



INNOVATION FUND

Driving clean innovative technologies towards the market

Green Foil project: Low CO₂ footprint aluminium foil for electric vehicle battery production

The Innovation Fund is 100% funded by the EU Emissions Trading System



Project summary

The Green Foil project aims to support the development of increased productivity in aluminium rolling to deliver aluminium foil that is used as a cathode current collector in electric vehicle (EV) batteries. The project will install an innovative surface treatment technology for aluminium production that improves plant productivity, thereby contributing to create a circular economy benefitting the entire EV battery value chain. At its full capacity, the aluminium foil produced on site will support the annual production of 565 000 batteries to equip EVs, thus helping to avoid all the greenhouse gas (GHG) emissions from conventional vehicles.

COORDINATOR

Gränges Finspång AB

LOCATION

Finspång, Sweden

SECTOR

Other energy storage

AMOUNT OF INNOVATION FUND GRANT

EUR 2 676 706

RELEVANT COSTS

EUR 4 461 176

STARTING DATE

01 April 2021

PLANNED DATE OF ENTRY INTO OPERATION

Q1 2023

Aluminium rolling mill

Innovative technology to increase productivity

The innovative element of the Green Foil project is enabling an increased productivity in the manufacturing of battery foil by introducing a new surface treatment technology (corona treatment, an electrical process used in the laminate industry for increasing surface tension). High power corona treatment is a new process in production of battery foils. It increases surface wettability on the battery foil, enabling a doubling of the process rolling speed, with a corresponding increase in plant productivity, in terms of metres of foil rolled per minute.

The Green Foil project will enhance the capacity for production of battery foil at Gränges Finspång utilizing primary rolling slabs with a very low CO₂ footprint sourced from smelters in the Nordic region. Such an approach supports an effective production and allows Gränges Finspång to offer battery foil with, for instance, a 75% lower CO₂ footprint than battery foil imported from Asia.

Supporting electric vehicle battery production based on more efficient aluminium foil production

The first benefit of the Green Foil project is the production of aluminium foil that is necessary for the production of EV batteries, therefore contributing to the development of a Europe-based e-mobility supply chain and helping to avoid the GHG emissions from conventional vehicles. The project will enable the production of batteries for EVs representing the potential avoidance of more than 36 million tCO₂eq over the first ten years of production compared to conventional (diesel-fuelled combustion engines) vehicles.

Scale up potential

The project is an enabler for further developments within the field of increasing productivity and production of low CO₂ battery foil.

The potential for sectoral scalability is also high, as European battery foil production will strongly support the development of European battery production, through better logistics links with the associated greater certainty and flexibility of supply.