INEOS Energy DK

Hejre Development Project

Document Title:

Hejre Environmental Impact Assessment (EIA) Addendum (English)

Scope 3 Assessment – Hejre tie-back to South Arne

3	12-01-2026	Issued for Use	IFU	INEOS	INEOS	INEOS
2	19-12-2025	Issued for Use	IFU	INEOS	INEOS	INEOS
1	01-12-2025	Issued for Use	IFU	INEOS	INEOS	INEOS
Rev.	Revision Date	Reason for issue		Prepared	Verified by	Approved by

Contractor Name:	*Xodus Group*
Contractor Doc. No.:	*A-101094-S00-A-REPT-001*
Contractor Revision.:	
Tag No's.: n/a	

System No: 00	Area Code: 00	Project No: 086	Facility Code: GEN
PO/WO No: n/a	Contract No: n/a		Page: 1 of 46

Document No.:

HEA-GEN-SA-REP-0006

INEOS E&P A/S

Scope 3 Assessment

Hejre tie-back to South Arne

ASSIGNMENT A101094-S00
DOCUMENT A-101094-S00-A-REPT-001

XODUS

www.xodusgroup.com

REVISIONS & APPROVALS

This document has been prepared by Xodus Group exclusively for the benefit and use of INEOS E&P A/S. Xodus Group expressly disclaims any and all liability to third parties (parties or persons other than INEOS E&P A/S which may be based on this document.

The information contained in this document is strictly confidential and intended only for the use of INEOS E&P A/S. This document shall not be reproduced, distributed, quoted or made available – in whole or in part – to any third party other than for the purpose for which it was originally produced without the prior written consent of Xodus Group.

The authenticity, completeness and accuracy of any information provided to Xodus Group in relation to this document has not been independently verified. No representation or warranty express or implied, is or will be made in relation to, and no responsibility or liability will be accepted by Xodus Group as to or in relation to, the accuracy or completeness of this document. Xodus Group expressly disclaims any and all liability which may be based on such information, errors therein or omissions therefrom.

REV	DATE	DESCRIPTION	ISSUED	CHECKED	APPROVED	CLIENT
A04	12/01/26	Issued for Use	Withheld	Withheld	Withheld	
A03	18/12/25	Issued for Use	Withheld	Withheld	Withheld	
A02	27/11/25	Issued for Use	Withheld	Withheld	Withheld	
A01	26/11/25	Issued for Use	Withheld	Withheld	Withheld	

CONTENTS

1 INTRODUCTION

The Hejre field is located in licence 5/98 in the central part of the Danish North Sea, approximately 300 kilometres (km) from the Danish west coast and close to the Norwegian shelf border. The Hejre tie-back to South Arne re-development concept ('the Project') will enable utilisation of existing infrastructure: the Hejre jacket was installed in 2014 and three Hejre wells were drilled in 2014-2016 that cannot be utilised without the Project). The Project comprises installation of an unmanned topsides onto the Hejre jacket which will subsequently be remotely controlled from the South Arne installations. A new 33 km insulated multiphase pipeline will be installed between Hejre and South Arne, where well fluids from Hejre will be processed.

The Project is further described in the Hejre tie-back to South Arne Environmental Impact Assessment ('the EIA'). Sections 8.4, 9.5 and 10.3 of the EIA assess the impacts of emissions to air arising from the construction, operation and decommissioning phases of the Project.

This Addendum to the EIA for the development of the Hejre field has been prepared following the decision of the Danish Energy Board of Appeal (Energiklagenævnet) dated 11 November 2025, which annulled the Danish Energy Agency's approval of the revised development plan for the Hejre field and remitted the case for reconsideration.

The Energy Board of Appeal found that the EIA did not include a description of the Project's indirect effect on the climate resulting from the combustion of hydrocarbons extracted under the permit. On this basis, the Board assessed that the EIA was not suitable as a sufficient basis for decision-making when the climate impacts resulting from the combustion of the extracted hydrocarbons were not included and addressed in the EIA. The Board has not thereby taken a position on whether there will be a significant impact on the climate as a result of the burning of the extracted hydrocarbons.

INEOS E&P A/S disagrees with the Board's decision, including its interpretation that it should be required, including pursuant to the EIA Directive, to assess the impact of the combustion of the extracted hydrocarbons as part of its environmental impact assessment of the project. However, the Board annulled the approval of the revised development plan for the Project, and this Addendum has been prepared to adapt to the Board's decision solely for INEOS to expedite a renewed approval. Accordingly, INEOS maintains the right to challenge the Board's decision before the Danish Courts and disagrees with the view that the assessment of indirect climate effects in an EIA requires a scope 3 assessment.

The methodology and terminology applied in this Addendum are without prejudice to the approaches applied to any other project when assessing their "indirect effects" in an EIA. INEOS E&P A/S, in consultation with the Danish Energy Agency has been referred to conduct an assessment in alignment with the United Kingdom Department for Energy Security & Net Zero (DESNZ) guidance, "Environmental Impact Assessment (EIA) – Assessing effects of downstream scope 3 emissions on climate. Supplementary guidance for assessing the effects of downstream scope 3 emissions on climate from offshore oil and gas projects" ('the Guidance', DESNZ, 2025a[1]). The Guidance references the publication by the Institute of Environmental Management & Assessment (IEMA, 2022) "IEMA Guide:

[1] *The Norwegian Ministry of Energy concluded consultation in July 2025 on the "Expert report on Combustion Emissions from Oil and Gas Extracted on the Norwegian Continental Shelf", available online here: This report is acknowledged but has not informed the assessment approach for downstream scope 3 emissions associated with the Hejre Project.*

Assessing Greenhouse Gas Emissions and Evaluating their Significance. 2nd Edition". The assessment documented within this report is based on the principles and approach codified by IEMA (2022[2]).

Given the time elapsed since the previous EIA was prepared, in addition to this addendum, which addresses scope 3 emissions, a number of updates have been made to the EIA for the development of Hejre. These updates are reproduced in Appendix 1[3].

1.1 Structure and content

1.1.1 Structure

This report is structured as follows:

- Environmental Protection Objectives (Section 2): Overview of the relevant international, national and sector specific commitments, legislation and policy relating to climate, fossil fuel and emissions;
- Baseline (Section 3): Summary of the environment in relation to current and projected greenhouse gas (GHG) levels over the Project lifetime (without the Project);
- Scope 3 Emissions Estimation (Section 4): Quantification of downstream scope 3 emissions for the Project; and
- Significance of Likely Effects (Section 5): Evaluation of the significance of effects of the downstream scope 3 emissions on climate.

1.1.2 Content

It is noted that Scoping and Consideration of alternatives is typically considered at the outset of a development:

Extract from the Guidance (DESNZ, 2025a):
The Environmental Statement (ES) should also describe the reasonable alternatives studied by a developer for a proposed project.

The EIA, Chapter 4 "Alternative concepts" contained assessment of the selected concept against alternatives, concluding that the selected concept was the optimal concept in relation to factors such as economic feasibility and environmental impact. As production volumes did not vary between the concepts, the downstream scope 3 emissions quantification is considered to be independent of the concept selected and is not therefore considered further in this report.

[2] *IEMA is now known as the Institute of Sustainability & Environmental Professionals (ISEP)*
[3] *Relevant updates resulting from project changes are also described in the Espoo report, developed to fulfil requirements of the Convention on Environmental Impact Assessment in a Transboundary Context ('Espoo convention')*

2 ENVIRONMENTAL PROTECTION OBJECTIVES

This Section provides an overview of environmental protection objectives relating to climate impacts from the release of GHG, as relevant to the Project. This information informs the assessment of significance of the likely effects (Section 5).

Extract from the Guidance (DESNZ, 2025a):
The assessment of likely significant effects of a project on the environment, must ....., *"take into account environmental protection objectives established in retained European Union (EU) law or at national level"*.

Environmental effects from scope 3 emissions from downstream activities largely relate to the impacts on climate from the release of GHGs.

2.1 Background

Environmental protection objectives are guiding principles for policy and decision-making which can be established at international, national and/or sectoral levels. The objectives are aimed at preserving, restoring and enhancing the environment.

Table 2-1 establishes the relevance of key policy, legislation and commitments at international, national and sectoral levels associated with climate change and carbon dioxide (CO_2) emissions in the context of the Project and the assessment of downstream scope 3 emissions.

Environmental protection objectives for climate change differ from those for other environmental receptors as they are not based on fixed numeric limits or thresholds. Instead, environmental protection objectives for climate change rely on broad measures aimed at system transformation, including decarbonizing economies, adapting to climate impacts, and achieving net-zero emissions. Collectively, these measures are implemented to limit GHG emissions and manage the effects of climate change.

Table 2-1 Overview of policy, legislation and guidance

DOCUMENT NAME	SUMMARY	RELEVANCE
International Agreements		
United Nations Framework Convention on Climate Change (UNFCCC) (UNFCCC, 2025a)	• Treaty that entered into force in 1994 and which established the international climate negotiation process; • 198 parties, i.e. all United Nations member states and the European Union; • Purpose: To address climate change by creating a global framework for cooperation.	• Global applicability; • Provides a framework for negotiation; • Led to establishment of Conference of Parties (CoP).
Paris Agreement (2015) (UNFCC, 2015)	• Established with aim of limiting the rise in average global temperature to well below 2°C above pre-industrial levels, with efforts to restrict it to 1.5°C; • Requires all Parties to submit and periodically update Nationally Determined Contributions (NDCs) outlining their emission reduction targets, supported by a regular review mechanism.	• Legally binding global agreement for climate action
Conference of the Parties (UNFCC, 2025b)	• Central forum for climate governance; • Annual CoP to assess progress towards climate goals, review implementation and negotiate new commitments; • At COP28 (Dubai, 2023), countries agreed to transition away from fossil fuels.	• Setting future direction of climate action
European Union Legal and Policy Frameworks		
European Green Deal (EC, 2020)	• Sets out a plan to transform Europe's economy, energy, transport, and industries for a more sustainable future. • Establishes aims for emissions reduction of at least 50% by 2030 rising towards 55%. • Seeks to enable a clean transition that protects people and planet, is economically sound and socially fair.	• European applicability; • Sets European direction of climate action.

DOCUMENT NAME	SUMMARY	RELEVANCE
EU Climate Law (EC, 2021)	• Writes into law the goal to become climate neutral by 2050. • Sets intermediate target of reducing net GHG by at least 55% by 2030. • Aims to ensure that all EU policies contribute to this goal and that all sectors of the economy and society play their part.	• Sets a legally binding target of net zero GHG emissions by 2050. • Commitment to preparation of sector-specific roadmaps charting the path to climate neutrality
Fit for 55 package (EC, 2025a)	• Set of laws aiming to reduce EU greenhouse gas emissions by at least 55% by 2030 • Aims to put EU to the path to achieve climate neutrality by 2050.	• Focus on carbon pricing, support for renewables and low-carbon alternatives and regulation of methane.
A Clean Industrial Deal (EC, 2025b)	• Focus on carbon emission reduction across various industrial sectors; • Aims to integrate circularity into industrial processes; • Includes measures to lower energy costs for industries	• Lays out plans to accelerate decarbonisation while securing the future of manufacturing in Europe by boosting strategic resilience and competitiveness.
The NDC of the EU and its Member States (UNFCCC, 2023c)	• EU and Member States commitment to reduce GHG emissions as part of the Paris Agreement. • Confirms commitment to reducing net GHG emissions by at least 55% by 2030. • Contains indicative contribution of 66.25% to 72.5% net reduction in GHG emissions by 2035, on the path to carbon neutrality by 2050	• Aims to accelerate the transition to a decarbonised economy and industry • Acknowledgement from EU of need to use all available technologies to use all available technologies to reduce emissions from hard to abate sectors
Danish Legal and Policy Frameworks		
Climate Act (2019/2020) (DMCEU, 2020)	• Adopted in December 2019 and entered into force in 2020. • Sets a binding target of 70% reduction in GHG emissions by 2030 compared to 1990 and climate neutrality by 2050. • Introduces five-year interim targets and annual climate programs. • Established the Danish Council on Climate Change which advises and annually assesses government efforts.	• Establishes the framework for phasing out fossil fuels in Denmark. • Commits to continuously reducing the use of oil, gas, and coal. • Forms the basis for all subsequent sector and energy agreements.

DOCUMENT NAME	SUMMARY	RELEVANCE
Danish Climate Strategies		
Climate Agreement for Energy and Industry (2020) (The Danish Government, 2020)	• Broad political agreement to develop and expand green technologies in the energy sector and industry. • Target of 3.4 million tons CO_2 reduction by 2030. • Focus on expanding renewable energy, CO_2 capture (CCS), Power-to-X, and energy efficiency. • Phase-out of oil and gas boilers, green heating, and cheaper green choices.	• Significant effort to replace fossil fuels with green energy. • CCS and Power-to-X will address the remaining hard-to-abate emissions. •
Climate Agreement on Green Electricity and Heating (2022) (The Danish Government, 2022a)	• Expansion of green electricity and heating, including offshore wind, solar energy, and electrification. • Goal to quadruple production of green electricity from onshore wind and solar. • Strengthening district heating and phasing out fossil-based heating.	• Reduces the need for fossil fuels in the electricity and heating sectors. • Accelerates electrification and phase-out of oil/gas for heating.
Agreement on Green Transport (2020) (Energistyrelsen, 2020a)	• Introduction of measures to accelerate the transition to cleaner road transport. • Increased deployment of electric vehicles through incentives and support schemes. • Mandatory blending requirements for sustainable biofuels. • Road charges (distance-based tolling) for heavy-duty vehicles. • Expansion of charging infrastructure. • Initiatives to reduce emissions from freight and commercial transport. • Low-emission zones in urban areas.	• Reduces national consumption of petrol and diesel by promoting electric vehicles. • Increases substitution of fossil fuels with sustainable biofuels where electrification is not yet feasible. • Incentivises freight operators to shift away from diesel-heavy transport. • Supports long-term phase-out of internal combustion engine vehicles. • Reduces use of fossil fuels in the transport sector
Agreement on CO_2 Storage Framework in Denmark (2022/2023) (Energistyrelsen, 2022)	• Establishes conditions for safe and environmentally sound storage of CO_2. • Enables import and export of CO_2 to/from abroad. • CCS recognized as a key measure to achieve climate targets.	• CCS will store emissions that cannot be eliminated otherwise. • Supports negative emissions and reduces reliance on fossil fuels.

DOCUMENT NAME	SUMMARY	RELEVANCE
Green Tax Reform -Agreement for Industry (2022) (The Danish Government, 2022b)	• Introduces higher and more uniform CO_2 tax across sectors. • Creates economic incentives to phase out fossil fuels and invest in green technology.	• Makes fossil fuel use more expensive and promotes green transition in industry.
Agreement on Hydrogen Infrastructure (2024) (The Danish Government, 2024)	• Development of infrastructure for green hydrogen, including export to Germany. • Hydrogen to replace fossil fuels in heavy industry and transport.	• Supports phasing out fossil fuels in sectors where electrification is difficult.
Agreement on Faster and More Efficient Expansion of the Electricity Grid (2024) (Energistyrelsen, 2024)	• Shorter permitting times and more flexible procedures for grid connection • A national grid development program coordinating planning across regions. • Increased investments in the transmission and distribution grid • Focus on faster permitting and grid connection.	• The agreement supports the electrification of society and enables a faster phase-out of oil, coal, and natural gas by ensuring sufficient capacity for large-scale renewable energy.
Agreement on Strengthened Conditions for CCS in Denmark (2023/2024) (The Danish Government, 2023)	• Improves conditions for CCS projects and ensures the technology can deliver necessary reductions by 2030. • Sets a target for storing at least 34 million tons of CO_2 over 15 years.	• CCS becomes a key tool to address emissions from industry and energy sectors.
Agreement on Expansion of Solar and Wind Onshore (2025) (Energistyrelsen, 2025a)	• Further expansion of renewable energy on land. • Focus on faster permitting and grid connection.	• Reduces the need for fossil fuels in electricity production.
Climate Programs and Status Reports (annual) (Energistyrelsen, 2025b)	• Government prepares annual climate program and status report showing the path to 2025 and 2030 targets. • Implementation and follow-up on agreements sector by sector.	• Ensures continuous monitoring of fossil fuel phase-out and implementation of green solutions.
Sector-Specific Plans		
Agreement on the Future of Oil and Gas Extraction in the North Sea (2020) (Energistyrelsen, 2020b)	• Ban on new permits for oil and gas extraction in the North Sea after 2050. • Plan for phasing out fossil production and supporting sector transition. • Focus on CCS and reusing competencies within fossil production to create green jobs.	• Sets an end date for fossil extraction in the North Sea. • Creates incentives to accelerate transition and CCS projects.

3 ENVIRONMENTAL BASELINE

This Section presents a description of the current global GHG baseline and its projected evolution (without implementation of the Project) based on available scientific data. The Section provides a reference scenario against which the Project's downstream scope 3 emissions can be evaluated (Section 5). Due to the global impact of scope 3 emissions, it is necessary to characterise the environmental baseline at a global scale.

Extract from the Guidance (DESNZ, 2025a):
A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of its likely evolution without implementation of the project as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.

….GHGs have a global effect on climate. Therefore, when determining the baseline scenario for scope 3 emissions, the location of the emissions is not relevant and a global baseline scenario of GHGs must be considered in the ES.

…. a reasonable future estimate of global GHGs affecting climate over the lifetime of a project needs to be considered as part of the baseline scenario…

3.1 Background

Human activities, particularly the burning of fossil fuels, can increase the concentration of GHGs in the atmosphere, which in turn traps heat and raises global temperatures (IPCC, 2022). The Intergovernmental Panel on Climate Change (IPCC) Annual Report 6 (AR6) Working Group I states that it is "*unequivocal that human influence has warmed the atmosphere, ocean and land. Widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred.*" The baseline against which downstream scope 3 emissions can be evaluated is a global baseline scenario of GHGs given that GHGs have a global effect, independent of where release occurs. This environmental baseline describes the current and future state of global GHG emissions (without the implementation of the Project) over the Project's expected lifetime[4].

The following data sources have been reviewed to characterise current GHG emissions:

- IPCC (2023): Sixth Assessment Report (AR6) – summarises annual GHG emissions for the period between 1950 and 2019 and provides an estimation of the remaining carbon budget[5];
- Forster *et al* (2025): Indicators of Global Climate Change 2024: Annual Update of Key Indicators of the state of the Climate system and human influence – follows methods employed by AR6 to provide updated estimates for the remaining carbon budget;

[4] As per the Hejre tie-back to South Arne EIA, the project is expected to be operational for 20 years.
[5] Defined as the total net amount of CO_2 that can still be emitted for 50% likelihood of limiting global warming to 1.5°C or 2°C above pre-industrial levels.

- Crippa *et al.* (2025): GHG emissions of all world countries – reports annual GHG emissions between 1970 and 2024 from the Emissions Database for Global Atmospheric Research (EDGAR)6; and
- Friedlingstein *et al* (2025): Global Carbon Budget 2025 – Annual report tracking trends in global carbon emissions and sinks.

Future GHG emission trajectories depend on how society grows and develops in relation to policy, global cooperation on GHG reductions and technological advancements. As multiple elements can influence these factors, there is no single set of future GHG data. Instead, a number of different future scenarios have been modelled by IPCC (2023), taking into consideration possible development pathways for human society.

3.2 Current GHG Emissions

3.2.1 Global GHG emissions

Over the last century, and particularly since the 1970s, GHG emissions have been steadily increasing across all major groups of GHGs, with the majority of contributions being comprised of CO_2 from the combustion of fossil fuels and industrial activities, as well as increasing contributions of methane (CH_4) and nitrous oxide (N_2O) (Forster *et al.*, 2025) (Figure 3-1). Between 2010 and 2019, average annual GHG emissions were higher than any previous decade, although the rate of growth has been slowing in comparison to 2000-2009 (IPCC, 2023).

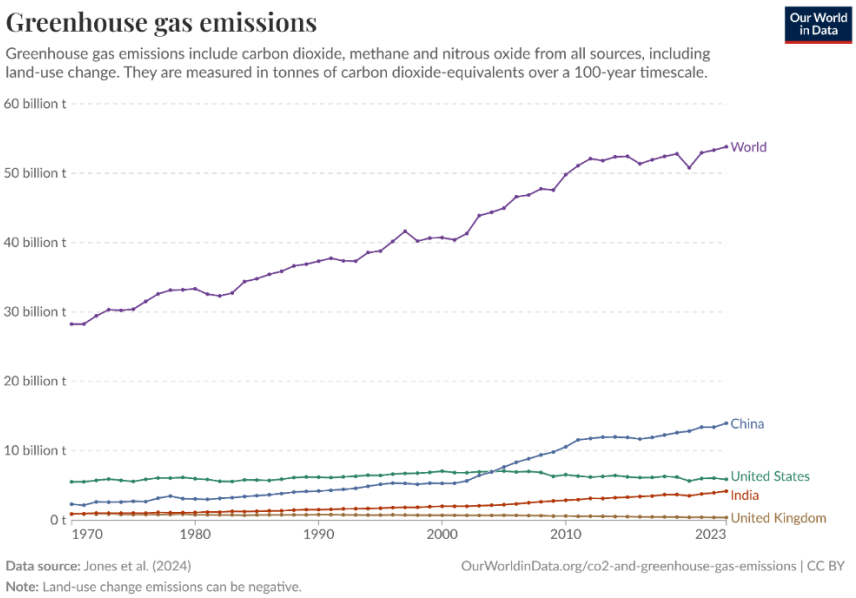

Figure 3-1 Global GHG emissions between 1970 and 2023 (Jones et al., 2024, taken from Our World in Data[7])

[6] *Global database of anthropogenic emissions of GHG and air pollution produced and maintained as a joint project of European Commission, Joint Research Centre and the International Energy Agency. Follows methods employed by AR6.*
[7] *Our World in Data*

While the global GHG emissions have increased in most regions between 1970 and 2024, the distribution of regional contributions vary widely based on the development of the region (Figure 3-2) (Crippa *et al.*, 2025). Crippa *et al.* (2025) note that the European Union has shown significant GHG emission reductions in 2024, with levels being 35% lower than emissions in 1990. Nevertheless, this declining trend is not observed across all nations (Crippa *et al.*, 2025).

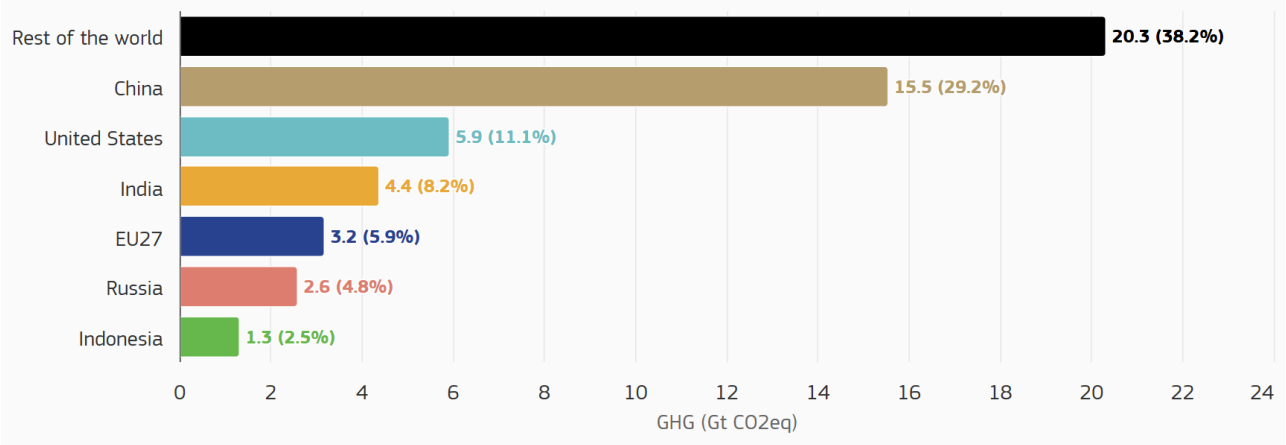

Figure 3-2 Annual global GHG emissions in 2024 (Crippa et al. 2025)

Global GHG emission estimates in IPCC (2023) and Forster *et al.* (2025) are detailed in Table 3-1. The estimates by Forster *et al.* (2025) follow a similar methodology to IPCC (2023) but incorporate more recently published data sources. Using the latest emissions estimates, Forster *et al.* (2025) estimated annual global GHG emissions in 2023 to be 55.4 ± 5.1 Gt CO_2e[8]. Crippa *et al.* (2025) report that in 2024, fossil CO_2 contributed to 74.5% of total emissions.

Table 3-1 Global GHG emissions estimates (IPCC, 2023; Forster et al., 2025)

CLIMATE INDICATOR	IPCC (2023) AR6	FORSTER *et al.* (2025)
GHG Emissions		
Annual GHG emissions (Gt CO_2e)	2019: 59 ± 6.6	2023: 55.4 ± 5.1
Decadal average GHG emissions (Gt CO_2e)	2010-2019: 55.9 ± 6	2010-2019: 52.9 ± 5.4 2014-2023: 53.6 ± 5.2

[8] *Carbon dioxide equivalent (abbreviated to CO_2e or CO_2eq) is a measure used to compare emissions from different GHG in addition to CO_2 (e.g. methane and nitrous oxide) based on the relative global warming potential of each GHG.*

3.2.2 Global Carbon Budget

The total cumulative CO_2 emissions (i.e. the total net amount of CO_2 emitted into the atmosphere as a result of human activities) from 1850 to 2019 is estimated to be 2,400 ± 240 Gt CO_2 (IPCC, 2023).

The remaining carbon budget is an estimate of the total net amount of CO_2 that can be released to limit warming to a specific level above pre-industrial levels. Forster *et al.* (2025) and Friedlingstein *et al.* (2025) predict the following remaining carbon budgets:

- Forster *et al.* (2025):
  - 50% likelihood of limiting warming to 1.5°C above pre-industrial levels: 130 Gt CO_2 from 2025;
  - 50% likelihood of limiting warming to 2°C above pre-industrial levels: 1,050 Gt CO_2 from 2025;
- Freidlingstein *et al.* (2025):
  - 50% likelihood of limiting warming to 1.5°C above pre-industrial levels: 170 Gt CO_2 from 2026; and
  - 50% likelihood of limiting warming to 2°C above pre-industrial levels: 1,055 Gt CO_2 from 2026.

3.2.3 Danish GHG emissions

Annual GHG emissions data for Denmark between 1990 and 2024 are shown in Figure 3-3 (Crippa *et al.*, 2025). GHG emissions in Denmark have declined by 45% between 1990 and 2024 in contrast to global GHG emissions which have increased by 65% and emissions from the EU27 (the 27 countries which constitute the European Union) which have declined by 35% over this same period. In 2024, Denmark GHG emissions were approximately 38 Mt CO_2e, constituting 0.07% of global GHG emissions.

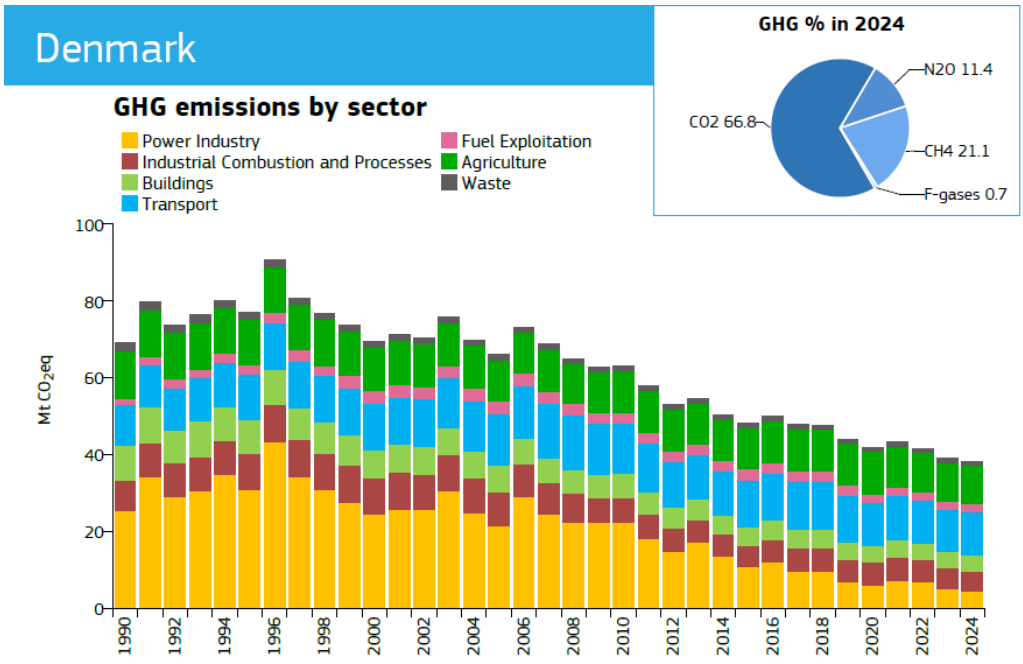

Figure 3-3 Denmark GHG emissions between 1990 and 2024 (taken from Crippa et al., 2025)

The Emissions Database for Global Atmospheric Research (EDGAR) (Crippa *et al*, 2025) also reports fossil CO_2 i.e. CO_2 resulting from the combustion of fossil fuels. As shown in Table 3-2, fossil CO_2 emissions from the EU27 and Denmark have reduced over the period 1990 to 2024 while global emissions have increased. In 2024, Denmark fossil CO_2 emissions were approximately 26 Mt CO_2: 51% lower than 1990 fossil CO_2 emissions and constituting approximately 0.06% of global fossil CO_2 emissions.

Table 3-2 Fossil CO_2 emissions between 1990 and 2024 (Crippa et al., 2025)

	FOSSIL CO_2 EMISSIONS (Mt CO_2)				% CHANGE RELATIVE TO 1990
	1990	2005	2015	2024	
World	22,660	30,016	36,293	39,633	+75
EU27	3,806	3,686	3,082	2,462	-35
Denmark	52	51	34	26	-51

3.3 Future Global GHG Emissions

As described in Section 3.1, there is no single dataset that can be used to predict future global GHG emissions. Instead, emissions projections across modelled scenarios are used. These scenarios cover a range of possible emissions and climate futures which could occur without the implementation of the Project ('do nothing' scenario). No probability or likelihood of one or other of these scenarios occurring is assigned by the IPCC.

The Representative Concentration Pathways (RCP[9]s) are four projections developed in 2011 and adopted by the IPCC in the fifth assessment report (IPCC, 2013) to inform climate modelling and research. Further projections were developed and presented within the IPCC AR6 report (IPCC, 2023), alongside the original RCPs. These projections are referred to as Shared Socioeconomic Pathways (SSP). There are 5 baseline SSPs which are defined by different ways the world could develop in terms of population growth, economic development, technological progress, energy use, and environmental policies. Each SSP is associated with a projection of GHG emissions up to 2100. In AR6, over 1,000 global emissions scenarios, which differ based on emissions driving forces (e.g. development, technological change and energy use), were grouped into eight categories (C1-C8) based on their projected temperature rise by 2100. These categories align with SSPs and RCPs, creating combined SSP-RCPs (Table 3-3). This classification helps identify pathways consistent with the 1.5°C Paris Agreement goal. Each SSP-RCP climate scenario corresponds to a CO_2 emissions profile (IPCC, 2023, Table 3-3).

[9] *Scenarios that include time series of emissions and concentrations of the full suite of GHGs and aerosols and chemically active gases, as well as land use/land cover (Moss et al., 2008).*

Table 3-3 Projected annual GHG emissions for selected modelled scenarios (IPCC, 2023)

WARMING CATEGORY	SSP - RCP	GHG EMISSIONS (Gt CO_2e/yr)			CUMULATIVE CO_2 (2020 – 2100) (Gt CO_2)
		2030	2040	2050	
C1: *Limit warming to 1.5°C (>50% probability) with no or little overshoot.*	SSP1-1.9	33	18	8	160
C3: *Limit warming to 2°C (>67%)*	SSP1-2.6	40	29	20	790
C6: *Limit warming to 3°C (>50%)*	SSP2-4.5	54	53	52	2,790
C7: *Limit warming to 4°C (>50%)*	SSP3-7.0	62	67	70	4,220
C8: *Exceed warming of 4°C (≥50%)*	SSP5-8.5	71	80	88	5,600

4 SCOPE 3 EMISSIONS ESTIMATION

This Section provides the quantification of the downstream scope 3 emissions associated with the Project, documenting the scope, methodology and assumptions informing the quantification.

Extract from the Guidance (DESNZ, 2025a):
....at a minimum, an ES should include an assessment of the downstream emissions that will arise from the use of hydrocarbons extracted as a result of the project (i.e. scope 3, category 11 emissions).

The starting point for estimating these emissions should be the (rebuttable) presumption that all produced hydrocarbons over the lifetime of a project will eventually be combusted.

.... downstream emissions from a new project will be presented ... against a no project ('do nothing') scenario (i.e. total quantity of scope 3 category 11 emissions from the project against zero scope 3 category 11 emissions for a no project scenario).

A developer may choose to further break down the scope 3 emissions into different downstream categories of the GHG Protocol relevant to the fate of the produced hydrocarbons, and provide an assessment of each relevant category.

...the estimate of scope 3 emissions must reflect the highest anticipated hydrocarbon production (the 'P10' data) specified in the application for development.....

Suitable conversion factors for the combustion of the produced hydrocarbons could be taken from the most recently published Government conversion factors for company reporting of greenhouse gas emissions (DESNZ, 2025a), or other suitable sources.

4.1 Background

In assessing and reporting emissions, emissions can be considered within different scopes (GHG Protocol, 2013):

- Scope 1 GHG emissions are direct emissions from activities/sources that are owned or controlled by an operator e.g. emissions arising from power generation on an asset;
- Scope 2 GHG emissions are indirect emissions from the generation of purchased or acquired electricity, steam, heating, or cooling consumed (not applicable to this Project where no energy or utilities are imported); and
- Scope 3 GHG emissions are all indirect emissions (not included in Scope 2) which are a consequence of activities owned or controlled by an operator but which occur from sources in the value chain that are not within the ownership or control of the developer e.g. the use of oil and gas extracted and sold as a result of a project.

The GHG Protocol (2013) identifies seven categories of downstream scope 3 emissions. Justification of the categories of downstream Scope 3 emissions scoped into this assessment is contained within Table 4-1, as required by the Guidance.

Table 4-1 Scoping of the Project's downstream scope 3 assessment (GHG Protocol, 2013)

DOWNSTREAM SCOPE 3 CATEGORY	SELECTED FOR ASSESSMENT
9: Transportation and distribution	Yes - quantified (Section 4.3)
10: Processing of sold products	Yes - quantified (Section 4.3)
11: Use of sold products	Yes - quantified (Section 4.3)
12: End of life treatment of sold products	No - not applicable: assume 100% combustion of sold product
13: Leased assets	No - not applicable, leased assets not within scope of the Project
14: Franchises	No - not applicable, franchises not within scope of the Project
15: Investments	No - not applicable, investments not within scope of the Project

As detailed within the Guidance, GHG emissions can be estimated with the application of conversion factors to activity data (DESNZ, 2025a). For this assessment:

- Conversion factors have been obtained from the 2025 UK Government Greenhouse Gas Conversion factors for Company Reporting (DESNZ, 2025b). The data set does not contain a crude oil conversion factor and therefore fuel oil has been used as a proxy[10]. Natural gas (100% mineral blend) has been used[11]. These conversion factors are greater (higher kg CO_2e/tonne) than conversion factors typically used for GHG reporting, which are derived from the European Union Emissions Trading Scheme (Reg 2018/2066), and are therefore used to provide a "worst-case" quantification.
- The relevant activity data is the 'P10' (high) production case for the Project.

4.2 Assumptions

To provide clarity in the assessment process, Table 4-2 lists the key assumptions made. Uncertainties associated with these assumptions are detailed in Appendix C.

[10] This is considered a "worst-case" assumption as fuel oil is defined as "Heavy oil used as fuel in furnaces and boilers of power stations, in industry, for industrial heating and in ships" with the highest kg CO_2e/tonne of the liquid fuels in the data set (excluding marine gas oil) (DESNZ, 2025b).

[11] Natural gas (100% mineral blend) is defined as "natural gas not obtained through the grid and therefore does not contain any biogas content" (DESNZ, 2025b).

Table 4-2 Key assumptions enabling quantification

ASPECT	ASSUMPTION	
General assumptions		
No-project ('do nothing') scenario	Zero downstream scope 3 emissions arising from the Project for a no-project scenario	
Fate of sold product	100% combustion	
Production profiles		
Annual P10 (high) production case	Production from 2028 to 2047: 63 million barrels of oil and 125 billion cubic feet gas. Section 4.4: sensitivity to P50 (mid) and P90 (low) production cases	
Scope 3 Category 11: end user combustion emissions conversion factors (DESNZ, 2025b)		
Hydrocarbon	Conversion factor	Density
Fuel Oil[12]	3,228.89 kg CO_2e/t	Density of Fuel Oil: 983.284 kg/m^3
Natural Gas (100% mineral blend)	2,603.30 kg CO_2e/t	Density of Natural Gas: (100% mineral blend): 0.80200 kg/m^3
Well to Tank (DESNZ, 2025b) conversion factors		
Hydrocarbon	Conversion factor	Density
Fuel Oil	714.87 kg CO_2e/t	Density of Fuel Oil: 983.284 kg/m^3
Natural Gas (100% mineral blend)	423.16 kg CO_2e/t	Density of Natural Gas (100% mineral blend): 0.80200 kg/m^3
Emissions reported within EIA		
Reference	Activity / Vessels	Emissions
Table 8-10 Summary of the estimated emissions to air during the construction phase of the Hejre tie-back to South Arne concept.	Pipelay, Installation of the Hejre topside and tie-in module at South Arne, well completion and repair	32,394 t CO_2e
Table 9-5 Estimated emissions related to the transportation activities during the production phase.*	Helicopters and supply vessel	1,015 t CO_2e per year, i.e.: 4.7 t CO_2+ 1,010 t CO_2+ (0.0001 t CH_4 x 28)[13]
Table 10-3 Estimated emissions related to the total decommissioning phase.	Helicopters and range of vessels, including rig	53,766 t CO_2e calculated as: 53,710 t CO_2+ (2 t CH_4 x 28[13])
Total emissions reported within EIA		106,454 t CO_2e

** Emissions associated with production are minimal as Hejre is an unmanned platform without water injection or gas lift and with very limited power demand for instrumentation and lighting.*

[12] *Used as proxy as no crude oil conversion factor in the 2025 UK Government Greenhouse Gas Conversion factors for Company Reporting*
[13] *The global warming potential of CH_4 is 28 (IPCC, 2014)*

4.3 Quantification

4.3.1 Scope 3, category 11 emissions

Scope 3, category 11 emissions are calculated to be the sum of:

- Fuel Oil conversion factor[14] (3,228.89 kg CO_2e/t; Table 4-2) multiplied by the mass of oil (t) produced as a result of the Project
- Natural Gas (100% mineral blend) conversion factor[15] (2,603.30 kg CO_2e/t; Table 4-2) multiplied by the mass of gas (t) produced as a result of the Project.

4.3.2 Scope 3, category 9 and 10 emissions

Well to Tank (WTT) conversion factors represent the GHG associated with the production and transport of a fuel, up to the point it is delivered for use (DESNZ, 2025c). This includes emissions from the extraction, refining and transportation of a fuel, prior to combustion. As illustrated in Figure 4-1, the GHG emissions associated with extraction are reported within the EIA (Table 8-10, 9-5 and 10-3 of the EIA; Table 4-2 of this report) and are therefore subtracted from calculated WTT values to produce an estimate of scope 3, category 9 and 10 emissions.

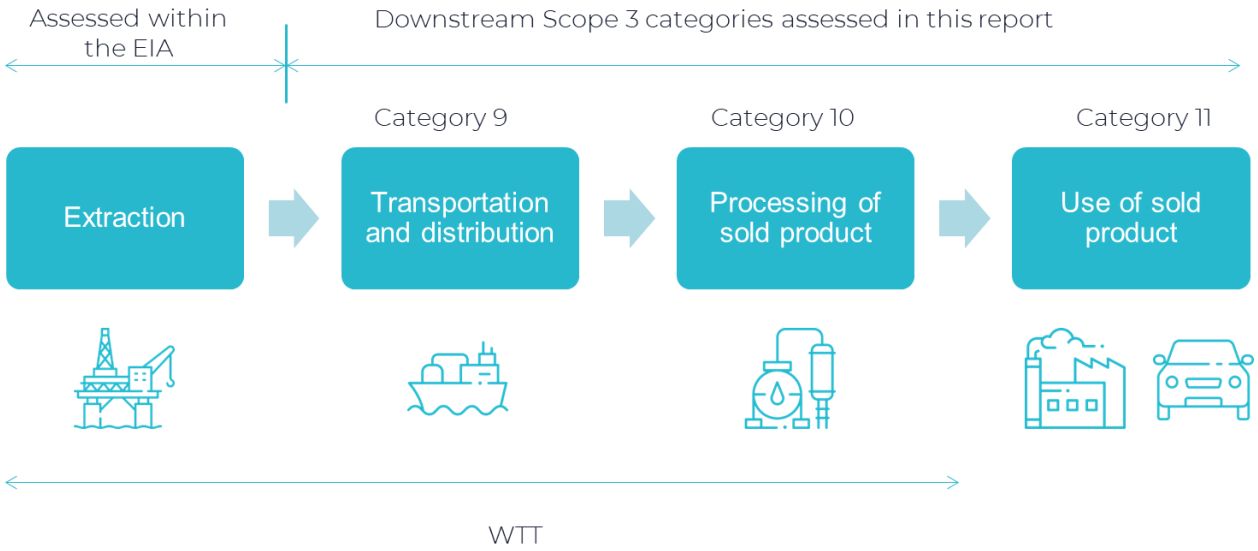

Figure 4-1 Schematic of GHG emissions associated with the production, transportation, processing and use of hydrocarbons

Scope 3, category 9 and 10 emissions are therefore calculated as follows:

[14] *Fuel Oil assumed to represent the variety of refined products which may be derived from crude oil*
[15] *Natural Gas (100% mineral blend) assumed to represent the gas produced as a result of the Project*

A) WTT emissions being the sum of:

- WTT Fuel Oil conversion factor[14] (714.87 kg CO_2e/t; Table 4-2) multiplied by the mass of oil (t) produced as a result of the Project.
- WTT Natural Gas (100% mineral blend) conversion factor[15] (423.16 kg CO_2e/t; Table 4-2) multiplied by the mass of gas (t) produced as a result of the Project.

B) GHG emissions reported within the EIA are subtracted from result (A).

This gives the results reported within Table 4-3.

4.3.3 Results

The scope 3, category 11 emissions estimates associated with the P10 (high) production case (Table 4-3) are estimated to be 39 Mt CO_2e, of which 82% (32 Mt) arise from the combustion of oil as a sold product and 18% (7 Mt) arise from the combustion of gas as a sold product.

The scope 3 category 9 and 10 emissions estimates associated with the P10 (high) production case (Table 4-3) are estimated to be 8 Mt CO_2e, of which 85% (7 Mt) arise from oil and 15% (1 Mt) arise from gas.

Table 4-3 Downstream scope 3 emissions quantification (P10 (high) production case[16])

DOWNSTREAM SCOPE 3 CATEGORY	OIL	GAS	TOTAL
Category 9 and 10 (t CO_2e)	6,980,000	1,190,000	8,170,000
Category 11 (t CO_2e)	31,938,000	7,414,000	39,352,000
TOTAL (t CO_2e)	38,918,000	8,604,000	47,522,000

4.4 Production Profile: Sensitivity

Calculation of downstream scope 3 emissions utilising the P10 (high) production case reflects the highest anticipated hydrocarbon production, as per the Guidance[17]. This value will be used in the assessment of significance (Section 5) as a 'worst-case'. Production from the Project will however lie within the range of P90 (low) production case - P50 (mid) production case (most likely) – P10 (high) production case. The influence of this assumption on the quantification of downstream scope 3 emissions is illustrated in Table 4-4. While not incorporated or assessed within this report, future developments in the energy sector are expected to exert downward pressure on emissions. These include the advancement and wider adoption of carbon capture and storage technologies. Such factors could significantly reduce the overall GHG footprint associated with the energy sector.

[16] *Emissions rounded to nearest thousand tonnes of CO_2e*
[17] *The P10 (high) production case was used as the basis of assessment for the EIA.*

Project downstream scope 3 emissions associated with the P90 (low) case are 49% lower than those associated with the P10 (high) production case. Correspondingly, emissions associated with P50 (mid) case are 26% lower than those associated with the P10 (high) case.

Table 4-4 Influence of production case on downstream scope 3 emissions quantification[16]

DOWNSTREAM SCOPE 3 CATEGORY	PRODUCTION CASE		
	P90 (LOW)	P50 (MID)	P10 (HIGH)
Category 9 and 10 (t CO_2e)	4,129,000	6,073,000	8,170,000
Category 11 (t CO_2e)	20,000,000	29,319,000	39,352,000
TOTAL (t CO_2e)	24,129,000	35,392,000	47,522,000

5 SIGNIFICANCE OF LIKELY EFFECTS

This Section assesses the significance of the likely effects of the downstream scope 3 emissions associated with the Project. Criteria and methodologies to define likelihood, sensitivity, magnitude and significance are documented and referenced.

Extract from the Guidance (DESNZ, 2025a):
...the content and context in the ES, particularly regarding the effects on climate from GHG emissions, should be comprehensive, to aid the decision maker in reaching a conclusion on the significant effects of the project on the environment.....

The ES, when evaluating the significance of likely effects of the project on the environment must also consider and contain information on cumulative effects.

The discussion of likely significant effects should be accompanied by an indication of the criteria used to determine whether an impact is 'likely' and whether it is 'significant'.

The expectation is that assessment methodologies will use a form of matrix that combines sensitivity of the receptor against magnitude of the impact to determine a level of significance associated with scope 3 emissions. Given the global effect of GHG emissions, the current state of the climate and the concentration of carbon dioxide and other GHGs in the atmosphere (WMO, 2025), the expectation is that the sensitivity level will be high.

ESs will consider how the GHG emissions associated with a proposed project impact climate at a global level and a national level.

....an assessment of scope 3 emissions in relation to the current state of climate and global emissions-reduction pathways (IPCC, 2023) is more likely to support a reasoned conclusion on significance

If global reduction pathways are used to contextualise magnitude of emissions as above, this approach should be inherently cumulative, as these pathways take into account a wide range of existing and planned projects and other activities.

5.1 Background

For some environmental impacts (for example, underwater noise), significance criteria are standard or numerically based. For others which do not have established numerically based significance criteria, such as likely effects of downstream scope 3 emissions, a more qualitative approach is required.

A systematic methodology is applied here for the qualitative assessment to be as objective as possible. The principles set out in IEMA (2022) have been followed to evaluate the significance of Scope 3 emissions. The significance of the Project's downstream scope 3 emissions is evaluated using a typical matrix approach, whereby the sensitivity of receptor and magnitude of impact are combined to derive the overall significance level. The assessment process is summarised below.

Following DESNZ (2025), given the scale of global scope 3 emissions, the Project's scope 3 emissions has not only been assessed against global emission levels. As per IEMA (2022): "*The crux of significance is not whether a project emits GHG emissions, nor even the magnitude of GHG emissions alone, but whether it contributes to reducing GHG emissions relative to a comparable baseline consistent with a trajectory towards net zero by 2050.*" Therefore, the assessment also considers the compatibility of the Project's scope 3 emissions with global emission reduction pathways set out in the IPCC AR6, sector-specific pathways, and national pathways (see Section 5.4). By using relevant emission reduction pathways to contextualise the magnitude of emissions the approach is inherently cumulative: these pathways take into account a wide range of existing and planned projects and other activities.

5.2 Likelihood

GHG emissions from any project will contribute to climate change (IEMA, 2022) and therefore the Project's downstream scope 3 emissions impact on the climate is "likely".

5.3 Sensitivity

The global climate is the receptor for the assessment and the sensitivity of the global climate is considered to be "high" due to the contribution of GHG emissions to climate change (IEMA, 2022; DESNZ, 2025a).

5.4 Magnitude

Evaluation of magnitude requires consideration of a Project's alignment with emission reduction pathways at global, sectoral and national levels.

5.4.1 Representative pathways

Global pathways

Global emission reduction pathways are scenarios representing how the world could limit global temperature rise given different future scenarios and existing and planned projects and other activities. For the purpose of this assessment, several global emission pathways, introduced in Table 3-3, have been selected which represent a range of potential future outcomes (Table 5-1).

Table 5-1 Selected emissions scenarios (IPCC, 2023 and Riahi K. et al., 2017)

WARMING CATEGORY	RATIONALE FOR SELECTION
C1 (SSP1-1.9 – very low emissions)	Representing the very low emissions scenario, achievement requires immediate, large scale global policy changes.
C3 (SSP1-2.6) – low emissions	Illustrative of low GHG emissions scenario with slower GHG emission reductions: CO_2 emissions cut to net zero around 2075.
C6 (SSP2-4.5 – intermediate emissions)	The closest pathway to the historic trajectory, this pathway would result in overshooting the 2°C limit in global temperature rises but would see marked decline in global CO_2 emissions between 2040 and 2100.
C7 (SSP3-7.0 – medium-high emissions)	Challenges to both climate change mitigation and adaptation, driven by a "regional rivalry" socioeconomic pathway. Assumes no additional climate policies.

Sector-specific pathways

In addition to global reduction pathways, sector-specific emission reduction pathways are considered as part of this assessment (IEMA, 2022). The International Energy Agency (IEA) (2023) published the *Net Zero Roadmap A Global Pathway to Keep the 1.5 °C Goal in Reach* in 2023, which presents emissions reduction pathways for the energy sector compatible with the IPCC C1 category ('the Net Zero Emissions (NZE) Scenario'). The IEA (2025a) report *World Energy Outlook 2025* provides updated emissions pathways compatible with the following scenarios:

- Current Policies Scenario (CPS): pathway aligned with policies and regulations already in place;
- Stated Policies Scenario (STEPS): pathway aligned with policies and regulations already in place and those that have been put forward but not yet adopted; and
- Updated NZE Scenario: pathway aligned to reaching net zero global emissions by 2050 with an exceedance of warming of 1.5°C for several decades, returning to below 1.5°C by 2100.

The NZE and STEPS scenarios represent the most ambitious scenarios to limit global warming. The NZE scenario is aligned with peak warming in 2050 at 1.65°C which declines thereafter, and is considered consistent with the Paris Agreement goal's upper limit of maintaining global warming levels to well below 2°C above pre-industrial levels (IEA, 2025a). The STEPS scenario is aligned with maintaining global warming levels to less than 2.5°C above pre-industrial levels by 2100. As the STEPS scenario is not aligned with the goals of the Paris Agreement (IEA, 2025a), only the NZE scenario has been considered further within this assessment.

IEA (2025a) projects natural gas and oil combustion CO_2 emissions for 2035, 2040 and 2050 under the NZE scenario. In addition, oil and natural gas supply for 2035, 2040 and 2050 are also estimated.

Table 5-2 Global energy-related CO_2 emissions NZE scenario GHG emissions and oil and gas demand (IEA, 2025a[18])

PARAMETER	2035	2040	2050
Natural gas combustion CO_2 (Gt CO_2)	4.2	2.3	0.4
Oil combustion CO_2 (Gt CO_2)	6.7	4.1	1.6
Oil supply (million barrels per day, Mb/d)	67.9	48.3	23.7
Natural gas supply (billion cubic metres per year, bcm/yr)	2,639	1,798	870

The United Nations Environment Programme Production Gap report (SEI, 2025) analyses future fossil fuel production plans of twenty countries and compares these volumes to the projected levels of future fossil fuel production estimates in climate models consistent with keeping the Paris Agreement's temperature goal within reach.

SEI (2025) provides GHG emissions and fossil fuel production estimates for IPCC C1 pathways. The GHG emissions are detailed in Table 5-3 and oil and natural gas production is detailed in Table 5-4. These differ from the IEA (2025a) estimates due to differences in modelling assumptions.

Table 5-3 GHG emissions for fossil fuels (production and combustion) for the pathways considered under SEI (2025)

PATHWAY	GHG EMISSIONS (Gt CO_2e PER YEAR)				
	2030	2035	2040	2045	2050
Pathways consistent with 2°C (median)	25	22	19	17	15
Pathways consistent with 1.5°C (median)	20	17	14	11	8

[18] *Estimates for oil and natural gas supply in exajoules per year (EJ/yr) have been converted to Mb/d or bcm using the following conversion factors (SEI, 2025): 1 EJ/year = 0.526 Mb/d; and 1 EJ/year = 29 bcm/yr.*

Table 5-4 Oil and natural gas production for fossil fuels (production and combustion) for the pathways considered under SEI (2025[19])

PATHWAY	OIL PRODUCTION (Mb/d)					NATURAL GAS PRODUCTION (bcm/yr)				
	2030	2035	2040	2045	2050	2030	2035	2040	2045	2050
Pathways consistent with 2°C (median)	99.4	94.2	83.1	70.0	57.9	3,915.0	3,654	3,451	3,306	3,335
Pathways consistent with 1.5°C (median)	88.4	78.9	63.1	45.8	32.1	2,726.0	2,378	2,204	2,001	1,769

National pathways

Projections of Danish oil and gas production, as well as Danish and European consumption, must be considered in light of the climate commitments and strategies adopted at both EU and national levels. These frameworks establish clear pathways toward climate neutrality and set binding targets that will directly and indirectly influence fossil fuel demand and, consequently, production volumes leading up to 2050.

These commitments, combined with Denmark's decision under the North Sea Agreement to phase out oil and gas production by 2050, reflect a fundamental shift in policy direction. Together with EU climate strategies, they are expected to shape market dynamics, regulatory frameworks, and societal trends, influencing both consumption and production patterns over the coming decades.

Key commitments and strategies detailed in Section 2, include:

- EU:
  - NDC of the EU and its member states (EC, 2025c): net reduction of 55% in GHG emissions by 2030, with indicative contribution of 66.25% to 72.5% for 2035, towards carbon neutrality by 2050;
- National:
  - Climate Act (2019/2020) established the aim of a 70% reduction in GHG emissions by 2030 compared to 1990 and climate neutrality by 2050. These ambitions were strengthened in 2022, aiming for climate neutrality by 2045 and achieving GHG emission reductions of 110% compared to 1990 levels in 2050[20];
  - Climate Agreement for Energy and Industry (2020): measures contributing to the reduction of emissions by 3.4 Mt CO_2e by 2030.
  - Agreement on the Future of Oil and Gas Extraction in the North Sea (2020): commitment to ending fossil fuel production by 2050.

[19] Oil and natural gas production has been converted from EJ/yr to Mb/d (oil) and bcm/yr (natural gas) using the following conversion factors (SEI, 2023): 1 EJ/year = 0.526 Mb/d; and 1 EJ/year = 29 bcm/yr.

[20] On the 17th November 2025, the Danish government proposed establishing a 2035 climate target of between 82 and 85 percent reduction in GHG emissions relative to 1990 (DMCEU, 2025). At the time of publication of this assessment, the target has yet to be finalised.

5.4.2 Magnitude criteria

A qualitative approach is used to assess the magnitude of impact, which considers if the Project's downstream scope 3 emissions align with international, sector-specific and national pathways, including reduction trajectories where available. The definitions for magnitude are included in Table 5-5 which also presents the consequence of effect and associated significance (further explained in Section 5.5).

Table 5-5 Definition of magnitude and significance

MAGNITUDE	DEFINITION	CONSEQUENCE OF EFFECT* (SIGNIFICANCE)
High	The Project's downstream scope 3 emissions are not compatible with: • International climate commitments targeting holding global average temperature rises to well below 2°C • Sector specific pathways and reduction trajectories • National climate policies	Major (Significant)
Medium	The Project's downstream scope 3 emissions are partially aligned with: • International climate commitments targeting holding global average temperature rises well below 2°C • Sector specific pathways and reduction trajectories • National climate policies	Moderate (Significant)
Low	The Project's downstream scope 3 emissions are aligned with: • International climate commitments targeting holding global average temperature rises well below 2°C • Sector specific pathways and reduction trajectories • National climate policies	Minor (Not significant)
Negligible	The Project's downstream scope 3 emissions go beyond: • International climate commitments targeting holding global average temperature rises well below 2°C • Sector specific pathways and reduction trajectories • National climate policies	Negligible (Not significant)

* Note, sensitivity is "High" as detailed in Section 5.3.

5.5 Significance

The assessment of impact significance is an inherently uncertain process given the use of projections of potential climate futures. The consequence of effect has been determined using the matrix outlined in Table 5-5, which combines sensitivity and magnitude. The consequence of effect ranges from negligible to high, where moderate or above is predicted to result in a significant effect on the environment.

The sections below assess the downstream scope 3 emissions of the Project against international, sectoral and national emissions pathways to identify whether the Project is aligned with relevant climate commitments and

emission reduction trajectories. Conclusions on the magnitude, consequence of effect and overall significance are made in Section 5.6.

5.5.1 International pathways

The projected median annual global GHG emissions trajectories for selected IPCC (2023) AR6 warming categories are detailed in Table 3-3. The total estimated downstream scope 3 emissions for the Project (under the P10 (high) production case) are 47,522,000 tCO_2e (i.e. 0.048 Gt CO_2e; Table 4-3). For 2030 and 2040, the Project's downstream scope 3 emissions have been calculated as a percentage of the emissions projections for the selected AR6 WGIII warming categories (Table 5-6). This is one approach to contextualising Project downstream scope 3 emissions at an international level. In accordance with DESNZ (2025a) guidance, the assessment does not only consider the proportion of the Project's scope 3 emissions against future global GHG emissions. The primary aim is to understand if the Project is compatible with relevant climate targets and commitments to determine whether a significant effect is likely. Following IEMA (2022), subsequent sections contextualise the Project's downstream scope 3 emissions at a sectoral level and at a national level. Some fossil fuel consumption and production remains under the C1 pathway. The IPCC (2022) AR6 Working Group III report states that energy system CO_2 emissions must fall by 87-97% to limit warming to below 2°C or 1.5°C threshold levels which will be accompanied by reduced fossil fuel consumption. The report states that the use of oil and gas must reduce by 41% and 25% between 2019 and 2050 respectively. The Project's declining production towards 2050 is considered to align with this target and this is considered further by contextualising the Project's scope 3 emissions against sector-specific pathways in Section 5.5.2.

Table 5-6 Comparison of Project scope 3 emissions with AR6 WGIII projections (IPCC, 2023)

WGIII WARMING CATEGORY	SSP-RCP	2030		2040	
		Project downstream scope 3 emissions (Gt CO_2e/yr)	Project % of AR6 projection*	Project downstream scope 3 emissions (Gt CO_2e/yr)	Project % of AR6 projection*
C1 Limit warming to 1.5°C (>50% probability) with no or little overshoot.	SSP1-1.9	0.006	0.017	0.002	0.0085
C3 Limit warming to 2°C (>67% probability)	SSP1-2.6		0.014		0.0053
C6 Limit warming to 3°C (>50% probability)	SSP2-4.5		0.010		0.0029
C7 Limit warming to 4°C (>50% probability)	SSP3-7.0		0.009		0.0023

***Annual emissions projections for AR6 WGIII warming categories are provided in Table 3-3.**

Conclusion

Given that the Project's downstream scope 3 emissions have a low magnitude of impact on the emissions trajectory compatible with the C1 warming category (as defined in Table 5-5), the emissions are considered not to hinder international climate commitments to maintain global average temperature rises well below 2°C.

5.5.2 Sector-specific pathways

Sector-specific pathways from IEA (2025a) and SEI (2025) are detailed in Section 5.4.1.

IEA (2025a) Emissions and Production Trajectories

The total energy related CO_2 emissions projections for the NZE scenario are 17.6 and 8.1 Gt CO_2 for 2035 and 2040, respectively (Table 5-2). The Project's downstream scope 3 emissions in 2035 (0.003 Gt CO_2e) and 2040 (0.002 Gt CO_2e) contribute to 0.02% of the IEA (2025a) NZE scenario projected emissions in these years.

IEA (2025a) also project natural gas and oil combustion emissions and oil and natural gas consumption values for the NZE scenario in 2035 and 2040 (Table 5-2). A comparison of the Project's downstream scope 3 emissions and associated oil and gas combustion levels with the IEA NZE scenario is provided in Table 5-7. The downstream scope 3 emissions for the oil and natural gas combustion associated with the Project are less than 0.035% of the NZE scenario values.

The P10 (high) production case for the Project has been used to determine the Project's proportion of NZE scenario oil and gas supply:

- 2035: 3.65 Mb/yr of oil (i.e. 0.010 Mb/d) and 6.52 billion cubic feet (bcf)[21] of gas (i.e. 0.19 bcm/yr); and
- 2040: 2.01 Mb/yr of oil (i.e. 0.006 Mb/d) and 4.26 bcf (i.e. 0.12 bcm/yr) of gas.

The Project's production equates to less than 0.02% of oil supply and 0.007% of natural gas supply under the IEA (2025a) NZE scenario.

Table 5-7 Comparison of project downstream scope 3 emissions with IEA NZE scenario (IEA, 2025a)

PARAMETER	2035		2040	
	Project	% of NZE Scenario*	Project	% of NZE Scenario*
Natural gas combustion CO_2 (Gt CO_2)	0.00045	0.0107	0.00029	0.013
Oil combustion CO_2 (Gt CO_2)	0.0023	0.034	0.0012	0.030
Natural gas supply (billion cubic metres, bcm)	0.19	0.0070	0.12	0.0067
Oil supply (million barrels per day, Mb/d)	0.010	0.015	0.0055	0.011

** NZE scenario values are provided in Table 5-2*

[21] *Bcf converted to bcm by using a conversion factor of 0.02832.*

SEI (2025) Emissions and Production Trajectories

The Project's contribution towards emissions trajectories and associated fossil fuel production levels for pathways consistent with maintaining global temperature average below 1.5℃ and 2℃ (as described in Table 5-3 and Table 5-4) is provided in Table 5-8. The Project's downstream scope 3 emissions contribute 0.006-0.023% of the oil production for pathways consistent with 1.5°C and 0.005-0.014% of the natural gas production for pathways consistent with 1.5°C.

Table 5-8 Project downstream scope 3 emissions and annual production as % of 1.5°C and 2°C compatible scenarios (SEI, 2025)

PATHWAY*	THE PROJECT AS % OF TOTAL			
	2030	2035	2040	2045
Global fossil fuel GHG emissions				
Pathways consistent with 2℃ (median)	0.022	0.012	0.008	0.005
Pathways consistent with 1.5℃ (median)	0.028	0.016	0.011	0.008
Global oil production				
Pathways consistent with 2℃ (median)	0.020	0.011	0.007	0.004
Pathways consistent with 1.5℃ (median)	0.023	0.013	0.009	0.006
Global natural gas production				
Pathways consistent with 2℃ (median)	0.010	0.005	0.003	0.003
Pathways consistent with 1.5℃ (median)	0.014	0.008	0.005	0.005

** SEI (2025) values provided in Table 5-3 and Table 5-4.*

Conclusion

Given that the Project's downstream scope 3 emissions have a low magnitude of impact on sector-specific emissions trajectories and oil and gas production levels that are consistent with maintaining global average temperature rises to well below 2°C (as defined in Table 5-5), the downstream scope 3 emissions are considered not to hinder sector-specific trajectories and targets.

5.5.3 National pathways

EU and Danish climate policies and strategies detailed in Table 2-1 provide the context for the assessment of the Project's downstream scope 3 emissions given future Danish demand for oil and gas and projected production. The annual Climate Status and Projection report produced in accordance with the Danish Climate Act (2020) (MECU, 2025) contains estimates of future consumption of oil and natural gas.

Production forecasts (Figure 5-1; DEA, 2025), incorporating Project production, are aligned with the Danish Climate Act and the 2020 North Sea Agreement stipulating that oil and gas production will cease in 2050. Up until 2050, overall oil and gas production in Denmark declines after a small peak in 2030. Downstream scope 3 emissions from the Project will make a minor contribution to the emissions associated with Danish oil and gas combustion and are not expected to hinder achievement of Danish climate targets. Indeed, the Climate Status and Projection 2025 report (which incorporates future estimates of oil and gas production) concluded that Denmark has identified the measures required to reach the 2030 emissions reduction target (MECU, 2025). The Project's production (and therefore downstream scope 3 emissions) will gradually decline towards 2047, consistent with the phasing out of fossil fuel production, a decline in oil and gas combustion emissions and the end of oil and gas production by 2050. Therefore, per Table 5-5, the Project's downstream scope 3 emissions have a low magnitude of impact on national commitments and targets.

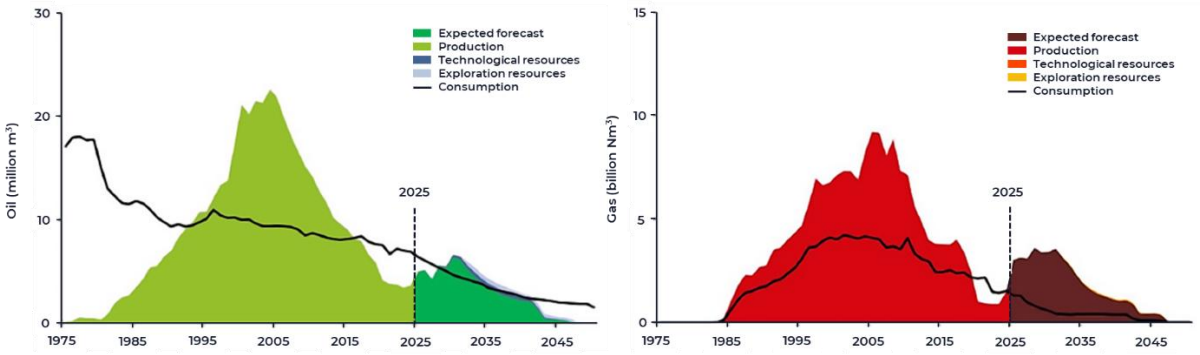

Figure 5-1 Danish oil and gas production and consumption: to date and forecast, consistent with the end of oil and gas production by 2050 (after DEA, 2025)

Conclusion

Given that the Project's downstream scope 3 emissions have a low magnitude of impact onnational commitments and targets that are consistent with maintaining global average temperature rises to well below 2°C (as defined in Table 5-5), the downstream scope 3 emissions are considered not to hinder national climate commitments and targets (see section 2.1).

5.6 Conclusion

Overall, the Project's scope 3 emissions will not hinder international climate commitments and sector specific pathways and emission trajectories compatible with holding global average temperature rises to below 2°C. Furthermore, the scope 3 emissions are also considered to align with national climate policies.

The Project's downstream scope 3 emissions are considered to make a minimal contribution to international, sector-specific and national emissions and are not expected to hinder the achievement of climate commitments and goals at an international or national level. The IEA (2025a) indicate that even in the NZE scenario, there will still be ongoing demand for fossil fuels. The Project's production (and therefore downstream scope 3 emissions) will gradually decline towards 2047, consistent with the phasing out of fossil fuel production in Denmark.

Therefore, using the magnitude criteria outlined in Table 5-5, the magnitude of impact is considered to be low, meaning the consequence of effect is minor and not significant. It is therefore concluded that ***the Project's downstream scope 3 emissions (including the emissions from burning the hydrocarbons extracted) will not have a significant effect and will not hinder international and national Paris-Agreement aligned climate goals***.

5.6.1 Mitigation Measures

Mitigation measures are to be considered only if likely significant adverse effects are concluded (DESNZ, 2025a). As the assessment herein (Section 5) concludes that downstream scope 3 emissions associated with the Project do not have a likely significant effect, no mitigation measures are identified.

6 REFERENCES

Crippa, M., Guizzardi, D., Pagani, F., Banja, M., Muntean, M. *et al.* (2025). *GHG emissions of all world countries - 2025 Report*, Publications Office of the European Union, Luxembourg, 2025, https://data.europa.eu/doi/10.2760/9816914, JRC143227. Available online at https://edgar.jrc.ec.europa.eu/report_2025 [Accessed on 24/11/2025]

Danish Ministry of Climate, Energy and Utilities. (2020). Climate Act. Available online at: https://www.en.kefm.dk/Media/1/B/Climate%20Act_Denmark%20-%20WEBTILG%C3%86NGELIG-A.pdf [Accessed on 24/11/2025].

Danish Ministry of Climate, Energy and Utilities. (2025). The Danish Government proposes one of the world's most ambitious climate targets for 2035. Available online at: https://www.en.kefm.dk/news/news-archive/2025/nov/the-danish-government-proposes-one-of-the-world%e2%80%99s-most-ambitious-climate-targets-for-2035- [Accessed 24/11/2025].

DEA (2025) Danish Energy Agency. Resource Estimation and Forecast. Available online at https://ens.dk/media/3601/download [Accessed 23/11/2025].

DESNZ (2025a). Environmental Impact Assessment (EIA) – Assessing the effects of downstream scope 3 emissions on climate. Available online at: https://assets.publishing.service.gov.uk/media/6853fa3d1203c00468ba2b15/Supplementary_guidance_-_Effects_of_Scope_3_Emissions.pdf [Accessed 18/11/2025].

DESNZ (2025b). 2025 Government Greenhouse Gas Conversion Factors for Company Reporting. Available online at: https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2025 [Accessed 24/11/2025]

DESNZ (2025c). 2025 Government Greenhouse Gas Conversion Factors For Company Reporting Methodology Paper for Conversion Factors Final Report. Available online at: https://assets.publishing.service.gov.uk/media/6846b0870392ed9b784c0187/2025-GHG-CF-methodology-paper.pdf [Accessed 24/11/2025].

DNV. (2025). Terminology explained: P10, P50 and P90. Available online at: https://www.dnv.com/article/terminology-explained-p10-p50-and-p90-202611/ [Accessed 19/11/2025].

Energiklagenævnets afgørelse i sag om godkendelse af revideret udbygningsplan for Hejre-feltet. Available online at: Afgørelse | Energiklagenævnet

Energistyrelsen. (2020a). Agreement on Green Transport (2020). Available online at: https://skm.dk/media/Skatteministeriet/Presse/Faktaark/Aftale_biler/aftaletekst-aftale-om-groen-omstilling-af-vejtransporten.pdf [Accessed on 24/11/2025].

Energistyrelsen. (2020b). Agreement on the Future of Oil and Gas Extraction in the North Sea (2020). Available online at: https://ens.dk/en/supply-and-consumption/political-agreements-and-applicable-legislation [Accessed on 24/11/2025].

Energistyrelsen. (2022). Agreement on CO_2 Storage Framework in Denmark. Available online at: https://ens.dk/en/supply-and-consumption/political-agreements-and-applicable-legislation [Accessed on 24/11/2025].

Energistyrelsen. (2024). Agreement on Faster and More Efficient Expansion of the Electricity Grid (2024). Available online at: https://www.kefm.dk/Media/638745300510439819/Aftale%20om%20hurtigere%20og%20mere%20effektiv%20udbygning%20af%20elnettet.pdf [Accessed on 24/11/2025].

Energistyrelsen. (2025a). Agreement on Expansion of Solar and Wind Onshore (2025). Available online at: https://www.kefm.dk/Media/638956738603346976/Aftale%20om%20udbygningen%20af%20sol%20og%20vind%20p%20land%202025.pdf [Accessed on 24/11/2025].

Energistyrelsen. (2025b). Denmark's Climate Status and Outlook. Available online at: https://ens.dk/en/analyses-and-statistics/denmarks-climate-status-and-outlook [Accessed on 24/11/2025].

European Commission. (2020). The European Green Deal – Striving to be the first climate-neutral continent. Available online at: https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en [Accessed 19/11/2025].

European Commission. (2021). European Climate Law. Available online at: https://climate.ec.europa.eu/eu-action/european-climate-law_en [Accessed 19/11/2025].

European Commission. (2022). Green Tax Reform – Emission taxes on industries. Available online at: https://commission.europa.eu/projects/green-tax-reform-emission-taxes-industries_en [Accessed 24/11/2025].

European Commission (2023). Paris Agreement: Council submits updated NDC on behalf of EU and member states. Available online at: https://www.consilium.europa.eu/en/press/press-releases/2023/10/16/paris-agreement-council-submits-updated-ndc-on-behalf-of-eu-and-member-states/ [Accessed 24/11/2025].

European Commission. (2025a). Fit for 55. Available online at: https://www.consilium.europa.eu/en/policies/fit-for-55/#what [Accessed 19/11/2025].

European Commission. (2025b). Clean Industrial Deal. Available online at: https://commission.europa.eu/topics/competitiveness/clean-industrial-deal_en [Accessed 19/11/2025]

European Commission. (2025c). 2040 Climate Target. Available online at: https://climate.ec.europa.eu/eu-action/climate-strategies-targets/2040-climate-target_en [Accessed 24/11/2025].

European Commission (2025d). Environmental Impact Assessment. Available online at https://environment.ec.europa.eu/law-and-governance/environmental-assessments/environmental-impact-assessment_en [Accessed 17/12/2025]

European Environment Agency. (2001). Carbon Dioxide Equivalent. Available online at: https://www.eea.europa.eu/help/glossary/eea-glossary/carbon-dioxide-equivalent [Accessed on 24/11/2025].

Forster P. M., *et al.* (2025). Indicators of Global Climate Change 2024: annual update of key indicators of the state of the climate system and human influence. Available online at: https://essd.copernicus.org/articles/17/2641/2025/#section9

Friedlingstein, P *et al.* (2025). Global Carbon Budget 2025. Available online at: https://essd.copernicus.org/preprints/essd-2025-659/ [Accessed 24/11/2025].

GHG Protocol. (2013). The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard. Available online at: ghg-protocol-revised.pdf [Accessed on 24/11/2025].

GHG Protocol. (2022). Category 3: Fuel- and Energy-Related Activities Not Included in Scope 1 or Scope 2. Available online at: https://ghgprotocol.org/sites/default/files/2022-12/Chapter3.pdf [Accessed 21/11/2025].

IEA. (2022). Climate Agreement for energy and industry. Available online at: https://www.iea.org/policies/16838-climate-agreement-for-energy-and-industry-ccus [Accessed 24/11/2025].

IEA (2023). Net Zero Roadmap. A Global Pathway to Keep the 1.5oC Goal in Reach. 2023 Update. International Energy Agency. Available online at: https://www.iea.org/reports/net-zero-roadmap-a-global-pathway-to-keep-the-15-0c-goal-in-reach [Accessed 21/11/2025].

IEA (2025a). World Energy Outlook 2025. Available online at: https://iea.blob.core.windows.net/assets/0a7a40a4-5dcb-4d6e-a7ad-76a1c90ec8eb/WorldEnergyOutlook2025.pdf [Accessed 21/11/2025].

IEA (2025b). Countries and Regions. Available online at: https://www.iea.org/countries [Accessed 21/11/2025].

IEMA (2022). Institute of Environmental Management & Assessment (IEMA) Guide: Assessing Greenhouse Gas Emissions and Evaluating their Significance. 2nd Edition. https://www.isepglobal.org/media/xmgpoopk/2022_iema_greenhouse_gas_guidance_eia.pdf

IPCC (2013). Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)] Available online at: https://www.ipcc.ch/report/ar5/wg1/

IPCC. (2018). Special Report: Global Warming of 1.5°C: Glossary. Available online at: https://www.ipcc.ch/sr15/chapter/glossary/ [Accessed 24/11/2025].

IPCC (2022). Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change[P.R. Shukla, J. Skea, R. Slade, A. Al Khourdajie, R. van Diemen, D. McCollum, M. Pathak, S. Some, P. Vyas, R. Fradera, M. Belkacemi, A. Hasija, G. Lisboa, S. Luz, J. Malley, (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA.

IPCC (2023). Sections In: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 35-115, doi: 10.59327/IPCC/AR6-9789291691647. Available online at: https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_LongerReport.pdf

Jones, M.W., *et al.*. (2023). National contributions to climate change due to historical emissions of carbon dioxide, methane, and nitrous oxide since 1850. *Scientific Data*, *10*(1), p.155.

MECU. (2025). Ministry of Climate, Energy and Utilities. Climate status and projection 2025. Available online at https://www.kefm.dk/klima/klimastatus-og-fremskrivning/klimastatus-og-fremskrivning-2025 [Accessed 23/11/2025]

Moss, R. *et al.* (2008). Towards New Scenarios for Analysis of Emissions, Climate Change, Impacts, and Response Strategies. Intergovernmental Panel on Climate Change, Geneva, 132 pp. Available online at: https://archive.ipcc.ch/pdf/supporting-material/expert-meeting-report-scenarios.pdf [Accessed 24/11/2025]

Reg 2018/2066 Commission Implementing Regulation (EU) 2018/2066 of 19 December 2018 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council and amending Commission Regulation (EU) No 601/2012

Riahi, K. *et al.* (2017). The Shared Socioeconomic Pathways and their energy, land use, and greenhouse gas emissions implications: An overview, Global Environ. Change, 42, 153– 168, https://doi.org/10.1016/j.gloenvcha.2016.05.009, 2017.

SEI (2025). SEI, Climate Analytics, & IISD. The Production Gap Report 2025. Stockholm Environment Institute, Climate Analytics, and International Institute for Sustainable Development. https://productiongap.org/2025report/

The Danish Government (2020). Climate agreement for energy and industry etc. Available online at https://www.kefm.dk/Media/8/8/aftaletekst-klimaaftale-energi-og-industri%20(1).pdf. [Accessed 24/11/2025]

The Danish Government. (2022a). Climate Agreement on Green Power and Heat. Available online at: https://www.kefm.dk/Media/637920977082432693/Klimaaftale%20om%20gr%C3%B8n%20str%C3%B8m%20og%20varme%202022.pdf [Accessed 24/11/2025].

The Danish Government. (2022b). Green Tax Reform -Agreement for Industry. Available online at https://fm.dk/media/usais0yk/aftale-om-groen-skattereform_a.pdf. [Accessed 24/11/2025].

The Danish Government. (2023). Agreement on Strengthened Conditions for CCS in Denmark. Available online at: https://www.kefm.dk/Media/638318274151274018/Agreement%20on%20Strengthened%20Framework%20Conditions%20for%20CCS%20in%20Denmark.pdf [Accessed 24/11/2025].

The Danish Government (2024). Agreement on economic framework conditions for hydrogen infrastructure. Available online at https://www.kefm.dk/Media/638478420542283365/%C3%98konomiske%20rammevilk%C3%A5r%20for%20brintinfrastruktur%20-2.%20delaftale%20om%20r%C3%B8rbunden%20brintinfrastruktur_april%202024.pdf. [Accessed 24/11/2025].

UNFCCC. (2015). The Paris Agreement. Available online at: https://unfccc.int/process-and-meetings/the-paris-agreement [Accessed 24/11/2025].

UNFCCC. (2025a). Conference of the Parties (CoP). Available online at: https://unfccc.int/process/bodies/supreme-bodies/conference-of-the-parties-cop [Accessed on 24/11/2025].

UNFCCC (2025b). Submission by the Danish Presidency of the Council of the European Union and the European Commission on behalf of the European Union and its Member States. Available online at: https://unfccc.int/sites/default/files/2025-11/DK-2025-11-05%20EU%20NDC.pdf [Accessed 19/11/2025].

UNFCCC. (2025c). Nationally Determined Contributions (NDCs). The Paris Agreement and NDCs. Available online at: https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs [Accessed 21/11/2025].

UNFCCC. (2025d). UN Climate Change – Who we are and what we do. Available online at: https://unfccc.int/resource/bigpicture/ [Accessed 19/11/2025].

UNFCCC. (2025e). UN Climate Change. Available online at: https://unfccc.int/ [Accessed 24/11/2025].

WMO. (2025). State of the Global Climate 2024. Retrieved from World Meteorological Organization. Available online at : https://wmo.int/publication-series/state-of-global-climate-2024 [Accessed 24/11/2025].

APPENDIX A ACRONYMS

ACRONYM	DEFINITION
AR6	Sixth Assessment Report
CCS	Carbon Capture and Storage
CH_4	Methane
CoP	Conference of Parties
CO_2	Carbon dioxide
CPS	Current Policies Scenario
DESNZ	Department for Energy Security & Net Zero
EDGAR	Emissions Database for Global Atmospheric Research
EIA	Environmental Impact Assessment
ES	Environmental Statement
GHG	Greenhouse Gas
Gt	Giga tonnes
GWP	Global Warming Potential
IEA	International Energy Agency
IEMA	Institute of Environmental Management & Assessment
IMP	Illustrative Mitigation Pathway
IPCC	Intergovernmental Panel on Climate Change
ISEP	Institute of Sustainability & Environmental Professionals
km	Kilometre
Mt	Million tonnes
NDC	Nationally Determined Contributions
NZE	Net Zero Emissions
N_2O	Nitrous oxide
RCP	Representative Concentration Pathway
SSP	Shared Socioeconomic Pathways
STEPS	Stated Policies Scenario
t	Tonnes
UNFCCC	United Nations Framework Convention on Climate Change
WGIII	Working Group Three
WTT	Well to Tank

APPENDIX B DEFINITIONS

TERM	DEFINITION	REFERENCE
CO_2e	Measure used to compare the emissions from different GHG based on their global warming potential (GWP). Derived by multiplying the tonnes of the gas emitted by the associated GWP for a given time horizon.	EEA, 2001
GHG	Gases in the atmosphere that absorb and emit infrared radiation, trapping heat and contributing to the greenhouse effect. Key examples include CO_2, CH_4, N_2O, and water vapor	IPCC, 2018
Global Remaining Carbon Budget	The total net amount of CO_2 that can still be emitted by human activities while limiting global warming to a specified level (e.g., 1.5°C or 2°C above pre-industrial levels).	IPCC, 2021a
GWP	A measure of how much heat different GHGs trap in the atmosphere relative to CO_2, which has a GWP of 1). Methane's GWP of 28 indicates that 1 tonne of methane causes the same warming as 28 tonnes of CO_2 over 100 years.	IPCC, 2018
EIA Directive	The EU EIA Directive (2011/92/EU, amended by 2014/52/EU) requires that major development projects undergo a mandatory environmental assessment before approval to identify and mitigate their significant effects on people, flora, fauna, soil, water, air, climate, landscape, and cultural heritage. The Directive aims to ensure public participation and sustainable development by integrating environmental considerations into decision-making.	European Commission, 2025d
IPCC	United Nations body for assessing the science related to climate change. Assesses global research and issues comprehensive assessment reports, special reports, and methodologies for greenhouse gas inventories. Provides a scientific basis for policymakers.	UNFCCC, 2025e
IPCC Assessment report 6	Multi-volume report by the IPCC for the assessment period 2015 to 2023. Synthesis of scientific knowledge on climate change, detailing its causes, current and projected impacts, and outlining strategies for mitigation and adaptation to limit global warming and build resilience	IPCC, 2023
Nationally Determined Contribution	Country specific climate action plans submitted every five years by parties (signatories) to the Paris Agreement. NDCs target reductions in national emissions and adaptation to the impacts of climate change.	UNFCCC, 2025d
Net-zero	A state where the amount of anthropogenic GHGs emitted into the atmosphere is balanced by anthropogenic removals, so that overall emissions are effectively zero.	IPCC, 2018
P10	Representation of the range of uncertainty in hydrocarbon production estimates where P10 (high) production case, i.e. 10% probability that production will exceed this value. Considered to be optimistic scenario.	DNV, 2025
P50		

TERM	DEFINITION	REFERENCE
P90	P50 (mid) production case, i.e. 50% probability that production will exceed this value. Considered to be "best estimate" and the most likely to occur. P90 (low) production case, i.e. 90% probability that production will exceed this value. Considered to be a conservative scenario.	
WTT	Emissions associated with extraction, production, and transportation of fuels, up to (but not including) combustion	GHG Protocol, 2022

APPENDIX C UNCERTAINTIES AND ASSUMPTIONS

Key uncertainties and assumptions inherent in this assessment are summarised in this appendix.

FACTOR	UNCERTAINTY
Environmental Baseline	Uncertainty in predicting global **GHG emissions** (IPCC, 2023) arises from • Uncertainty in predicting changes in population, society, technology and policy; and • Climate model sensitivity and resolution. Uncertainty in predicting **climate change impacts** (IPCC, 2023) arises from • Uncertainty in attributing given levels of warming to specific human activities; • Unknown timing and occurrence of potential irreversible impacts ('tipping points'); • Complex physical, biological, and socio-economic responses to changing climate condition; and • Influence of global cooperation and governance decisions on future policy choices, adaptation measures, and mitigation efforts.
Scope 3 Emissions Estimation	**Scope of assessment:** Scope 3, category 9, 10 & 11 emissions are quantified, per the Guidance (DESNZ, 2025). Emissions classified within other scope 3 categories may occur across the value chain: quantification is complex and may risk double counting of these less material scope 3 emission categories and thus overestimating emissions. **Conversion factors:** Conversion factors are applied, per the Guidance, where measured data cannot be acquired. Being generic, emission factors do not reflect the specifics of hydrocarbon utilisation by the end user (e.g. nature of product, combustion efficiency). **P10 (high) production case:** P10 (high) case forms the basis for emissions quantification, per the Guidance. There is a 10% probability that this quantity of production will be achieved from the Project, and production is therefore likely to be lower. **100% combustion of sold product, unabated**: This assumption is applied, per the Guidance. Non-combustion use of hydrocarbon will occur, including feedstock for the chemical sector (IEA, 2022). No abatement is assumed in this assessment, i.e. all emissions from combusted hydrocarbons are assumed to be released to the atmosphere.
Significance of Likely Effects	Uncertainty in predicting the future energy mix and demand for oil and gas (IEA, 2025a) arises from complex interactions between energy, the introduction of new technologies, economics and geopolitics. Best available scientific data has been used to inform the assessment which is also based on a realistic worst case emissions scenario.

APPENDIX D COMPETENT EXPERTS

The competent experts that contributed to this assessment are listed in this appendix.

NAME	COMPANY	TITLE	RELEVANT QUALIFICATIONS/EXPERIENCE
Withheld	Xodus	Withheld	Approximately 17 years of experience in undertaking EIA Projects. Managed a number of large oil and gas projects.
Withheld	Xodus	Withheld	Approximately 20 years of experience in environment/oil and gas. PhD in marine energy, and chartered environmentalist.
Withheld	Ineos E&P A/S	Withheld	18 years of S&E experience in offshore oil and gas production. Holds a Masters degree in Environmental and Safety Management