Danish Ministry of Climate,
Energy and Utilities

Denmark's roadmap for transitioning away from fossil fuels



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Cover photo: Adobe Stock



Introduction

The historic decision of the first Global Stocktake highlighted the need to transition away from fossil fuels (TAFF) in a just, orderly and equitable manner as a necessary global action to limit global warming to 1.5°C in line with the Paris Agreement. In response to this, important focus has been given to roadmaps that shows the transition away from fossil fuels – both globally and nationally.

Denmark wants to contribute to this important agenda by showcasing the Danish TAFF roadmap. The roadmap underscores the government's overarching objective of positioning itself as Denmark's greenest government. It demonstrates selected key supply and demand measures that have been central to the Danish transition so far as well as highlights Denmark's potential to further reduce reliance on fossil fuels and promote the adoption of cleaner, renewable-based electricity. It does not constitute an exhaustive list of all relevant policies in this matter but rather seeks to summarize the most relevant areas of action. For more in depth information, numerous government publications are available such as the Climate Program and the Climate Status and Outlook report[1].

[1] Available in Danish here.

The regulatory framework for Danish climate policies

The Danish Climate Act[2] sets binding targets for 2030 and 2050 and supports transparency and systemic monitoring of national greenhouse gas (GHG) emissions by establishing an annual cycle. The annual cycle of the Climate Act contains five key events. This ensures a continuous revision of progress towards achieving Danish climate targets and involves multiple stakeholders. The two key events are the publication of the yearly **Climate Status and Outlook** and the **Climate Programme**. Climate Status and Outlook describes how Denmark's GHG emissions have developed from 1990 to the present and projects how emissions will develop in the future, thereby providing the basis for assessing the extent to which the reduction targets under the Climate Act and Denmark's EU climate commitments are expected to be met through the climate and energy measures already adopted.

The objectives and content of the Climate Programme are largely defined by the Danish Climate Act. Among other requirements, the Climate Act stipulates that the Minister for Climate, Energy and Utilities must assess, on behalf of the government, whether it can be demonstrated that the national climate targets will be met. The assessment draws on the projection of emissions identified in the Climate Status and Outlook and takes an integrated approach to managing the risks associated with climate action. If it cannot be demonstrated that the national climate targets will be met, the duty to act under the Climate Act is triggered, requiring the Climate Programme to present new policies and initiatives with expected emission reduction effects. The government's publications also help inform the government ahead of the negotiation process of the national budget.

Another part of the regulative framework is the annual report from The Danish Council on Climate Change, an independent expert body advising the government on climate policy. The annual status report, published in February, provides recommendations for government climate action, assesses progress towards international climate targets, and evaluates whether current policies are sufficient to achieve them.

The Climate Act furthermore establishes the Danish climate goals. For 2030, it sets a 70 pct. reduction target of GHG emissions[3]. Additionally, the Danish Government has decided to strengthen the climate neutrality goal as well as the 2050 target in the Climate Act, resulting in Denmark having a legally binding target of climate neutrality by 2045 and a 110 pct. reduction in GHG by 2050[4].

As Denmark is a member state to the European Union, there are several EU targets, instruments and laws in this area that Denmark also operates under although they will not be featured in this roadmap.

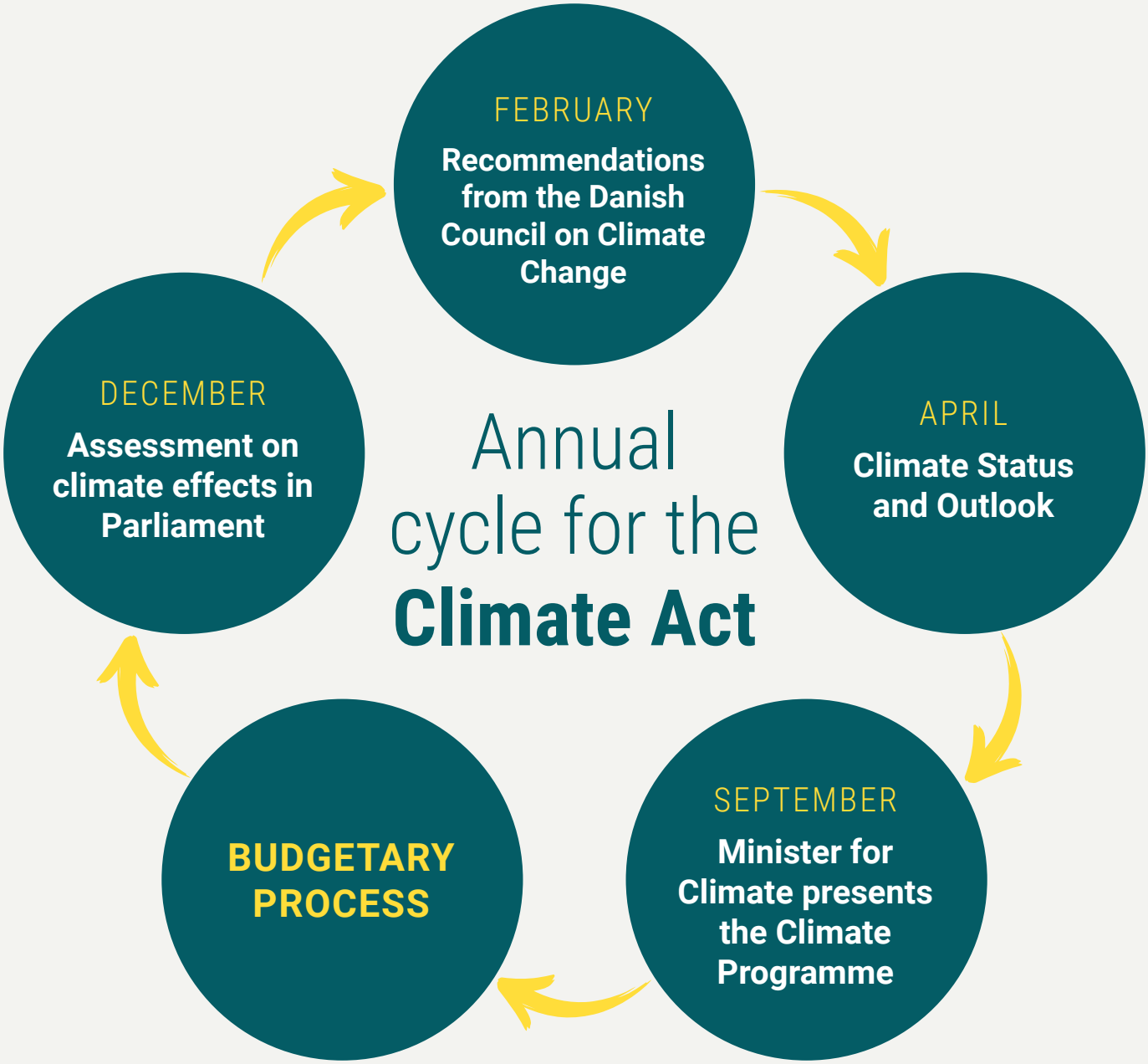
Denmark also contributes substantially to global TAFF action through multilateral engagement, alliances, and government cooperations, but this roadmap will focus mainly on national actions.

For further information on Denmark's Global Climate Impact, please see Global Report.

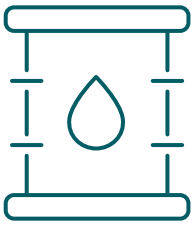
[2] From 2020, available here.

[3] Compared to 1990 levels.

[4] Compared to 1990 levels.


FEBRUARY
Recommendations from the Danish Council on Climate Change
APRIL
Climate Status and Outlook
SEPTEMBER
Minister for Climate presents the Climate Programme
BUDGETARY PROCESS
DECEMBER
Assessment on climate effects in Parliament
Annual cycle for the Climate Act

End date for oil and gas production and coal generation



Oil and gas

2050: End date for production

Denmark has positioned itself as a frontrunner in TAFF with the pioneering political North Sea Agreement[5] that cancelled future government-initiated oil- and gas licensing rounds and set an end date for all oil and gas production by 2050, thereby ending a fossil era. Ensuring stable operating and licensing conditions until 2050 provides investor certainty for companies operating in Denmark and a clear direction of travel. Furthermore, a gradual and managed phase-out of oil and gas leaves time for the government to manage possible energy or economic risks and secure investments in alternatives such as renewable energy. For instance, oil consumption for heat and electricity is projected to be phased out by 2028, and represent only 5% of energy consumption in manufacturing in 2040, according to the Danish Climate Outlook and Status 2026[6].

With the agreement, the government also wanted to ensure a just transition that did not leave workers and communities behind. Therefore, the agreement includes an initiative for growth and development in and around Esbjerg, which has historically been a junction for the Danish oil and gas sector, and an initiative on CO_2 storage in the North Sea.

Finally, the agreement laid the foundation for Denmark's global leadership on the issue of fossil fuel phase-out, as it led to the launch of the international Beyond Oil and Gas Alliance (BOGA) in 2021 which now accounts for 24 members and friends committed to tackling the supply side of oil and gas.



Coal

2028: End of coal-fired power plants

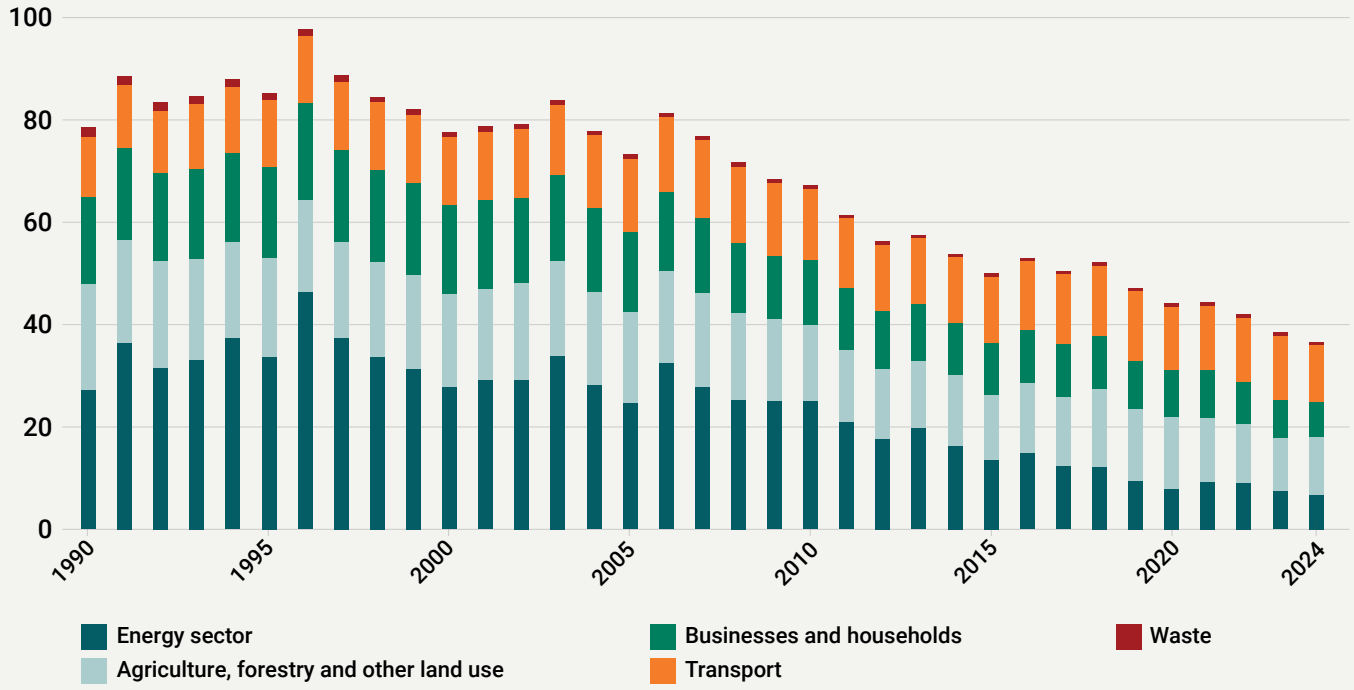
Denmark is already experiencing periods without any coal contributing to its energy system and since the Climate Act was approved in 2020, four coal-fired power plants have been phased out. Denmark's last remaining coal-fired power plant is expected to be phased out by 2028. After 2028 coal is only used in the manufacturing sector. By 2047 all coal consumption is projected to be phased out according to the Danish Climate Outlook and Status 2026[6].

[5] From 2020, available here.

[6] Subject to assumptions and uncertainty in projections.

CO_2e emissions and removals across sectors 1990-2025

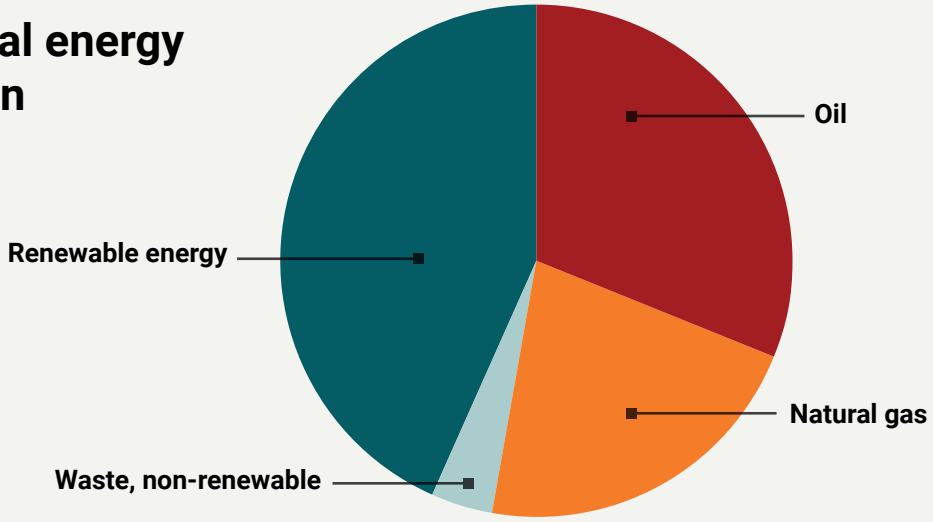
Mio. tonnes CO_2e



Source: KF26

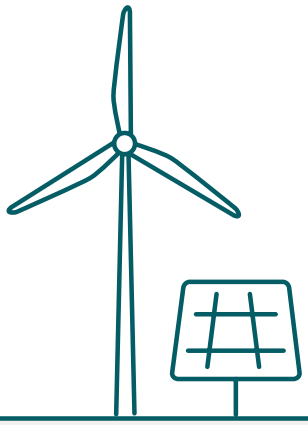
Share of total energy consumption

2025



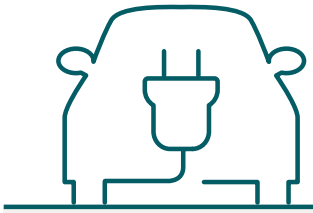
Source: Energistatistikken 2025

Electrifying the future



Denmark is committed to accelerate the TAFF and head towards renewable energy and a comprehensive electrification of the society. In 2024, more than 80 pct. of the Danish electricity supply was covered by renewables. The total electricity generation is expected to increase significantly towards 2035, driven primarily by an increase in electricity generation from wind and solar power. It is a Danish priority to ensure affordable and green energy for Danish households and businesses and work systematically to increase the electrification of industry, heating and transport. As of October, electric cars have made up 85% of total car sales in Denmark in 2026[7].The proportion of electric car sales is thereby projected to surpass its 2025 level of 84% according to the Danish Climate Outlook and Status 2026.

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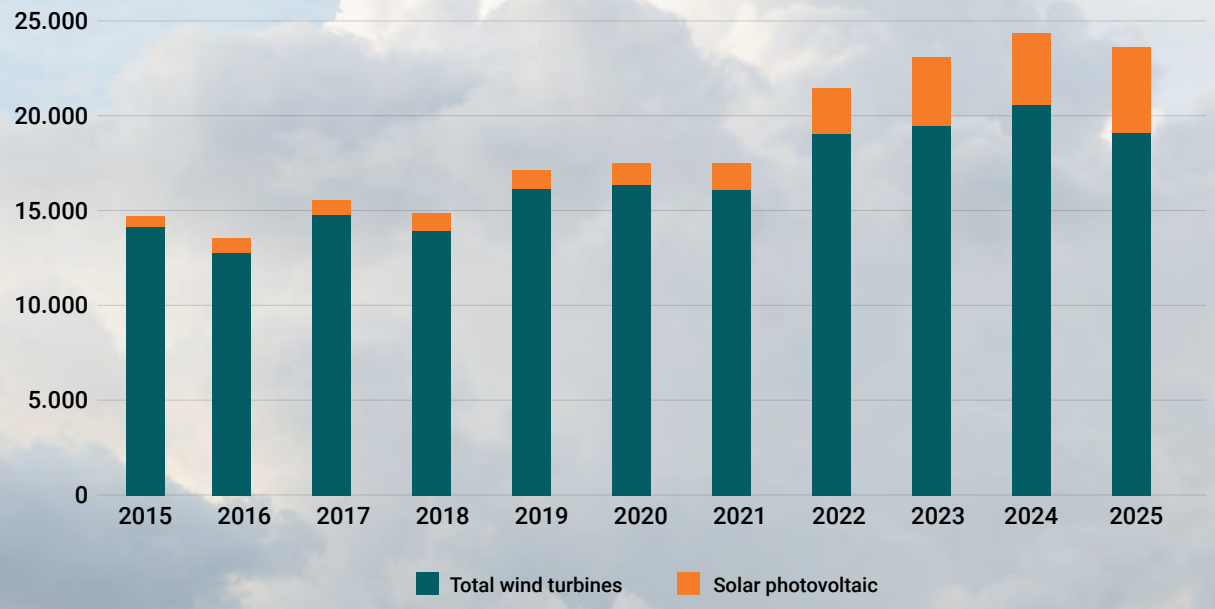
Electrification combined with the expansion of renewable energy can contribute to lower average wholesale electricity prices, provided that electricity supply increases sufficiently to meet the growing demand, and thereby potentially reducing businesses' operating costs, by making them less dependent on global oil and gas prices, and may lead to less energy consumption, as electricity is more energy efficient. Electrification based on renewable energy in heating, including through electrification of district heating, transport and industry, will be key in decarbonizing the sectors and reduce reliance on fossil fuels.

To promote widespread electrification across society, the Government prioritizes sizable funds annually on the state budget for electrification. The funding will support measures that promote electrification in relevant sectors, such as heating, transport and industry, thereby securing funds for accelerating the transition away from fossil fuels.

[7] bilstatistik.com/dk-da

Total production of wind and solar energy

GWh



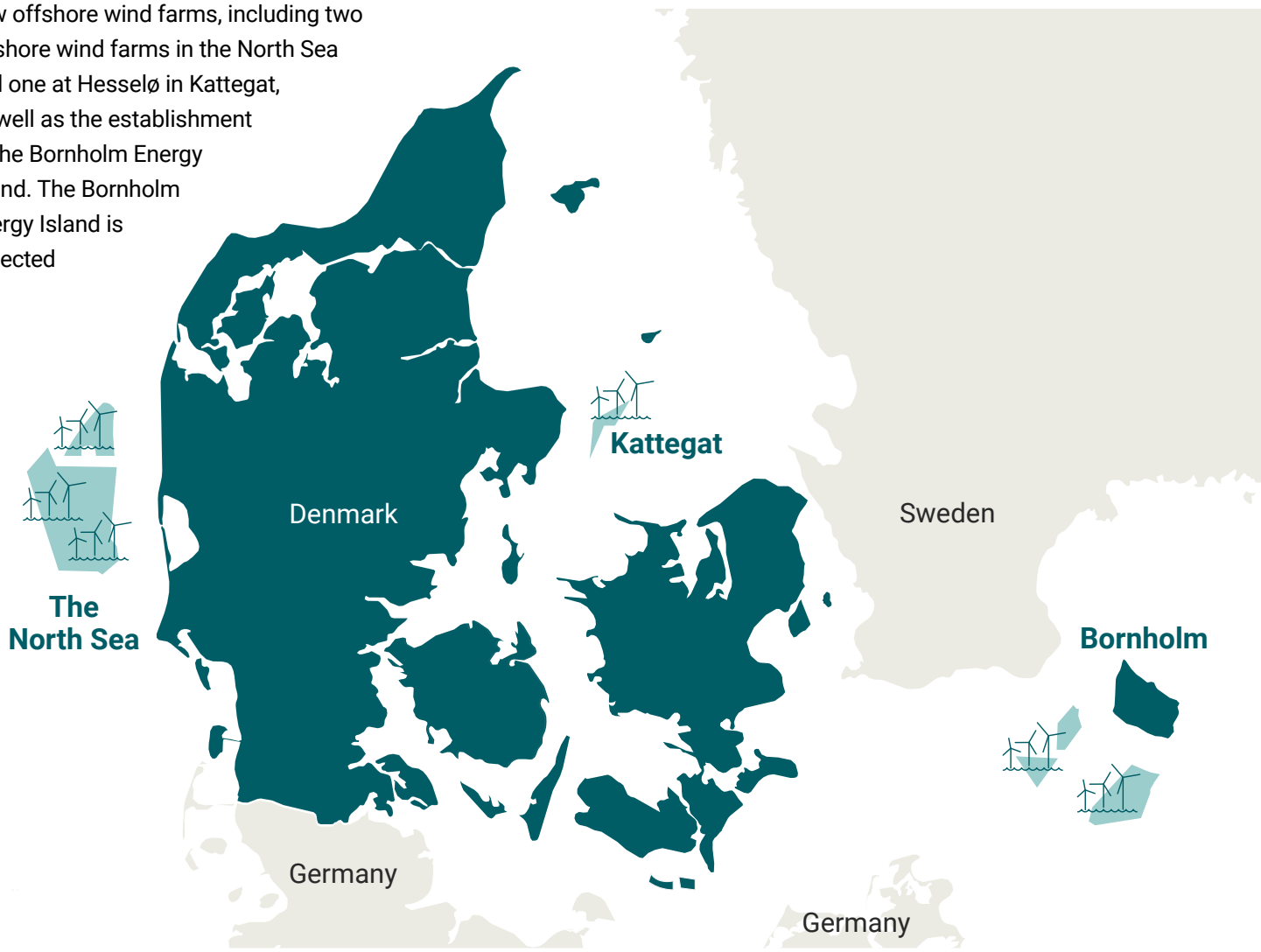
Source: Energistatistikken 2025

From pioneering to scaling offshore wind

The increase in electricity generation towards 2030 and further towards 2050 will largely depend on the realisation of new offshore wind and renewable energy tenders. Denmark has the world's longest running history with offshore wind dating back to 1991 when the world's first ever offshore wind farm was established. We currently have a total of 17 fully established active offshore wind farms.

The expansion of renewable energy will, among other things, follow from the tenders for three new offshore wind farms, including two offshore wind farms in the North Sea and one at Hesselø in Kattegat, as well as the establishment of the Bornholm Energy Island. The Bornholm Energy Island is expected to contribute with a total offshore wind capacity of at least 3 GW, of which up to 1,2 GW will be connected to Denmark[8].

The increased electricity generation will, among other things, meet the demand from new industries, heat pumps, Power-to-X (PtX), data centres and the electrification of the transport sector, with electricity consumption expected to increase by almost 30 pct. by 2030 and more than 50 pct. in 2024[9].



The map shows the two projected offshore wind farms in the North Sea and one at Hesselø in Kattegat as well as the Bornholm Energy Island. These are in addition to the 17 fully established offshore wind farms.

[8] Cf. Agreement on the Financial Framework for Energy Island Bornholm.
[9] Subject to assumptions and uncertainty in projections.

Integrating climate into economic decision-making

GreenREFORM is Denmark's macroeconomic model for climate policy analysis, integrating detailed modelling of emissions and activities in emissions emissions-intensive sectors such as energy, industry, agriculture and waste with a model of the wider economy. It allows policymakers to assess both the climate effects of economic policies and the economic and fiscal effects of climate policies. By providing a common analytical framework for assessing climate, economic and fiscal impacts, the use of the GreenREFORM model can support more integrated policymaking across ministries. In that sense, it can support a whole-of-government approach to the TAFF, by giving different ministries a shared framework for assessing how policies interact across the economy.





Putting a price on carbon

Carbon pricing is a key element of Danish climate policy. Denmark combines the EU Emissions Trading System (EU ETS) with national taxation to strengthen incentives for businesses to reduce fossil fuel use, improve energy efficiency and invest in low-emission technologies.

Under the 2022 Agreement on a Green Tax Reform for Industry etc., Denmark is introducing a higher and more uniform tax on CO_2 emissions from fossil fuels. The tax is being phased in towards 2030, providing businesses with clearer and more predictable incentives to transition away from fossil energy.

When the reform is fully implemented, Denmark will no longer have any direct or indirect subsidies tied to the use of fossil fuels. In 2030, the effective energy and carbon taxation for all sectors is above 750 DKK, equivalent to the expected ETS price in 2030. It corresponds to approx. €100[10].

The reform is accompanied by targeted transition support for businesses facing the greatest challenges in reducing their emissions. The support promotes investments in technical decarbonisation solutions and aims to limit the risk of emissions and jobs being relocated abroad. The framework for the support schemes was agreed separately in 2024.

Denmark is also introducing carbon pricing for other greenhouse gas emissions, including a CO_2e tax on livestock emissions in 2030. As this tax targets non-energy-related CO_2e-emissions, it forms part of Denmark's broader climate policy and is not covered further in this roadmap.



Fossil fuel subsides

2030: End of all fossil fuel subsidies

[10] Cf. Inventory of fossil fuel subsidies in Denmark in 2030 published November 16, 2026.

The presented initiatives pay important contributions to Denmark's TAFF. However, a range of additional initiatives – both nationally and internationally – are playing their important parts to the transition, and many projects combining cooperation, investment, technological development and economic incentives are in pipeline to accelerate the transition in the future.

If you want to know more, please visit:

The Danish Climate Act

The Climate Programme

The Climate Status and Outlook

The Danish North Sea Agreement 2020

Global Report

You can also reach out to kefm@kefm.dk if you wish to receive more information on any initiatives contributing to the Danish TAFF.



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