



Luxembourg, 19/12/2024

Environmental and Social Completion Sheet (ESCS)

Overview

Project Name:	HALDOR TOPSOE INNOVATIVE CATALYSTS SOLUTIONS
Project Number:	2020-0781
Country:	Denmark
Project Description:	R&D investments for the development of new catalysts and catalytic technologies with a special focus on innovative hydrogen technologies and other catalytic technologies for “carbon emission reduction” applications.

Summary of Environmental and Social Assessment at Completion

EIB notes the following Environmental and Social performance and key outcomes at Project Completion.

No significant environment or social issues were noted. The project concerned investments in research, development and innovation, over a three-year period (2021-2023), for the development of new products (catalysts) and new catalytic technologies targeting the reduction of pollutant emissions from industrial plants, that were carried out in existing facilities without changing their already authorised scope. Overall, the project has been assessed as acceptable having no adverse impact on the environment.

The scope of the project had been voluntarily restricted to the financing of the **promoter’s R&D activities with the highest “Carbon emission reduction” potential**, excluding the development of pure conventional technologies and catalysts, which are primarily used by conventional fossil fuels industries. Therefore, the project was focusing on the development of new technologies and catalysts to support the promoter’s customers in transition towards renewable energy and carbon neutrality of industrial operations. More specifically, the project supported the most promising environmentally-friendly technologies for the production of greener chemicals and renewable fuels (such as green hydrogen, green ammonia, biofuels, and electrified methanol).

The R&D activities of the project have significant impacts in different industries through increased cost effectiveness, increased environmental sustainability (lower environmental impacts) and increased energy and resource efficiency (see example below).

In 2023, the promoter broke ground on its SOEC factory in Herning, Denmark. This “first-of-a-kind” SOEC factory is expected to be operational this year (2024); it will manufacture innovative SOEC electrolyzers that are necessary to produce e-fuels, green ammonia and e-methanol. Topsoe’s state-of-the art SOEC (Solid Oxide Electrolyser Cell) technology plays a key role in the sustainable production of green hydrogen; by utilizing renewable energy sources to power the electrolysis process, SOEC enables the efficient conversion of water into hydrogen and oxygen without harmful emissions.

The promoter’s annual report (2023) provides another few examples of recently launched demo-plants and products that give good illustrations of the positive contribution of the promoter’s R&D activities to society.

Summary opinion of Environmental and Social aspects at completion:

Based on the reports provided by the promoter, EIB is of the opinion that the Project has been implemented in line with EIB Environmental and Social Standards, applicable at the time of appraisal.