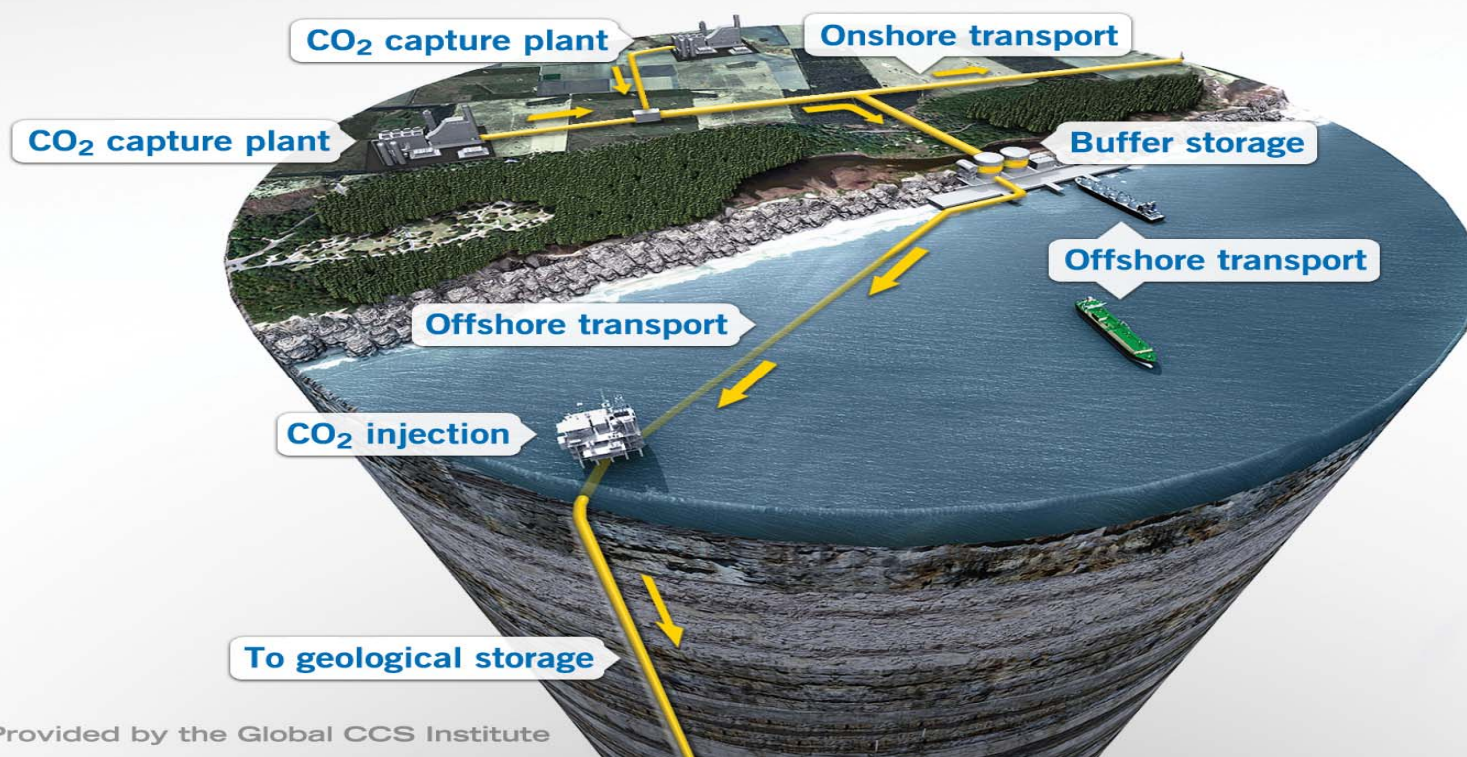




Rijksdienst voor Ondernemend  
Nederland

# CCUS in the Netherlands

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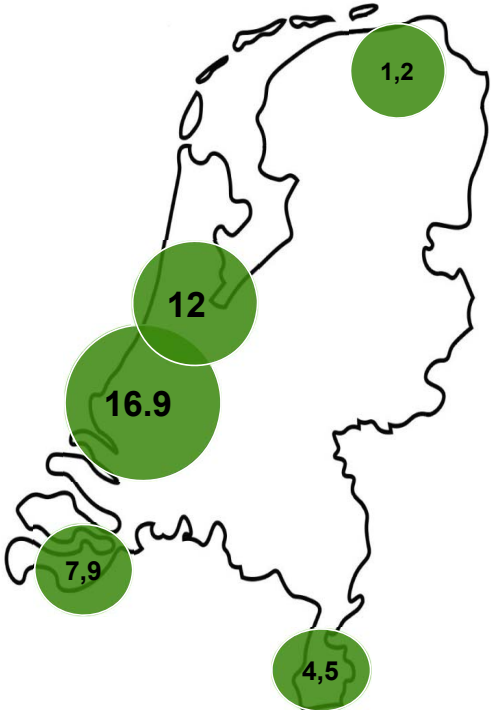


Provided by the Global CCS Institute



# CCUS in the Netherlands

- Contents
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## Climate Agreement on CCS

- CCS as part of the industry reduction pathway.
- Role for CCS limited in different ways:
  - Subsidy capped at 7,2 (+3) Mtpa
  - ZEEF ("sieve"): only CCS when no cost-effective alternatives exist
  - Horizon: no new subsidies past 2035
- Exemptions for realising negative emissions.
- Subsidy via broadened SDE+ scheme.
  - SDE+: feed in premium for renewable energy



Beeld: ©EZK / Valerie Kuypers



## Embedding CCS in the SDE++

- The scheme will be broadened to a set of industrial CO<sub>2</sub>-reduction options.
- Ranking based on euro / ton: cost of CO<sub>2</sub> avoided.
- Several CCUS pathways considered eligible: capture from refineries, hydrogen production, waste incineration, steel production.
- Subsidy duration of 15 years.
- Emitters are eligible, in their costs they can include the transport & storage (T&S) fee.
- (draft) “basisbedragen” (euro/ton avoided) calculated by PBL:

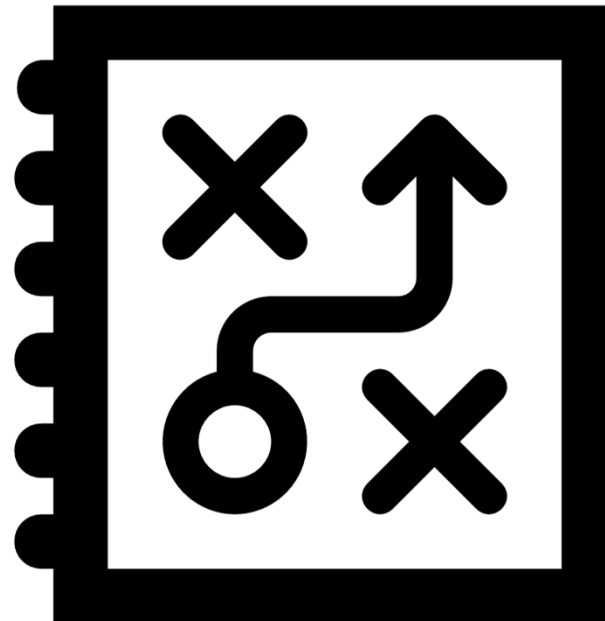
Subcategorie	Mogelijke toepassingen	SDE++-basisbedrag [€/ton CO <sub>2</sub> vermeden]
Extra CO <sub>2</sub> -opslag bij bestaande installaties	Bestaande installaties Ethyleenoxide	35
Geconcentreerde CO <sub>2</sub> -bronnen	Waterstof, ammonia en staal	67
CCS bij afvalverbrandingsinstallaties	Afvalverbrandingsinstallaties	91
CCS bij raffinaderijen	Raffinaderijen	139

- Market revenues will be deducted through EUA price.








## SDE++ Features under consideration

- Extension of realisation deadlines
- Adjustment for real costs
- Permitting
- Bank guarantees
- Infrastructure capacity allocation







## Innovation subsidies - 2019

- TSE CCUS Studies 
  - Feasibility of large scale industry application of CCUS
  - 12 applications – 3 granted, 2 rejected, 7 being reviewed
- DEI+: CCUS 
  - (preparation of) CCUS pilots in industry
  - 6 applications – 2 granted, 4 rejected
- Joint Industry Projects (JIP tender)  
  - Tender supporting R&D in capture and utilisation of CO2 and other industrial CO2 reduction
  - 2 application – 2 granted
- ACT2 – kicks off 
  - Support for international innovation in CCS
  - NL parties are involved in 6 of 12 projects



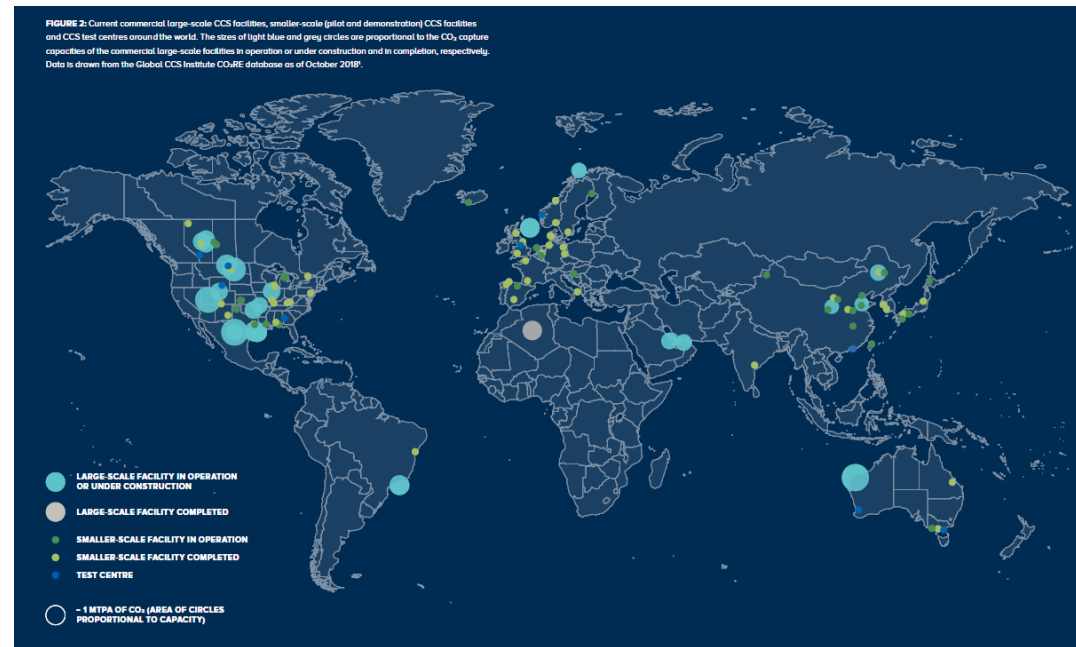
## Innovation subsidies - 2020

- TSE CCUS Studies & DEI+  
- Both
  - Main aim still for large scale industrial application in 2030
  - But also support for BECCS and DAC
  - Opening beginning 2020
  - On 'first come first serve' basis
  - Max 4 year project deadline
  - Call texts will be published soon!
- MMIP6 – tender
  - MMIP – CCU & CCS included as relevant topics in the MMIP6 report (nov 2019)
  - Aimed at large mission oriented projects from consortia
  - Detailed set-up of this tender scheme still to be determined
  - Role of CATO-network moving forward discussed between Ministry EZK, RVO and CATO



# News flash

- International developments
  - 43 large scale facilities under development (GCCSI, 2019)
  - Biggest dedicated CCS projected to date started in 2019: Gorgon
- London protocol
- CCS stakeholder engagement – by RVO
- Innovation fund
- ACT3 starts soon







# Questions?

