reduction of greenhouse gas emissions)?	No
If so, to which area of emission is the co-benefit linked?	-
Does the indicator measure indirect impacts (i.e. co-benefits)?	Yes
If so, what co-benefit does it measure?	New business models and increase of green and quality employment / Renewal of the vehicle fleet
Can the indicator be used to monitor impact pathways?	Yes
If so, for which impact pathway?	Deployment of an electric vehicle charging infrastructure.
Is the indicator captured by existing CDP/SCIS/Mayors' Covenant platforms?	[yes/no]
Additional information	
Planned data source	Municipal / Udalsarea 2030
Planned availability	Yes
Planned collection interval	2020 - 2030
References	
Results describing the indicator	
Other indicator systems using this indicator	

B-3.2: Indicator metadata	
Indicator name	Percentage of electric buses in the urban public transport fleet
Indicator unit	%
Definition	Percentage of electric buses in the urban public transport fleet
Calculation method	(No. of electric buses / Total no. of buses)*100
Context	Electrification of mobility
Does the indicator measure direct impacts (i.e. reduction of greenhouse gas emissions)?	No
If so, to which area of emission is the co-benefit linked?	-
Does the indicator measure indirect impacts (i.e. co-benefits)?	Yes
If so, what co-benefit does it measure?	
Can the indicator be used to monitor impact pathways?	Yes
If so, for which impact pathway?	Adaptation of the urban public transport service infrastructure to electric mobility.
Is the indicator captured by existing CDP/SCIS/Mayors' Covenant platforms?	[yes/no]
Additional information	
Planned data source	Municipal
Planned availability	Yes
Planned collection interval	2020 - 2030
References	
Results describing the indicator	
Other indicator systems using this indicator	

B-3.2: Indicator metadata	
Indicator name	Urban Distribution Centres (UDCs) for goods
Indicator unit	number
Definition	No. of Urban Distribution Centres (UDCs) for goods in the city
Calculation method	No. of existing freight UDCs in the city
Context	Optimisation of logistics
Does the indicator measure direct impacts (i.e. reduction of greenhouse gas emissions)?	No
If so, to which area of emission is the co-benefit linked?	-
Does the indicator measure indirect impacts (i.e. co-benefits)?	Yes
If so, what co-benefit does it measure?	Optimisation of routes, distances and number of goods delivery journeys / pollution reduction
Can the indicator be used to monitor impact pathways?	Yes
If so, for which impact pathway?	Extension of logistics nodes with the establishment of Urban Distribution Centres (UDCs) for goods in other locations in the city.
Is the indicator captured by existing CDP/SCIS/Mayors' Covenant platforms?	[yes/no]
Additional information	
Planned data source	Municipal
Planned availability	Yes
Planned collection interval	2020 - 2030
References	
Results describing the indicator	
Other indicator systems using this indicator	

B-3.2: Indicator metadata	
Indicator name	Fleet of electric vans and trucks
Indicator unit	number
Definition	Number of electric vans and trucks registered in the city.
Calculation method	Number of electric vans and trucks registered in the city.
Context	Electrification of logistics
Does the indicator measure direct impacts (i.e. reduction of greenhouse gas emissions)?	No
If so, to which area of emission is the co-benefit linked?	-
Does the indicator measure indirect impacts (i.e. co-benefits)?	Yes
If so, what co-benefit does it measure?	Renewal of the goods delivery fleet / Reduction of pollution
Can the indicator be used to monitor impact pathways?	Yes
If so, for which impact pathway?	Promotion of electric vans and trucks for the gradual electrification of freight vehicles
Is the indicator captured by existing CDP/SCIS/Mayors' Covenant platforms?	[yes/no]
Additional information	
Planned data source	Municipal
Planned availability	Yes
Planned collection interval	2020 - 2030
References	
Results describing the indicator	
Other indicator systems using this indicator	

B-3.2: Indicator metadata	
Indicator name	Number of energy rehabilitated dwellings
Indicator unit	number
Definition	No. of dwellings entire rehabilitated on an annual basis
Calculation method	No. of dwellings entire rehabilitated on an annual basis
Context	Efficient building
Does the indicator measure direct impacts (i.e. reduction of greenhouse gas emissions)?	No
If so, to which area of emission is the co-benefit linked?	-
Does the indicator measure indirect impacts (i.e. co-benefits)?	Yes
If so, what co-benefit does it measure?	Improving the thermal comfort of dwellings / Reducing household energy bills / Increasing the value of buildings
Can the indicator be used to monitor impact pathways?	Yes
If so, for which impact pathway?	Progressive energy eco-rehabilitation of existing buildings and public spaces in the declared Degraded Areas.
Is the indicator captured by existing CDP/SCIS/Mayors' Covenant platforms?	[yes/no]
Additional information	
Planned data source	Municipal / Udalsarea 2030
Planned availability	Yes
Planned collection interval	2020 - 2030
References	
Results describing the indicator	
Other indicator systems using this indicator	

B-3.2: Indicator metadata	
Indicator name	Energy efficiency in housing and buildings
Indicator unit	%
Definition	Number of dwellings/buildings with energy performance certificates rated A, B or C out of the total number of dwellings/buildings with energy performance certificates.
Calculation method	(Dwellings/buildings with energy performance certificates rated A, B or C / Dwellings/buildings with energy performance certificates)*101
Context	Efficient building
Does the indicator measure direct impacts (i.e. reduction of greenhouse gas emissions)?	No
If so, to which area of emission is the co-benefit linked?	-
Does the indicator measure indirect impacts (i.e. co-benefits)?	Yes
If so, what co-benefit does it measure?	Improving the thermal comfort of dwellings / Reducing household energy costs
Can the indicator be used to monitor impact pathways?	Yes
If so, for which impact pathway?	Improving the thermal performance of buildings
Is the indicator captured by existing CDP/SCIS/Mayors' Covenant platforms?	[yes/no]
Additional information	
Planned data source	Municipal / Udalsarea 2030
Planned availability	Yes
Planned collection interval	2020 - 2030
References	
Results describing the indicator	
Other indicator systems using this indicator	

B-3.2: Indicator metadata	
Indicator name	Residential and tertiary sector heat energy consumption
Indicator unit	GWh/year
Definition	Final thermal energy consumption in the residential and tertiary sectors of the city
Calculation method	Consumption of natural gas and oil derivatives used for heating and hot water (DHW) in residential and tertiary buildings.
Context	Efficient building
Does the indicator measure direct impacts (i.e. reduction of greenhouse gas emissions)?	Yes
If so, to which area of emission is the co-benefit linked?	Building
Does the indicator measure indirect impacts (i.e. co-benefits)?	Yes
If so, what co-benefit does it measure?	Reduced air pollution / Less external dependence
Can the indicator be used to monitor impact pathways?	Yes
If so, for which impact pathway?	Progressive change of the city's energy model through dwellings and residential, tertiary, industrial buildings, etc., joining the decarbonised heat network.
Is the indicator captured by existing CDP/SCIS/Mayors' Covenant platforms?	[yes/no]
Additional information	
Planned data source	Municipal / Udalsarea 2030
Planned availability	Yes
Planned collection interval	2020 - 2030
References	
Results describing the indicator	
Other indicator systems using this indicator	

B-3.2: Indicator metadata	
Indicator name	Electricity consumption in the residential sector per inhabitant per year
Indicator unit	kWh/inhab/yr
Definition	Annual electricity consumption in the residential sector per inhabitant
Calculation method	Domestic consumption of electricity / Total population of the city
Context	Electrification of demand
Does the indicator measure direct impacts (i.e. reduction of greenhouse gas emissions)?	Yes
If so, to which area of emission is the co-benefit linked?	Electricity
Does the indicator measure indirect impacts (i.e. co-benefits)?	Yes
If so, what co-benefit does it measure?	Reduction of energy bills / Creation of green and quality jobs
Can the indicator be used to monitor impact pathways?	Yes
If so, for which impact pathway?	Increasing the energy culture of citizens through developing a programme of training, education, dissemination and citizen involvement in the energy transition.
Is the indicator captured by existing CDP/SCIS/Mayors' Covenant platforms?	[yes/no]
Additional information	
Planned data source	Municipal / Udalsarea 2030
Planned availability	Yes
Planned collection interval	2020 - 2030
References	
Results describing the indicator	
Other indicator systems using this indicator	

B-3.2: Indicator metadata	
Indicator name	Total electricity consumption per inhabitant per year
Indicator unit	kWh/inhab/yr
Definition	Total annual electricity consumption per capita
Calculation method	Total electricity consumption / Total population of the city
Context	Electrification of demand
Does the indicator measure direct impacts (i.e. reduction of greenhouse gas emissions)?	Yes
If so, to which area of emission is the co-benefit linked?	-
Does the indicator measure indirect impacts (i.e. co-benefits)?	Yes
If so, what co-benefit does it measure?	Reducing energy bill expenditure
Can the indicator be used to monitor impact pathways?	Yes
If so, for which impact pathway?	Increasing citizens' energy culture through developing a programme of training, education, dissemination and citizen involvement in the energy transition.
Is the indicator captured by existing CDP/SCIS/Mayors' Covenant platforms?	[yes/no]
Additional information	
Planned data source	Municipal / Udalsarea 2030
Planned availability	Yes
Planned collection interval	2020 - 2030
References	
Results describing the indicator	
Other indicator systems using this indicator	

B-3.2: Indicator metadata	
Indicator name	Renewable energy production in the city
Indicator unit	MWh/year
Definition	Estimated total renewable energy production in the city.
Calculation method	Sum of all annually generated renewable energy production
Context	Distributed electricity generation
Does the indicator measure direct impacts (i.e. reduction of greenhouse gas emissions)?	Yes
If so, to which area of emission is the co-benefit linked?	Electrical and thermal energy
Does the indicator measure indirect impacts (i.e. co-benefits)?	Yes
If so, what co-benefit does it measure?	Boosting energy self-sufficiency / Reducing energy bills / Creating green, quality jobs
Can the indicator be used to monitor impact pathways?	Yes
If so, for which impact pathway?	Increased investment in mixed public-private projects in renewable electricity generation.
Is the indicator captured by existing CDP/SCIS/Mayors' Covenant platforms?	[yes/no]
Additional information	
Planned data source	Municipal / Udalsarea 2030
Planned availability	Yes
Planned collection interval	2020 - 2030
References	
Results describing the indicator	
Other indicator systems using this indicator	

B-3.2: Indicator metadata	
Indicator name	Total generation of household and commercial waste
Indicator unit	kg/inhab/day
Definition	Household and commercial waste generation per inhabitant per day
Calculation method	Total generation of household and commercial waste/Total population of the city/365
Context	Reduction of waste production
Does the indicator measure direct impacts (i.e. reduction of greenhouse gas emissions)?	No
If so, to which area of emission is the co-benefit linked?	-
Does the indicator measure indirect impacts (i.e. co-benefits)?	Yes
If so, what co-benefit does it measure?	Pollution reduction
Can the indicator be used to monitor impact pathways?	Yes
If so, for which impact pathway?	Increased prevention and recycling of municipal waste.
Is the indicator captured by existing CDP/SCIS/Mayors' Covenant platforms?	[yes/no]
Additional information	
Planned data source	Municipal
Planned availability	Yes
Planned collection interval	2020 - 2030
References	
Results describing the indicator	
Other indicator systems using this indicator	

B-3.2: Indicator metadata	
Indicator name	Separate collection from household or commercial sources
Indicator unit	kg/inhab/day
Definition	Selective collection at source of glass, paper-cardboard, light packaging, bio-waste, textiles, WEEE, toxic waste, etc., of domestic and commercial origin.
Calculation method	Quantity of selectively collected waste of domestic or commercial origin / Total population of the city / 365
Context	Increased waste recycling
Does the indicator measure direct impacts (i.e. reduction of greenhouse gas emissions)?	No
If so, to which area of emission is the co-benefit linked?	-
Does the indicator measure indirect impacts (i.e. co-benefits)?	Yes
If so, what co-benefit does it measure?	Reduction of material and energy consumption / Reduction of pollution / Creation of green jobs
Can the indicator be used to monitor impact pathways?	Yes
If so, for which impact pathway?	Increase in the rate of reuse and recycling of materials/waste.
Is the indicator captured by existing CDP/SCIS/Mayors' Covenant platforms?	[yes/no]
Additional information	
Planned data source	Municipal
Planned availability	Yes
Planned collection interval	2020 - 2030
References	
Results describing the indicator	
Other indicator systems using this indicator	

B-3.2: Indicator metadata	
Indicator name	Surface occupied by parks, gardens and urban green areas
Indicator unit	m^2 / inhabitant
Definition	Surface of the city occupied by parks, gardens and public green areas per inhabitant.
Calculation method	Surface occupied by parks, gardens and urban green spaces / Total population of the city
Context	Renaturalisation
Does the indicator measure direct impacts (i.e. reduction of greenhouse gas emissions)?	No
If so, to which area of emission is the co-benefit linked?	-
Does the indicator measure indirect impacts (i.e. co-benefits)?	Yes
If so, what co-benefit does it measure?	Improving the quality of life / Improving health and well-being / Reducing the heat island
Can the indicator be used to monitor impact pathways?	Yes
If yes, for which impact pathway?	Enhancing green infrastructure
Is the indicator captured by existing CDP/SCIS/Mayors' Covenant platforms?	[yes/no]
Additional information	
Planned data source	Municipal
Planned availability	Yes
Planned collection interval	2020 - 2030
References	
Results describing the indicator	
Other indicator systems using this indicator	

B-3.2: Indicator metadata	
Indicator name	Energy consumption in the industrial sector
Indicator unit	GWh/year
Definition	Final energy consumption in the industrial sector.
Calculation method	Electricity + natural gas + diesel + LPG consumption of the industrial sector
Context	Decarbonised industry
Does the indicator measure direct impacts (i.e. reduction of greenhouse gas emissions)?	Yes
If so, to which area of emission is the co-benefit linked?	Industry
Does the indicator measure indirect impacts (i.e. co-benefits)?	Yes
If so, what co-benefit does it measure?	Reducing pollution / Improving competitiveness
Can the indicator be used to monitor impact pathways?	Yes
If yes, for which impact pathway?	Promoting energy-climate transformation of the city's industrial sector to adopt carbon neutrality as a basic criterion for to make it competitive.
Is the indicator captured by existing CDP/SCIS/Mayors' Covenant platforms?	[yes/no]
Additional information	
Planned data source	Municipal / Udalsarea 2030
Planned availability	Yes
Planned collection interval	2020 - 2030
References	
Results describing the indicator	
Other indicator systems using this indicator	

B-3.2: Indicator metadata	
Indicator name	Organic crop and livestock farms
Indicator unit	number of agricultural + livestock holdings
Definition	Number of organic farms and organic livestock farms
Calculation method	Total number of organic crop and livestock farms
Context	Organic and regenerative farming
Does the indicator measure direct impacts (i.e. reduction of greenhouse gas emissions)?	No
If so, to which area of emission is the co-benefit linked?	-
Does the indicator measure indirect impacts (i.e. co-benefits)?	Yes
If so, what co-benefit does it measure?	Improvement of agricultural production / Promotion of healthy and local food / Creation of green jobs
Can the indicator be used to monitor impact pathways?	Yes
If so, for which impact pathway?	Increasing sustainable production and quality food, with the involvement and collaboration of the different agents that are committed to other forms of production and consumption.
Is the indicator captured by existing CDP/SCIS/Mayors' Covenant platforms?	[yes/no]
Additional information	
Planned data source	Municipal / Udalsarea2030
Planned availability	Yes
Planned collection interval	2020 - 2030
References	
Results describing the indicator	
Other indicator systems using this indicator	

B-3.2: Indicator metadata	
Indicator name	Organic crop and livestock area
Indicator unit	ha
Definition	Agricultural area used for organic crops and organic livestock.
Calculation method	Total agricultural area used for organic crops and organic livestock farming
Context	Organic and regenerative farming
Does the indicator measure direct impacts (i.e. reduction of greenhouse gas emissions)?	No
If so, to which area of emission is the co-benefit linked?	-
Does the indicator measure indirect impacts (i.e. co-benefits)?	Yes
If so, what co-benefit does it measure?	Improvement of agricultural production / Promotion of healthy, local food / Creation of green jobs
Can the indicator be used to monitor impact pathways?	Yes
If so, for which impact pathway?	Increasing sustainable production and quality food, with the involvement and collaboration of the different agents (who are committed to other forms of production and consumption).
Is the indicator captured by existing CDP/SCIS/Mayors' Covenant platforms?	[yes/no]
Additional information	
Planned data source	Municipal / Udalsarea2030
Planned availability	Yes
Planned collection interval	2020 - 2030
References	
Results describing the indicator	
Other indicator systems using this indicator	

B-3.2: Indicator metadata	
Indicator name	Municipal GHG emissions per capita per year (without industry and without primary sector)
Indicator unit	t CO_{2e} /inhab/yr
Definition	GHG emissions from the city (without industry and primary sector). Includes emissions from the transport, residential, services and waste collection and treatment sector.
Calculation method	GHG emissions from the city (without industry and without primary sector) / Total population of city
Context	GHG emissions
Does the indicator measure direct impacts (i.e. reduction of greenhouse gas emissions)?	Yes
If so, to which area of emission is the co-benefit linked?	Building, mobility, energy and waste management
Does the indicator measure indirect impacts (i.e. co-benefits)?	Yes
If so, what co-benefit does it measure?	All those associated with decarbonisation
Can the indicator be used to monitor impact pathways?	Yes
If so, for which impact pathway?	All
Is the indicator captured by existing CDP/SCIS/Mayors' Covenant platforms?	[yes/no]
Additional information	
Planned data source	Municipal
Planned availability	Yes
Planned collection interval	2020 - 2030
References	
Results describing the indicator	
Other indicator systems using this indicator	

B-3.2: Indicator metadata	
Indicator name	Municipal GHG emissions per inhabitant per year
Indicator unit	t CO_{2e} /inhab/yr
Definition	GHG emissions for the city. Includes emissions from all sectors
Calculation method	Total greenhouse gas emissions for the city / Total population of the city
Context	GHG emissions
Does the indicator measure direct impacts (i.e. reduction of greenhouse gas emissions)?	Yes
If so, to which area of emission is the co-benefit linked?	All
Does the indicator measure indirect impacts (i.e. co-benefits)?	Yes
If so, what co-benefit does it measure?	All those associated with decarbonisation
Can the indicator be used to monitor impact pathways?	Yes
If so, for which impact pathway?	All
Is the indicator captured by existing CDP/SCIS/Mayors' Covenant platforms?	[yes/no]
Additional information	
Planned data source	Municipal
Planned availability	Yes
Planned collection interval	2020 - 2030
References	
Results describing the indicator	
Other indicator systems using this indicator	

B-3.2: Indicator metadata	
Indicator name	City Council GHG emissions per inhabitant per year
Indicator unit	t CO_{2e} /inhab/yr
Definition	GHG emissions from municipal activity
Calculation method	GHG emissions for the city / Total population for the city
Context	GHG emissions
Does the indicator measure direct impacts (i.e. reduction of greenhouse gas emissions)?	Yes
If so, to which area of emission is the co-benefit linked?	Emissions of the municipal administration
Does the indicator measure indirect impacts (i.e. co-benefits)?	Yes
If so, what co-benefit does it measure?	All those associated with decarbonisation
Can the indicator be used to monitor impact pathways?	Yes
If so, for which impact pathway?	All
Is the indicator captured by existing CDP/SCIS/Mayors' Covenant platforms?	[yes/no]
Additional information	
Planned data source	Municipal
Planned availability	Yes
Planned collection interval	2020 - 2030
References	
Results describing the indicator	
Other indicator systems using this indicator	

PART C - ENABLING CLIMATE NEUTRALITY BY 2030

MODULE C-1

Organisation and Governance Innovation Interventions

C.1.1: Organisational and Governance Interventions					
Action number and name	**Description**	**Responsible person and entity/body**	**Stakeholders**	**Impact**	**Co-benefits**
Vitoria-Gasteiz 2030 Strategy - Urban Agenda of Vitoria-Gasteiz	Vitoria-Gasteiz Urban Agenda 2030, as a sustainability strategy for the city, aligned with the Sustainable Development Goals (SDGs).	City Hall Urban Agenda 2030 Political Facilitation Committee	All political areas, as well as all departments, autonomous agencies and municipal companies.	Alignment with the SDGs and the Climate Neutrality and Adaptation Missions Encouraging internal mainstreaming.	The cross-cutting nature of this new governance structure of the City Strategy brings it into line with the strategic priorities and interventions set out in this Climate City Contract and with the portfolio of transformative actions. It also encourages use of existing governance structures without the need to create new ones. It also encourages multi-level and multi-stakeholder organisation.
Sustainable Energy and Climate Action Plan (SECAP VG 2030)	SECAP governance structure, aligned with compliance with the Basque Energy Sustainability Law.	City Hall Commission on Energy Sustainability (CSE)	Councillors of the Local Government Board (JGL) and Energy Action Units (UAE) of the different departments, autonomous agencies and municipal companies.	Promoting sustainable energy policies. Encouraging internal mainstreaming.	
Multi-level platform / Multi-stakeholder space Missions	A space to contrast strategies, cooperate in the implementation and creation of actions, and share experiences in relation to the goal of achieving climate neutrality. All relevant stakeholders in the city will be represented on this platform.	AVG - Department of Territory and Climate Action.	All relevant actors in the city in the following areas: Institutional (technical and political) Education sector (universities, educational centres, technology centres, etc.) Economic and financial sector Social sector (organised and unorganised citizens) Cultural sector Media City Networks	Promoting climate neutrality and climate change adaptation policies in all sectors of society.	Materialisation of the multi-stakeholder collaboration required by the Mission. The platform will share both climate neutrality and climate change adaptation issues.
Participatory budgeting	Vitoria-Gasteiz Hobetuz: this is a participatory programme through which citizens directly decide how part of the municipal budget is spent.	AVG- Department of Citizen Participation, Transparency and Civic Centres	Citizenship	Involving citizens directly in decision-making in a fully transparent manner and with public monitoring of projects.	Increasing the culture of citizen participation.
Climate Neutrality Office	An office to bring together, coordinate and provide technical support to the political governance, technical-administrative and socio-economic governance, academia and media of	AVG - Department of Territory and Climate Action.	Technical-administrative and socio-economic governance.	Create the focal point of the Mission, the body that all citizens, organisations, stakeholders, etc., are aware of	Shared and comprehensive vision of climate change issues.

C.1.1: Organisational and Governance Interventions					
Action number and name	**Description**	**Responsible person and entity/body**	**Stakeholders**	**Impact**	**Co-benefits**
	the two European Climate Missions - the Climate Neutral and Smart Cities Mission and the Climate Change Adaptation Mission.			as the coordinating element of the Missions in which the city is taking part.	
Ensanche 21: Vitoria-Gasteiz Renovation Society	Transformation of the public company Ensanche 21 Zabalgunea into a renovation agent for the city.	Ensanche 21 Zabalgunea	Ensanche 21 Zabalgunea, Vitoria-Gasteiz City Council, citizens, economic, business and financial agents related to the urban eco-rehabilitation sector.	Proactive search for solutions to manage initiatives in cooperation with citizens, strengthening its work as an interlocutor between guilds and banks, as well as a renovation agent or delegated promoter.	By refocusing an agency formerly dedicated to urban expansion you are coordinating efforts to drive the vision you have set out in the Mission objectives. Greater proximity to citizens and improved administration-administration relations.
Pairing: University Research and Technology Centres with Vitoria-Gasteiz	Agreement with the San Sebastian School of Architecture (ETSASS) for specific subjects. Agreements with the Alava Technology Park, the CIC Energigune and the BC3 (Basque Centre for Climate Change).	Vitoria-Gasteiz City Council CEA Universities Technology Centres Research Centres	Vitoria-Gasteiz City Council CEA Universities Technology Centres Research Centres	Partnership agreements encourage joint work on initiatives aimed at promoting sustainability and achieving climate neutrality and adaptation to climate change as soon as possible.	Getting the entire research community involved in the objectives of the Mission.
Mission Communication Strategy	Design and development of a Mission Communication Strategy.	Vitoria-Gasteiz City Council with the support of the NetZeroCities Platforms, citiES2030. Department of Territory and Climate Action, Sustainability, Climate and Energy Service, and Department of the Mayor's Office, Protocol and Institutional Communication Service.	Vitoria-Gasteiz City Council NetZeroCities, citiES2030. Department of Territory and Climate Action, Sustainability, Climate and Energy Service, and Department of the Mayor's Office, Protocol and Institutional Communication Service. Citizenship	Involvement of the entire socio-economic, citizen and media fabric of the city with the objective of the Mission. Raising awareness among citizens and agents regarding climate change.	Increasing society's knowledge and awareness of everything related to sustainability, climate change and resilience. Knowledge of the position of Vitoria-Gasteiz in the European framework of cities. Boosting pride in the city among the citizens of Vitoria-Gasteiz.

C-1.2: Description of organisational and governance interventions

Strategy Vitoria-Gasteiz 2030 - Urban Agenda of Vitoria-Gasteiz

The Vitoria-Gasteiz 2030 Strategy - Vitoria-Gasteiz Urban Agenda is the comprehensive and participatory roadmap to transform the city with a view to 2030, to implement the SDGs and their goals by means of 98 actions. It has been drawn up on the basis of a process shared between public agents (political groups and municipal technical departments) and private agents (other public institutions, economic and social agents, associated and non-associated citizens, etc.). Five strategic challenges have been determined, including making Vitoria-Gasteiz green, climate-neutral, resilient and self-sufficient, and four transversal levers, which affect many dimensions: technical-political, public-private, citizens, and global challenges. The city's participation in the two European climate change challenges (Climate Mission and Adaptation Mission) is expressly included in the last of these dimensions. This guarantees that the public policies developed in this decade will focus on climate neutrality and improve resilience, in line with VG's two European missions. Likewise, the internal governance structure created to draft and develop the strategy, both political (political committee) and technical (cross-cutting teams formed by the departments, autonomous agencies and municipal public companies) enables the Mission to be developed transversely, as well as multilevel governance between various levels of public administrations. The Vitoria-Gasteiz 2030 Urban Agenda Strategy includes developing a Circularity Strategy for Vitoria-Gasteiz 2030 and the Industry Plan, which sets in motion the Industry Roundtable. This is a space where business associations, companies located in various industrial areas and the city council can work together. It currently supports industrial digitalisation, diversification of activity, and the transition to a circular and decarbonised economy. It aspires to become a public-private governance space following the objectives and general governance of the mission.

Sustainable Climate and Energy Action Plan (SECAP VG 2030)

The Vitoria-Gasteiz Sustainable Energy Action and Climate Plan (PACES 2030) is the strategic starting framework and part of the roadmap for the city's action on energy transition and climate change mitigation. The SECAP has established governance, which on the one hand is aligned with compliance in terms of energy sustainability regulations, and on the other hand, will form an integral part of the general governance determined for the mission.

Mission-oriented participatory budgeting

The Vitoria-Gasteiz Hobetuz programme is a direct tool for participation and management of the city, through which citizens can suggest and decide how part of the municipal budgets might be spent. For the 2022-2023 edition, 3 million euros have been earmarked of which €200,000 has been set aside for proposals made by children. The programme is committed to active citizenship that participates and takes co-responsibility for improvements to the city, understanding that citizen participation in public management is key. The programme is inspired by principles (inclusivity, influence, gender, collaboration, learning, etc.) that should explicitly drive progress towards decarbonisation of the city, as well as intensifying the value of the Mission's weighting criteria to select projects.

Multi-level platform / Multi-stakeholder space missions

A space created to contrast strategies, cooperate in implementation and creation of actions, and share experiences in relation to the climate neutrality goal. This platform will represent all the city's relevant stakeholders and will bring together the distributed leadership necessary to make the Mission a success. It will enable stakeholders from various sectors to coordinate their management with the mission's objective in their respective economic, business, social, research, communication, sectors.

It will help us build ownership of the process with all stakeholders in our partnership, develop new avenues for collaboration, drive and rewarding engagement, and connect, share and celebrate our successes with other communities. This will give us a common goal with a shared vision of Vitoria-Gasteiz for the year 2030.

Work is currently underway to develop the concept, structure, objectives and tasks of this space/platform and support will be sought from NetZeroCities and citiES2030 and all others deemed necessary to include elements of innovation.

Climate Neutrality Office

A climate neutrality office has been planned in coordination with the Multi-Level-Multi-Stakeholder Platform.

This office is conceived as a space to bring together, coordinate and provide technical support to political, technical-administrative and socio-economic governance of the two European Climate Missions - the Climate-Neutral and Smart Cities Mission and the Climate Change Adaptation Mission. It aims to become the focal point of the Missions, the body to which all stakeholders will turn in the first instance and from which they will be called upon to participate. Work is currently underway to develop the concept, structure, objectives and tasks of this office and support will be sought from NetZeroCities and citiES2030 and any others deemed necessary to include aspects of innovation.

Ensanche 21: Renovation Society of Vitoria-Gasteiz

Work is currently underway to transform the Ensanche 21 Zabalgunea S.A. Municipal Company from an organisation which managed municipal land in the expansion areas of the city into a company whose main objective is renovation, regeneration and urban renewal. It should become a rehabilitation agent for the city. It should also proactively search for solutions to manage initiatives in cooperation with citizens, strengthening its work as an interlocutor between guilds and banks, as well as a renovation agent or delegated promoter. This company is currently coordinating the Urban Regeneration Project in the Zaramaga neighbourhood.

University- VG/Technology and Research Centres-VG pairings

We are currently working on an agreement with the San Sebastian School of Architecture so that students can work on subjects related to the Urban Strategy and renovation urban planning with real examples from the city of Vitoria-Gasteiz. In the future, these agreements are expected to be extended to other faculties and universities such as the University of the Basque Country and the University of Mondragón. Agreements are also in the pipeline with the Alava Technology Park or with the CIC Energigune or BC3.

Mission communication strategy

Work is required on designing a communication strategy and the development and implementation of the different actions and/or associated communication campaigns. In this strategy, the following concepts will have to be considered:

- What key messages do we want to convey?
- What does the Climate City Contract mean for your city?
- What do we find difficult to communicate?

Considering our target audience, the language to be used, innovation in communication actions, etc. Both for the design of the Strategy and for the development of the different actions, the necessary support and aid will be sought both within and outside the framework of the Mission.

MODULE C-2

Social and Other Innovation Interventions

C.2.1: Social innovation and other interventions					
Action number and name	**Description**	**Responsible person and entity/body**	**Stakeholders**	**Impact**	**Co-benefits**
Public Procurement of Innovation for the circular economy and climate neutrality	Development of mission-oriented innovation projects through Public Procurement of Innovation (PPI)	Recruitment Service Municipal Departments involved in the Mission	Municipal departments involved in the Mission Companies	Development of new innovative products and services with an impact on climate mission	
Green Deal Community	Community of companies and business organisations working on more sustainable and climate-neutral business models.	Department of Economic Promotion, Employment, Trade and Tourism	Municipal departments Companies Industry Roundtable	Development of business models and best practices with impact on climate mission	
Municipal innovation grants	Developing innovation projects through a mission-oriented grant strategy	Department of Finance	Departments, autonomous agencies and municipal companies involved in the mission Private organisations Organised and unorganised citizenship	Development of new innovative products and services with an impact on climate mission	
Vitoria-Gasteiz living lab	Promote public-private collaboration to help companies with innovative technological products or circular economy solutions to experiment and implement them in real environments in the city.	Department of Economic Promotion, Employment, Trade and Tourism	Departments, autonomous agencies and municipal companies involved in the mission Private organisations Organised and unorganised citizenship	Facilitating local companies to test, monitor and test their technological developments.	Positioning the city as a benchmark for innovation
Energy Communities in rural entities	Development of community bioenergy projects in rural areas of the municipality for decarbonisation.	Department of Territory and Climate Action	Municipal departments Rural councils Citizenship	Unlocking bioenergy potential in rural communities	
Basaldea organic farming project	A set of actions aimed at promoting agriculture with a lower environmental and climate impact in line with the mission.	Department of Economic Promotion, Employment, Trade and Tourism	Municipal departments Organic farmers Slow Food Araba Organic consumer associations Citizenship	Cultural, behavioural and habit changes in food production and consumption	

C.2.1: Social innovation and other interventions					
Action number and name	**Description**	**Responsible person and entity/body**	**Stakeholders**	**Impact**	**Co-benefits**
Collaboration with social innovation centres	Incorporate the social innovation approach to reinforce the community dimension of the mission-driven experimentation portfolio.	Department of Territory and Climate Action	Lehendakari Agirre Center (LAC) Municipal departments Climate Neutrality Office	Social Innovation	

C-2.2: Description of social and other innovation actions

Public Procurement of Innovation for the circular economy and climate neutrality

Public procurement of innovation represents an invaluable tool with which to articulate and shape the challenges of climate neutrality by 2030, strengthening collaboration from public-private capital required to transform the city economically and socially. Public demand is the means to develop new innovative products and services with an impact on the climate mission to solve pressing public needs. Some areas which might be impacted are related to sustainable mobility and last-mile logistics for goods, shared self-consumption and distributed energy resources, as well as decarbonisation and increasing the resilience of the existing housing stock.

Green Deal Community

"Green Deal" is a community of companies and business organisations in Vitoria-Gasteiz that are working on the transition to business models that require fewer natural resources and have a lower climate impact, where large and small companies share common spaces and all companies have something to contribute. More than five hundred companies, organisations and business entities have demonstrated their commitment by joining the Green Deal Community and incorporating good sustainable practices in their day-to-day work to make their business more efficient and open up new markets. The member companies bring sustainable environmental management measures into their day-to-day operations, encouraging better business development. These measures can be applied in very different aspects, grouped into 4 main areas: (1) circular economy (fewer materials in production, and less waste generated, working on eco-design and taking into account the life cycle of products), (2) carbon footprint (changes in habits to lower energy consumption, changing the mode of travel and optimising routes to receive supplies or deliver products, plus using renewable energies), (3) water footprint (introduction of water-saving technologies or modification of consumption habits), and (4) environmental awareness (actions to disseminate care for the environment by bringing more agents into sustainability).

The Mission can be an additional stimulus to make progress in policies by working from a community-of-interest perspective on the decarbonisation of our city.

Municipal innovation grants

Calls for subsidies and grants aimed at developing activities or programmes complementary to municipal ventures, specified annually in a Strategic Subsidy Plan. The current strategic lines of action included in the Strategic Subsidy Plan will be completed with a strategic line of action aimed at innovation projects oriented towards the Climate Mission for cities, offering financial support to innovative projects related to building refurbishment, energy communities, energy efficiency, sustainable mobility, circular economy, etc. The selection criteria for the projects to be subsidised will be related to the potential impact of the project on climate neutrality, private investment to complement the subsidy, as well as the project's capacity for social involvement and mobilisation. Likewise, the other municipal subsidy lines will incorporate mission-oriented criteria to define their respective projects.

Vitoria-Gasteiz laboratory city

The programme aims to promote public-private collaboration to facilitate companies with innovative technological products or circular economy solutions to experiment and implement them in real environments in the city. The aims would be to help local companies test, monitor and trial their technological development to validate or improve it, achieving optimal performance under real conditions, promote development of their own technology and make it known to potential customers, as well as attract companies and external knowledge to test their innovations in the city, to the benefit of local companies. The aim would be to update the programme, especially favouring innovative products or solutions with direct implications for the Mission, both in terms of decarbonisation and digitalisation.

Energy Communities in rural entities

This is a strategy to develop circular renewable energy projects with citizen participation and empowerment through setting up an Energy Community in rural entities, in which the aim is to achieve the circularity of the biomass resource, as it will come from the environment, using it for thermal purposes in the entity itself (heating and hot water), and also promoting local employment. Local energy generation will be a step forward

in its energy sovereignty towards an equitable energy system promoted by citizens.
A pilot project is being developed by Aberasturi Council, intended to be scaled up to as many Councils in the city area as possible, which would have a clear impact on the Mission, with potential replication of the technical, economic and participatory model. The innovative nature of the project lies, on the one hand, in the participatory process of the residents, who have been involved from the beginning of the project, and on the other hand, in the origin of the biomass, as district heating installations are usually fed by forest or agricultural biomass, but not both.

Ecological Agriculture Project / Basaldea Agri-ecological Business Centre
The Basaldea project comprises a set of actions targeting changes in a series of cultural, behavioural and consumer habits, (1) The Basaldea Agri-ecological Business Centre is an agri-incubator generating new ecological agriculture farms aimed at entrepreneurs who wish to develop this kind of project, making land, equipment and common infrastructures available to them. (2) Training in ecological agriculture, aimed at people with training or experience in the agricultural sector or with an interest in working professionally in organic farming and with the possibility of becoming self-employed on land belonging to the Basaldea Centre. Training in bio-intensive regenerative agriculture, programmes working with the Slow Food movement, etc. (3) Fixed distribution and marketing channel for organic products, with participation from the city's Central Market.

Collaboration with social innovation centres (Agirre Lehendakari Center)
Experiences developed so far indicate that the main challenge when implementing European missions is to connect socio-ecological transition processes with social and community dynamics. Despite all the efforts made in this respect, the communities where the Missions take place do not tend to embrace them.
Incorporating a social innovation approach will help us to reinforce the community dimension of the urban mission-driven experimentation portfolio through (1) exhaustive mapping of the whole ecosystem so we can visualise and reinforce unusual connections in real time, (2) segmentation of the different ways of perceiving the need and impact of the mission, (3) generating new multi-stakeholder deliberative spaces with a community approach (sensemaking), and (4) establishing a co-creation and prototyping system with a portfolio approach that can be adaptively managed. As an extra, social innovation tools offer us the possibility of incorporating a communication perspective and evolutionary (developmental) evaluation into the process.
It will seek to establish a participatory innovation approach through a partnership agreement with the Agirre Lendakari Center (ACL) to bring in a mission-focused project to implement deep listening with stakeholders and the wider community as a tool to increase capacity to identify their needs, come to better and more reliable complex decisions, drive their commitments to formulate their own solutions and take responsibility for their follow-up, and change perceptions about the scale, scope and speed of implementing changes to achieve neutrality.

MODULE C-3

Financing of Action Portfolio (*Economic Case*)

The investment costs presented throughout the Vitoria-Gasteiz Climate City Contract are based on the Economic Model for decarbonisation of cities. This model estimates the incremental cost of all decarbonisation actions in the sectors it covers rather than their total cost. Thus, the incremental cost is the additional cost of a specific decarbonisation action compared to the cost of a reference scenario, such as the Business as Usual (BAU) scenario for the year 2030, in which current trends and policies are assumed to remain unchanged. Therefore, the cost presented throughout the document is an incremental cost, not a total cost, reflecting the additional cost required to carry out the decarbonisation actions of the action plan in the sectors covered by the Economic Model.

C-3.1: Summary of actions with related costs									
Issuing sub-sector	**Sub-sector number**		**Responsible entity**	**Start and end date**	***Issuing sector***	**Impact**			**Estimated total cost (MEUR - NPV 2020-2030)**
						GHG reduction (kt CO_{2e})	**Operational cost savings (MEUR - NPV 2020-2050)**	**Co-benefits (MEUR - NPV 2020-2050)**	
Lowering the need for motorised transport	33%	Reduction	AVG	2020-2030	Transport	32	€380	€97	€-
Modal shift: shift to public and non-motorised transport	18%	Reduction of private vehicle passenger-km	AVG	2020-2030	Transport	8	€45	€83	€(24)
Shared transport	11%	Due to increased transport efficiency	AVG+	2020-2030	Transport	5	€75	€21	€-
Car electrification	35%	Of the electrified fleet to 2040	AVG+	2020-2040	Transport	10	€1	€5	€(17)
Bus electrification	100%	Of the electrified fleet	AVG	2020-2030	Transport	9	€3	€3	€(4)
Optimisation of freight transport logistics	10%	Reduction of travel distance through route optimisation	AVG +	2020-2030	Transport	21	€98	€25	€-
Electrification of trucks	90%	Trucks <3.5 t to 2040	AVG +	2020-2030	Transport	9	€11	€5	€(27)
	40%	Trucks >3.5 t to 2040		2020-2031	Transport				
Building renovations	4.0%	Of all existing buildings / year	AVG+	2020-2030	Buildings and heating	32	€360	€28	€(537)
New near-zero energy buildings	20%	Percentage of new buildings constructed according to maximum energy efficiency standards	AVG+	2020-2030	Buildings and heating	1	€16	€1	€(22)

C-3.1: Summary of actions with related costs									
Issuing sub-sector	**Sub-sector number**		**Responsible entity**	**Start and end date**	***Issuing sector***	**Impact**			**Estimated total cost (MEUR - NPV 2020-2030)**
						GHG reduction (kt CO 2e)	**Operational cost savings (MEUR - NPV 2020-2050)**	**Co-benefits (MEUR - NPV 2020-2050)**	
Efficient lighting and appliances	100%	Of light fittings retrofitted between 2020 and 2030 (40% efficiency improvements)	AVG+	2020-2030	Buildings and heating	24	€307	€2	€(149)
Low-emission heat generation (decarbonisation of heating)	60%	Percentage of electric local heating	AVG+	2020-2030	Buildings and heating	143	€111	€75	€(472)
Low-emission electricity generation	85%	Part of the current electricity production from fossil fuels replaced by renewable energies	AVG+	2020-2030	Electric	275	€253	€-	€(158)
Waste recycling			AVG	2020-2030	Waste	18	€3	€1	€1
Total						**588**	**€1,663**	**€347**	**€(1,407)**
AVG+: City Council with the collaboration of the corresponding sector´s stakeholders.									

OUTLOOK AND NEXT STEPS

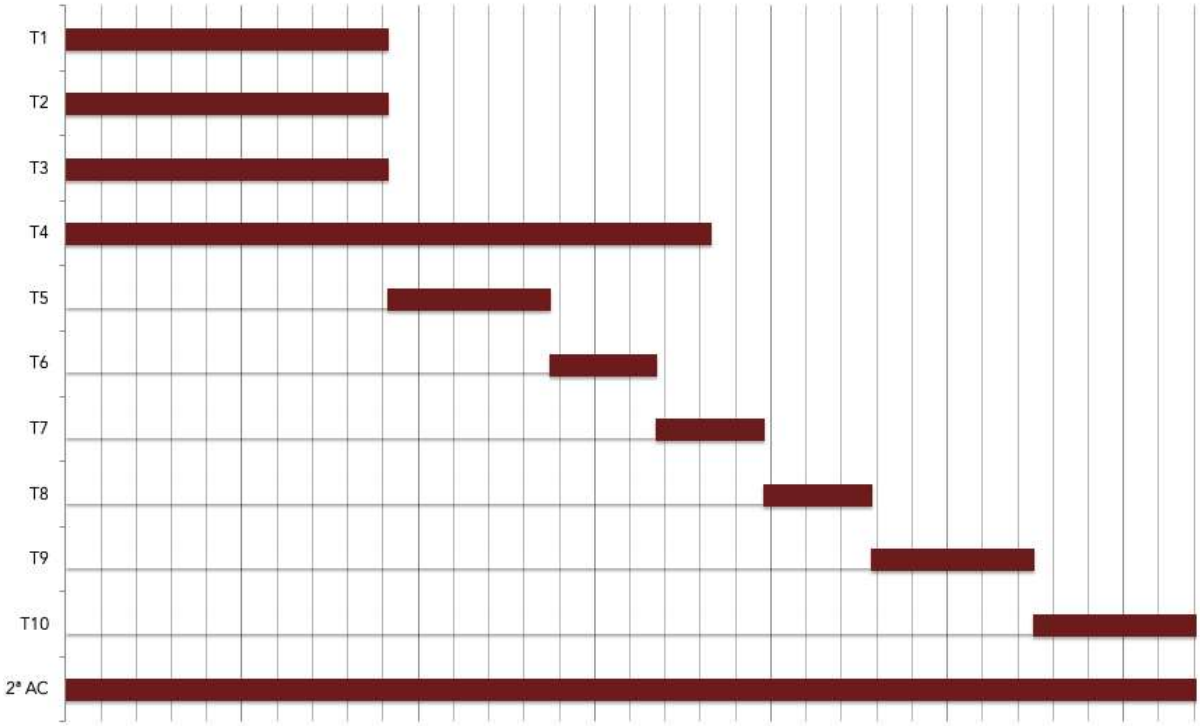
As part of an iterative continuous improvement process, the Climate City Contracts will be reviewed within the next 2 years. Here are the next steps and plans in the process of reviewing and improving the Action Plan as part of Vitoria-Gasteiz´s Climate City Contract.

- **Improving and expanding the Economic Model**: this refers to the review and adjustment of the current economic model with the aim of broadening its scope and refining its analysis so that it reflects the ambition of the climate action plan even more accurately and its associated capital and investment needs.
- **Specification of the initiatives and projects included in the Action Plan**: this involves identifying and defining in detail the different actions, initiatives and projects that form part of the Action Plan, to ensure their financing and adequate implementation.
- **Broaden interdepartmental collaboration to drive implementation of the Climate Investment Plan**: this refers to the need to promote greater collaboration between the various departments and work areas involved in implementing the Climate Investment Plan, to improve their coordination and increase their effectiveness.
- **Obtain specific commitments from various entities within the framework of the Climate City Contract (Accession Documents)**: the aim is to obtain a formal commitment from various entities and organisations within the Climate City Contract framework, through signing Accession Documents, to support and work towards the objectives and goals set out in the Contract.
- **Development of monitoring and evaluation plan for the Climate City Contracts: Key CCC indicators, data collection method and monitoring reporting requirements**: this refers to developing a detailed plan for monitoring and evaluation of the Climate City Contract, identifying the key indicators to be measured, the data collection method and the monitoring reporting requirements.
- **Implementation of the monitoring and evaluation process, including sending out the plan to participating cities and guidance on data collection and reporting**: this is the implementation of the monitoring and evaluation plan, including communication of the plan to participating actors and entities and guidance on how to collect data and prepare the related monitoring reports.
- **Collection of baseline data on the key indicators identified in the M&E plan**: refers to the collection of baseline data on the key indicators identified in the M&E plan, to establish a basis for comparison for future measurement and analysis.
- **Analysis of reference indicators and degree of progress in achieving emission reduction targets**: the aim is to analyse the benchmark indicators and assess the degree of progress in achieving the emission reduction targets set out in the Climate City Contract.
- **Review of Vitoria-Gasteiz´s Climate City Contract based on the results of the evaluation process, including assessment of the effectiveness of the monitoring and evaluation process and identification of areas for improvement**: refers to the review of the Climate City Contract based on the results of the evaluation process.

The timelines below are a guideline and may be modified and adapted as deemed necessary, keeping the maximum timeframe for a 2nd version of the Climate City Contract to 2 years.

T	Tasks	Start date	Final date
T1	Improve and extend the Economic Model	M1	M6
T2	Specify initiatives and projects included in the Action Plan	M1	M6
T3	Expand interdepartmental collaboration to drive implementation of the Climate Investment Plan.	M1	M6
T4	Obtain specific commitments from various entities under the Climate City Contract (Accession Documents).	M1	M12
T5	Develop monitoring and evaluation plan for the Climate City Contracts: Key CCC indicators, data collection method and monitoring reporting requirements	M6	M9
T6	Implement the monitoring and evaluation process, including sending the plan to participating cities and guidance on data collection and reporting.	M9	M11
T7	Gather baseline data on key indicators identified in the monitoring and evaluation plan	M11	M13
T8	Analyse baseline indicators and move forward towards emission reduction targets	M11	M13
T9	Review Vitoria-Gasteiz´s Climate City Contract based on the results of the evaluation process, including assessing the effectiveness of the monitoring and evaluation process and identifying areas for improvement.	M13	M16
T10	Draft the 2nd version of the Climate City Contracts based on the results of the assessment and monitoring process	M16	M24
2nd CCC	**2nd version of Vitoria-Gasteiz´s Climate City Contract**	**M1**	**M24**

Timeline graph



Vitoria-Gasteiz

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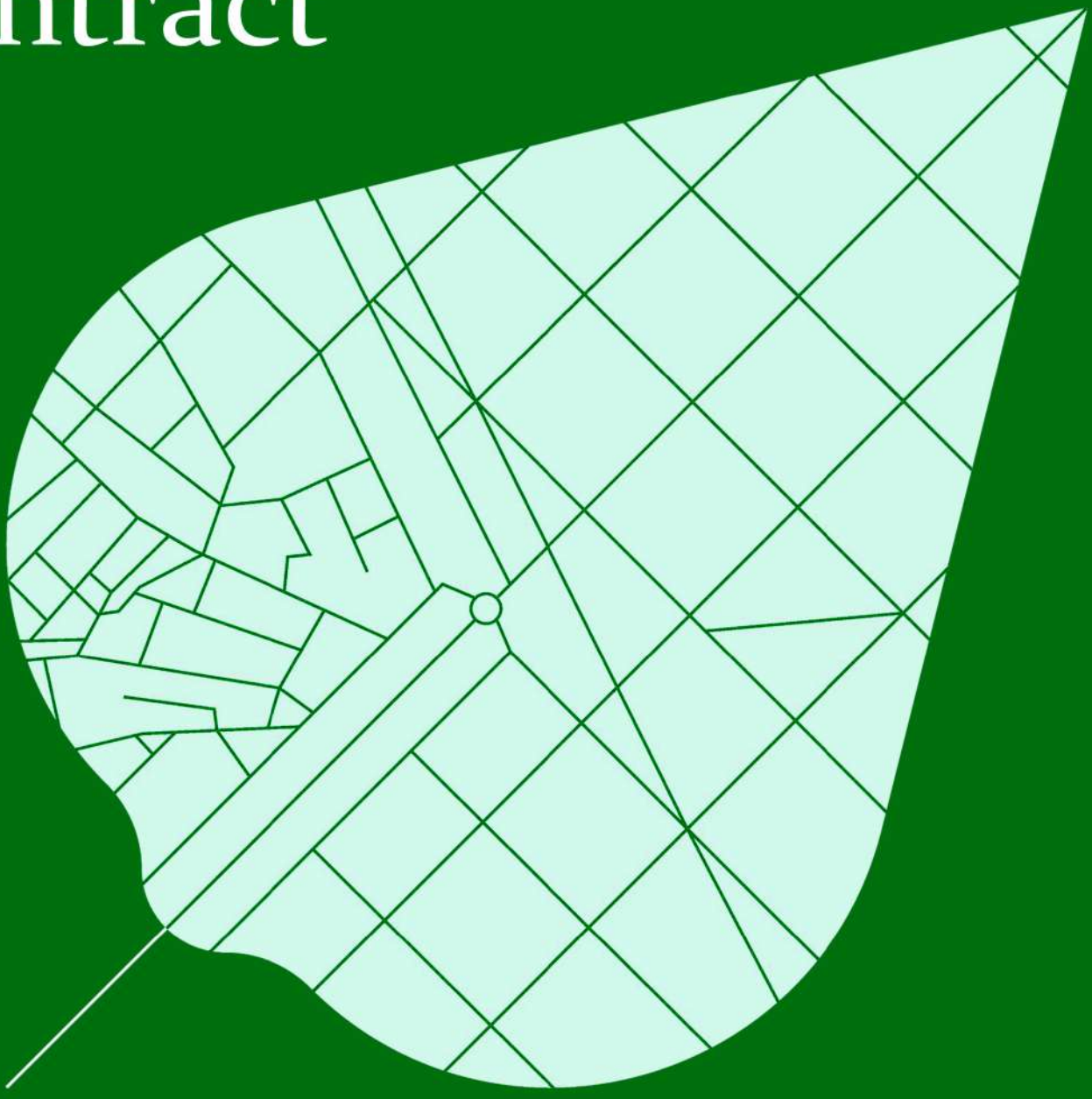
Vitoria-Gasteiz Climate City Contract



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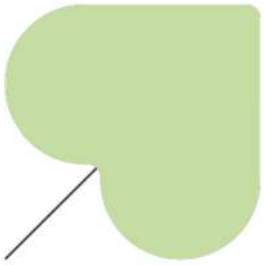

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Introduction

At a crucial moment in the global response to climate-related emergencies, the European Union has committed to lead on climate action and has set the targets and legislation to achieve this. Member States must reduce their emissions by at least 55% by 2030 and achieve climate neutrality by mid-century. In this context, cities have a key role to play, both in accelerating the decarbonisation process and in ensuring a fair and equitable transformation that contributes to the well-being of society as a whole.

Despite occupying only about 3% of the earth's surface, cities generate more than 70% of greenhouse gas emissions and consume more than 65% of global energy. It is also important that they act as experimental, innovative hubs in the transition to climate neutrality.

The EU Mission "100 Climate Neutral and Smart Cities by 2030" aims to support city transformation to accelerate implementation of the Paris Agreement, and to become both a catalyst and driver to implement the European Green Deal, demonstrating that climate neutrality by 2050 is a real possibility.

In Spain, the Government of Spain and the City Councils of Barcelona, Madrid, Seville and Valencia signed the "Climate Neutral Cities in 2030" declaration on 8 September 2021, to boost to the commitments and initiatives from the signatory cities and demonstrate government support for these cities´ transformation to achieve climate neutrality and become more resilience. Following in this wake, the City Councils of Soria, Valladolid, Vitoria-Gasteiz and Zaragoza signed the Declaration on 13 December.

Furthermore, on 15 September 2021, the senate Plenary approved a motion urging the Government to promote climate neutrality of cities within the framework of the European Cities Mission. The motion recognised cities´ fundamental role in response to the climate emergency and highlights the opportunity to accelerate the necessary and cross-cutting changes to make cities climate neutral by 2030. It also appreciates that the different territorial administrations promote and facilitate Spanish cities´ climate neutrality by joining the Cities Mission and developing transformation projects.

In this regard, on 25 November 2021, the Cities Mission launched a call for expression of interest addressed to European cities with more than 50,000 inhabitants interested in taking part. Of the 377 that applied, 100 European cities were selected from the EU-27, including the Spanish cities of Barcelona, Madrid, Seville, Valencia, Valladolid, Vitoria-Gasteiz and Zaragoza.

The Mission Implementation Plan foresees that each of the 100 selected cities will develop a City Climate Neutral Contract adapted to its own circumstances, through a co-creation process working closely with the whole of civil society and all citizens, explaining the strategy to deploy and monitor innovative and digital solutions that target climate neutrality; and enabling other cities to follow suit by 2050. This document is therefore a clear political commitment, not only to the European Commission and national, regional and local authorities, but also to citizens. It includes a comprehensive climate action plan in sectors such as energy, buildings, waste management and transport, plus the corresponding investment plans.

This document thereby responds to the requirements of the European Cities Mission. It has been drafted by the city, with participation from citizens and other public and private agents and sets out plans to achieve climate neutrality. The document particularly recognises that the Mission cannot succeed without a solid anchor in the local community to garner broad support. It therefore involves civil society, youth groups, cultural institutions and creative sectors, foundations, local media, small and medium-sized enterprises, private industry, trade unions, academia and research, and the public sector, among others, in their respective roles as decision-makers, users, consumers, producers and owners.

Furthermore, the document integrates the city's own qualities and heritage, which ensure not only the local dimension of this transition to climate neutrality, but also makes it inclusive, in line with the New European Bauhaus values (*beautiful, sustainable, together*). It fosters a sense of belonging and ownership by the city's inhabitants and professional agents, showing the relevance of their unique contribution and that compliance with this document will bring about better quality of life and a better environment for all.

On the other hand, the document comes within the framework of an iterative process, as a document that will be subject to monitoring and updating, by signing addenda and other adhesion documents, thus bringing together other agents for the city to achieve the goal of climate neutrality. In particular, the commitments set out document may be expanded or updated to contribute effectively to achieving climate neutrality in the city.

The document is divided into several parts: one concerning the cities' commitment to achieve climate neutrality in the city; another explains institutional support and coordination of the different public administrations; another part outlines its monitoring and updating; and a final part comprise the annexes corresponding to the Climate Action Plan, the City Climate Investment Plan and the City Stakeholders and Commitments, which follow the models developed by NetZeroCities[1].

1 The NetZeroCities project is part of the Horizon 2020 Research and Innovation Programme and provides the necessary technical, regulatory and financial assistance to the cities of the European Cities Mission https://netzerocities.eu/the-nzc-project/).

Commitment of the city of Vitoria-Gasteiz to climate neutrality

Introduction

The city of Vitoria-Gasteiz aspires to be climate neutral by 2030, a very ambitious goal based on a long-held conviction that sustainability is the way to improve people's lives without compromising the needs of future generations and without renouncing economic and social development and environmental protection. In this context, Vitoria-Gasteiz also aspires to become a resilient, metabolically-efficient and biodiverse municipality by 2030. It intends to foster a vibrant and committed social fabric in a safe, healthy and inclusive environment, within an attractive and prosperous economic system (a challenge of our Vitoria-Gasteiz 2030 Urban Agenda (AU2030VG).

Vitoria-Gasteiz' has been on a constant, consistent road to sustainability since the 1990s. A pathway has been backed up by a series **of climate policies and strategies.** Some of the most important milestones along the way illustrate and sum up the city´s entire pathway:

+ **1995:** The **Charter of European Sustainable Cities and Towns** (Aalborg Charter) was signed, making it the first Spanish city to do so.

+ **1998: Approval of the Vitoria-Gasteiz Local Agenda 21**. A very important turning point for environmental policies and subsequently social and economic issues. The first action plans were drawn up (2003-2007 and 2010-2014), with a framework of sustainability indicators to monitor action plans (annual monitoring reports issued between 1998 and 2020).

+ **2008:** Joining the Covenant of Mayors for Climate and Energy, Europe (Covenant of Mayors), and commitment to European sustainability policies.

+ **2010: Approval of the Plan to Combat Climate Change for Vitoria-Gasteiz (2010-2020).** This first sustainable energy action plan (SEAP) set a Greenhouse Gas (GHG) emissions reduction target of 25.7% on the base year (2006). Finally, thanks to successful implementation of the plan, GHG emissions were reduced by 31.4% in 2020.

+ **2012: European Green Capital**, recognition of the joint effort and commitment to the environment from the citizens and the various urban agents.

+ **2016**: **Basque Declaration - New roadmap for European cities and towns**: creating productive, sustainable and resilient municipalities for a liveable and inclusive Europe.

+ **2019:** Vitoria-Gasteiz receives the **Global Green City Award** (from the Global Forum on Human Settlements) – further recognition of the collective effort and commitment made to the environment by our citizens and our city.

+ **2020: Renewal of the Commitment to the Covenant of Mayors**. This commitment was demonstrated by preparing and approving the Sustainable Energy and Climate Action Plan for Vitoria-Gasteiz (SECAP 2030) with a time frame of 2030.

  SECAP 2030 is the main tool used to organise all action on energy transition, mitigation and adaptation to climate change in the city. It comprise two interrelated action plans: the Integrated Energy Transition Action Plan (PATEI) and the Climate Change Adaptation Action Plan (PAACC).

  In the field of energy transition and emission mitigation, the SECAP2030 sets the following targets for 2030 compared to the base year (2006):

  - Reduce energy consumption by 29%.
  - Reduce direct GHG emissions by 61.5%.
  - Reduce net GHG emissions by 83.1%.

  It also set specific adaptation goals for Vitoria-Gasteiz, defined according to the results of the impact chains evaluated in the risk diagnosis on the city as a whole:

  - *Droughts on rural areas*: reduce the risk associated with farming, due to the possible effects of climate change, by strengthening farmers´ ability to adapt.
  - *River flooding on the urban environment*: to reduce the flooding associated with extreme events and improve the ecological status of water bodies and the sustainable use of this resource.
  - *Pluvial flooding on the urban environment*: guaranteeing the city´territorial and urban functionality by increasing the resilience of drainage infrastructures and sustainable territorial planning.
  - *Heat waves on the health of the population*: ensuring thermal comfort and access to comfort zones during extreme temperature episodes.
  - *Extreme winds on urban, rural and population health*: improving knowledge on climate change scenarios of extreme winds.

  In total, the SECAP 2030 includes 100 actions in 13 strategic areas for energy transition, mitigation and adaptation to climate change in the municipality.

+ **2020-2022: Development of the Vitoria-Gasteiz 2030 Urban Agenda.** Work has been carried out since 2020 on a new municipal governance framework and a methodology to design and assess urban policies, with the aim of developing, approving and implementing the Vitoria-Gasteiz 2030 Urban Agenda (AU2030VG) and its corresponding action plan, which was approved on 9 September 2022, with the aim of making progress on the Sustainable Development Goals (SDGs) both locally and globally.

  Strong political leadership is vital for policies and strategies to be successful in terms of sustainability, climate change, and most importantly, continuity over time. Therefore, political consensus has been prioritised by Vitoria-Gasteiz over the years. The following agreements demonstrate the city's unanimous political commitment to sustainability and fighting climate change.

+ **2019: Approval by the Plenary Session of the Vitoria-Gasteiz City Council (27-09-2019) of the Motion** of the Ekologistak Martxan Araba Association, on declaring a climate emergency in which the Vitoria-Gasteiz City Council undertook to determine the political commitments, regulations and resources necessary to reduce GHG emissions to reach a net zero balance by no later than 2040 and if possible before 2035.

+ **2021: Institutional declaration in favour of the** United Nations (UN) **2030 Agenda.** The Plenary of the City Council of Vitoria-Gasteiz made an institutional declaration in favour of the 2030 Agenda and the SDGs, approved in the XII plenary session of the Spanish Federation of Municipalities and Provinces (FEMP), and adherence to the Network of Local Entities to develop the SDGs outlined by the UN 2030 Agenda.

+ **2022: Institutional Declaration of Support for decarbonisation of the city of Vitoria-Gasteiz within the framework of the European Missions on climate-neutral and smart cities and adaptation to climate change.** The Vitoria-Gasteiz Urban Agenda 2030 incorporates the European missions on Smart and Climate-Neutral Cities and Adaptation to Climate Change as levers for environmental, economic and social transformation, leaving no one behind.

  With this institutional declaration, all the political groups supported Vitoria-Gasteiz´s participation in the European Missions on 100 Smart and Climate Neutral Cities in 2030 and Adaptation to Climate Change. Furthermore, they recognised this participation "as a shared responsibility" which they undertook "to address and respond with the leadership, means and resources it deserves".
  These missions are an opportunity to accelerate the processes of decarbonisation and local adaptation to climate change that Vitoria-Gasteiz has already planned, using the

Vitoria-Gasteiz Sustainable Climate and Energy Action Plan (SECAPVG2030) as its main tool. This declaration committed all political groups to revising the SECAP 2030, "as stated in the plan itself, aiming for climate neutrality by 2030". In fact, the first Climate Action Plan attached to this initial iteration of City Climate Contract already incorporates actions that will accelerate decarbonisation from the emissions reduction target set in the SECAP 2030 (61.5%) to 82%.

+ **2022: Institutional Declaration of Support for the Vitoria-Gasteiz 2030 Urban Agenda (AU2030VG) - Vitoria-Gasteiz 2030 Strategy.** Through an Institutional Declaration, the Municipal Corporation of Vitoria-Gasteiz unanimously showed its support for the Vitoria-Gasteiz 2030 Urban Agenda (AU2030VG) "to meet the Sustainable Development Goals in the city and its neighbouring towns so that no one is left behind in a sustainable environment where we continue to work as a society".

However, the goal of climate neutrality is not only a goal for the city, but also a challenge at regional, state, European and global level. This explains Vitoria-Gasteiz´s long-term active participation **in regional, national, European and international networks with the intention of sharing, applying and transferring its experiences and the lessons it has learned**, thus extending the city´s current and future activities in terms of sustainability and climate neutrality, highlighting the following:

+ Alava Alliance for Sustainable Development 2030
+ EUDEL: Association of Basque Municipalities
+ Udalsarea2030: Basque Network of Sustainable Municipalities
+ FEMP: Spanish Federation of Municipalities and Provinces
+ Spanish Network of Cities for Climate
+ ENERAGEN: Association of Spanish Energy Management Agencies
+ RECI: Spanish Network of Intelligent Cities
+ ICLEI: Local Governments for Sustainability
+ CoM: Covenant of European and Global Mayors for Climate and Energy,
+ WHO: European Health Cities Network
+ Green Capital Cities Network
+ European Health Cities Network
+ CIVITAS Forum Network: Sustainable and Smart Mobility
+ City Protocol
+ Biophilic Cities
+ WHO Global Network of Age-Friendly Cities and Communities
+ SDG Cities: UN-Habitat Initiative

The European Commission´s launch of the Climate-Neutral and Smart Cities Mission by 2030, called the Cities Mission, in November 2021, represents a unique opportunity for the city of Vitoria-Gasteiz.

Thus, **the city's motivation** for joining the Mission is as follows:

> ***Vitoria-Gasteiz*** *wants to continue moving towards climate neutrality and remain at the forefront of these policies, as it has demonstrated over the past three decades. Furthermore, our city is convinced that the Cities Mission is the very tool that will help us to achieve these objectives. This Mission will accelerate the processes that our city already has in place, scale up previous pilot projects to cover the whole city, and close the remaining gap to attain climate neutrality by 2030 through innovative ideas and transformative projects. All of this will be followed up in subsequent iterations of this City Climate Contract. This Mission also guarantees that Vitoria-Gasteiz will act as a centre for experimentation and innovation regarding new solutions that can then be scaled and transferred to other Basque, Spanish and European cities.*

All of this aims to improve the lives of our citizens without leaving anyone behind and contribute locally to achieving the 17 Sustainable Development Goals.

All our action on climate change neutrality and adaptation is and will be aligned with European, estate and regional policies and regulations on energy transition, the circular economy and fighting climate change.

At European level, the European Commission has launched the NetZeroCities Platform as a core tool to support and assist European cities, providing them with the backing and solutions they need to break down current structural, institutional and cultural barriers to achieve climate neutrality by 2030.

Nationally, the **National Platform of Climate Neutral Cities (citiES2030)** provides us with support, coordination, support and a shared space where the 7 Spanish cities in the mission, plus other cities in Spain, can work together, share and contrast experiences and knowledge, to achieve our goal of climate neutrality by 2030.
With all this support, and more, we would like to work on all those transversal levers where innovation is key to achieving our objectives, such as governance, regulatory sandboxes, data or social participation.

Goal: Climate neutrality by 2030

The city of Vitoria-Gasteiz aspires to be climate neutral by 2030. To this end, it is working from a Climate and Sustainable Energy Action Plan (SECAP 2030).

For 2030, in relation to the base year of 2006, the Comprehensive Energy Transition Plan (PATEI 2021-2030), within the SECAP 2030 for Vitoria-Gasteiz sets a direct GHG emissions reduction target of 61.5% (Scope 1 and 2) and a net GHG emissions reduction target of 83%. This plan also intends that the entire municipality should achieve climate neutrality by 2050.

The urban sectors associated with these GHG emissions are:

+ residential, tertiary and institutional construction
+ internal mobility of passengers and goods (both private and public)
+ provision of municipal services (public lighting, management of the water cycle, waste management, etc.)
+ the primary sector (agriculture and livestock).

Secondly, SECAP 2030, and the climate ambition associated with it, have been reviewed based on the new target set by the Mission and the results of the **Economic Model** carried out by Material Economics, firstly to reveal the existing gaps in the transport, buildings and heating, electricity and waste sectors, to achieve climate neutrality in 2030 for the whole city of Vitoria-Gasteiz, and secondly to plan, develop and accelerate the actions required to achieve that neutrality.

All this work is the beginning of the iterative construction process of construction that is taking place within the framework of the City Climate Contract. In other words, all the results obtained in this first iteration will be reviewed and updated in subsequent iterations.

This following conclusions were drawn from this first version:

According to the results of the **Economic Model**, in the Business As Usual (BAU) scenario, the projection of GHG emissions to 2030 is practically the same level of emissions as produced in 2019 (which has been considered the reference year for the economic model).

The sectors with the greatest impact on overall emissions are electricity generation (35%) and building and the built environment (25%), followed by internal mobility (16%) and waste management (2%). However, there are two sectors not included in the model (industry and

primary sector) which account for the remaining 22%. All these sectors will be included in the city's climate neutrality target.

The **Economic Model** resulting from the implementation of the Climate Action Plan proposed in this first iteration of our City Climate Contract estimates a reduction of GHG emissions in scopes 1 and 2 for the 4 sectors considered in it (and scope 3 for waste management) of 82%, with significant reductions in all of them. The sectors outside the model will also have to reduce their emissions by the same percentage, in order to achieve an overall reduction of 82%.

The Economic Model uses a Business As Usual (BAU2030) scenario as a reference to estimate the potential emission reductions through various decarbonisation strategies and actions. The BAU2030 scenario provides a baseline against which to compare the cost-effectiveness of these decarbonisation strategies and actions. This Economic Model estimates the incremental cost of the set of decarbonisation actions in the sectors addressed by the model. By comparing the costs and benefits of the different decarbonisation pathways against this scenario, the Economic Model can estimate the potential ROI (Return on Investment) of each strategy and action, identifying the most cost-effective pathways to attain the emission reduction target while ensuring the best cost-benefit ratio.

At this point, it is relevant to note that, although a high initial investment is required in 2030, the accumulated savings and co-benefits in 2050 represent an estimated return on investment (ROI) of 43% (not to mention the increase in property values for the owners of the buildings).
In addition, the industrial sector and other sectors not included in the levers considered by the Economic Model will work closely with the institutions on their own decarbonisation. The aim is to achieve a reduction in these sectors that will bring down figures across all emitting sectors to 82% by 2030.

The entire city of Vitoria-Gasteiz aspires to achieve zero net GHG emissions by 2030 with estimated residual emissions for that year of less than 20%. Therefore, this Climate Contract and the associated Action Plans will be reviewed every two years to meet this goal.

For residual emissions, a CO_2 absorption strategy is envisaged, broadly based on Nature Based Solutions (NBS), reforestation and regenerative agriculture.

In addition, successive iterations of the Climate Contract will consider seeking help from platforms such as NetZeroCities, CitiES2030 and others to address Scope 3 emissions.

Achieving this climate neutrality goal by 2030 is not a stand-alone objective but connected to a series of other objectives and co-benefits for the city, such as improving citizens´ health,

improving air quality, promoting sustainable growth, creating green jobs, improving public spaces and housing comfort, reducing the use of raw materials and waste generation, minimising environmental impacts and climate change and halting the loss of biodiversity.

This makes it possible to identify the people, groups and agents who will benefit from the Mission, such as:

+ Residents of the municipality and visitors
+ Children, young people and the elderly
+ Collectives with health problems (respiratory, cardiovascular, mental health, etc.).
+ Businesses and entrepreneurs related to the green economy and ecological transition
+ Farmers, producers and local trade
+ Active and sustainable mobility user groups

Other sectors that can benefit include ecosystem services, the health system, employment, the productive fabric and the city's innovation ecosystem.

It goes without saying that this must be a **fair transition**, attempting to improve the lives of our citizens **without leaving anyone behind** and contributing from the local level to achieving the 17 Sustainable Development Goals.

Thus, **the concept of climate neutrality** targeted by the city of Vitoria-Gasteiz within the framework of the Cities Mission of Cities goes beyond reducing our GHG emissions. It is an objective that implies systemic transformation towards environmental, economic and social sustainability.

Moreover, the current climate emergency situation does not give us any room to deviate from these objectives; climate change is a reality that is just dawning on us as we suffer the consequences in our cities. The energy crisis resulting from the complicated international situation has a direct impact on our citizens´ finances. The urgency of all this obliges us to set ambitious objectives and not to deviate from the our deadlines.

Finally, I would like to insist that **Vitoria-Gasteiz** aspires to be a carbon neutral, resilient and metabolically efficient and biodiverse city by 2030, and this has been endorsed by the entire Municipal Council through these aforementioned Institutional Declarations:

+ Institutional Declaration of support for the decarbonisation of the municipality of Vitoria-Gasteiz in the framework of the European Missions of carbon neutral cities and adaptation to climate change[2].
+ Statement of support for the Vitoria-Gasteiz 2030 Urban Agenda (AU2030VG) - Vitoria-Gasteiz 2030 Strategy[3].

2 https://www.vitoria-gasteiz.org/docs/wb021/contenidosEstaticos/adjuntos/es/66/54/96654.pdf

3 https://www.vitoria-gasteiz.org/docs/wb021/contenidosEstaticos/adjuntos/es/66/53/96653.pdf

Key priorities and strategic interventions

Based on the SECAP 2030 data and the results of the Economic Modelling, conducted by Material Economics for the first iteration in the development framework of this Climate City Contract, six key priorities or strategies have been identified that must be urgently addressed to meet the climate neutrality goal:

1. Comprehensive regeneration and eco-rehabilitation of the city's neighbourhoods
2. Energy generation from renewable sources and promoting Energy Communities.
3. Mobility and sustainable transport
4. Circularity of the local economic system
5. Green Infrastructure and carbon sinks
6. Intelligent data-driven management.

Within these 6 key strategies, and in this first iteration, some lines of action have already been implemented or planned in the SECAP 2030 which, due to the new climate neutrality goal, should not only be implemented immediately, but also accelerated. Other lines will require additional innovative actions and financing models, seeking necessary alliances and collaborations with the different local agents involved, as well as with agents from other territorial areas. Through the successive iterations of this Climate Contract, these lines of action will have to be contrasted, modified and updated.

Some cross-cutting priority elements are also common to all lines such as:

+ Governance
+ Regulation
+ Funding
+ Social communication

where a systematic review will be necessary for successive iterations of this Climate City Contract, to be used as an efficient lever for the targeted systemic change.
These strategic lines are explained below with some specific examples of action areas, which should be accelerated in same cases and new innovative actions included in others.

Comprehensive regeneration and eco-rehabilitation of neighbourhoods

The aim is to carry out urban, social and environmental regeneration with the following objectives:

+ Improve the energy efficiency of residential and tertiary buildings, including publicly-owned buildings.
+ Improve universal accessibility and sustainable mobility.
+ Connecting households to a high-speed digital network.
+ Connect households and commercial premises to a city-wide decarbonised district heating network.
+ Improve public space with the introduction of green infrastructure (and other actions, e.g. accessibility).
+ Generate low- or zero-emission urban developments and building sites.

Two Mission pilot projects were launched immediately:

+ **The urban regeneration, eco-rehabilitation and vitalisation project for the Zaramaga neighbourhood (AD)** in Vitoria-Gasteiz, which incorporates all the aforementioned action areas in a single neighbourhood, with resident-participation from the outset. Depending on the results, the project will be scaled up to other neighbourhoods in the city with similar characteristics. This project includes work to be carried out in Vitoria-Gasteiz in the multi-city project: Multi-stakeholder innovative & systemic solutions for urban regeneration: Spain, which has been selected by the Mission's NetZeroCities Pilot Cities Programme (NZC-H2020-202209).

+ **The Ensanche - Eco-Entrepreneurial District project** to transform the city centre and work together to recover its identity through Vitoria-Gasteiz´s three main strengths: our identity as a sustainable and ecologically responsible city, our hallmark as an industrial and service city and our great potential as a university and knowledge city. This project has been co-created with the citizens and conceived according to the New European Bauhaus values.

Success of these pilot projects could really accelerate the city´s progress towards climate neutrality.

Within the scope of action targeting a decarbonised thermal network for the city as a whole, a process has been initiated to assess the technical and economic-financial feasibility, as well as its social acceptance, as a preliminary phase to subsequently define and develop it. Future iterations of this Climate Contract will specify the final model of this decarbonised network.

Generation of energy from renewable sources and promotion of Energy Communities

This strategic line of work includes the following areas of action:

+ Public, private and public-private and public-private thermal and electrical power generation.

+ Deployment of renewable energy generation projects in municipal buildings and public spaces, mainly based on photovoltaic solar energy, targeting self-consumption.

+ Installation of photovoltaic solar energy in residential, tertiary and industrial buildings.

+ Promoting the creation of Energy Communities in both urban and rural areas.

+ Tackling fuel poverty through the developing programmes and support schemes for vulnerable groups and encouraging the use of alternative financing systems (e.g. through energy communities or crowdfunding).

We are currently working on a community energy initiative as co-creation with citizens regarding an energy project in the rural area of the municipality to define a renewable thermal energy community that uses local resources (forestry and agricultural waste). Once this project has been consolidated, it will be scalable to other rural areas of the municipality. All of this will be incorporated into successive iterations of this Climate City Contract.

Mobility and sustainable transport

The aim is to transform and decarbonise the city's mobility system through:

+ producing a new sustainable mobility model which promotes active mobility and an electrified public transport system.
+ developing the superblocks model and implementing traffic calming zones
+ extending pedestrian and cycling networks, and expanding the public transport network
+ reformulating the regulated parking zone
+ promoting electrification of mobility (private and public, passenger and freight)
+ promoting the use of efficient driving techniques.

Ongoing and future interventions will help to reinforce this change. The implementation of eBRT (electric Bus Rapid Transit) in 2022 has saved 1,520 tonnes of CO_{2e}/year. The extension of the tramway in 2023 will also make a significant reduction in the use of private vehicles. Other interventions include creating a low emission zone (LEZ) in the city centre (2023), installing deterrent systems for private vehicles (charging systems, etc.) (2023) and the constructing a last-mile hub for cargo bikes (2024).

In turn, the Economic Model has identified that improving urban logistics is a key factor in both its contribution to GHG emissions and its potential to reduce GHG emissions. Many factors prevent good efficiency and sustainability in last-mile logistics, including lower average

speeds, more stops and vehicle inactivity time, longer idling time, unsuccessful deliveries, collection of parcels for return, etc., which ultimately lead to higher fuel consumption and emissions.

In this sense, to accelerate this strategic line, the Climate Action Plan will incorporate collaborative initiatives with the Logistics Sector to optimise it, such as making routes more efficient by using advanced route optimisation software, capable of considerably reducing delivery times, changing the fleet of combustion vehicles for emission-free vehicles, whether electric or conventional bicycles, or even in the future for new modes of delivery (drones or autonomous delivery vehicles). Centralising deliveries at common access points such as ticket offices or warehouses could be another action to significantly reduce the number of trips by motorised vehicles. A service open to the public is already being implemented in the city centre as part of a pilot project to deliver parcels to smart mailboxes managed by a bicycle delivery cooperative.

Circularity of the local economic system

Circularity of the production system

The objective is to progressively modify the urban economic-productive system from the currently prevailing linear economic model to a circular model, which keeps materials in circulation indefinitely, obtains the highest possible value before and after disposal, and prioritises the sustainable use of resources through the transition to renewable energies, among other possibilities.

+ **Boosting the circular transition of economic sector:** transition of sectors to the circular economy will involve a change in the production model for the industry and services sectors, based on servitisation, eco-design, introducing new reused materials, minimising consumption of raw materials, etc. The sectors will have two major drivers: legislation and consumption. The capacity to adapt to this new scenario will not be the same for all companies and sectors. The public sector will seek to support other sectors to avoid gaps forming between them, and the necessary public-private alliances will be sought to develop the new economic model.

+ **Promoting circular entrepreneurship:** the productive transformation that will bring about transition for the economy from a linear model to a more circular model will be an opportunity to generate new businesses. The municipal actions to be promoted will include supporting these new business models, both in terms of entrepreneurship and intra-entrepreneurship.

+ **New Basque Circular Hub headquarters in Vitoria-Gasteiz:** the Basque Circular Hubs are a benchmark in southern Europe, unique due to the type of services they offer, encompassing market foresight, advanced training, trend analysis and generating expert knowledge in the field of the circular economy. This new Hub in Vitoria-Gasteiz will promote the development of technical circular economy projects in Alava´s business world with the participation from young professionals trained in the Hub itself. In addition, companies in Alava will have young specialists with the right knowledge to bring the circular economy into their processes. The services provided by the Hub will match the Mission´s goals.

Municipal waste management

The Urban Waste Prevention and Management Plan (2016-2030) consider the current situation, and a series of objectives and measures has been planned to prevent generating waste (reduction of more than 15% in weight on 2016), preparing the generated waste for reuse and recycling (reaching at least 60% of total waste by weight), and the reduction of waste sent to landfill (below 15%), to substantially improve current ratios and significantly help reduce emissions. Within this framework, a number of projects are already underway:

+ New bulky waste collection service with a circular economy approach, provided by a third sector company that collects, sorts, prepares for reuse and markets the bulky waste collected, and offers a door-to-door collection. The service targets efficient collection, keeping material on the public highway for as little time as possible, to avoid deterioration, and to improve reuse and recycling rates. In addition, a shop has been set up selling decoration, furniture, toys and other reused products at affordable prices, obtained through this service and which have passed quality standards for sale.

+ The Konpondu project seeks to promote a change in the current consumption model of citizens in an attempt to extend the useful life of products through the local repair sector. Konpondu is a search engine for repair shops on the municipal website, featuring professionals who repair consumer products ranging from large and small household appliances to clothing and footwear, image and sound equipment, furniture, etc., as well as information and documentation related to repair and the circular economy.

+ Reutilizagune is a service for individuals regarding the reuse and second life of electrical and electronic appliances, household appliances, toys, furniture, computer, sports and children's equipment in use and books, novels, encyclopaedias or textbooks, all in good condition. These appliances and household goods are stored for a full week before being uploaded to the corresponding website.

+ Collection of used vegetable oil by containerisation on the public highway.

+ Recycling of organic matter through:
    - a new collection system with individualised access which identifies users by reading their citizen card and electronic chip.
    - home and community composting. The Composta (Reduce, Recycle, Compost) project provides citizens with the necessary resources to carry out composting (materials, training, follow-up visits and continuous advice via telephone and email).

Vitoria-Gasteiz Circularity Strategy 2030

A local Circularity Strategy 2030 and an initial action plan with a 4-years time frame (2023-2026) are currently being developed. Its planning scope covers materials and waste linked in one way or another to all sectors of the city (imports, exports, generation, etc.), and its general objective is to make local economic activities more competitive in terms of the circular economy. Initially, 3 lines of action have been established: *(1) Promotion and development of the circular industrial, construction, services, commerce and hotel and catering sectors; (2) Promotion of a responsible consumption model among citizens; (3) Development of efficient waste collection and management services that allow high levels of recycling.*

This strategy will match the Mission´s goals, and may lead to tackling the reduction of Scope-3 emissions, an area in which Vitoria-Gasteiz would also like to set an example.

There are two particularly relevant areas in the Mission, insofar as they are related to proposed or future actions to reduce and/or absorb emissions in the Climate Action Plan: on the one hand, construction and specially renovation of buildings and the circularity of the materials to be used, and on the other, measures to be applied in the primary sector in relation to food.

+ **Circularity of building materials.** Building renovation or other refurbishment and new construction is a key opportunity to apply circular economy and climate neutrality criteria in the construction sector: products that last longer, use of fewer natural resources, resource/material efficiency, design for maximum efficiency over the building lifetime, redesign of the building to be more modular and repairable, reuse of building materials, introduction of recycled or renewable materials, planning of demolitions, proper waste management, improved machinery and equipment maintenance, optimisation of construction operations, limitation of distance for transport of materials, creation of zero-emission construction sites by bringing in construction machinery powered by renewable energies, etc. At the moment, there are no contrasted data available on the metabolism of these materials in the municipality, so one line of work in the coming months will consist of obtaining, validating and

contracting them. This work will seek support by drawing on the experience of the NetZeroCities consortium members.

+ **Vitoria-Gasteiz Agri-food Strategy.** The Vitoria-Gasteiz Agri-Food Strategy and its action plan (2017-2025) are going to be re-issued to provide a strategy built on a shared vision by the key agents from the production and distribution sector, plus an intersectoral and multi-actor action plan.

  The assessment of "food flows in the city of VG" (2021) revealed that more than 95% of the unprocessed food consumed in the city came from outside the Basque Country. A similar situation applies to all materials. These plans estimate indirect emissions and implement actions that contribute to decarbonising both systems. Some of the studies-projects being developed to activate this systemic change are the aforementioned report on food flows in the city (2021-22), which aims to quantify the total quantities of unprocessed food consumed in the city and the proportion (%) of local products, the results of which will establish the baseline of the CO_2 footprint for its food system. At the same time, a study is being carried out to quantify carbon capture by the city's farmland. Finally, the Municipal Organic Farmers' Seedbed (Basaldea) has been set up, which aims to attract and settle new organic farmers in the city, helping to diversify and increase local production as well as providing a solution to the flooding problem in the area.

Green Infrastructure and carbon sinks

Vitoria-Gasteiz´s Urban Green Infrastructure is made up of the Green Belt, parks and gardens, tree-lined streets and squares, green sports areas, urban orchards, streams, central reservations and roundabouts, vacant plots and other less conventional elements such as façades and green roofs. The **Vitoria-Gasteiz Urban Green Infrastructure Strategy** is being developed to improve the ecological, environmental and social functions of urban green spaces. This plan defines a system of main spaces on which to act, and a set of projects and interventions aiming to increase urban biodiversity (through naturalisation actions, creation of ponds and bird shelters...), improve water drainage (by laying permeable paving, creating rain gardens...), improve fixation of CO_2 and other atmospheric pollutants (through planting trees...), etc. Currently, the estimated carbon sequestration capacity of urban trees is 2,295 tonnes of CO_2/year. In addition, this green infrastructure will be promoted as an element that generates urban climate refuges, incorporating shade, evo-transpiration and permeable surfaces into this structure´s planning and design.

- **The Green Belt** (827 ha) is a semi-natural area comprising forests, rivers, wetlands, meadows, woodlands and hedgerows. It surrounds the urban centre and brings nature

closer to the city. It comprises more than 265,000 trees, a total leaf area of 12.11 km^2 and more than 12,000 tonnes of carbon stored in the plant tissue. In addition, its estimated carbon sequestration capacity is 3,168 tonnes of CO_2/year and removes 564 tonnes of air pollution (PM) (i-tree methodology, 2019). The aim is to incorporate new degraded areas and/or areas with great potential to act as carbon sinks in the peri-urban environment into the multifunctional Green Belt project, by generating new parks and agri-ecological spaces (Larragorri, Mendebaldea, Idiazabal Project, etc.).

- Reissue of the **Urban Tree Master Plan** with the aim of highlighting the benefits of trees and turning them into a living heritage element of the city as well as a tool for the thermal regulation of public spaces and a carbon sink. This plan will include the appropriate planning, design and management strategies to achieve the objectives of the previous point.

- **Naturalisation of school playgrounds**. The project seeks to turn outdoor spaces of educational centres to adapt them to climate change and incorporate them into the urban green infrastructure system, with the active participation of the educational community, incorporating the perspectives of coeducation, inclusion and sustainability as principles for intervention. It is specified in the following objectives:

    - Transform school playgrounds through Nature-Based Solutions (NBS) for climate change adaptation in the context of climate policies and the green infrastructure strategy.
    - Create more inclusive spaces and opportunities to implement comprehensive educational projects in the Vitoria-Gasteiz Educating City context.
    - Improve social cohesion through community and social action projects and promote citizen participation.
    - As public service facilities, schools are an excellent laboratory for implementing innovative solutions and for disseminating and spreading practices to fight climate change and embrace the Mission's objectives.

+ **Naturalisation of the Old Town:** project to take steps to naturalise the Old Town, firstly, by identifying spaces on public roads and in public and private heritage buildings where it is feasible to intervene and, secondly, by proposing green infrastructure interventions in the identified spaces. Possible actions include the planting of trees, climbing plants, landscaping, installation of flowerpots and planters, etc. The project aims to co-create and test mechanisms to enable public-private management of green infrastructure in public spaces.

All this will require coordination and civil responsibility mechanisms to enable public-private management of green infrastructure in the city's public space, allowing proliferation and diversification of green infrastructure on a micro scale by empowering citizens as key players in contributing to its generation and maintenance. One example of this is the Olarizu Botanical Garden, which has become a benchmark in botanical dissemination and the potential of green infrastructure as a driving force to activate citizens.

Data-driven smart management

The Vitoria-Gasteiz City Council is committed to promoting smart data-based management by facilitating data sharing and transparency. To this end, it will use the city´s Geographic Information System and the digital model built within the framework of the European SmartEnCity project for the city´s Coronación neighbourhood. It will promote its use, extension and adaptation to enable the use of these digital tools in decision-making focussing on achieving climate neutrality.

In the future, the ultimate goal would be to set up a **Digital Twin of Vitoria-Gasteiz**, a virtual replica of the main elements of the municipality and its critical infrastructure, connected to databases and sensors, which will allow the analysis, modelling, simulation and prediction of scenarios, and develop hypotheses to support better decision-making processes.

It will also be necessary to work on a new innovative model of data governance and management, by setting up a "Data Office".

Principles and process

Climate change is currently one of the humanity´s main challenges, as a global problem that must nevertheless be fought on a local scale. Moving towards a climate-neutral city at an accelerated pace is also a huge challenge that must be embraced by all urban agents and citizens.

As the closest level of government to the city, local governments have the powers to address the urban areas that cause the most significant environmental impacts, affecting aspects as wide-ranging as urban planning, mobility, environmental protection, consumption, etc., therefore playing a key role in the energy transition and in the fight to reduce the vulnerability to the different consequences of climate change in their territory.

Building a solid mandate to govern the process that will lead us towards climate neutrality, requires collaboration and coordination between the different areas of the Vitoria-Gasteiz City Council (AVG) and other institutional levels, as well as the intense collaboration and **participation of citizens** and different stakeholders in a collaborative co-creation process. To achieve effective participation, commitment and co-responsibility of all of them, seeking intersectionality, collaboration and support from entities with experience in developing social innovation processes will be promoted with the aim of breaking down current barriers in the city's participatory processes. Likewise, intervention strategies will be developed for **vulnerable groups** that promote participatory awareness-raising (awareness of individual and social rights and duties in the light of climate change), training, learning and developing values, skills and necessary abilities (active listening, free expression, cooperation and teamwork), and that promote spaces and opportunities for participation (working in their networks and organisations) for these groups.

This will enable a robust, inclusive and systemic governance system to be set up, based on co-creation and focused on implementation and experimentation. A system based on **multi-stakeholder collaboration, multi-level governance and distributed leadership.**

The **multi-stakeholder collaboration** will involve creating a Multi-level and Multi-stakeholder Platform. A space created to contrast strategies, cooperate in the implementation and creation of actions, and share experiences in relation to the goal of achieving climate neutrality. All relevant agents in the city will be represented on this platform, referencing the quintuple helix model (public sector, private sector, academia and technology centres, civil society and citizenship and media) encompassing at least the following areas:

+ Institutional at all administrative levels (technical and political)

+ Economic and financial sector
+ Universities, Technological Centres, Innovation Centres
+ Social sector (organised and unorganised citizens)
+ Education, culture, sports, etc.
+ Media
+ City Networks

Successive iterations of this Climate City Contract, which will be issued at least every two years, and by seeking the necessary support to implement it, will develop how the various stakeholders will interact and engage with the platform.

Multilevel governance is reflected in this system including all institutional levels that are directly or indirectly involved. In our case, this political governance must firstly integrate the regional (Basque Government), provincial (County Council of Alava) and local (Vitoria-Gasteiz City Council and representation of the Municipal Councils) institutions, and secondly, all public entities with a purpose related to the climate neutrality goal in some way. Finally, all this political governance must also be connected with institutions at state and European level in order to give the project the character of a global challenge that it possesses.

The **first iteration of the Climate City Contract** propose to work on models of Documents of Adhesion to the Climate Contract, with the different levels of institutional governance (Autonomous Community, Historical Territory, etc.) and with the different agents from the relevant sectors of the municipality (economic, financial, educational, research centres, media, cultural, society, etc.), where both parties compile and sign their commitments to the Mission´s objective. The models are currently being worked on and future iterations intend to incorporate adhesions from the various stakeholders. This will require working on new innovative forms of participation and governance, for which we will have to seek the necessary support and assistance.

Furthermore, this important challenge posed by the Cities Mission requires **distributed leadership**. This leadership is organised internally through the structure created to develop and implement the Vitoria-Gasteiz 2030 Urban Agenda (AU2030VG), as the European Missions in which the city participates are among the cross-cutting levers to be activated to meet the challenges it sets for the city.

Firstly, the AVG has assigned the responsibility for the technical coordination of the developing the SECAP 2030 and the AU2030VG to the Sustainability, Climate and Energy Service, which is part of the Territory and Climate Action Department. This service is therefore responsible for promoting the Covenant of Mayors for Climate and Energy and the AU2030VG with the 17 Sustainable Development Goals in the city. It will also work as an interdepartmental facilitator,

acting as a municipal node to deploy the AU2030VG and the SECAP 2030, ensuring an adequate and integrated governance scheme.

To generate the systemic change that will drive the Mission, this coordination is supported by the Climate Missions Coordination Team, made up of people from various municipal departments, municipal companies and political coordination, all this integrated and supported by the Area of Territory and Climate Action, Mobility and Public Space. From this team, governance is distributed into 5 main areas of leadership: general coordination, technical-administrative, networks, agents and policy.

This whole new governance system will be responsible for developing successive iterations of the Climate City Contract, co-designing the portfolio of new and/or accelerating actions and interventions that will be needed to achieve climate neutrality by 2030. These iterations will be one of the tools used to monitor the proposed actions and interventions and the impacts generated through their implementation.

Externally, to coordinate distributed leadership, a space/platform will be set up through which the different agents involved will be able to lead and coordinate their respective sectors of action. Support, collaboration and coordination will be sought to set up and develop this space/platform with the Spanish Cities Platform for Climate Neutrality CitiES2030 and with the NetZeroCities Mission platform.

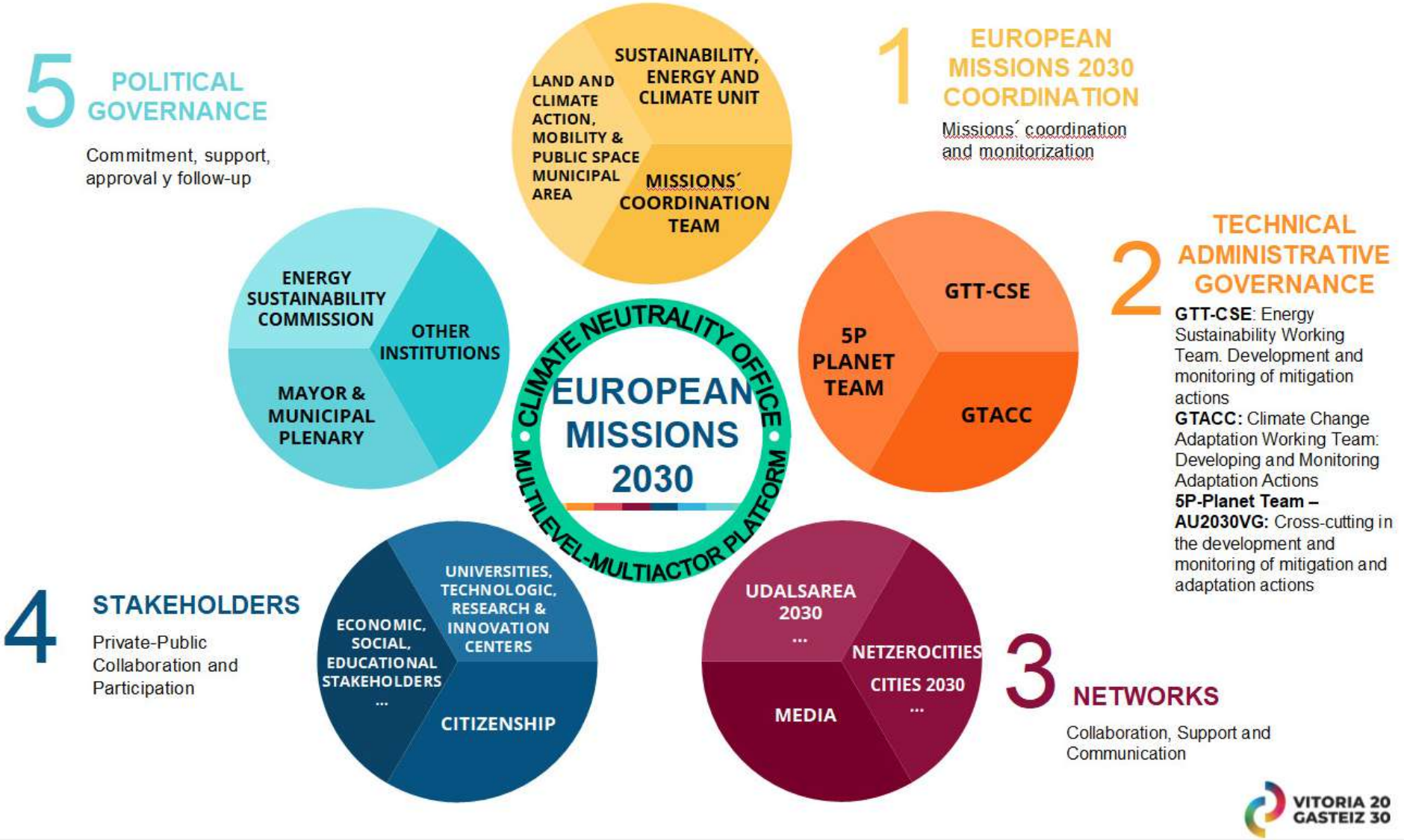
Finally, the need to set up a **Climate Neutrality Office** is being assessed, to bring together, coordinate and offer technical support to both the political governance and the technical-administrative and socio-economic governance of the two European Climate Missions -Climate Neutral and Smart Cities Mission and Adaptation to Climate Change Mission- in which Vitoria-Gasteiz is participating. All this will be developed and specified in the successive iterations of the Climate City Contract.

Implementation of this new governance system will give us a common goal with a shared vision of the Vitoria-Gasteiz we want in 2030. It will help us to generate ownership of the process among all stakeholders in our society, develop new avenues for collaboration, drive and reward commitments and connect, share and celebrate our successes with other communities.

The complete diagram of the governance initially designed for the Vitoria-Gasteiz City Mission and Adaptation Mission is shown below.

Future iterations will work on the coordination, interaction and engagement model between the multi-stakeholder space/platform, the climate neutrality office and the involvement of the different agents from the 5 defined areas.

Governance diagram



Spanish Government support for climate neutrality in Mission cities

Through the Declaration signed by the Third Vice-President of the Government and Minister for Ecological Transition and the Demographic Challenge, in the appendix of this document, the Government of Spain expresses its commitment to the transformation process of the city, selected by the European Commission on 28 April 2022 to participate in the European Cities Mission.

Monitoring, updating and amending the Climate City Contract and its Annexes

This document and its Annexes, which form an integral part of it, are structured within the framework of an iterative process, as a dynamic and flexible document that will be subject to monitoring, updating and modification in order to review and adjust the commitments, actions and/or investments necessary to achieve the City's climate neutrality objectives.

The signatories undertake to monitor the progress of the commitments undertaken in this Climate City Contract and its Annexes at least every two years and to update them accordingly. This monitoring and updating is established without prejudice to the fact that specific monitoring, review and updating methodologies are set out in the different Annexes.

The signatories may introduce modifications to it and/or to any of its Annexes, when necessary for the sake of achieving its objective, when it does not affect its essential purpose, and provided that it implies a specification, improvement or upward revision of the objectives and commitments undertaken,. These modifications shall preferably be made during the biennial monitoring and shall be sent to the other signatories for information purposes.

Gorka Urtaran Agirre
Mayor of Vitoria-Gasteiz

GOBIERNO DE ESPAÑA
VICEPRESIDENCIA TERCERA DEL GOBIERNO
MINISTERIO PARA LA TRANSICIÓN ECOLÓGICA Y EL RETO DEMOGRÁFICO

citiES 2030

Declaración de apoyo del Gobierno a la neutralidad climática de las ciudades Misión españolas

Dejo constancia del compromiso de apoyo del Gobierno de España a los "acuerdos de neutralidad climática" presentados por las ciudades seleccionadas por la Comisión Europea el 28 de abril de 2022 para participar en la Misión Europea de Ciudades: Madrid, Barcelona, Sevilla, Valencia, Zaragoza, Valladolid y Vitoria-Gasteiz.

Este apoyo, para contribuir a la transformación ecológica y energética de las ciudades y a una mayor resiliencia climática y social, se materializa en el marco de las competencias del Estado, entre otros, en los siguientes aspectos:

1. **El impulso de un marco regulatorio alineado con la innovación sistémica y la colaboración público-privada** que requiere la Misión Europea de Ciudades. En este contexto, destaca:

    + La Agenda Urbana Española, aprobada en febrero de 2019, que pone de manifiesto la necesidad de lograr la sostenibilidad en las políticas de desarrollo urbano. Se constituye como un método de trabajo y un proceso para todos los actores que intervienen en las ciudades y que aspiran a un desarrollo equitativo, justo y sostenible desde los distintos campos de actuación. Esta estrategia se desarrolla en torno a 30 objetivos específicos y 291 líneas de actuación, que incluye a todos los pueblos y ciudades con independencia de tamaño y población, y aborda la sostenibilidad económica, social y medio ambiental.

    + La Ley 7/2021, de 20 de mayo, de cambio climático y transición energética. Marco institucional que garantiza, a través de sus distintas medidas, la coordinación de las políticas sectoriales, asegurando coherencia entre ellas y sinergias para alcanzar el objetivo de la neutralidad climática y aumentar

nuestra capacidad de adaptación ante los efectos adversos del cambio climático.

El compromiso de trabajar en los desarrollos reglamentarios de la Ley es claro. Por las implicaciones que tiene para la Misión de ciudades, se destacan los siguientes: i) en el ámbito energético, se trabaja en el establecimiento de un marco para desplegar eficiencia energética en industrias y edificios y las energías renovables como vectores hacia la descarbonización, ii) en materia de movilidad sin emisiones, se recoge el mandato a las ciudades para que adopten planes de movilidad urbana sostenible con medidas de mitigación, como las zonas de bajas emisiones, iii) en materia de contratación verde, se trabaja para establecer medidas que integren la lucha contra el cambio climático en los procedimientos de contratación pública, como son la inclusión como prescripciones técnicas particulares en los pliegos de contratación de criterios de reducción de emisiones y de huella de carbono dirigidos específicamente a la lucha contra el cambio climático.

2. **La puesta en marcha de la Plataforma de Colaboración para la Neutralidad Climática de las Ciudades Españolas (citiES 2030)**, una herramienta creada *ad hoc* y ya en funcionamiento para facilitar la implementación de la Misión de Ciudades.

   El Gobierno de España, con la implementación de esta plataforma, no solo permite dar cumplimiento a una de las actividades iniciales de la Misión, sino que se convierte en referente para los demás países y ciudades del programa.

   Esta plataforma es una infraestructura de innovación y colaboración multiactor para apoyar y acelerar la transformación de las ciudades españolas hacia la neutralidad climática.

   La plataforma tiene como principales beneficiarios a los Ayuntamientos de las ciudades españolas de más de 50.000 habitantes o capitales de provincia que tengan la voluntad de alcanzar la neutralidad climática total o parcialmente en 2030, así como a las ciudades de más de 20.000 habitantes que quieran iniciar este proceso.

La plataforma ofrece a las ciudades una serie de servicios, entre los que destacan:

+ la formación, aprendizaje y fortalecimiento de capacidades;
+ el apoyo al desarrollo de plataformas de innovación sistémica locales para el diseño de carteras de proyectos transformadores;
+ la asistencia para la redacción y seguimiento de los acuerdos climáticos de ciudad y el diseño de hojas de ruta en un entorno multiactor;
+ la conexión con procesos similares en otras ciudades europeas; la incubación de proyectos multiciudad; la participación y activación ciudadana;
+ la asistencia a las ciudades para la estructuración de planes de financiación de la transformación, involucrando a actores del ámbito financiero; y
+ la comunicación estratégica.

La gobernanza de la Plataforma es multiactor y multinivel, con el objetivo de facilitar, ordenar y garantizar direccionalidad y estabilidad en estas colaboraciones. De esta manera, cuenta con la participación de los actores de la quíntuple hélice:

+ sector público (administraciones y agencias públicas).
+ sector privado (empresas, sector financiero, sector de infraestructuras urbanas y asociaciones profesionales).
+ academia (universidades y centros de investigación).
+ sociedad civil (ONGs y asociaciones de vecinos).
+ medios de comunicación.

3. **El apoyo a la movilización de inversiones verdes.** Un buen ejemplo es el despliegue del Plan de Recuperación, Transformación y Resiliencia a través de la movilización de un volumen de inversión sin precedentes que prioriza no sólo paliar los efectos de la crisis, sino también la transformación de nuestro país hacia una economía sostenible e inclusiva.

   El Plan reconoce el papel fundamental de las ciudades en la transformación económica y social, por su capacidad de generar actividad a corto plazo con efecto tractor sobre la industria y sectores clave, y su importancia frente a la emergencia climática. Así, se recogen de iniciativas destinadas a aspectos esenciales para la neutralidad climática de las ciudades como:

   + La mejora de la movilidad sostenible, con el impulso del vehículo eléctrico y de pila de combustible y la extensión de las infraestructuras de recarga, a través de los diferentes programas MOVES.

   + El impulso de la rehabilitación de los entornos residenciales urbanos, viviendas, edificios y barrios, con el objetivo prioritario de reducir en consumo energético e impulsar la descarbonización en el parque residencial.

   + El desarrollo de comunidades energéticas, que impulsen la innovación social y la participación ciudadana en renovables, eficiencia energética o movilidad eléctrica, contribuyendo con ello a una descarbonización justa e inclusiva en ámbitos urbanos.

   + El impulso del autoconsumo para el aprovechamiento energético de los tejados y cubiertas urbanos, el almacenamiento detrás del contador y la climatización renovable en hogares.

   + El desarrollo de estrategias e iniciativas transformadoras de renaturalización urbana, favoreciendo el incremento de la infraestructura verde y la biodiversidad en ciudades españolas y favoreciendo las Soluciones Basadas en la Naturaleza para dar respuesta a sus desafíos socioambientales.

+ El apoyo a la implementación de la normativa de residuos, en colaboración con las CCAA y las ciudades, y con inversiones en digitalización en materia de gestión ambiental, a través del PRTR.

+ El despliegue de convocatorias de ayudas a municipios y entidades locales para la implantación en las ciudades de zonas de bajas emisiones y la transformación sostenible y digital del transporte urbano.

4. **El seguimiento de los avances del conjunto de las siete ciudades a través de la información procesada en la Plataforma de Colaboración citiES 2030**, con el objetivo de integrar la hoja de ruta de transformación urbana en el conjunto del proceso de descarbonización del país.

En el marco del proceso iterativo de la Misión Europea de Ciudades, el Gobierno participará en el seguimiento y actualización de los compromisos asumidos en las declaraciones de neutralidad climática de las ciudades de Barcelona, Madrid, Sevilla, Valencia, Valladolid, Vitoria-Gasteiz y Zaragoza, apoyando el reconocimiento y divulgación de los avances alcanzados.

Teresa Ribera Rodríguez
Vicepresidenta Tercera y
Ministra para la Transición Ecológica y el Reto Demográfico

GOBIERNO DE ESPAÑA
VICEPRESIDENCIA TERCERA DEL GOBIERNO
MINISTERIO PARA LA TRANSICIÓN ECOLÓGICA Y EL RETO DEMOGRÁFICO

citiES 2030

Supporting statement of National Government for the climate neutrality of Spanish Mission Cities

I hereby place on record the Spanish Government's commitment to support the climate city contracts presented by the cities, which were selected by the European Commission on 28 April 2022 to participate in the European Cities Mission: Madrid, Barcelona, Sevilla, Valencia, Zaragoza, Valladolid and Vitoria-Gasteiz.

This support contributes to the ecological and energy transformation of cities and to a greater climate and social resilience, which is materialised in the Spanish State's framework of competences, among others, in the following aspects:

1. **The impulse of a regulatory framework aligned with the systemic innovation and public-private collaboration** required by the European Mission of Cities. In this context, it highlights:

    + The Spanish Urban Agenda, approved in February 2019, which highlights the need to achieve sustainability in urban development policies. It is constituted as a working method and a process for all the actors involved in cities that aspire to an equitable, fair and sustainable development from the different fields of action. This strategy is developed around 30 specific objectives and 291 action lines, which includes all villages and cities regardless of size and population, and it addresses economic, social and environmental sustainability.

    + Law 7/2021, of 20 May, on climate change and energy transition. This institutional framework guarantees, through its various measures, the coordination of sectoral policies, ensures coherence between them and synergies to achieve the objective of climate neutrality, and increases our capacity to adapt to the adverse effects of climate change.

The work commitment on the regulatory developments of the Law is clear. Due to the implications for the European Mission Cities, the following stand out: (i) in the energy field, work is being done to establish a framework to deploy energy efficiency in industries and buildings, and renewable energies as vectors towards decarbonisation, (ii) in terms of emission-free mobility, the mandate for cities to adopt sustainable urban mobility plans with mitigation measures, such as low-emission zones, is included, iii) in the area of green procurement, we are working to establish measures to integrate the fight against climate change in public procurement procedures, such as the inclusion of emission reduction and carbon footprint criteria specifically aimed at the fight against climate change as specific technical requirements in procurement specifications.

2. **The launch of the Multi-stakeholder Collaboration Platform for the Climate Neutrality of Spanish Cities (citiES 2030),** a tool created *ad hoc* and already in operation to facilitate the implementation of the Cities Mission.

   With the implementation of this platform, the Government of Spain not only fulfils one of the initial activities of the Mission, but also becomes a reference for the other countries and cities in the programme.

   This platform is a multi-stakeholder innovation and collaboration infrastructure to support and accelerate the transformation of Spanish cities towards climate neutrality.

   The platform's main beneficiaries are city councils of Spanish cities with more than 50,000 inhabitants or provincial capitals that want to achieve full or partial climate neutrality by 2030, as well as cities with more than 20,000 inhabitants that want to initiate this process.

   The platform offers cities a range of services, including:

   + Training, learning and skills enhancement

+ The support for the development of local systemic innovation platforms for the design of transformative project portfolios;

+ The assistance in drafting and monitoring climate city contracts and the design of roadmaps in a multi-stakeholder environment;

+ The connection with related processes in other European cities; the incubation of multi-city projects; the citizen participation and activation;

+ The assistance to cities to structure transformation financing schemes, involving financial actors;

+ The strategic communication.

The Platform's governance is multi-stakeholder and multi-level, with the aim of facilitating, ordering and guaranteeing directionality and stability in these collaborations. In this way, it relies on the participation of the actors of the quintuple helix:

+ The public sector (administrations and public agencies).

+ The private sector (companies, financial sector, urban infrastructure sector and professional associations).

+ The academia (universities and research centres).

+ The civil society (NGOs and neighbourhood associations).

+ The media.

3. **The support to mobilisation of green investments.** A good example is the deployment of the Recovery, Transformation and Resilience Plan through the mobilisation of an unprecedented volume of investment that prioritises not only mitigating the effects of the crisis, but also the transformation of our country towards a sustainable and inclusive economy.

   The Recovery Plan recognises the fundamental role of cities in economic and social transformation, due to their capacity to generate short-term activity with a pull effect on industry and key sectors, and their importance in terms of the climate emergency. Thus, it includes initiatives aimed at essential aspects for the climate neutrality of cities, such as:

   + The improvement of sustainable mobility, with the promotion of electric and fuel cell vehicles and the extension of recharging infrastructures, through the different MOVES programmes.

   + The promotion of the renovation of urban residential environments, housing, buildings and neighbourhoods, with the priority objective of decreasing energy consumption and promoting decarbonisation in the household stock.

   + The development of energy communities that promote social innovation and citizen participation in renewables, energy efficiency and electric mobility, thereby contributing to fair and inclusive decarbonisation in urban areas.

   + The promotion of self-consumption for the energy use of urban roofs and decks, storage behind the meter and renewable HVAC in homes.

   + The development of transformative strategies and initiatives for urban renaturalisation, helping to increase green infrastructure and biodiversity in Spanish cities and favouring Nature-Based Solutions to respond to their socio-environmental challenges.

   + The support for the implementation of waste regulation, in collaboration with the autonomous communities and cities, with investments in

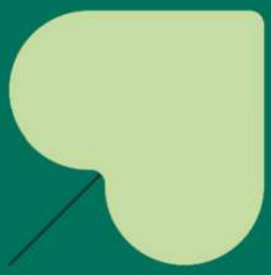
digitalisation for environmental management, through the Recovery Plan.

+ The deployment of calls for grants to municipalities and local entities for the implementation of low-emission zones in cities and the sustainable and digital transformation of urban transport.

4. **The monitoring of the progress of the seven cities through the information processed in the citiES 2030 Platform**, with the aim of integrating the urban transformation roadmap into the country's decarbonisation process.

As part of the iterative process of the European Cities Mission, the Spanish Government will participate in the monitoring and updating of the commitments made in the climate neutrality agreements of the cities of Barcelona, Madrid, Sevilla, Valencia, Valladolid, Vitoria-Gasteiz and Zaragoza, supporting the recognition and dissemination of the progress achieved.

Signed by Teresa Ribera Rodríguez, Third Vice-President of the Government of Spain and Minister for Ecological Transition and Demographic Challenge



Vitoria-Gasteiz

Ayuntamiento
de Vitoria-Gasteiz
Vitoria-Gasteizko
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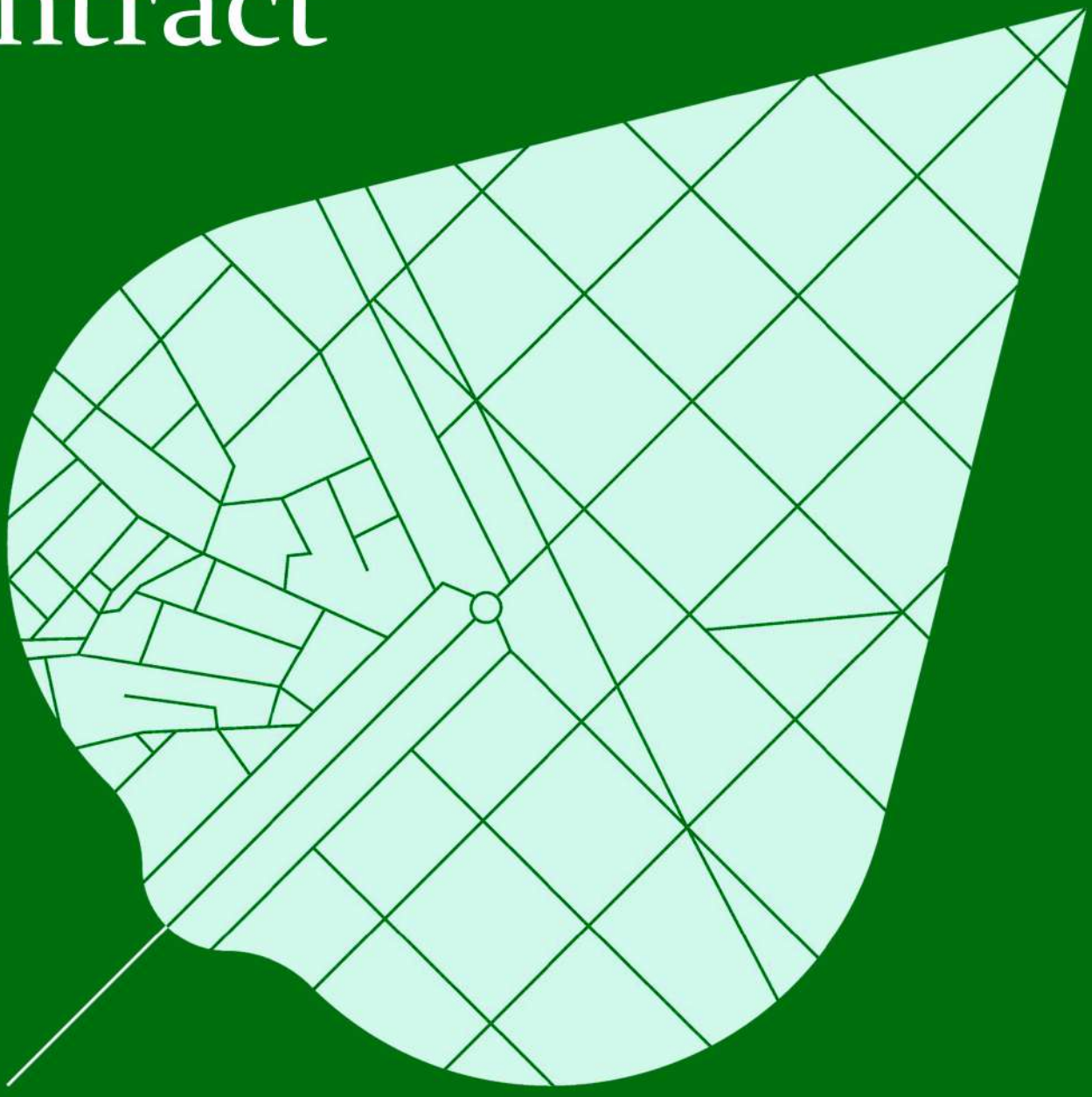
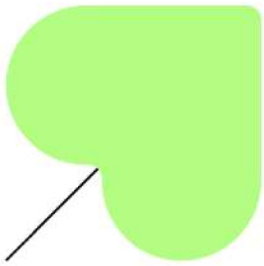
2030

Vitoria-Gasteiz Climate City Contract



citiES 2030



ANNEX 3:
Individual Signatory Commitments

ANNEX III

STAKEHOLDERS AND COMMITMENTS

OTHER ACTORS
Including a list of other stakeholders who have committed to support the City to achieve climate neutrality by 2030.

Name of the organisation	Sector/Area
Spanish Government	Public Administration
Basque Government	Public Administration
Álava General Assembly	Public Administration
Association of Councils of Vitoria-Gasteiz - ACOVI-GKE	Public Entity
Basque Energy Agency - EVE	Public Agency
Basque Environmental Management Society - IHOBE	Public Agency
Spanish Federation of Municipalities and Provinces - FEMP	Spanish Network of Municipalities and Provinces
Basque Network of Municipalities towards Sustainability – Udalsarea 2030	Basque Network of Municipalities
CitiEs 2030	Spanish Network to Climate Neutrality
University of the Basque Country (UPV-EHU)	Academia
Basque Centre For Climate Change - BC3	Research & Technological Development Centre
TECNALIA Foundation	Research & Technological Development Centre
Basque Institute for Agricultural Research and Development - NEIKER	Research & Technological Development Centre
Basque Foundation for rural, coastal and food development - HAZI Foundation	Research & Technological Development Centre
Research Center for electrochemical and thermal energy storage - CICenergiGUNE	Research & Technological Development Centre
Jean Monnet Excellence Center on Sustainability - ERASME	Research & Innovation (R&I)

Name of the organisation	Sector/Area
	institutions
Kutxabank	Financial Institution
Laboral Kutxa – Caja Laboral: Credit Cooperative	Financial Institution
BBVA	Financial Institution
Spanish Group for Green Growth - GECV	Business association
Álava Chamber of Commerce	Public Entity
Basque Environment Cluster - ACLIMA	Industrial Business Cluster
Basque Construction Cluster Association - ERAIKUNE	Industrial Business Cluster
Álava Technology Park	Technology park
Álava Construction Employers' Union – UNECA (SEA)	Entrepreneurs Association
Mercedes Benz España S.A.U Vitoria-Gasteiz Plant	Automotive sector company
Onaindia Obras Públicas S.A.	Urban services company
EMAUS Environmental Services S.L.	Urban services company
Eroski S COOP	Delivery services company
UAGA - Agro-livestock Union of Álava	Agricultural Professional Organization
UDAPA SCOOP - Agricultural Cooperative	Agricultural Cooperative
Saski Baskonia S.A.D.	Sports sector company
Deportivo Alavés S.A.D.	Sports sector company
BAKH Baskonia Alavés Kirol Hiria	Sports sector company
Fundación 5+1 Fundazioa	Sport Foundation
UNESCO Etxea - Centre in the Basque Country	NGOs and associations
Red Cross in Alava	NGOs and associations
Vitoria-Gasteiz Social Council	Citizen entities

VITORIA-GASTEIZ´S CLIMATE CITY CONTRACT 2030

ACCESSION DOCUMENT OF ..... TO VITORIA-GASTEIZ´S CLIMATE CITY CONTRACT ON CLIMATE NEUTRALITY AND ADAPTATION WITHIN THE FRAMEWORK OF EU 100 CLIMATE NEUTRAL AND SMART CITIES AND ADAPTATION TO CLIMATE CHANGE MISSIONS TO 2030

LOGO OF THE CITY AND OF THE SIGNATORY ECONOMIC-FINANCIAL SECTOR STAKEHOLDER HERE

I. PREAMBLE

1. ***Climate change*** *is a critical global challenge that requires strong and ambitious joint action at all political, territorial, economic and social levels, given the current* ***climate emergency*** *situation that has been declared at international, European and national level, as well as by the Basque Parliament, the Basque Government and the City Council of Vitoria-Gasteiz.*

2. Planet´s protection through the sustainable management of its natural resources and the adoption of urgent measures in the face of the challenge of climate change is one of the basic pillars on which the ***United Nations 2030 Agenda for Sustainable Development*** *is built, in order to be able to meet the needs of present and future generations.* ***Sustainable Development Goal (SDG) 13 - Climate Action****, sets targets related to taking urgent action to combat climate change and its adverse effects, and to meet the objectives of the international Paris Agreement on this matter.*

3. Precisely in order to achieve climate neutrality by 2050 and to comply with the Paris Agreement, the European Union has adopted the European Green Deal, which includes a series of measures to achieve this goal.

4. In the framework of the European Green Deal, the European Commission has launched the European Missions as a pilot innovation of the research and innovation programme "Horizon Europe". In the area of climate change, the missions aim to prepare adequately for the achievement of the 2050 European targets set for the European Union as a whole, through learning from the experience of a selected number of European cities and regions that are part of these missions, where innovation efforts will be intensified to test, trial and demonstrate the feasibility of achieving climate neutrality and adaptation to climate resilience by 2030, i.e. 20 years ahead of the 2050 deadline. The European Commission plans to mobilise the financial, policy and regulatory instruments at its disposal to achieve its climate neutrality objectives, promoting active and sustained partnership between public and private actors, such as EU Member States, regional and local authorities, research institutes, businesses and investors, and citizens.

5. ***Vitoria-Gasteiz*** *has been selected by the* ***European Commission*** *to take part in two of its missions, such as "****100 Climate-neutral and smart cities by 2030 Mission****" -known as the "Cities Mission"-, and the "****Adaptation to Climate Change Mission"*** *-known as the "Adaptation Mission"-, the mission in which the Basque Government has also been selected as part of the same, including the whole of the region.*

*6. The "**Cities Mission"** has a twofold objective: (i) to work towards making 100 European cities - and 12 cities in EU partner states - smart and carbon neutral by 2030, acting as innovation and experimentation ecosystems to achieve this goal; (ii) and to draw relevant lessons from the experience of the Mission cities to extend the learning to facilitate the transition to climate neutrality of other European cities by 2050.*

*7. The "**Adaptation Mission"** aims to help at least 150 regions and municipalities to accelerate their resilience to climate change by 2030, so that their experience and learning will facilitate adaptation to climate change in other territories.*

*8. The objectives of both missions to achieve climate neutrality and adaptation by 2030 are **inspiring objectives and also the vision**, which the City Council of Vitoria-Gasteiz has assumed as its own, to join the European challenge of accelerating the achievement of climate neutrality, in coherence with the consolidated trajectory and commitment of the city to environmental sustainability and its membership of the cities´ network that have been recognised as Green Capital in the European Union. In addition, the large territorial extension of the municipality and its composition -urban, agricultural and forestry- represent an important potential for action in terms of adaptation.*

*9. Vitoria-Gasteiz's accesion to the commitment to climate neutrality inexorably entails accelerating its climate action in the face of the challenges of greenhouse gas mitigation and adaptation to climate change, intensifying the necessary efforts to this end, all in an **environment of innovation and synergetic collaboration** with all the stakeholders involved, as well as with the different territorial levels.*

10.** This municipal commitment has been endorsed by all the political groups of the council through the **"Institutional Declaration of support for the decarbonisation of the municipality of Vitoria-Gasteiz within the framework of the European missions of carbon neutral cities and adaptation to climate change"**, approved unanimously, and with two essential tools to achieve climate neutrality by 2030: **Sustainable Energy and Action Plan (SECAP)** and **Vitoria-Gasteiz´s Urban 2030 Agenda (AU2030VG).

*11. The fact that Vitoria-Gasteiz is one of the seven Spanish cities of the "Cities Mission" on which the European Commission has focused its attention and has considered it worthy of assuming and being capable of intensifying its efforts and acting as a pole of innovation and experimentation to achieve climate neutrality ahead of the global deadline set for 2050, also represents a **challenge for the country**, which transcends the city.*

*12. This challenge for the country is also linked to the role of the cities and regions of the climate missions to **act as a lighthouse** through the dissemination and replication of*

lessons learnt from these innovative experiences in other cities, regions or territories, so that the challenge of climate neutrality in an advanced manner is also extended and shared in their surroundings.

13. Achieving the challenge of climate neutrality and adaptation in Vitoria-Gasteiz by 2030 as an integral part of the European missions requires, in any case, ***the participation of society as a whole****, of all agents, of citizens and of the different institutional levels.*

14. Specifically, climate missions require that their scope and content -based on the Sustainable Energy and Action Plan (SECAP) and the Vitoria-Gasteiz´s Urban 2030 Agenda-, their governance and their deployment be set out in a document that takes the form of a climate city contract, in which all agents, citizens and the different institutional levels will have to participate.

15. Given the complexity of forming a climate city contract of these characteristics, due to the novelty that this entails and the large number of parties participating in it and its diverse nature, it has been considered appropriate that at the time of the start of the two climate missions - of climate neutral cities and adaptation – accession documents should be signed, ordered by the nature of the signatory parties, so that all of them, as a whole, make up the Vitoria-Gasteiz´s Climate City Contract, which, in turn, revolves fundamentally around the roadmap towards climate neutrality in 2030 presented by Vitoria-Gasteiz in its candidacy for the mission of climate-neutral cities, and which resides in the Sustainable Energy and Action Plan (SECAP), adopted by the commitment made by the city within the Covenant of Mayors for Climate and Energy of the European Union. Vitoria-Gasteiz´s Climate City Contract will be, in short, an "Agreement of agreements".

16. The participation of the ***economic-financial agents*** *in the Vitoria-Gasteiz Climate City Contract includes the signing of the accession document by: business organisations, which include small, medium-sized and large companies that form part of the business fabric of Vitoria-Gasteiz or that operate in it; self-employed workers; business clusters; professional associations; business organisations; trade union organisations; financial institutions; and any other economic agent interested in contributing to the effort to achieve climate neutrality in Vitoria-Gasteiz by 2030.*

17. The ..... (to be completed by THE FINANCIAL ECONOMIC SECTOR AGENT, maximum 5 paragraphs)

II. NATURE AND SUBJECT

18. The subject of Vitoria-Gasteiz´s Climate City Contract is to include the commitments of the signatory parties to achieve climate neutrality in Vitoria-Gasteiz by

2030, as well as to capitalise on the learning from the experience acquired and improve its replicability in other territories and fields of action.

19. The nature of Vitoria-Gasteiz´s Climate City Contract is of a programmatic nature, and its signing does not produce any legal effect for the parties, nor any legal obligation for them.

20. The commitments contained in Vitoria-Gasteiz´s Climate City Contract identify the initiatives that the signatory parties intend to carry out as measures to achieve climate neutrality by 2030.

III. CONTENT AND COMPOSITION

21. In addition to the commitments of the parties, Vitoria-Gasteiz´s Climate City Contract includes the system of governance foreseen for its application and development, as well as an investment plan linked to it.

22. Vitoria-Gasteiz´s Climate City Contract has no binding economic content for the parties. The investment plan indicates the necessary resources foreseen to achieve climate neutrality.

23. Vitoria-Gasteiz´s Climate City Contract is made up of all the accession documents signed by the City Council for climate neutrality in 2030, forming a single "Agreement" as a whole.

IV. COMMITMENTS OF VITORIA-GASTEIZ´S CITY COUNCIL

24. Vitoria-Gasteiz´s City Council undertakes to work and intensify its efforts to achieve climate neutrality and its adaptation to climate change in the municipality by 2030.

25. Vitoria-Gasteiz´s City Council commits to lead the city's transition to climate neutrality by 2030 in a participatory manner through the deployment of the city's Climate City Contract.

26. Vitoria-Gasteiz´s City Council commits to work with all stakeholders and to promote all necessary measures to share and disseminate the experience gained in its transition to climate neutrality by 2030.

27. Vitoria-Gasteiz´s City Council undertakes to carry out planning for the transition to climate neutrality by 2030 in its Departments, as well as in its autonomous bodies - Centre for Environmental Studies (CEA), Luis Aramburu School of Music, José Uruñuela

School of Dance - and its public companies - AMVISA, TUVISA, Ensanche 21.

28. Vitoria-Gasteiz´s City Council commits to review the municipality's Sustainable Energy and Climate Action Plan (SECAP 2030), as well as to plan and adopt the necessary measures to advance the goal of achieving climate neutrality by 2030.

29. Vitoria-Gasteiz´s City Council commits to focus its efforts on six key priorities that need to be urgently addressed at the municipal level in order to reach the 2030 climate neutrality target:

a) Integrated regeneration and eco-rehabilitation of city neighbourhoods.
b) Energy generation through renewable sources and promotion of Energy Communities.
c) Sustainable mobility and transport.
d) Circularity of the local economic system.
e) Green infrastructure and carbon sinks.
f) Data-driven smart management.

30. In terms of integral regeneration and eco-rehabilitation of neighbourhoods, Vitoria-Gasteiz´s City Council undertakes to:

a) Improve the energy efficiency of residential, tertiary and publicly owned buildings.
b) Improve universal accessibility and sustainable mobility.
c) Connect households to a high-speed digital network.
d)Connect dwellings and commercial premises to a city-wide decarbonised district heating network.
e) Improve public space with the introduction of green infrastructure (and other actions, e.g. accessibility).
f) Generate low- or zero-emission urban developments and building spaces.

31. As regards the generation of energy by means of renewable sources and the promotion of Energy Communities, Vitoria-Gasteiz´s City Council undertakes to:

A) Promote public, private and public-private thermal and electric power generation.
b) Deploy renewable energy generation projects in municipal buildings and public spaces, mainly based on photovoltaic solar energy, aimed at self-consumption.
c) Encourage the installation of photovoltaic solar energy in residential, tertiary and industrial buildings.
d) Promote the creation of Energy Communities, both in urban and rural areas.
e) Tackle energy poverty through the development of programmes and support schemes for vulnerable groups, also encouraging the use of alternative financing systems (e.g. through energy communities or crowdfunding).
32. In terms of mobility and sustainable transport, Vitoria-Gasteiz´s City Council is

committed to transforming and decarbonising the city's mobility system through:

a) The materialisation of a new sustainable mobility model, promoting active mobility and an electrified public transport system.
b) Developing the superblock model.
c) Implement limited traffic zones and create low emission zones (LEZ) in the city centre.
d) Expand pedestrian and cycling networks.
e) Extend the public transport network.
f) Reformulate the regulated parking zone.
g) Promote the electrification of mobility.
h) Promote the use of efficient driving techniques.
i) Build a last mile centre for freight bicycles.

33. With regard to the circularity of the local economic system, Vitoria-Gasteiz´s City Council undertakes to:

a) Promote the circular transition of economic activity sectors and circular entrepreneurship.
b) Carry out the Urban Waste Prevention and Management Plan (2016-2030), reducing by more than 15% the weight of waste compared to 2016, reuse and recycling of waste generated by at least 60% by weight of total waste generated, and to reduce waste disposed of in landfill to below 15%.
c) Promote the development of the Materials Circularity Strategy.
d) Re-launch Vitoria-Gasteiz´s Agri-Food Strategy and its action plan (2017-2025).
e) Promote the Municipal Organic Agriculture Seedbed (Basaldea).
f) To seek national and international alliances to quantify and monitor the reduction of Scope 3 emissions through the implementation of the actions and projects derived from the previous strategies.
34. In terms of green infrastructure and carbon sinks, Vitoria-Gasteiz´s City Council undertakes to:

a) Promote green infrastructure as an element that generates urban climate refuges.
b) Re-launch the Urban Tree Master Plan in order to enhance the benefits of trees (thermal regulation, carbon sink, etc.) and turn them into a living heritage element of the city.
c) Generate coordination and civil responsibility mechanisms to enable public-private management of green infrastructure in the city's public space.
d) Incorporate new degraded areas and/or areas with great potential to act as carbon sinks in the peri-urban environment of Vitoria-Gasteiz into the multi-functional Green Belt project.
e) To promote the Olarizu Botanical Garden to turn it into a benchmark site for

botanical dissemination.

f) Naturalise school playgrounds and introduce the playground as another curricular element that encourages the creation of a greater link with nature.

g) Naturalise the Old Town Quarter.

h) Facilitate the creation and piloting of new land management policies to enhance its capacity as a carbon sink.

35. In terms of intelligent management based on data, Vitoria-Gasteiz´s City Council undertakes to:

a) Promote smart data-driven management, facilitating data sharing and transparency. To this end, it will work on the basis of the Geographic Information System built for the city and on the digital model built within the framework of the European SmartEnCity project for the Coronation district of the city. It will promote its use, extension and adaptation to enable the use of these digital tools in decision-making aimed at achieving climate neutrality.

b) Work on a new model of data governance and management.

c) Modernise working tools and digitise municipal information flows in a way that facilitates the above objective.

d) To modernise municipal tools in the interaction with citizens, so as to reduce management times and enable zero-paper digital management.

e) To promote, as a final objective, the creation of a Digital Twin of Vitoria-Gasteiz, which will make it possible to analyse, model, simulate and predict scenarios, as well as develop hypotheses to support better decision-making processes.

36. Vitoria-Gasteiz´s City Council undertakes to update and complete its commitments on the occasion of Vitoria-Gasteiz´s Climate City Contract iterations.

37. Vitoria-Gasteiz´s City Council undertakes to promote the proper functioning of the governance system through the secretariat functions provided by the Technical Office of Vitoria-Gasteiz´s Climate City Contract.

V. (…)´S COMMITMENTS

38. (If located in Vitoria-Gasteiz) (...) undertakes to work and intensify its efforts to achieve climate neutrality of its organisation located in Vitoria-Gasteiz by 2030.

39. (If not located in Vitoria-Gasteiz or beyond the municipality) (...) commits to support the participation of Vitoria-Gasteiz in the Cities and the Adaptation Missions, and to support its transition to climate neutrality in the municipality by 2030.

40. (…) commits to participate in supporting the city's transition to climate neutrality by 2030 through the deployment of the city's Climate City Contract.

41. (…) commits to work with all stakeholders and to promote all necessary measures to share and disseminate the experience gained in its transition to climate neutrality by 2030.

42. In the matter of (...), (...) undertakes to .....

43. (…)

44. (…) commits to update and complete its commitments on the occasion of the reviews of Vitoria-Gasteiz´s Climate City Contract

45. (…) undertakes to actively participate in the governance system, reporting the information agreed within the framework of this system to the Technical Office of Vitoria-Gasteiz´s Climate City Contract.

VI. GOVERNANCE

46. The governance system for the effective management of Vitoria-Gasteiz´s Climate City Contract is based on three aspects of participation: political or institutional, technical or administrative, and economic-social.

47. Vitoria-Gasteiz´s Climate Neutrality Office is the body that supports the management and operation of the governance system of Vitoria-Gasteiz´s Climate City Contract.

48. Political or institutional governance comprises: the Mayor, the highest representative figure of the City Council; the City Council's Energy Sustainability Commission, made up of political leaders from the different municipal government areas; the Local Government Board; the City Council Plenary; and other administrations or institutional entities.

49. Technical or administrative governance is limited to the technical team of the municipal administration and its autonomous entities and public companies, which will promote the work necessary for the deployment of the transition to climate neutrality within the framework of their municipal functions.

50. Economic and social governance includes economic, financial, social, educational and cultural agents, the media and organised and unorganised citizens. In order to organise them, the creation of a space/platform will be promoted through which the different agents will be able to exercise leadership and coordination within their respective sectors of action.

51. The governance system of Vitoria-Gasteiz´s Climate City Contract will be set up as the subscription and effectiveness of the different accession documents that comprise it unfolds, in such a way that the instruments or forums of governance that are adopted respond in the most appropriate manner to the needs that arise at any given time.

52. In any case, the plenary meeting of Vitoria-Gasteiz´s Climate City Contract will be held annually, with the participation of the three aspects of governance - political or institutional, technical or administrative and economic-social - to deal with issues related to the Climate City Contract and its development, and, in particular, with its system of governance.

VII. LABEL OR LABEL OF COLLABORATING ENTITY

53. The entities that signed the Accession Documents of this Climate City Contract may use the label or label of collaborating entity of the Climate City Contract in the exercise of their activities, provided that this benefits the transition towards climate neutrality, their visibility and awareness.

54. The terms governing the label or label of collaborating entity of Vitoria-Gasteiz´s Climate City Contract shall be determined within the framework of the development of the Climate City Contract.

VIII. VALIDITY

55. This Accession Document is valid from the moment it is signed and expires with the end of the Vitoria-Gasteiz´s Climate City Contract.

56. Without prejudice to its period of validity, this accession document may be updated at any time to adapt to new developments in the development of Vitoria-Gasteiz´s Climate City Contract, as well as in the commitments of the entities that subscribe to it.

In Vitoria-Gasteiz, date ….

Vitoria-Gasteiz