

Background and company Profile

INCELL International provides world-leading smart and sustainable lithium power-backup solutions for the global telecom market. In only a few years, our solution has become market leading. We have products installed in over 50 countries - from Svalbard to Ghana. We make sure that people all over the world can continue to communicate hassle-free. With headquarters and R&D in Sweden, manufacturing in Mexico, sales office in the United States and global sales channels, we serve telecom customers around the world.

Project description and methodology

Evaluate Incell's indoor backup battery (model will be selected later) using the life cycle analysis methodology from cradle-to-grave in order to compare its environmental performance with other batteries available on the market (lead-acid for example). The scope could be expanded to econometric and scenario analysis based on data availability and prior discussions with the candidates.

The methodology includes conducting a literature survey of the most recent life cycle analysis carried out for similar products. Inventory data will be for the indoor backup battery will be provided by Incell. The inventory of similar products on the market (lithium-ion and lead-acid batteries) should be collected and prepared from the literature survey. The analysis will be performed preferably using OpenLCA software (other software can be discussed) and the project will be carried out by 2 students.

Timeline

Stage 1: *Approx 3 months* - Literature survey, definition of the functional unit, the limits of the system, compilation of inventory, modelling in the software and carry out a preliminary analysis.
Stage 2: *Approx 2 months* – The definition of the different scenarios (batteries) to be compared, a disturbance and sensitivity analysis will be carried out (possibly focusing on EoL stage), the economic analysis can be included if it is relevant for the purpose of the analysis.

The expected corporate presentation is tentatively set for June 2021.

Desired Profile

The project is suitable for students with the ability to work independently and creatively. Although the company is based in Kista, Stockholm, the students have the flexibility to work remotely; based on the above, the project meetings will be carried out through Microsoft Teams. If suitable, the students may also work directly at the HQ in Kista.

A desired background on:

- Environmental engineering, environmental management, chemical engineering, or related scientific fields.
- High interest in energy systems and energy storage technologies. Previous background working for the industry will be considered an asset.
- Previous knowledge in LCA methodology (e.g. Chalmers course on masters level VTM081) is desired.
- Previous knowledge in OpenLCA/SimaPro/GaBi software.
- Good communication skills in English will be considered an asset.

Selection Process:

If you are interested, please send your CV and a short motivation letter to Fernando copying Mudit not later than November 11th 2020. Applications will be revised in a continuous basis. A non-disclosure agreement is expected to be signed for confidential information.

Contact

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