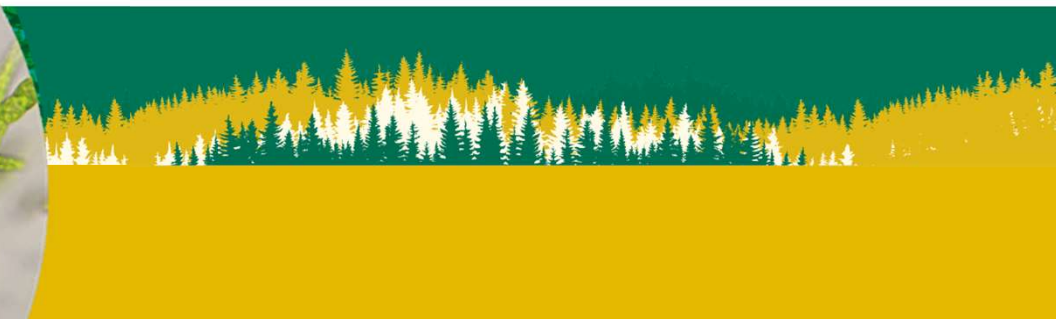
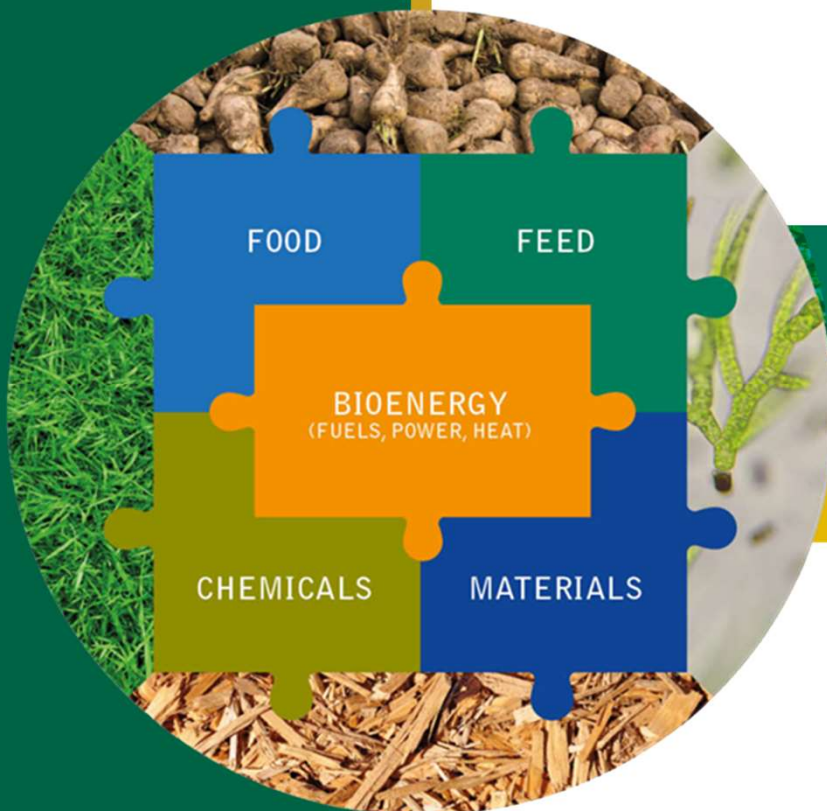


# Updates Denmark

November 2019



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# Policy update

- New government political direction to reduce emissions presented in June 2019
- Country climate targets were raised to 70% emission reduction by 2030

## Denmark's new government raises climate change to highest priority

Published on 26/06/2019, 1:31pm

In a deal with other left parties, the Social Democrats agreed to raise the country's climate targets and place the green transition at the heart of policy



Danish prime minister Mette Frederiksen (Photo: News Oresund/Commons)

By **Chloé Farand**

**Denmark's government announced a "new political direction" based on an ambitious climate manifesto, released on Wednesday.**

Social Democrat leader Mette Frederiksen, 41, became the country's new prime minister on Wednesday, after she secured a political deal with three other left-wing parties to form a one-party minority government.

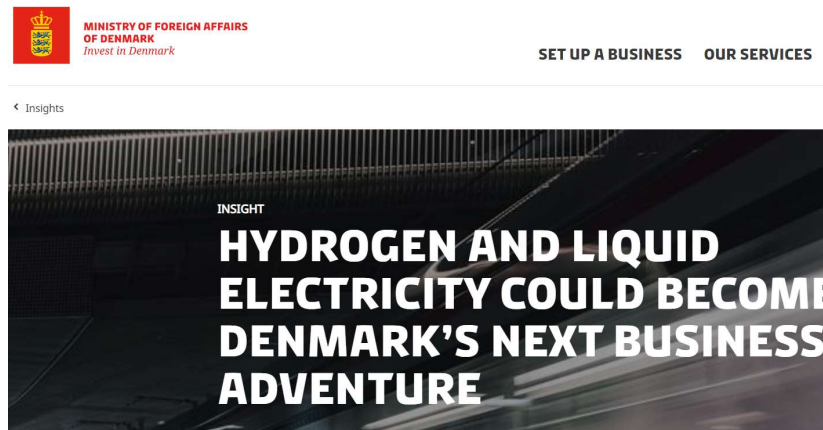
Under the agreement, the new government pledged to introduce binding decarbonisation goals and strengthen its 2030 target to reduce emissions by 70% below the 1990 level – the current target is 40%.

The left-wing alliance acknowledged this was "a very ambitious target" and that the last five points of emissions reduction to 70% would be "particularly difficult to reach".



# Targets / Directions

- The new deal includes energy efficiency improvements:
  - a broad electrification strategy
  - a ban on the sale of all new diesel and gasoline cars from 2030 and hybrids from 2035
  - cooperation with other North Sea countries to exploit offshore wind potential
- Ambition is 1 million electrical vehicles by 2030
- **Efforts in Electricity conversion to hydrogen and liquid fuels**



Power2x is currently developing fast in Denmark and with our progressive green transition, new business and investment opportunities are emerging. Several foreign businesses have already invested in the conversion of surplus electricity to hydrogen.

According to a new report by the independent public enterprise, Energinet, owned by the Danish Ministry of Climate and Energy, the conversion of electricity to hydrogen and liquid fuels – the so-called Power2X – can become relevant earlier than expected. This is due to cheaper wind energy prices, an increased demand for green fuel for transportation and the rapid developments in electrolysis technology.

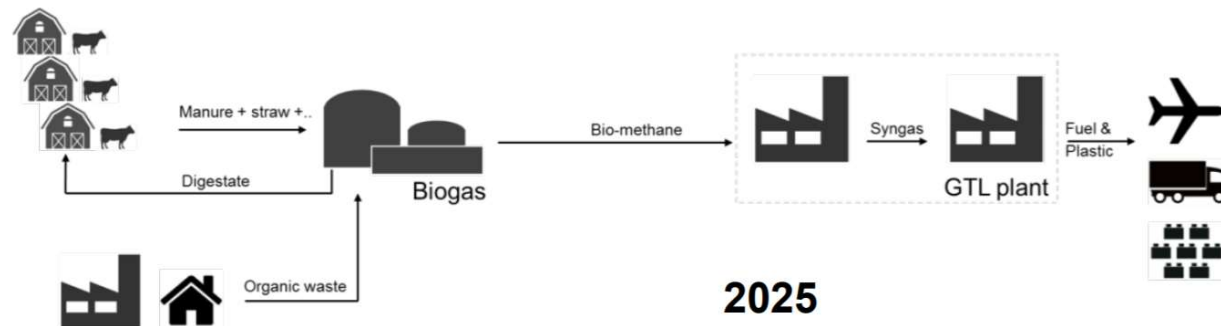
Denmark can become one of the frontrunners in this development. Denmark is a windy country and has many years of experience with and development of wind energy.

# Targets / Directions

- Increase the use of biofuels (ethanol, biodiesel) according to EU directives.
- From 2020 all new busses should be climate friendly, e.g. electrical, biogas or biofuels
- Green growth at Copenhagen airport - Goals include:
  - By 2030, CPH will be an emission-free airport with emission-free transport to and from the airport
  - The entire airport will be CO2 emission-free by 2050, from the airport itself, air traffic, companies operating in the airport and land traffic to and from the airport

# Targets / Directions

- Increase sustainable **aviation fuel** production:
  - Ethanol to jet
  - Jet based on renewable feedstocks of biogas, bio-methane (GTL – gas-to-liquid technology)

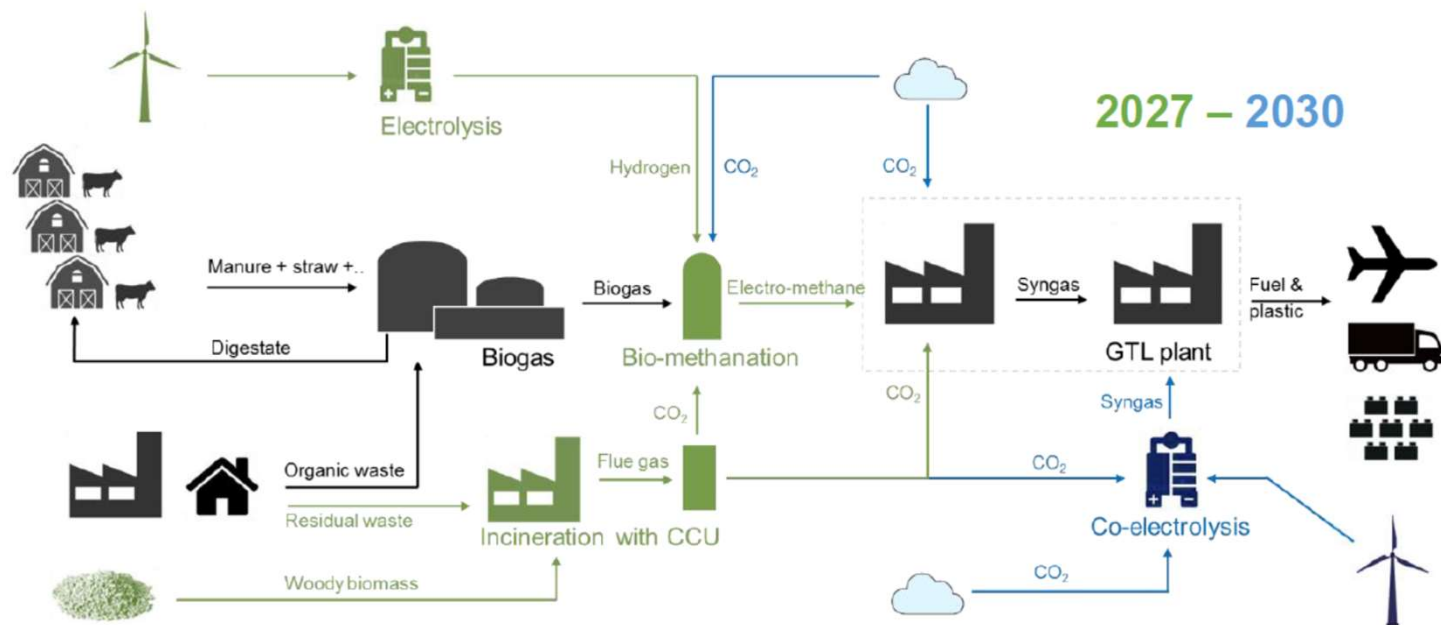


*Production of GTL jet fuel, other fuels and plastics based on feedstock of bio-methane. The applied technology is mature and already existing and a jet fuel factory based on this technology can be in full scale operation by 2025*

<https://www.cleancluster.dk/wp-content/uploads/2019/10/Nordic-aviation-fuel-production-28-10-2019-final.pdf>

# Targets / Directions

- Increase sustainable **aviation fuel** production:
  - Ethanol to jet
  - Jet based on renewable feedstocks of biogas, bio-methane (GTL – gas-to-liquid technology)
- Integration with wind power to produce electro-methane (2027-)



<https://www.cleancluster.dk/wp-content/uploads/2019/10/Nordic-aviation-fuel-production-28-10-2019-final.pdf>

# Targets / Directions

- Increase sustainable **marine fuel** production.

Maersk have a strategy of CO2 neutrality for shipping by 2050.



24 October 2019

PRESS RELEASE

## **Alcohol, Biomethane and Ammonia are the best-positioned fuels to reach zero net emissions**

*A study by A.P. Moller - Maersk and Lloyds Register confirms that the best opportunities for decarbonizing shipping lie in finding new sustainable energy sources. Based on market projections, the best positioned fuels for research and development into net zero fuels for shipping are alcohol, biomethane, and ammonia.*

29 October 2019

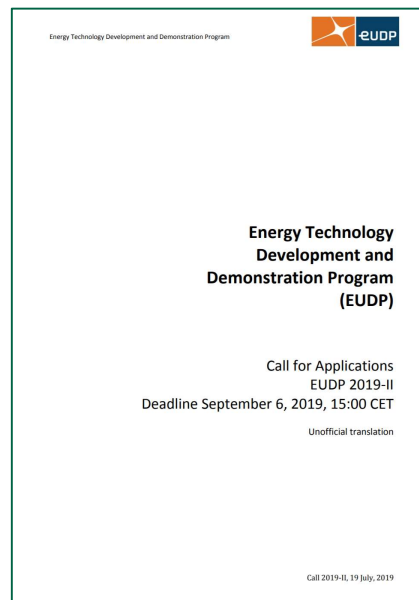
## **Maersk join forces with industry peers and customers to develop LEO**

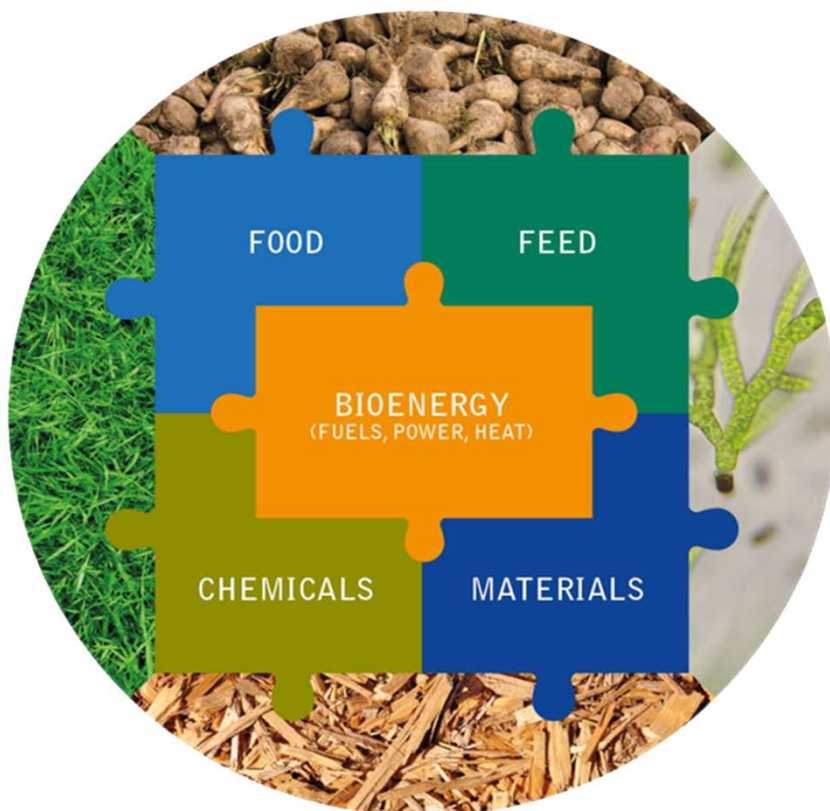
*A.P. Moller - Maersk alongside with Wallenius Wilhelmsen, BMW Group, H&M Group, Levi Strauss & Co. and, Marks & Spencer to explore LEO - a blend of lignin and ethanol - that could be part of the future solution for sustainable shipping.*

Maersk and Wallenius Wilhelmsen have teamed up with Copenhagen University to develop LEO. Copenhagen University is currently running the lab-scale development of this potential marine fuel. The project aims to move into phase II – testing the fuel on actual vessel engines – in the second quarter of 2020.

# Increased funding available for Research

- Increased funding available for Research in Energy and related areas including biomass utilization, biorefineries, circular economy





**IEA Bioenergy**



**Task42 – Biorefining in a Circular Economy**

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