From Oslo to the EU: The Journey Towards Clean Construction

Global MOU Summit 2025

3rd June 2025 - Arnhem

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ABOUT US

The basics

- International, independent climate NGO
- First office in Oslo, 1986
- In Brussels since 1994, with an EU policy focus
- In Berlin since 2021



Bellona and Zero Emission Construction Sites

What are ZECS?

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Zero-emission construction machinery, equipment, onsite vehicles

Focus area

Embodied Carbon

As the world transitions towards climate neutrality, it is important to decarbonise every part of the economy, including buildings.

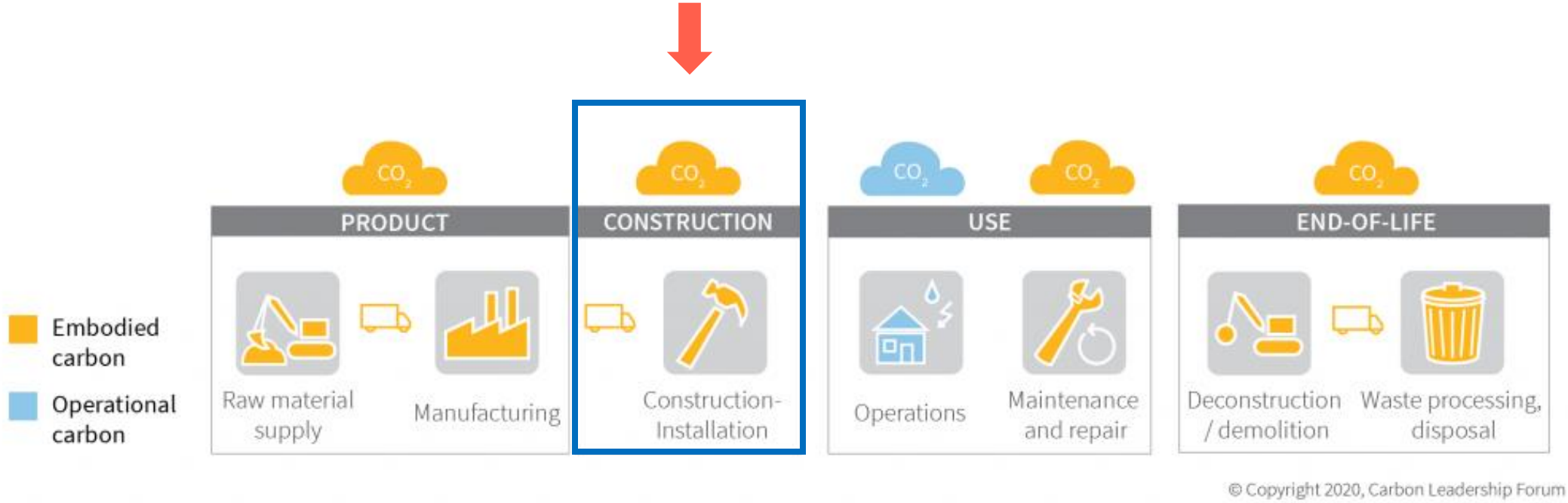
Embodied carbon has become a critical topic in the building sector as it accounts for the carbon emissions associated with the production, transportation, and installation of building materials and products.

FOSSIL-FREE

Focus area Embodied Carbon

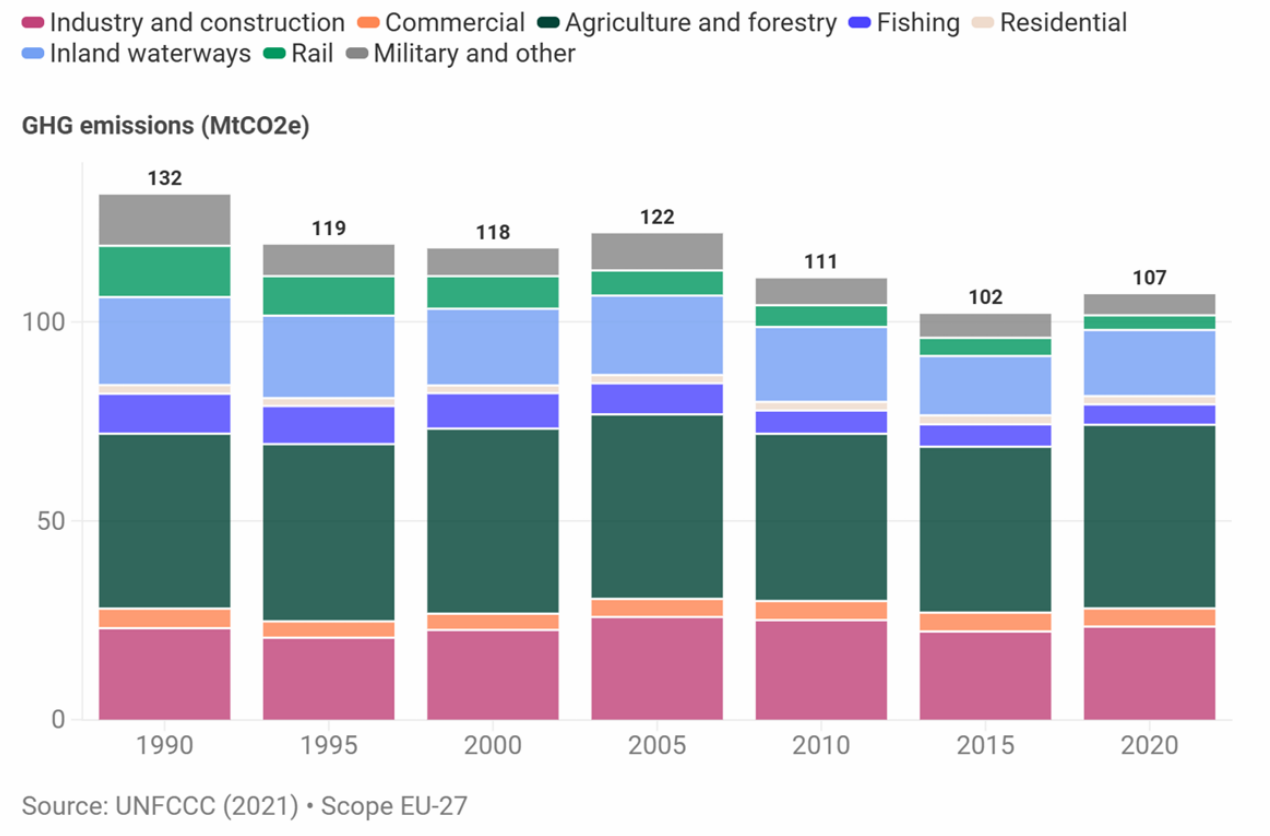
Zero-Emission Construction Sites

Embodied Carbon and Construction



Whole Life Carbon (WLC) =
Embodied Carbon + Operational Carbon

Why Construction Machinery?



Graph from "Reducing emissions from non-road mobile machinery", T&E (2024)

2/3 of emissions from NRMM are caused by 2 sectors: industry and construction & agriculture and forestry.

NRMM emissions in the EU27

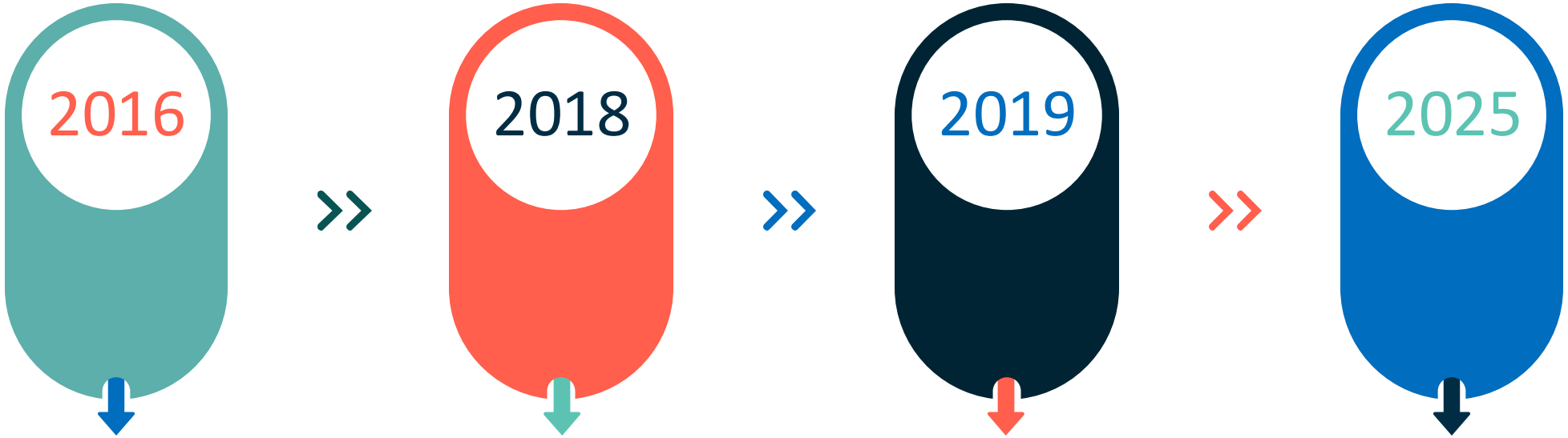
amounts to **108 MtCO2e per year**

= 3% of EU's emissions

= 55 million cars

> half of all HDV emissions

Bellona's Contribution



2016

Cooperation with the City of Oslo

From fossil-free to emission-free:

WHAT CAN BE RUN ELECTRIC SHALL BE RUN ELECTRIC!

2018

First Market Maturity Report

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2019

Second Market Maturity Report & Emission-Free Construction Equipment Database

2025

Emission-Free Construction Equipment Database V2 Updated and Expanded &

Lessons Learned Report

Powering Up a Renewable Society (PURE) Project

- Ongoing project (2024-2026).
- Partners: City of Oslo, Hafslund (grid operator), SINTEF (research center) & Bellona (NGO)
- Activities & deliverables: guidelines for contractors, lessons learned report, twin cities in DK and NL, policy recommendations for the EU, scientific publications based on project data…

- **Bellona's role**: bringing lessons learned in **Oslo's journey** towards zero-emission construction to the EU and **advance the transition in Europe.**

From Oslo to the EU: The Journey Towards Clean Construction



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Why Oslo?

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- ❑ Early pilots like **Olav V's Gate** set precedent.
- ❑ Since **2025 -** First city globally to mandate **zero-emission public construction works**.
- ❑ Starting **2030 –** citywide construction works will be **ZECS**

Oslo’s journey

A replicable model for cities worldwide



Oslo’s procurement strategy



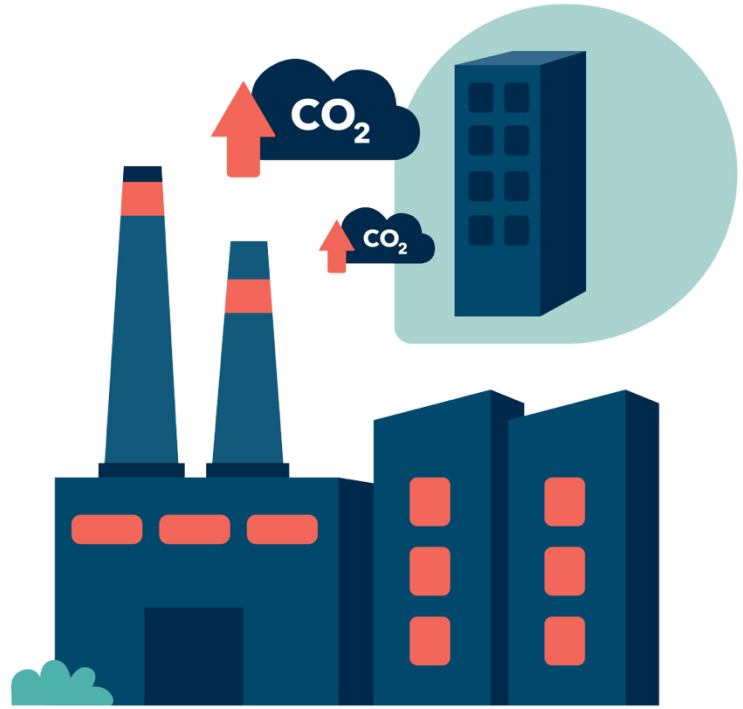
Source: Oslo Climate Agency

1. Uses GPP as a strategic tool
2. Emphasis on environmental award criteria (up to 30%)
3. Gradual tightening: from fossil-free to zero-emission
4. Continuous market dialogue with industry to align expectations and capabilities.

ZECS across Europe

Where do European public buyers stand today?

- European interest in ZECS is growing, with early adopters in many regions.
- Several Nordics capitals and Dutch cities have included ZECS targets
- Cities like Barcelona and Paris have started pilot projects
- At EU level, initiatives and networks are fostering collaboration on sustainable procurement
- Significant disparities remain across regions in the uptake and implementation of ZECS.



Differences across the EU

Governance structures

Centralised vs. Decentralised

Market readiness and supply chains

Availability of electric machinery, qualified contractors, or adequate grid capacity



Procurement maturity and innovation culture

Strategic tool for climate action.

Legal and regulatory environments

Presence of strong environmental award criteria and LCA requirements

Recommendations for EU cities

- Set clear climate and ZECS targets
- Use procurement strategically
- Mandate environmental award criteria
- Launch pilot projects
- Enable early market dialogue
- Coordinate energy planning
- Build procurement capacity
- Provide transitional financial support
- Standardise data collection and metrics
- Leverage networks and peer learning

Final remarks

- Transition to zero-emission construction machinery is necessary for **Europe to remain competitive**
- The **technology** already **exists** but scaling up is essential to **cut costs**
- Effective policy solutions require a **mix of supply and demand instruments**
- **ZECS** need to become **the norm**
- **Green Public Procurement** is a key enabler for lead markets

Bellona is committed to enable the transition.

We collaborate with all stakeholders, reach out!

What's next?

04 Status report update

03 Bellona Annual Climate Action Conference – lead markets panel

02 Brief on public procurement in construction

01 EU policy recommendations report – fall 2025

Useful Resources

- From Oslo to the EU: The journey towards clean construction
- Embodied Carbon Focus Area: Zero-Emission Construction Sites
- Database: Emission-free Construction Equipment (by manufacturer) - Bellona.org
- Webinar: The Silent Revolution of Zero-Emission Construction Sites
- Zero Emission Construction Sites: Status 2019
- Zero-Emissions Construction Sites Factsheet - Bellona EU
- Oslo's Pilot City Activity: Power Up a Renewable Society (PURE)
- Guidelines for Emission-free Construction Sites | Nordic Sustainable Construction
- Zero Emission Construction Sites | Public Buyers Community
- Microsoft Word - Leap to Zero conference report
    - ENI - English - Zero Emission Constructions - lessons learned in the Netherlands | Emissieloos Netwerk Infra

Thank you and Get in touch!

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