



Guidance on establishing joint procurement contracts across municipal borders for second-life battery energy storage systems

Introduction and purpose of this guidance

This guidance document provides practical recommendations on circular and cost-efficient procurement of second-life EV battery energy storage systems (BESS).

This guidance can be used to:

- Support pre-analysis and alignment between participating municipalities
- Provide questions for market dialogue prior to tendering
- Give guidance on the use of minimum requirements vs award criteria
- Provide suggestions for requirement formulations and verification requirements
- Support contractual follow-up and collaboration between participating municipalities

The checklist follows a structured process from pre-analysis and market dialogue to requirement setting and contractual follow up.

Questions for market dialogue

To assess the market readiness for second-life EV battery energy storage systems and relevant procurement models, market inquiries with relevant suppliers and contractors should be carried out prior to submission of the tender.

Market dialogue can be conducted as physical or digital meetings or directly with relevant suppliers.

In the table below you will find a selection of questions that can be used to assess technical capacity, circularity and cost efficiency.

Market inquiry questions on battery systems:

Question	Follow-up action
Battery capacity What is the maximum power output (kW) and storage capacity (kWh) of the battery	Based on the responses received, contracting authorities may define appropriate minimum requirements or award criteria related to capacity, lifetime and technical performance.



system offered?	
<p>State of Health (SoH)</p> <p>What is the documented State of Health (%) of the battery modules at the time of delivery?</p>	<p>If suppliers can provide reliable documentation, define a minimum SoH requirement.</p> <p><i>Requirement specification:</i></p> <p>“The battery system must have a documented State of Health of minimum [insert %] at the time of delivery.”</p>
<p>Safety systems</p> <p>What safety barriers are integrated in the system (e.g. fire detection, gas detection, cooling system)?</p>	<p>If safety features are consistently offered, define minimum safety requirements.</p> <p><i>Requirement specification:</i></p> <p>“The battery energy storage system shall include integrated fire detection and thermal management systems in accordance with applicable safety regulations and standards.”</p>

Circularity and end-of-life management

To ensure that second-life battery systems support circular economy objectives throughout their operational lifetime, contracting authorities should clarify how the battery components can be reused, repaired and recycled at end-of-life. Market dialogue should provide information on documentation, recycling schemes and environmental performance.

The table below presents suggested requirement specifications and corresponding verification methods.

Suggestions for requirement specifications	Verification requirements
Recycling at end-of-life	



The supplier shall describe how battery modules and components will be handled and recycled at end-of-life.	Documentation of recycling scheme and responsible recycling operator.
Remaining lifetime documentation The bidder shall document the estimated remaining charging cycles in equivalent full cycles.	Technical documentation and guarantee statement.
Design for disassembly The battery system shall enable replacement of individual modules.	Technical description confirming modular design.
Climate footprint documentation The bidder shall provide documentation of the estimated climate footprint of the battery system.	Environmental Product Declaration (EPD), Life Cycle Assessment (LCA) documentation, or equivalent third-party verified documentation.

In addition to circularity aspects, contracting authorities should also consider the long-term economic performance of the battery energy storage system.

Cost efficiency and award criteria

To ensure long-term economic performance of the battery energy storage system, contracting authorities should assess life cycle costs, operational costs and guarantees for remaining lifetime. Market dialogue should clarify available documentation and calculation methods.

The table below presents suggested award criteria related to cost efficiency and technical performance.

Wording of criterion	Verification requirements
The bidder will be evaluated based on the total life cycle costs of the battery system including procurement cost, operational costs and expected remaining lifetime.	Life Cycle Cost (LCC) calculation submitted by the bidder.
The bidder will be awarded for higher remaining lifetime in equivalent full cycles than the minimum requirement.	Documentation of estimated remaining charging cycles and guarantee statement.
The bidder will be awarded based on higher usable capacity (kW/kWh) than the minimum requirement.	Technical specification of current usable capacity.



Contractual follow-up

To ensure that the expected technical performance, circularity objectives and cost efficiency are maintained throughout the contract period, relevant follow-up mechanisms should be included in the contract. Clear reporting obligations and monitoring procedures help secure transparency, accountability and long-term value.

The table below presents suggested contractual requirements related to performance monitoring and operational follow-up.

Contractual requirements
The supplier shall annually report the remaining usable capacity and operational performance of the battery system.
The supplier shall notify the contracting authority of any significant degradation.
Replacement of defective modules shall be possible during contract period.
The supplier shall annually report the documented State of Health (SoH) and remaining usable capacity of the battery system.

