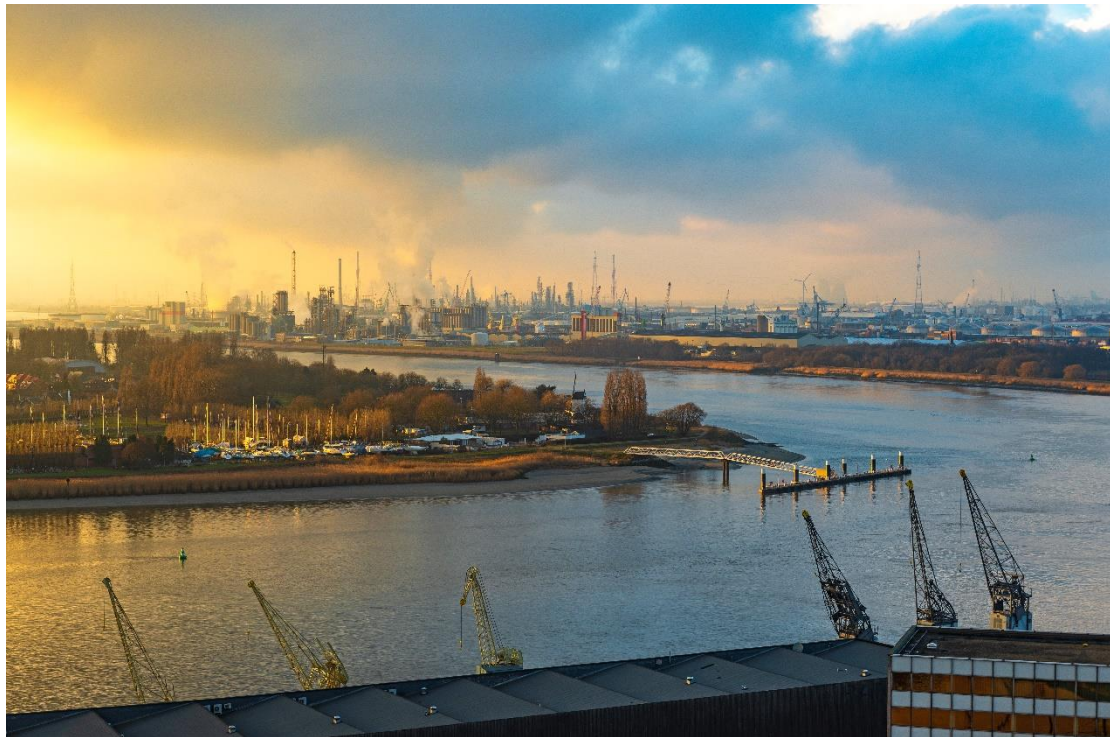


## Antwerp@C/Kairos@C

**A carbon transport and interim storage network in the port of Antwerp lays the groundwork for decarbonizing chemicals and other industries**



### Key facts & stats

- Location: Antwerp, Belgium
- Potential impact from 2030 (and beyond): ~10 Mt
- Consortium participants: Air Liquide, BASF, Borealis, ExxonMobil, INEOS, TotalEnergies, Fluxys, the Port of Antwerp-Bruges
- CO<sub>2</sub> sources: Energy and industrial companies, particularly chemicals
- Transport: Ship, barge, pipeline
- Storage site: exploring North Sea options in Norway, the Netherlands, Denmark and the UK
- Status: FEED; final investment decision for the first phase expected early\_2023
- In operation: 2025 (first phase – 2.5MT)

Antwerp@C aims to build shared CO<sub>2</sub> transportation infrastructure for a consortium of emitters located in the Port of Antwerp, [home](#) to the largest integrated energy and chemicals cluster in Europe. It is planning an open-access system to collect captured CO<sub>2</sub>, liquefy it, temporarily store it and load it onto ships/barges for transport to storage.

The first stage of this initiative is called Kairos@C, which chemicals giant BASF is spearheading alongside industrial gas maker Air Liquide. Kairos@C will capture CO<sub>2</sub>

from five BASF and Air Liquide plants – two that make hydrogen, two that make ethylene oxide and one that makes ammonia. Kairos@C could lead to annual reductions of as much as 1.5 Mt of CO<sub>2</sub> from these five plants when operations kick off in 2025. The project could reduce over 14 Mt of CO<sub>2</sub> emissions over the first 10 years of operation.

Air Liquide is developing an innovative method of compression that will allow for 10 times the capacity of the largest CO<sub>2</sub> liquefaction unit in operation today. The initial plan is to use the Northern Lights shipping and storage solution, while looking for other potential storage options such as depleted gas fields in the North Sea. In future, one or more pipelines could be built to connect industrial clusters in Belgium, northern France and Germany to the Antwerp@C network.

The European Commission announced in 2020 that it would support Antwerp@C's engineering studies via a grant from its Connecting Europe Facility, which funds innovative cross-border European infrastructure projects. Kairos@C, meanwhile, received funding from the European Innovation Fund. The Flemish government also provided a subsidy to support Antwerp@C's feasibility studies.