

Media Kit

# Kassø Power-to-X facility

20/03/2025



EUROPEAN  
ENERGY



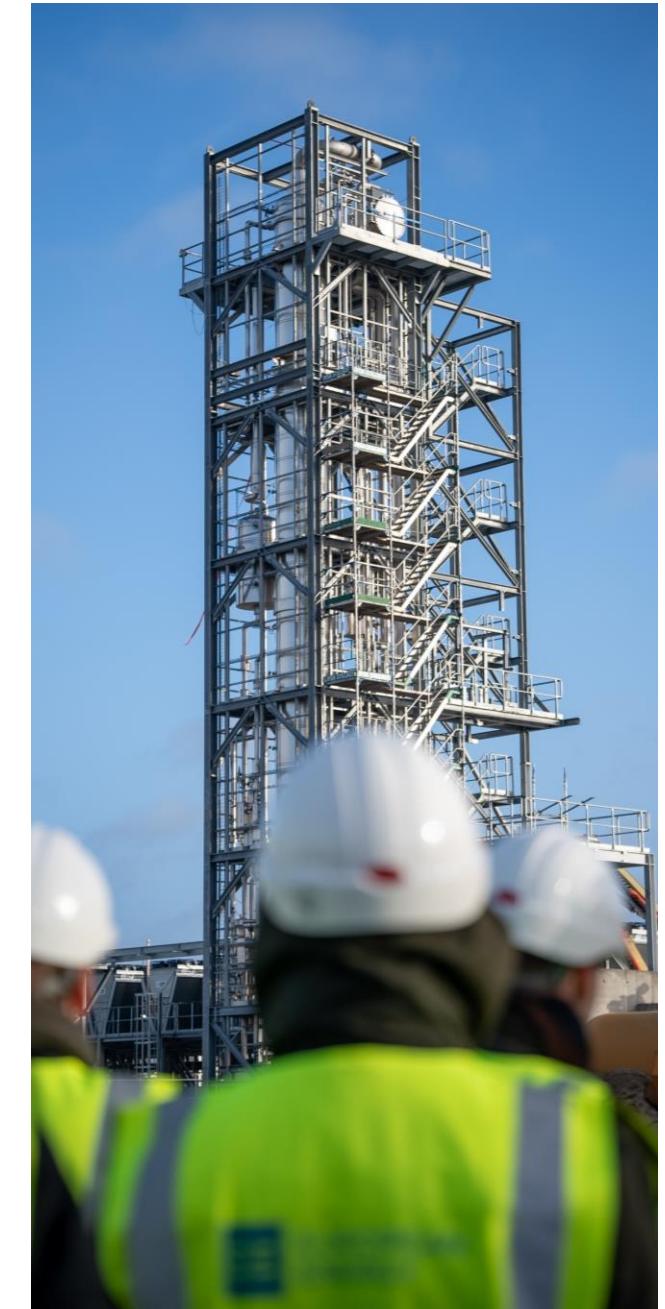
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# Important Terms

- **Power-to-X (PtX):** the name for technologies that convert electricity from renewable energy into another power source.
- **E-methanol:** the same product as methanol (methyl alcohol), produced from natural gas; however, it is a green alternative when it is produced using renewable energy and biogenic CO<sub>2</sub> captured from e.g. biogas plants and waste incineration compared to generated from fossil fuels such as coal or gas.
- **Electrolysis:** a process in which an electric current is passed through a substance, causing it to break down into its component part.
  - At Kassø, electricity is used to split water (H<sub>2</sub>O) into hydrogen (H<sub>2</sub>) and oxygen (O<sub>2</sub>), a fundamental step in many PtX processes.
- **Off-taker:** a company or entity that buys a product from the producers of e-methanol or renewable energy.
- **Carbon Capture (CC):** capturing CO<sub>2</sub> emissions from industrial sources or the air for storage or in producing synthetic fuels like e-methanol.
- **Biogenic CO<sub>2</sub>:** CO<sub>2</sub> captured from natural sources like biomass instead of fossil-based emission.



# About Kassø Power-to-X facility

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## **The world's largest commercial e-methanol facility**

Sectors such as shipping, aviation and chemicals face pressure to become CO<sub>2</sub> neutral. However, direct electrification is often not feasible in these sectors—but now, there are scalable alternatives.

Kassø Power-to-X facility, the world's largest commercial-scale e-methanol production site, turns renewable energy, water, and CO<sub>2</sub> into a green fuel. Kassø e-methanol facility has the capacity to produce up to 42,000 tonnes or 53 million litres of e-methanol for its off-takers per year.

This innovation offers a viable path for hard-to-electrify industries, such as shipping and aviation, to reduce their carbon footprints and realise net-zero targets.

Both the e-methanol facility and the 304 MW solar park in Kassø are owned by Solar Park Kassø ApS (“SPK”) under the joint venture company, Kassø MidCo ApS (“MidCo”). MidCo is co-owned by European Energy (51%) and the Mitsui & Co., a global trading and investment company (49%).



# Facts about Kassø Power-to-X facility

304 MW renewable electricity

The largest solar park in the Nordic region, the 304 MW Kassø Solar Park, supplies the Power-to-X plant with renewable electricity.

42,000 tonnes e-methanol

When fully operational, the Power-to-X facility can produce up to 42,000 tonnes of e-methanol (53 million litres) annually. That amount is equivalent to the annual consumption of three to four of Maersk's first green container ships.

100+ full-time jobs

The Power-to-X facility employs over 100 people during the construction phase, half of whom are locals. Around 30 full-time employees will manage the day-to-day operations of the completed plant, with support from external subcontractors. Many of European Energy's 60 Power-to-X employees are actively involved in the project and are supported by external advisors.



Heating for 3,300 households

The excess heat from the e-methanol production is used for district heating in the local area, providing heat for 3,300 households.

52 MW electrolysis

With 52 MW of electrolyser capacity, the Power-to-X facility produces around 8,000 tonnes of green hydrogen annually, which is processed into e-methanol.



## More facts

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# 340,000

Manhours were required to construct Kassø Power-to-X facility underlining the scale and complexity of the project.

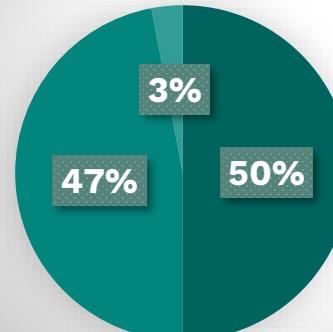


# 3,700

Tonnes of steel was used to construct the facility.



## Origin of suppliers



- Danish suppliers
- European suppliers
- Other suppliers



# 60,000

Tonnes of captured biogenic CO<sub>2</sub> are utilised annually at the facility, contributing to a circular and sustainable carbon cycle.



# 170

Kilometers of cables are installed at Kassø Power-to-X facility.



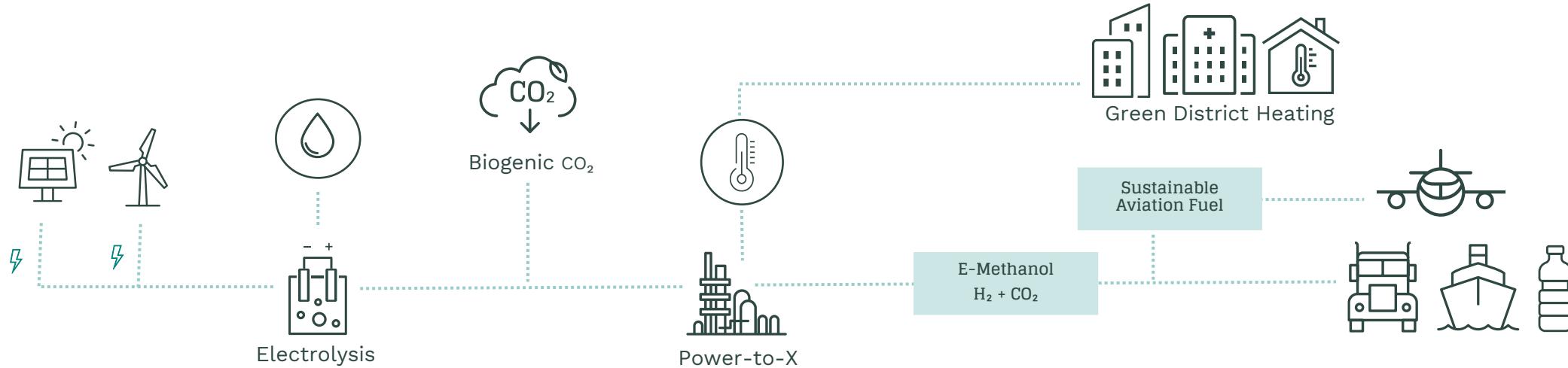
# What is e-methanol?

- E-methanol is the same product as methanol (methyl alcohol), which is already used as a fuel in combustion engines and as a raw material in the chemical industry.
- Methanol is normally produced by using natural gas and coal, but e-methanol is a green alternative, produced using renewable energy and biogenic CO<sub>2</sub> captured from biogas plants and waste incineration.
- When we combine the hydrogen with biogenic CO<sub>2</sub> it becomes e-methanol, which can be used in both heavy transportation and the chemical industry, including the production of plastics



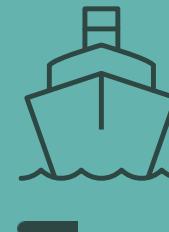
# How does Solar Park Kassø ApS (“SPK”) produce e-methanol?

- Solar Park Kassø ApS (“SPK”) produces e-methanol using renewable energy from wind and solar farms.
- An electrolyser powered by renewable energy splits water into green hydrogen and oxygen. When we combine the hydrogen with biogenic CO<sub>2</sub> it becomes e-methanol.
- The process creates excess heat, which can be supplied to the local district heating network and provide climate-friendly and affordable heat to local residents.
- E-methanol facilities can ramp up and down production and utilise surplus renewable electricity in the grid. Production of e-methanol can thereby play a role in balancing the grid during peak periods when the energy system is not consuming all the electricity produced.



# Why is e-methanol important?

- E-methanol has an excellent potential to reduce the fossil CO<sub>2</sub> footprint across heavy transport and the chemical industry.
- These industries, usually referred to as hard-to-electrify, are challenging to decarbonise due to their reliance on fossil fuels and carbon as integral parts of their production processes.
- With e-methanol they now have a green alternative that displaces the fossil fuels and fossil-based raw materials that would otherwise be used.



In the coming years, an increasing number of container ships will be launched that can run on e-methanol as a marine fuel.



E-methanol can replace fossil-based methanol in plastic production, among other things.



E-methanol can be blended with gasoline and used in diesel blends for road transport.



Through further processing, e-methanol can be turned into sustainable aviation fuel (SAF).

# Images & Videos

The zip file included in the media kit has a selection of images and videos.

You can download it at

[https://drive.google.com/file/d/1aOeLFpQoBte8FMCwknlCeYlrPEdJzEas/view?usp=drive\\_link](https://drive.google.com/file/d/1aOeLFpQoBte8FMCwknlCeYlrPEdJzEas/view?usp=drive_link)

# Overview of picture and video files (credit: European Energy)

File Name	Description
Picture 1.jpg	Overview of Kassø Power-to-X facility
Picture 2.jpg	Solar Park Kassø
Picture 3.jpg	Power-to-X facility and solar park
Picture 4.jpg	CEO Knud Erik Andersen together with EE employee visiting the Power-to-X facility.
Picture 5.jpg	Emil Vikjær-Andresen, EVP and Head of Power-to-X in European Energy speaking at the Power-to-X facility.
Picture 6.jpg	Knud Erik Andersen, CEO of European Energy
Picture 7.jpg	Emil Vikjær-Andresen, EVP and Head of Power-to-X in European Energy
Picture 8.jpg	Rene Alcaraz Frederiksen, Director in European Energy and CEO of Solar Park Kassø
Picture 9.jpg	Toshikazu Yamazaki, CFO of Solar Park Kassø
Picture 10.jpg	EE employee holding first bottle of e-methanol from plant
Video 1.mp4	Overview of Kassø Power-to-X facility
Video 2.mp4	Drone footage of Kassø Power-to-X facility
Video 3.mp4	Drone footage of Solar Park Kassø

# Press releases and other links

# Previous Press Releases on Kassø Power-to-X facility

- [First biogenic CO2 delivered from Tønder Biogas to Kassø Power-to-X facility - European Energy](#)
- [European Energy & Mitsui & Co. to inaugurate Kassø e-methanol facility in May 2025 - European Energy](#)
- [European Energy produces first e-methanol at Kassø - European Energy](#)
- [European Energy and Petrobras strengthen partnership for green methanol production in Brazil - European Energy](#)
- [European Energy inaugurates its first green hydrogen facility - European Energy](#)
- [European Energy receives EU Innovation Fund grant for Green Methanol facility in Denmark - European Energy](#)
- [Danske Commodities and Solar Park Kassø sign agreement to optimise world's largest commercial Power-to-X facility - European Energy](#)
- [Metafuels plans eSAF facility in Denmark together with European Energy - European Energy](#)
- [Lithuanian Energy Minister visits Kassø Power-to-X facility - European Energy](#)
- [European Energy to cooperate with Polish Municipalities on Power-to-X development - European Energy](#)
- [European Energy wins tender to start next generation of e-fuel production - European Energy](#)
- [European Energy and Mitsui complete transaction regarding Kassø solar farm and Power-to-X-facility - European Energy](#)
- [Mitsui will acquire stake in Northern Europe's largest solar plant and the world's largest e-methanol facility - European Energy](#)

# More helpful resources

- Short brochure on e-methanol: <https://europeanenergy.com/wp-content/uploads/2025/02/e-methanol-a-game-changer-for-decarbonising-heavy-transport-and-industry-2.pdf>
- European Energy website on Kassø: [Kassø e-methanol facility - European Energy](#)
- European Energy website on Power-to-X: [Power-to-X - European Energy](#)
- DTU article on Power-to-X: [Power-to-X. From green energy to green fuel](#)

