

Finland's largest hydrogen plant planned in Kokkola

Project developer Flexens Oy Ab and KIP Infra Oy, part of Kokkola city council, have signed a letter of intent regarding a land lease agreement for a facility with a hydrogen production capacity of approximately 300 megawatts in the Kokkola Industrial Park area. Such a facility would certify a strengthened energy and ammonia self-sufficiency for Finland. Production of mainly green hydrogen and ammonia is meant to start running at the end of 2027. The Finnish Minister of Economic Affairs, Mika Lintilä, considers this good news for both Central Ostrobothnia and the development of the Finnish hydrogen economy.

As the country's largest hydrogen project to date, the facility in Kokkola would mark a concrete step forward for the Finnish hydrogen industry. The facility would also be partially responsible for Europe's energy needs and ensure self-sufficient fertiliser production.

"The market outlook for green hydrogen and ammonia is excellent. **BotH2nia**, 'the Hydrogen Bay of the North', being established around the Gulf and Bay of Bothnia, is predicted to be able to meet a significant part of all of Europe's energy needs in the form of hydrogen. Furthermore, the Kokkola plant's 300 megawatts would fulfil a third of the domestic capacity target of 1,000 megawatts as stated in Finland's climate and energy strategy," says **Berndt Schalin**, CEO of **Flexens Oy Ab**.

"These are very happy news for Central Ostrobothnia and the development of the Finnish hydrogen economy. Thanks to the city's deep-water port and industrial centre, Kokkola is a very attractive investment destination. Interest in producing green hydrogen and ammonia has increased enormously in recent years. Implementing this project would improve energy self-sufficiency and strengthen domestic fertiliser production for agriculture," says Minister of Economic Affairs **Mika Lintilä** (Centre Party).

Hydrogen production is crucial for the renewable energy transition.

"Hydrogen plays an important role in achieving the carbon neutrality goals set out in Finland's climate and energy strategy. In addition, hydrogen production creates significant export-promoting opportunities and attracts investment and added value to Finland. A society with a completely renewable energy system requires wind and solar

power, which vary according to weather. Hydrogen can act as energy storage, and by being refined into ammonia needed for agriculture will in turn guarantee self-sufficiency," Schalin comments.

KOKKOLA'S INDUSTRIAL PARK OFFERS AN EXCELLENT ENVIRONMENT FOR HYDROGEN PRODUCTION

The new hydrogen plant is being built in the Kokkola Industrial Park. Kokkola was chosen because of the city's suitable industrial area.

"Hydrogen gas is already produced in Kokkola, which guarantees an established safe operating environment. In addition, there is a port in the area. Along the west coast, a type of 'hydrogen hub' is also being formed, as there is already the wind power and green electricity required for hydrogen production," says Schalin.

For Kokkola, the hydrogen facility would also create several new jobs.

"We are happy about Flexens' project. We have purposefully constructed the area of Kokkola Industrial Park, KIP, and its industrial infrastructure, and Flexens' decision is an indication of a well-functioning ecosystem. We want to take part in building the Finnish hydrogen economy, and this project is a significant part of that. The project also improves the competitiveness of the existing industry. Future, new jobs will also strengthen our city's growth," says **Jonne Sandberg**, chairperson of the board at **KIP Infra Oy**.

In addition, **Kokkolan Energia Oy** is negotiating using waste heat from the hydrogen plant in its district heating production.

"The project implementation would strengthen the energy networks in Kokkola's large industrial area, such as the electricity and heating networks. This enables a significant waste heat recovery and brings us both employment opportunities and turnover. The project also supports the goals of our low-carbon strategy by, for example, reducing district heating and logistics emissions and enabling hydrogen and hydrogen-based fuels in the area. Within the project, we are at least negotiating the construction of energy infrastructure and the possibilities of, among other things, recycling waste heat. We are open to various business models and new ideas," says **Mikko Rintamäki**, CEO at Kokkolan Energia Oy.

THE HYDROGEN TRANSMISSION INFRASTRUCTURE PROJECT NORDIC HYDROGEN ROUTE BOTHNIAN BAY SUPPORTS THE DEVELOPMENT OF THE AREA'S HYDROGEN ECONOMY

One of the essential partners in the Kokkola hydrogen plant project is **Gasgrid Finland**, developing infrastructure for hydrogen transmission within the **Nordic Hydrogen Route Bothnian Bay** project, together with the Swedish company **Nordion Energi**. The Nordic Hydrogen Route Bothnian Bay project aims to set up a 1,000-kilometer hydrogen transmission network around the Bothnian Bay and Bothnian Gulf, and an open hydrogen market by 2030.

The hydrogen production facility and the Nordic Hydrogen Route Bothnian Bay are important to each other and the green industrialisation of the region, as they can contribute to the development of the hydrogen economy both in the Kokkola region and elsewhere. The hydrogen produced in the Kokkola plant can be transported and stored in the hydrogen transmission network developed in the area, to which several producers and consumers can connect. In this way, the conditions are created for hydrogen trading and the development of a hydrogen infrastructure and market.

"Kokkola's hydrogen production facility project is a concrete step towards realising the region's hydrogen economy and developing a comprehensive infrastructure and market for hydrogen transmission. Such pioneer projects also contribute to the continued development of infrastructure for hydrogen transmission," says **Olli Sipilä**, CEO of Gasgrid Finland Oy.

Gasgrid and Flexens intend, together with other actors in the area, to study the development needs for local, and thus also regional and national, hydrogen infrastructure.

"We invite actors in the area to participate in Flexens' and Gasgrid's joint study and to actively participate in the development of the local hydrogen economy", Schalin comments.

MORE INFORMATION

Berndt Schalin, Flexens Oy Ab, berndt.schalin@flexens.com, +358 (0) 408 429 469

Olli Sipilä, Gasgrid Finland Oy, olli.sipila@gasgrid.fi

Jonne Sandberg, KIP Infra Oy, jonne.sandberg@kokkola.fi

Mikko Rintamäki, Kokkolan Energia Oy, mikko.rintamaki@kokkolanenergia.fi

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