Scaling Zero-Emission Construction in Oslo

NET ZERO CITIES
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Executive snapshot

Cities are responsible for a large share of emissions, and construction activities are a significant contributor. To accelerate the transition toward climate-neutral urban development, Oslo received expert support to explore how zero-emission construction (ZEMCON) can be scaled across European cities. The initiative aimed to assess the environmental, economic, energy-system, and regulatory implications of adopting zero-emission construction practices. The work also examined the market readiness and policy frameworks required to enable implementation at city, national, and EU levels.

The project analysed six cities - Oslo, Stockholm, Eindhoven, Munich, Barcelona, and Budapest - to understand how different contexts influence the transition to zero-emission construction. The main output was a comprehensive EU-level impact assessment and policy roadmap outlining pathways for cities to adopt ZEMCON approaches in infrastructure and building projects. By identifying policy options, market conditions, and system impacts, the initiative supports cities in integrating zero-emission construction strategies into their climate-neutrality plans and contributes to the broader ambition of climate-neutral European cities.

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Knowledge Report

THE CHALLENGE

Urban areas face significant pressure to reduce greenhouse-gas emissions while continuing to develop infrastructure and buildings. Construction activities contribute heavily to urban emissions through energy use, materials production, and logistics.

For cities pursuing climate neutrality, transitioning construction practices toward zero-emission approaches is a critical but complex challenge. This transition requires alignment between technology, market readiness, regulation, and energy systems. Oslo sought to better understand the implications of scaling zero-emission construction (ZEMCON) across European cities and to identify policies that could enable broader adoption.

THE APPROACH

With support through the City Expert Support Facility (CESF), expert partners provided Oslo with analytical and strategic support to explore the transition to zero-emission construction. The initiative delivered a comprehensive EU-level impact assessment that examined several dimensions of the transition, including:

- Environmental impacts of zero-emission construction
- Cost implications
- Energy-system interactions
- Market readiness across the construction sector
- Existing legal frameworks and regulatory barriers
- Policy options at city, national, and EU levels

The analysis included comparative case studies from six NetZeroCities example cities: Oslo, Stockholm, Eindhoven, Munich, Barcelona, and Budapest. This multi-city perspective helped identify common barriers, enabling conditions, and policy pathways that could accelerate the adoption of zero-emission construction practices. The work was delivered through several outputs, including:

- Baseline assessment and methodology report
- Road-mapping and impact assessment analysis
- Policy options report
- Executive summary presentation
- Final consolidated report synthesising all findings

THE IMPACT

The initiative produced a structured evidence base to support decision-making on zero-emission construction in European cities.

Key contributions include:

- A consolidated understanding of environmental and energy system impacts of zero-emission construction approaches.
- Insights into market readiness and cost implications for adopting these practices.
- Identification of policy options and regulatory pathways at different governance levels.

These findings provide cities with actionable knowledge to integrate zero-emission construction into their climate-neutrality strategies and infrastructure planning.

Evidence

The project produced a comprehensive final report titled: “EU-level Impact Assessment and Policy Options: Transitioning to ZEMCON in European cities (infrastructure and buildings)”.

The report consolidates analysis from multiple deliverables, including baseline assessments, impact analysis, and policy recommendations.

KNOWLEDGE SHARING

Several insights emerged from the analysis:

- Transitioning to zero-emission construction requires coordination across multiple systems, including energy, regulation, and construction markets.
- Cities benefit from cross-city comparison and knowledge exchange, as policy frameworks and market maturity vary significantly.
- Scaling ZEMCON approaches depends not only on technology but also on supportive governance and policy alignment across EU, national, and local levels.

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WANT TO KNOW MORE?

Learn more about Oslo

Read the Report: EU-level Impact Assessment and Policy Options

Read the Executive Summary presentation of key results and implications

Still got questions? Ask us:
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NEXT STEPS FOR THE CITY

The study provides a foundation for cities and policymakers to advance the transition to zero-emission construction.

- Potential next steps include:
- Integrating ZEMCON pathways into city climate action plans and infrastructure strategies.
- Developing supportive policy frameworks that remove regulatory barriers.
- Encouraging collaboration between cities, industry, and EU institutions to accelerate implementation.
- Using the study as a reference for replication and scaling across other European cities pursuing climate neutrality.

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