

Project brief

April 2022

Better batteries: Malmö's roadmap toward ethical and climate-smart public procurement of e-vehicle batteries



Project Background

Malmö (Sweden), the 2021 EU City for Fair and ethical trade, committed to be a net-zero carbon municipal organization by 2030. Re-thinking of transportation and related procurement policies plays one of the key roles in the process of climate transition. One of the solutions is a vehicle fleet electrification. The e-vehicle (EV) battery supply chains are however often associated with several social, environmental and governance (ESG) risks, which are most pronounced in producer countries with weak enforcement of regulatory, industry and international frameworks and practices. These pertain not only human rights issues and environmental degradation, but also high levels of greenhouse gas (GHG) emissions related to the EV supply chains. Approaching the climate transition holistically therefore requires greater knowledge of

both, the sustainability issues and the GHG emissions associated with the entire product lifecycle. Better informed procurement practices by cities – as large public procurers – can help address many of the ESG issues.

The project, implemented jointly with the International Trade Centre and with financial support from the European Commission, aimed to scrutinize the risks associated specifically with the EV and e-bike (EB) batteries and to outline a public procurement roadmap with strategic focus areas in managing risks related to the lifecycle of batteries. Ultimately, the city of Malmö aims to be able to procure e-vehicles with ethically certified batteries and GHG data fully disclosed.

Interested to learn more or to follow the conversation?

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Public procurement of EV and e-bike batteries: what are the main considerations?

The following four key risk areas were identified and considered:

1

The mining and refining of battery materials, and the manufacturing of battery cells, is associated with **high GHG emissions**. The level of emissions varies depending on where raw materials are sourced and where the battery cells are manufactured.



2

The mining and processing of raw materials used in common battery types is associated with several **ESG issues**, the most serious of which is child labour in cobalt mining.



3

Transparency in battery value chains is generally limited, making it difficult for downstream users to ensure batteries and their raw material inputs are produced in accordance with international best practice.



4

Some of the current **recycling methods**, such as hydrometallurgical and pyrometallurgical processes, are associated with negative environmental and social impacts.



The scale and severity of these risks varies depending on the stage in batteries' value chains, their use in EVs and through to their re-use, end-of-life, and recycling:

...An 80% reduction in GHG emissions is possible in the battery manufacturing stage

Battery production in a country with a low reliance on fossil fuels, such as Sweden, enables EV batteries manufacturing with only 20% of the GHG emissions compared to countries with heavy reliance on coal in their energy mix.

...Transparency is generally low in the automotive industry

Battery manufacturers generally provide very limited details on their supply chains, including the origins of raw materials. The pending EU Battery Regulation proposes supply chain due diligence obligations for EV battery manufacturers; this comes as a strong imperative in an industry which according to some indices performs relatively poorly in terms of ensuring human rights due diligence.

...The battery supply chain is highly concentrated in a few geographies

Several of the raw materials needed for battery manufacturing are highly concentrated in a small number of countries, some of which are politically volatile. The processing phase is even more concentrated, where Chinese companies are dominating the operations and only around 6% of production takes place in Europe.

...Yet recycling rates of lithium-ion batteries are low

Despite high GHG emissions and significant ESG issues along the supply chain, recycling rates of batteries are currently very low, with some statistics putting it at around 5%. Very few major EV manufacturers have implemented closed-loop recycling schemes. This is a key area for development.



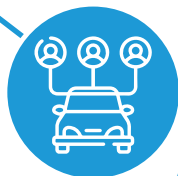
Malmö Roadmap for public procurement of EV batteries: Strategic Focus Areas

Addressing these issues in public procurement policies will inevitably include a gradual approach, starting with deeper learning about the market, monitoring key developments, and piloting. The Roadmap serves as a guiding document towards constructing a public procurement framework of the city, which ultimately favours suppliers who ensure ethical and sustainable production and meet minimum standards.

Incorporate ESG considerations into procurement criteria for EVs/EBs



1



Reduce unnecessary procurement

2



3

Address the root causes of ESG issues in battery supply chains

Focus on recycling and reuse



4

Better batteries:

Malmö's roadmap toward ethical and climate-smart public procurement of e-vehicle batteries

1: Incorporate ESG considerations into procurement criteria for EVs/EBs

Taking a progressive approach to procurement criteria by defining minimum requirements to be eligible for tender participation, since it will become increasingly realistic to assess suppliers' sustainability performance and disclosure due to new legislative measures.

Risk management measures:

- Establish procurement criteria to favour suppliers of EVs and EBs that minimise emissions in the battery manufacturing process.
- Require suppliers of EVs and EBs to disclose information on their raw material supply chains.
- Establish procurement criteria that favour suppliers who source battery raw materials from sub-suppliers certified as compliant with international best practice.

Prioritisation timeline of measures: short- to long-term

2: Reduce unnecessary procurement

Exploring ways to limiting procurement of vehicles to the strictly necessary number and identifying options to optimize the fleet, such as shared mobility approaches.

Risk management measure:

- Establish mechanisms for departments to share EVs and EBs – thereby reducing the total number of vehicles needed.

Prioritisation timeline of measures: short- to medium-term

3: Address the root causes of ESG issues in battery supply chains

Demonstrating leadership by actively – and publicly – advocating for change and working jointly with other actors, including through multi-stakeholder initiatives.

Risk management measure:

- Support initiatives that aim to address the causes of environmental and social problems in battery supply chains.

Prioritisation timeline of measures: short-term

4: Focus on recycling and reuse

Seizing on the opportunities – and mitigating risks – associated with the recycling potential of EV batteries (economic, social, economic, and strategic).

Risk management measures:

- Lease or purchase vehicles from EV and EB manufacturers that already have recycling schemes in place and develop a framework to ensure those recycling schemes respect environmental and social best practice.
- Investigate second-life options to prolong EV battery life.

Prioritisation timeline of measures: medium- to long-term



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