# Industrial-scale climate action with Carbon Capture and Storage (CCS)

Europe's largest ammonia and fertilizer plant now leads the region's biggest industrial emissions cut.



CCS is a strategic investment in Europe's industrial future

Scalable, cost-efficient and compatible with existing hard-to-abate industries, particularly ammonia and fertilizer production.

#### HOW CCS WORKS

## CO<sub>2</sub> as byproduct of ammonia production

Yara's ammonia production relies on hydrogen generated via steam methane reforming (SMR), a process that emits high-purity CO<sub>2</sub>.

#### CO, capture

CO<sub>2</sub> is captured at the ammonia plants using MDEA absorption technology.

#### Liquefaction

Captured CO<sub>2</sub> is compressed and liquefied for safe transport. Yara expanded its liquefaction capacity to handle 800kt/yr.

### Temporary storage at the plant

The liquid CO<sub>2</sub> will be temporary stored in the storage tanks on site in Sluiskil. There are 7 storage tanks with a total capacity of 15,000 tons.

### Loading onto ships

Twice per week, a ship of Northern Lights arrives in Sluiskil and liquid CO<sub>2</sub> is loaded from the storage tanks into the ship.

### Transport & permanent storage

The ship delivers CO<sub>2</sub>
to Øygarden, Norway,
for intermediate storage.
Subsequently the CO<sub>2</sub> is
injected into a deep geological
reservoir, which has been
verified and approved by the
Norwegian authorities.

CO<sub>2</sub> as byproduct of ammonia production

Ammonia producing plant
Sluiskil is Europe's largest fertilizer plant, making it a strategic site for large-scale CO<sub>2</sub> capture and as future CCS hub for nearby factories.

production

1.9 M ton/year

Used in different industries

Ammonia

Greenhouses Food Urea fertilizer

Urea fertilAdBlue

rgest fertilizer plant, making it rge-scale CO<sub>2</sub> capture and as earby factories.

Carbon Capture Storage (CCS)

O.8 M ton /year

Captured CO<sub>2</sub> O.8 M ton/year × 15 years
= 12 M tonnes CO<sub>2</sub> captured (total)

