Technical Specification Double-side Page (Adapted to remove proprietary information)

1. **TECHNICAL SCOPE:** Summarize the mock-up devised during the EXPLORE phase: how have you addressed the challenge/Theme Challenges and tackled with its requirements and data. Include a diagram.

> 1. Solar Charge API collects data on energy production of solar installations and forward-looking production forecasts provided by solar producers.
> 2. Solar Charge API connects to charging station management platforms
>
> 3. When predictive algorithms indicate that energy production of solar panels is higher than average building consumption, building owners/administrators receive a notification in advance to charge their own vehicles or reduce the cost to charge for other drivers in the cases of publicly accessible chargers.

2. **ALGORITHMS, TOOLS AND CONCLUSIONS:** Detail the algorithms and tools identified to accomplish the challenge/Theme Challenges. Show clear understanding of the used REACH dataset/s and addressed challenge/Theme Challenges.

> An example use-case of how the above data infrastructure works is the following. Data from previous days (energy prices and RES generation and consumption, either from open data, Partner providers or REACH datasets) are stored and used in training ML Models which are then cross-validated using some of the previous days as well as the day-ahead forecast data available from the input API.

3. **SCALABILITY AND FLEXIBILITY OF THE SOLUTION:** Discuss whether the solution can truly cope with humongous and increasing datasets and how flexible it is to adapt to other related domains

> To achieve interoperability, the cloud service will also utilize data standardization tools to facilitate data interchange between e-mobility service providers.

4. **DATA GOVERNANCE AND LEGAL COMPLIANCE:** Describe the security level of the proposed solution, i.e. how authentication, authorization policies, encryption or other approaches are used to keep data secure. Explain how will be compliant with the current data legislations concerning security and privacy (e.g. GDPR).

> Solar Charge will utilize ANONYMIZER service from BE-YS Research to ensure full anonymization of datasets originating from private households and public charging stations.

5. **QUALITY ASSURANCE AND RISK MANAGEMENT:** Describe the quality process planed for the final product. Technologically, which are the potential risks in all the phases of the project (design of the solution, development, testing, deployment...) and indicate mitigation plans to still fulfil the challenge/Theme Challenges and data provider requirements.

The project team has uninterrupted access to sufficient volume of data from charging stations and Solar energy production data to support the early development stages of the service without significant dependencies to external data providers. In that way project team will be able to showcase successful use cases of the API and attract more data providers to scale the service in new geographies.