

1. Project description

Copenhagen Infrastructure Partners (CIP) plans to establish one of Europe’s largest production facilities of CO2-free green ammonia.

The project will be located in the town of Esbjerg on the west coast of Denmark, where the Power-to-X-facility will convert power from offshore wind turbines in the Danish part of the North Sea to hydrogen through electrolysis. The hydrogen will serve as input to production of ammonia in a Haber-Bosch plant.

It is envisaged that the project will consist of a 1GW electrolysis hydrogen plant and have a capacity to produce up to 900k tons of green ammonia annually. Expected production of green ammonia is 400k – 600k tons annually. The technologies to be applied in the plant are not yet decided, but a high level of technological readiness will be required.

The green ammonia is expected to be used by the agriculture sector as CO2-free green fertilizer and by the shipping industry as CO2-free green fuel. Ammonia will be shipped from the port of Esbjerg.

Excess heat from the production process will be used to provide heating for around one third of the local households in Esbjerg through the already existing district heating network.

The project will be developed in 2021-2022 with construction potentially starting in 2023. The plant is expected to be commissioned in 2026.

Please select which part of the value chain for hydrogen your project focuses on (select one or more, where applicable):

Production	Transmission	Industrial application	Mobility	Energy	Housing application	Other
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Partnerships and spillover effects

While Copenhagen Infrastructure Partners have already outlined a broad range of potential suppliers and offtakers for the project, CIP’s Esbjerg PtX project would like to further explore possibilities to connect with partners across EU borders and explore the potential to create further cross-border benefits for the European hydrogen economy.

CIP would appreciate the opportunity to connect to both potential equipment suppliers and potential offtakers from all over EU.

Suppliers, including

- Suppliers of electrolyser technology of a high of technological readiness level
- Suppliers of ammonia plants
- Suppliers of hydrogen and ammonia storage

Offtakers, including companies within

- Shipping
- The fertilizer industry
- Distributed generation

Additionally, we would be interested in the prospects of establishing an Ammonia bunker network across Europe, and hence would like to explore perspectives on that with interested parties for such activities.