

# Porthos and Beyond: The Critical Importance of Carbon Capture and Storage Projects for Dutch Climate Goals

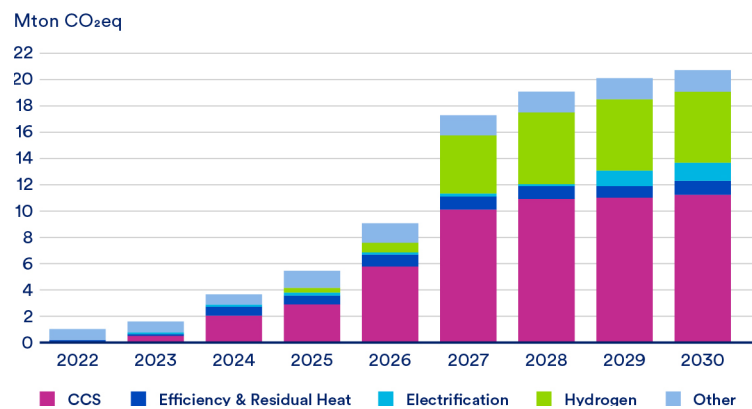
*Without carbon capture and storage projects such as Porthos, the Netherlands' 2030 climate goals will be unattainable.*

## The Role of Carbon Capture & Storage in the Netherlands 2030 Climate Targets

The Government has strengthened the targets set out in the [Climate Act](#). The Netherlands must now **reduce its CO<sub>2</sub> emissions by 55% by 2030 and 95% by 2050**, compared with 1990. The Netherlands is the **6th largest** industrial producer in the EU and industry must quickly reduce emissions to meet these targets.<sup>1</sup> It will be crucial to tackle emissions from industrial clusters such as the Port of Rotterdam. Carbon capture and storage can reduce CO<sub>2</sub> emissions in the Netherlands at a comparatively low cost.<sup>2</sup>

- [The National Climate Agreement](#) emphasizes the importance of carbon capture and storage, as a necessary part of a suite of solutions to reduce emissions
- In 2030, more than 50% of all scope 1 emissions reductions from industry will come from carbon capture and storage projects, according to the [2022 Klimaatnota](#).
- Once operational, Porthos will contribute some 17% of the CO<sub>2</sub> reductions targeted for industry in 2030.

Expected emission reduction of planned projects (scope 1) by year of implementation and technology option, 2022



Concept-Klimaatnota 2022, Ministerie van Economische Zaken en Klimaat.

<sup>1</sup> The industrial sector is required to reduce its CO<sub>2</sub> emissions by 60% by 2030.

<sup>2</sup> [The Balans van de Leefomgeving 2018 report](#)

The Port of Rotterdam CO<sub>2</sub> Transport Hub and Offshore Storage project, known as ‘Porthos’ is a major first-mover carbon capture and storage project which will transport and store CO<sub>2</sub> captured by industry in the Port of Rotterdam, the Netherlands. **Porthos is a crucial project for meeting both the Netherlands’ and the EU’s climate goals, and without this project the 2030 climate targets will be unachievable.**<sup>3</sup>

The Port of Rotterdam will feature two other large carbon capture and storage projects, Aramis and CO<sub>2</sub>next. These projects will collaborate with Porthos to reduce emissions and develop a scaled value chain for CO<sub>2</sub> capture, transport and storage. Once completed, **Porthos will be one of the world’s largest carbon capture and storage projects** and marks the first time that CO<sub>2</sub> will be captured and stored on a large scale in the Netherlands and in a European Union member state. With an oversized **onshore pipeline built to transport up to 10 Mt CO<sub>2</sub> per year**, this project is the key to unlocking further emissions reductions through carbon capture and storage in the Netherlands and wider region.

## How the Porthos Project Works:



<sup>3</sup> [Briefing note advisory to the council of ministers – December 2022](#)

<sup>4</sup> The empty gas fields for storage are [P18-2](#), [P18-4](#) and [P18-6](#).

## The Porthos project will result in:

**2.5 Mt CO<sub>2</sub>**

Reductions of 2.5 Mt CO<sub>2</sub> per year into the CO<sub>2</sub> transport and storage network

**37 Mt CO<sub>2</sub>**

Resulting in 37 Mt CO<sub>2</sub> stored over a 15-year period.

## The Interim Ruling by the Council of State

On the 2nd of November 2022, the Council of State ruled that the project had to include an assessment on the impact of nitrogen emissions on protected Natura 2000 areas in the vicinity associated with its construction for which it previously had an exemption. An ecological assessment has been provided by the project, to which all parties will respond, and following this the Council of State will make its final decision on whether the project can proceed.

## The Importance of Porthos in Decarbonising the Port of Rotterdam

- 1** The Port of Rotterdam is the largest seaport in Europe and in 2020 had CO<sub>2</sub> emissions of 22.4 Mt which accounted for 16% of the Netherlands' total CO<sub>2</sub> emissions.
- 2** The Port has set ambitious carbon emission reduction targets of 55% by 2030 and achieving carbon neutrality by 2050.
- 3** Carbon capture and storage represents a vital step in the Port's plans to become a state-of-the-art decarbonisation hub, with the Porthos project alone able to tackle 11% of the port's CO<sub>2</sub> emissions.
- 4** The Porthos project was developed to create a flexible and open-access carbon capture transport and storage infrastructure for a cluster of emitters in the port area who will share a common CO<sub>2</sub> trunk pipeline. The SDE++ policy formed the business case of the project by bridging the gap between the costs of capture, transport and storage of CO<sub>2</sub> and the price of the Emissions Trading Scheme (ETS).
- 5** With its oversized capacity of 10 Mt CO<sub>2</sub> per year, the project will provide the CO<sub>2</sub> transport and compression infrastructure for the port area and beyond, which is planned to be used for the expansion of carbon capture and storage deployment in the Netherlands through the Aramis project.