

Nordic Electrofuel AS (“NEF” or the “Company”) business concept is to produce carbon neutral e-fuel based on synthetic hydrocarbon using renewable energy, water, and CO/CO₂. The final product will replace fossil-based products like kerosene (jet fuel), diesel, naphtha, wax and lubricants. Hydrocarbon/Fischer-Tropsch-based e-fuel offers crucial advantages since it can be used in existing engines and infrastructure without any modifications. This enables transport sectors to implement a swift and significant reduction of the carbon footprint without making massive investments in new equipment. E-kerosene has already been certified for use in airplanes since 2009. Power-to-hydrocarbons gives the most cost-efficient Power-to-Liquid (PtL) solution for decarbonizing the aviation industry. E-Fuel have a clean combustion and as such eliminates particulates emissions. In aircrafts particulates creates Cirrus clouds which should be considered to be twice as severe for the global warming than the CO₂ emissions itself.

The value proposition of NEF is to utilize Norway’s rich access to renewable hydropower and access to CO/CO₂ from point source emissions, for example from the cement industry, metal oxide reduction plants, waste burning plants or bio-fuel plants, and combine it with advanced electrolysis technology. This will enable the company to offer carbon neutral liquified electricity at competitive prices.

NEF will build a pilot plant at Herøya, Porsgrunn, in southern Norway with a production capacity of 10 million liters per year (hereinafter referred to as **E-fuel 1**). The FEED study has been completed by Aker Solution and the plan is to start commissioning in 2025.

Following successful commencement of the 10 million liters’ plant, NEF plans to upscale with **E-fuel 2** with a capacity of 200 million liters which will be based at Herøya, all in accordance with the original roll out plan. Herøya in Porsgrunn gives access to vital process technology experience and essential infrastructure such as power grids, water, CO/CO₂ and port facilities. The company will evaluate E-fuel 1 according to the project planning which will result in an optimized setup for the expansion towards e-fuel 2. The investment in E-fuel 1 is linked to the investment in future e-fuel plants. With E-fuel 1 NEF will demonstrate production of carbon neutral liquified electricity at competitive prices.

In 2021 the company undertook a feasibility study for **E-fuel 3** with a capacity of 190 million liters which will be based at Holla in the Trøndelag county. The feasibility study was conducted by Aker Carbon Capture and Aker Solution. The plan is to consequently build several E-fuel plants in Norway with a capacity of 200 million liters.