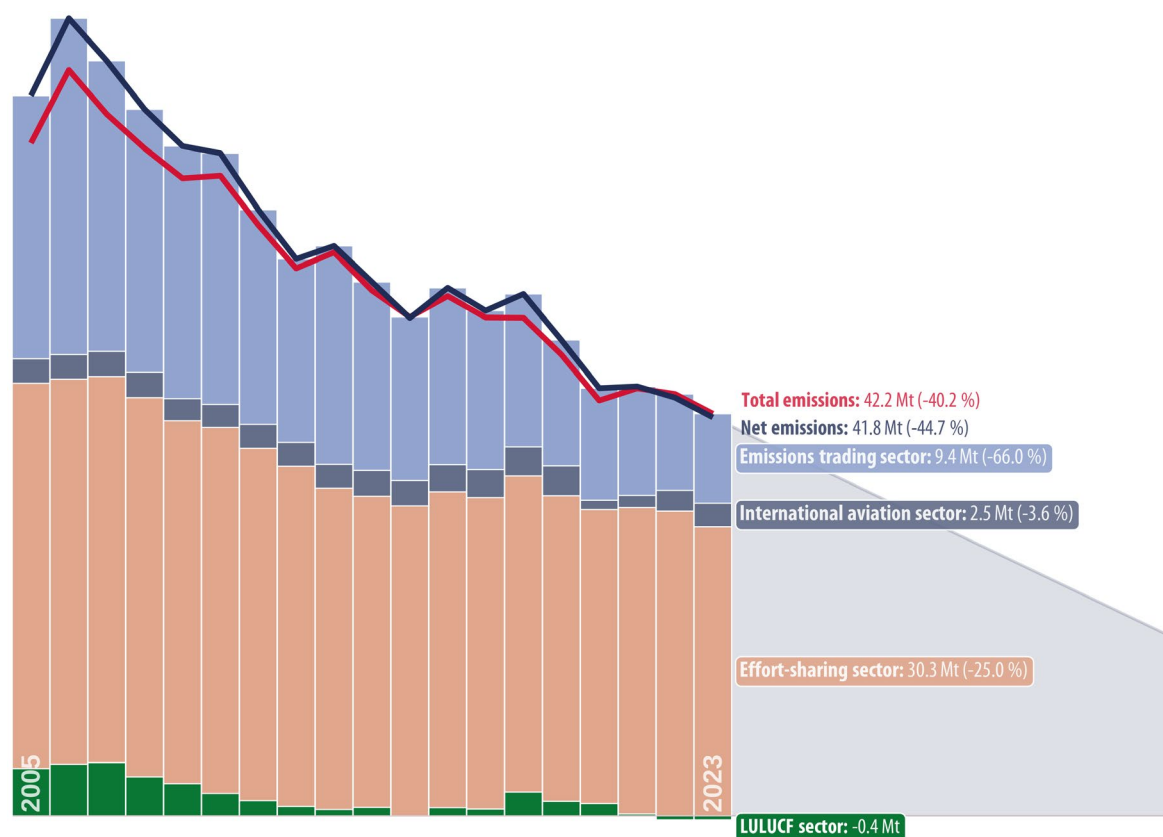


Denmark's climate action strategy

Denmark is legally bound to reach climate neutrality by 2050 (see trajectory in Figure 1) and deliver a 70 % greenhouse gas (GHG) emissions reduction by 2030 compared with 1990. Denmark accounts for 1.4 % of the EU's net GHG emissions, and achieved a net emissions reduction of 44.7 % from 2005 to 2023, greater than the 30.5 % EU average reduction over the same period. Emissions from sectors under the EU emissions trading system (ETS) were more than halved (-66 %). Denmark's land use, land-use change and forestry (LULUCF) sector has historically been an emissions source, but in 2022 and 2023 it delivered a small sink function. For the effort-sharing sectors, Denmark over-achieved on its targets for 2020, but will need additional measures to reach the updated 2030 obligations. With its 2023 REPowerEU chapter and 2024 changes to its recovery and resilience plan (NRRP), Denmark has further increased its climate spending. Denmark submitted a [draft](#) updated national energy and climate plan (NECP) on 3 July 2023. The European Commission [assessed](#) it, making recommendations for the [final](#) updated NECP, submitted on 30 June 2024.

In a 2023 [survey](#), 74 % of Danes, compared with a 46 % EU average, identified climate change to be one of the four most serious problems facing the world. Most expect national government (77 %) and/or the EU (75 %) to tackle climate change, while 54 % find it to be a personal responsibility.

Figure 1 – Denmark's greenhouse gas emissions in million tonnes (Mt), 2005–2023



Data source: European Environment Agency (EEA), 2024.

This briefing is one in a series covering all EU Member States.

EPRS | European Parliamentary Research Service

Author: Liselotte Jensen with Paulina Jabczyńska; Graphics: Ville Seppälä
Climate Action Research and Tracking Service, Members' Research Service

PE 767.173 – December 2024



Denmark's starting point

The [Danish Climate Act](#), agreed on politically in December 2019, was adopted in June 2020, and includes two reduction targets. By 2030, the country should reduce its GHG emissions by 70 % compared with 1990 levels, and by 2050 at the latest, achieve climate neutrality. A key principle of the act is to maintain a welfare society while pursuing a green transition. Historical responsibilities and moral obligations are the key arguments why Denmark wants to play a leading role in global efforts to combat climate change. The act requires Denmark to set a national climate target every 5 years with a 10-year perspective. Updates cannot reduce ambitions and must be accompanied by a climate action plan, of which the [first](#) was published in June 2020. In 2021, Denmark [announced](#) an indicative target for 2025 of 50–54 % GHG emissions reductions compared with 1990. Later that same year, the country published its [roadmap for a green Denmark](#) containing specific sectoral measures and timelines. In the 2022 [government coalition agreement](#), the parties advanced the climate neutrality target to 2045, aiming for a 110 % reduction of GHG emissions by 2050.

Denmark met its 2020 EU GHG emissions, share of renewable energy and energy consumption targets. The country's over-achievement in all the target areas [helped](#) deliver the 2020 EU-level goals and make up for countries that lacked progress in those areas. Between 2005 and 2023, Denmark succeeded in reducing emissions in all sectors, except waste management. Agriculture, where emissions remained stable over most of the period, finally decreased (7 %) when including 2023 data, yet accounts for over a quarter of Danish GHG emissions. Emissions per capita in Denmark are close to the EU average, reaching 7.1 tonnes of carbon dioxide equivalent (tCO₂e) in 2023, which is a 45 % decrease compared with 2005. In addition, the Danish economy's carbon intensity was reduced by 54 % between 2005 and 2023, and is 45 % below the EU average.

The 2024 [country-specific recommendations](#) for Denmark focus on keeping up the pace of implementation of the NRRP as well as cohesion programmes. A specific recommendation focuses on efforts for a more sustainable agriculture. In this regard, after the 2021 [agreement](#) on green transition of agriculture, the 2022 [government agreement](#) included establishing a climate tariff on agriculture. In February 2024, experts [recommended](#) three possible models including CO₂ tariffs per tonne of agricultural emissions ranging from €33 to €100 (see also page 5). Similar to [2023](#), the 2024 [country report](#) notes the high material footprint and per capita waste generation.

Denmark was the highest-ranking country in the 2025 [Climate Change Performance Index](#) (CCPI). The CCPI ranks countries based on their climate protection performance using primarily quantitative data, with experts providing qualitative evaluation of a country's forward-looking climate policies.

Climate action governance

Under the Climate Act, Denmark set up the [Danish Council on Climate Change](#) (DCCC), an independent expert body, to assess the government's climate efforts. The DCCC makes cost-effective policy suggestions to the minister for climate, energy and utilities, and provides a status update on the country's targets. The February 2024 DCCC [assessment](#) showed a gap of [2.6 million tonnes](#) of CO₂ equivalent (MtCO₂e) in delivering on the 2030 target. The October 2024 DCCC assessment of the government's 2024 [climate programme](#) acknowledges the pathway towards the 2030 target through agreed initiatives, yet points to [high risks](#) of potential delays in implementation.

Denmark has a [Youth Climate Council](#), in which youth representatives contribute their ideas on Danish climate action. From 2020 to 2022, a [Citizen's Assembly](#) of 99 randomly selected citizens made specific climate policy recommendations. The initiative is currently under evaluation. In addition, the government established [14 climate partnerships](#) with the Danish business community that focus on cooperation between the government and the private sector in addressing climate and green transition challenges. So far, they have [presented](#) over 400 recommendations.

Danish climate adaptation focuses primarily on water management, with a [web portal](#) for tips and latest updates. A [new plan](#) with dedicated funding [proposals](#) was adopted in October 2023.

Climate action in the national recovery and resilience plan

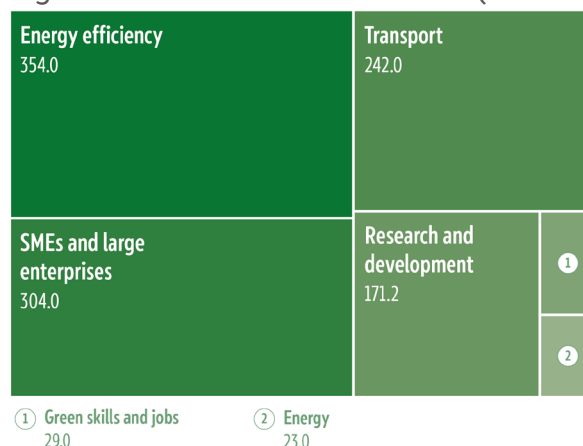
The Danish 2021 [national recovery and resilience plan](#) (NRRP) had a [REPowerEU chapter](#) added in 2023, and several measures were [modified](#) in 2024. The 2022 [revision](#) of allocations decreased the Danish maximum grant allocation by -7.9 %. The EU financing of the Danish plan totals €1 626 million. Denmark's climate tagging, the part dedicated to climate action (see Figure 2), increased from 59 % of the original plan to 69 % in the updated plan, according to the Commission's dedicated country [web page](#), well above the Recovery and Resilience Facility (RRF) target of 37 %.

Only two of the [Danish NRRP's](#) eight components have no climate tag. The main climate measures concern green tax reforms (for industry, company car registration, and tariffs on electricity from car charging points). Energy efficiency measures target renovation and support for replacing oil burners and gas furnaces. Research investment targets innovation in various sectors, including agriculture, industry and transport. Specific examples of investment include subsidies for bike lanes and projects on carbon-rich soils. In the plan's latest version, Denmark [removed](#) the carbon capture and storage REPowerEU action, as the tender received too few bids.

Energy situation

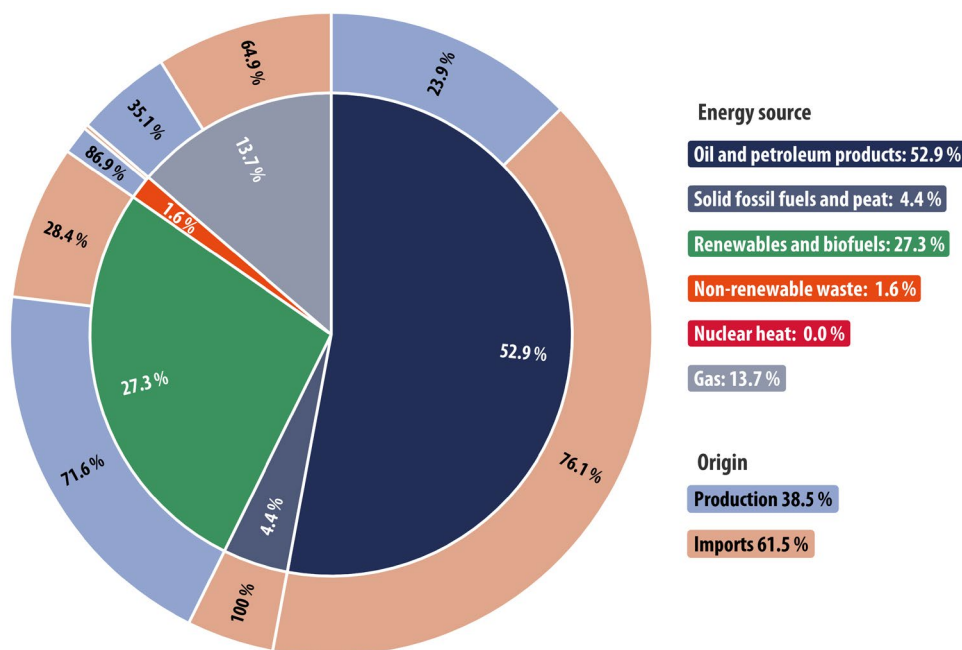
In 2022, Denmark imported (61.5 %) or produced (38.5 %) a total of 28.3 million tonnes of oil equivalent (Mtoe). Renewables, mainly wind and biofuels, constitute a large share (27.3 %) of Denmark's energy mix and are primarily produced in Denmark. However, as shown in Figure 3, oil and petroleum products remain the main fraction in the country's energy mix.

Figure 2 – NRRP climate dimension (€ million)



Data source: [European Commission](#), 2024; graphic by Lucille Killmayer, EPRS.

Figure 3 – Energy mix and import dependency, 2022



Data source: Eurostat ([nrg_bal_sd](#)), 2024.

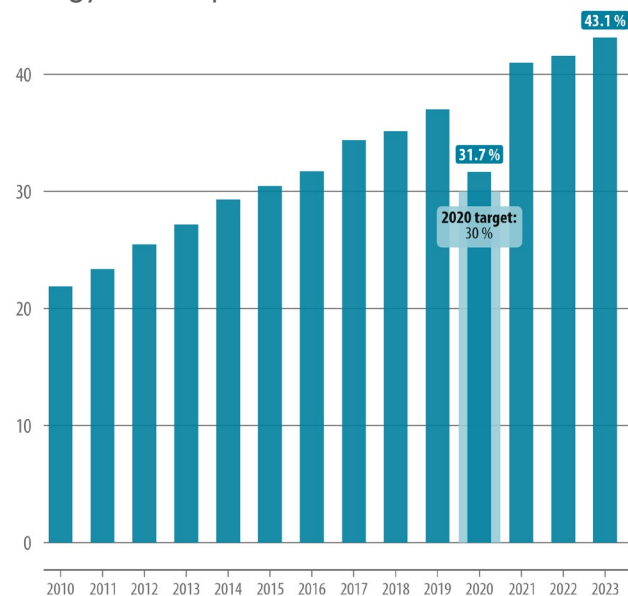
The 2024 reopening of the Tyra oil and gas field [re-established](#) Denmark as a net-exporter of gas. Oil imports are expected to continually decrease towards 2030, when own oil-extraction is expected to peak. In 2020, a broad parliament coalition [decided](#) to end oil and gas extraction in the North Sea by 2050. In response to the energy crisis, a June 2022 reform, '[Denmark can do more II](#)', accelerated the green transition, fast-tracking renewables and boosting Denmark's energy independence.

In its NECP, Denmark has not committed to a specific target for its share of renewable energy sources (RES) in gross final consumption by 2030. In 2023, the RES share reached 43.1 % (Figure 4). Denmark [acknowledges](#) that under EU legislation, its national contribution should be close to 60 %.

The final updated NECP [projects](#) a 73.8 % share of RES by 2030, taking into account key measures from numerous political agreements. These include enabling a [quadrupling](#) of energy production from photovoltaics and wind turbines on land by 2030 compared with 2021, and installing more district heating, where the RES share is [projected](#) to reach 81 % in 2030. A 2022 [agreement](#) sets the ambition for 100 % green gas by 2030, which the NECP also refers to, with the mention of specific forthcoming [tenders for biomethane](#).

Several [political agreements](#) have sought to expand offshore wind energy. The hope was to achieve at least 9 to 14 gigawatts (GW) installed capacity by 2030. The final updated NECP's RES share projections include 4 GW offshore wind. However, no bids were received on the first [tender](#) in 2024 for 3 GW, with a second tender closing on 1 April 2025. Denmark is projecting to reach 100 % renewable electricity consumption by 2028; however, as can be [deducted](#) from the final updated NECP, and as [pointed out by stakeholders](#), this target could be in jeopardy without the 4 GW offshore wind energy.

Figure 4 – Renewable energy share in final energy consumption



Data source: Eurostat ([nrg_ind_ren](#)), 2024.

Sectoral challenges and strategies

Because of the economic rebound following the pandemic, emissions rose in some sectors in 2021 compared with 2020. For 2023, data show year-on-year emissions reductions in almost all sectors. The 'other emissions' category saw a slight increase, yet remains below 2019 levels. Emissions linked to waste management were the same as in 2022. Although the waste management sector holds only a small share of Danish total emissions (2.9 %), it is the only sector in which emissions have risen since 2013. Political agreements in [2020](#) and [2022](#) increased waste tariffs and sorting in order to increase recycling and reduce overall waste generation, with a vision towards a [climate-neutral waste sector](#) by 2030. [Praised](#) as the biggest climate policy progress since the Danish Climate Act, the green tax reform in industry was [adopted](#) in June 2022, covering all industrial sectors.

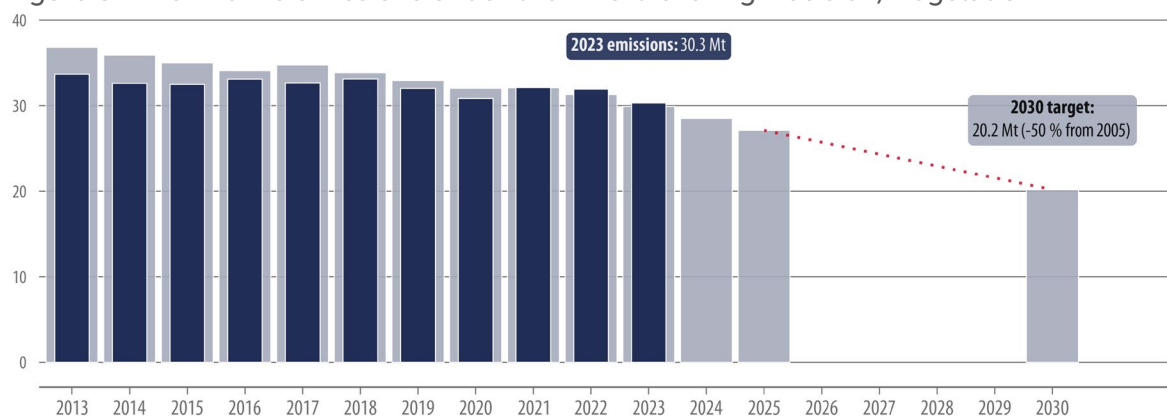
As shown in Figure 5 below, Denmark remained below allocations in each year covered under the Effort-sharing Decision, and delivered a 26 % emissions reduction in 2020 compared with 2005, surpassing the country's 20 % target. The Effort-sharing Regulation (ESR) sets a 50 % emissions reduction target for 2030 compared with 2005, which Denmark expects to reach with additional measures. Sectors covered by the ESR include transport, buildings, agriculture, small industrial installations, waste treatment, and fugitive emissions from energy supply and product use. The 2020 [green housing agreement](#) with €4 billion towards 2026, is the biggest-ever targeted support for

comprehensive refurbishment of public sector housing. The 2022 reform package focuses on expanding district heating, phasing out fossil fuels for heating, and supporting heat pumps.

The transport and agriculture sectors each account for 27 % of Denmark's emissions. The overarching 2020 [agreement](#) on green transition of road transport is implementing primarily tax and tariff reforms supported by the RRF. For heavy-duty vehicles, Denmark changed from the Eurovignette to a [kilometre-based road tariffs](#) system linked to CO₂ performance.

In a world first, the June 2024 '[deal on a green Denmark](#)' established a [CO₂ emissions tax on the farming sector](#). Building on the experts' [impact modelling](#), the deal was reached through a [tripartite process](#) involving the private (farmers and unions), civic (nature organisations) and public sector (local authorities and government). While the 2020 political agreement on [green tax reforms](#) aimed for carbon taxation across all sectors, analysis into agricultural competitiveness delayed the process.

Figure 5 – Denmark's emissions under the Effort-sharing Decision/Regulation

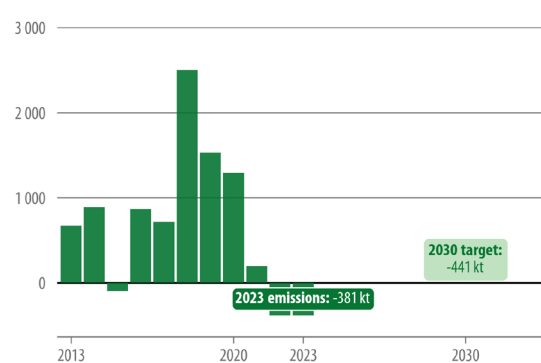


Data source: [EEA](#), 2024.

The November implementation [agreement](#) contains financial and technical details. The carbon tax will take effect in 2030 at €16 (DKK 120) per tonne of CO₂e, rising to €40 (DKK 300) by 2035. Nature restoration is a significant part of the deal, with 140 000 hectares (ha) of [carbon-rich peat soils](#) being restored, for instance, through rewetting, thereby also reducing the release of nitrogen to aquatic areas. An estimated 1 billion trees will be planted, with reforestation of 250 000 ha of agricultural land by 2045. The total estimated cost is €5.8 billion (DKK 43 billion), which covers the purchase of agricultural lands, restoration, subsidies for green technologies, and innovation for the sector.

Denmark's LULUCF sector, traditionally a source of emissions, managed a small sink function from 2022 (Figure 6), partly following new [mapping](#) of carbon-rich peat soils that reduced the areas from 172 000 ha in 2010 to 118 000 ha in 2022. By 2030, Denmark [must](#) reduce its LULUCF emissions by 441 kilotonnes of CO₂e (ktCO₂e) compared with its average emissions in 2016, 2017 and 2018 (where accounting adjustments may occur). In 2020, this baseline was 5 779 ktCO₂e. The Commission [assessment](#) found Denmark's draft updated NECP unlikely to deliver on the country's 2030 LULUCF obligation. However, a 2024 Danish climate ministry [progress report](#) incorporating updated mapping and accounting practices estimated the country would over-achieve on the 2030 LULUCF target by -200 ktCO₂e.

Figure 6 – LULUCF emissions in Denmark



Data source: [EEA](#) (2030 target is based on 2016-2018 baseline), 2024.

Latest policy developments

With [10 % of Danish territory renatured](#), including six new national parks, the tripartite 'deal on a green Denmark' – hailed as [historic](#) – will have significant impact on Denmark's LULUCF sector. Conversely, the repercussions of the outcome of the first 3 GW offshore wind tenders, which fell short of expectations, are yet to be determined. The scale-up of offshore wind in the North Sea is not only a Danish ambition, with the 2022 [Esbjerg declaration](#) signed between Belgium, Denmark, Germany and the Netherlands, committing to reach 65 GW offshore wind in the North Sea by 2030 ([boosted](#) to 120 GW among more countries in the 2023 [Ostend declaration](#)). Following the failed tender, the energy agency is starting [market dialogues](#) to determine the cause of the lack of interest. In 2023, the government [announced](#) that, owing to cost increases and market insecurities, the planned high-profile energy islands in the Danish North Sea would have to be reconsidered. The islands were a key part of the Danish 2021 [strategy for Power-to-X](#) (PtX) with offshore hydrogen production and direct pipelines to surrounding countries. The ambitions remain unchanged, and in November 2024, Denmark signed a [memorandum of understanding](#) with the Netherlands on further cooperation on green hydrogen production, trade and infrastructure. The [over-subscription](#) of a recent PtX tender showed the strong interest in this area. A larger project is [HØST PtX](#) in Esbjerg.

Denmark [aims](#) to become a hub for carbon capture utilisation and storage (CCUS), and has concluded agreements with [Belgium](#) and the [Netherlands](#). Three licenses for large-scale carbon capture and storage (CCS) in the Danish part of the North Sea were [approved](#) in 2023. In December 2024, the [final investment decision](#) was taken to realise commercial storage at the INEOS-led Greensands Future project, starting end-2025 or early 2026. The initial volume will be 400 000 tonnes of CO₂ annually, with a potential for 8 million tonnes of CO₂ annually. Denmark's CCS ambitions, too, encountered early obstacles with [under-subscription of the first tender](#) for capture of biogenic CO₂, with Denmark having to remove that part under its REPowerEU targets. One of the funded [projects](#) of that tender has now signed an agreement to store its captured CO₂ in the Greensands Future storage facility.

Beyond [pointing](#) to risks relating to delayed implementation across initiatives towards 2030, the DCCC highlights the need to tackle Denmark's consumption-based carbon footprint.

The 2022 political [agreement](#) on a Green Fund pledged to set aside funding in [annual amounts](#). For the 2024–2040 period, these will total over €7 billion (DKK 53.5 billion).

MAIN REFERENCES

Danish Council on Climate Change, [Kommentering af Klimaprogram 2024](#), 2024.

European Commission, [Denmark –final updated NECP 2021–2030](#), 2024.

European Commission, [factsheet](#) on highlights of the Commission's assessment of Denmark's draft updated National Energy and Climate Plan, 2023.

DISCLAIMER AND COPYRIGHT

This document is prepared for, and addressed to, the Members and staff of the European Parliament as background material to assist them in their parliamentary work. The content of the document is the sole responsibility of its author(s) and any opinions expressed herein should not be taken to represent an official position of the Parliament.

Reproduction and translation for non-commercial purposes are authorised, provided the source is acknowledged and the European Parliament is given prior notice and sent a copy.

© European Union, 2024.

eprs@ep.europa.eu (contact)

www.eprs.ep.parl.union.eu (intranet)

www.europarl.europa.eu/thinktank (internet)

<http://epthinktank.eu> (blog)