Proposal for industry participation in the

"Engineering & Business Case"



Energy storage value chain in Europe

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Boosting Innovation and Entrepreneurship in the Sustainable Energy Sector



Template to join the Engineering & Business Case®

1. Company name / Innovation project / name

Caparica Solaris, Main activity: Renewable Energy Project Development

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2. Technology/Case

Analysis of the energy storage value chain in Europe and its industrial development potential.

3. Description of the work to be done

"With electrification set to be one of the main pathways to decarbonisation, batteries as electricity storage devices will become one of the key enablers of a low-carbon economy. Given their capacity to integrate more renewables into our energy systems and their ability to green the industry and transport sectors, with spill over effects on the electrification on many additional sectors, global demand for batteries is expected to grow very rapidly over the coming years, making the market for batteries a very strategic one. To build up a viable manufacturing sector in Europe and consolidate technological and industrial leadership, the European Commission has identified batteries as a strategic value chain where the EU must step up investment and innovation to strengthen the industrial policy strategy." — European Commission.

Analysing all the value chain of energy storage under an industrial perspective and framing it in the circular economy. It is intended to reflect on European industrial development and to identify possible ways to unlock this potential. The state-of-the-art will be studied and compared with the existent industrial capacity. It is aimed to identify the gaps and address the respective solutions.

4. Key Performance Indicators (KPIs) or key deliverables

Clear KPIs and Deliverables are essential for a successful Challenge. Please list the key success criteria that will need to be achieved. These may include, but are not limited to: Technical specifications, performance relative to current state of the art, characterisation and/or validation required to demonstrate that the approach is fit-for-purpose, validation of new technologies and business models, prototypes, etc. On the other hand, the deliverable compiles project reports.

Answer this question and please fill in the following table:

Table 1. Key Performance Indicators*

| Importance | KPIs and Deliverables |
|------------|-----------------------|
| | |



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| _ | | | |
|---|--|---|--|
| | Must Meet | a) Investigate how government policies, schemes, subsidies, consumer demand, and climate change are impacting on the European storage industry. How many support schemes can be found? Is there any available funding and financing? | |
| | | KPI: each group has to select 1 KPI | |
| | | b) Investigate how many players are involved in this market. How many different technologies? How many countries are developing project? How many projects in the present? How many projects planned for the future? KPI: each group has to select 1 KPI | |
| | | IN II. Cutif gloup has to select I IN I | |
| | Good if met | | |
| | *This table helps us to prioritise your expectations | | |

5. Case study planning – a separate plan is provided for each of the 4 parts

| Stage/ Gate | Description - Value of green energy | Planned date |
|----------------|---|--------------|
| Session | Kick-off Meeting. Introduction to the case | 11/03 14h |
| 0 | | |
| STG-0 | Understanding the energy storage market and value chain | |
| | Tasks: | 08/04 14h |
| | 1. Review of state-of-the-art (technological) | |
| | 2. Identify the complete value chain (industrial) | |
| | 3. Search for circular economy solutions | |
| | DELIVERABLE - European Market overview and international | |
| | contextualizing. Global market analysis considering key | |
| | technologies and players. | |
| Session | State-of-the-art overview | |
| 1 | | |
| STG-1 | European Union market | |
| | Tasks: | 29/04 14h |
| | 1. Identify European Union plans and policy (energy and storage) | |
| | 2. Identify European supporting schemes (industrial development) | |
| | DELIVERABLE - overview of European plans and policy. Analyse the | |
| | global strategy, identify the major challenges and propose solutions | |
| | (critical thinking). | |



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| Session | European policy and strategy overview | |
|---------|--|-----------|
| 2 | | |
| STG-2 | Industrial value chain analysis | |
| | Tasks: | 20/05 14h |
| | Identify the current industrial capacity | |
| | 2. Identify industrial projects under development | |
| | DELIVERABLE – analysis of what exists and what is missing. | |
| Session | Analysis of the current industrial capacity and projects under development | |
| 3 | | |
| STG-3 | Tasks: | 09/06 14h |
| | Select a specific value chain point | |
| | 2. Spotting gaps | |
| | DELIVERABLE – each group has to select a specific value chain point | |
| | and must present and improvement plan. | |
| | | |
| Session | Final meeting – presenting a specific project | |
| 5 | | |
| STG-4 | Conclusion | 14h |
| | Tasks: | |
| | Integrated and interlinked presentation with all the most relevant | |
| | parts of each previous stage. | |
| | Final report - 5 pages maximum | |