

Carbon Sequestration Leadership Forum
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CSLF Task Forces

- CEE Workshop
- CO₂ Hubs, Clusters and Infrastructure
- TRM Monitoring

Updates June 2022

**Presented to CSLF Technical Group
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by

**Lars Ingolf Eide
Research Council of Norway
Norwegian delegate**

Regional Workshop on CCUS in Eastern, Central and Southern Europe



Status

- Meeting with CCS4CEE February 2022
 - Preliminary thoughts on content and structure of workshop
- Talks with the Norwegian Embassy in the Czech Republic on logistics
- Resources very limited rest of year
- Aim for workshop early 2023
- Start planning late August
 - Contact CSLF representants in CEE countries and allied organisations that have shown interest

Potential cooperation partners



- CSLF representatives from CEE countries (Czech Republic, Poland, Romania, (Russia) and Serbia, perhaps also Greece)
- EEA and Norway Grants Fund for Regional Cooperation
 - Bellona and WiseEuropa as coordinators of the project *ccs4cee* (<https://ccs4cee.eu>)
- ENeRG network (<https://energnet.eu/about-energnet/>)
- EU Commission (member of CSLF) and France (BRGM) through the projects *StrategyCCUS (ended April 2022)*
 - *Croatia, Romania, Poland and Greece*
- and follow-up *Pilot Strategy (start fall 2021)*
 - *Poland and Greece*
- Baltic Sea Region Energy Cooperation (BASREC)
- Clean Energy Ministerial (CEM) CCUS (political, legal and financial matters)
- CSLF-allied organizations CO2GeoNet and IEAGHG
- ACT
- CCUS Projects Network (<https://www.ccusnetwork.eu/>)

**Status
industrial
clusters and
transport and
storage hubs**



Several Hubs and Clusters have progressed



The Netherlands

- Porthos – FEED
 - The Dutch government has set aside €2.1 billion in grant money from the SDE++ funding scheme for Porthos’ customers:

Norway

- Longship
 - Passed FID, in construction



United Kingdom

- Two projects selected for Phase-1 in Government’s cluster sequencing
 - East Coast Cluster
 - Hynet

United States

- DoE Workshop Sept 2021
- The Great Plains Institute [An Atlas of Carbon and Hydrogen Hubs for United States Decarbonization](https://scripts.betterenergy.org/CarbonCaptureReady/GPI_Carbon_and_Hydrogen_Hubs_Atlas.pdf)
(https://scripts.betterenergy.org/CarbonCaptureReady/GPI_Carbon_and_Hydrogen_Hubs_Atlas.pdf).
- US Bipartisan Infrastructure Bill – \$3.5 B for each of DAC and hydrogen hubs

Other Progress



The Oil and Gas Climate Initiative (OGCI) CCUS Hub

- Launched The CCUS Hub Platform (<https://ccushub.ogci.com/>) in 2022 with three parts
 - The CCUS Hub Search (<https://ccushub.ogci.com/ccus-hub-search/>)
 - The Playbook, can be downloaded from <https://ccushub.ogci.com/about-us/>.
 - Hubs in Action (<https://ccushub.ogci.com/hubs-in-action/>)

Europe - Projects of Common Interest (PCIs)

- The fifth PCI list, adopted in November 2021

Ships, Barges and Pipelines

Name	Description	Comments
CO2 Transports	CO2 Transports aims to establish infrastructure to facilitate large-scale capture, transport and storage of CO2 from Rotterdam, Antwerp and the North Sea Port	Porthos (Port of Rotterdam) from third PCI list of 2017 is joined by ports of Antwerp and North Sea Ports.
Northern Lights	Northern lights project – a commercial CO2 cross-border transport corridor project between several European capture initiatives (United Kingdom, Ireland, Belgium, the Netherlands, France, Sweden) and transport the captured CO2 by ship to a storage site on the Norwegian continental shelf	A modified version of CO2 cross border from third PCI list of 2017
CO2 Svalbard Transport and Infrastructure Project	CO2 Svalbard Project is the transportation infrastructure component of the Acom full scale CCS project (United Kingdom, in facton phases: Netherlands, Norway)	Also on third PCI list of 2017
Axamsis	Cross-border CO2 transport and storage project (outtake from emitters in the hinterland of Rotterdam harbor area and storage in location on the Dutch continental shelf)	New
Dartignan	CO2 export Multimodal HUB from Dunkirk and its hinterland (emitters from the industrial cluster in the area of Dunkirk, France with storage where available in the North Sea country territories)	New
EU CCS Interconnector	Poland – EU CCS Interconnector (emitters from the industrial cluster in the area around Gdansk, Poland with storage where available in the North Sea country territories)	New
Athos	Athos project proposes an infrastructure to transport CO2 from industrial areas in the Netherlands and is open to receiving additional CO2 from others, such as Ireland and Germany. Developing an open-access cross-border interoperable high-volume transportation structure is the idea.	Terminated as steel producer Tata withdrew

How to proceed?



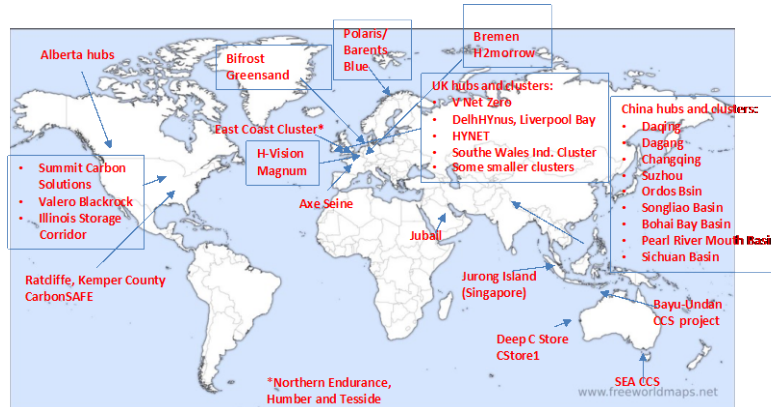
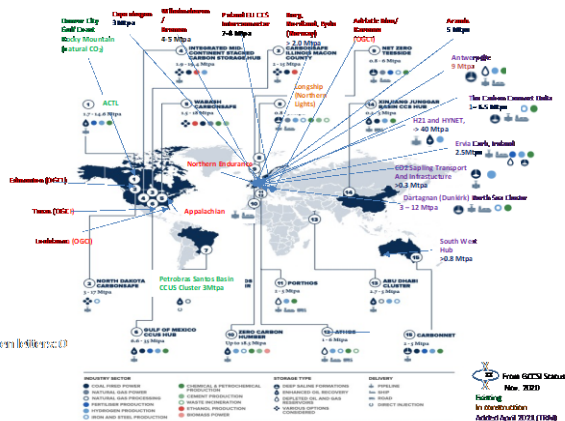
- Close the Task Force?
 - Much is happening, other sources may give the same information
- Continue
 - No long reports with description of projects
 - Mainly short presentation as this, possible extended with some links
 - Follow-up to workshop October 2020 (now in person or hybrid in late 2023 or early 2024)
- New volunteers?
 - Members from Melbourne 2018 are Norway (Chair), Australia, Brazil, Canada, and the United Kingdom

Examples of additional industrial clusters and storage hubs



By September 2021 (TRM 2021, GCCSI 2021 and literature search)

September 2021-June 2022 (literature search)



CSLF TRM Monitoring



Purpose: Monitor progress of activities under Key recommendations in CSL TRM 2021

Re-establish task force to prepare monitoring report for delivery to CEM CCUS meeting in September??

Priority recommendations from CSLF TRM 2021 to consider are:

- Technology development, innovation and cost reduction (Input from PIRT/Academic TF).
- Strategic build-out of CCUS projects and hubs.
- Development of strategy, policy, legal and financial frameworks. This must be in close cooperation with CEM CCUS or completely left to them.



CSLF TRM Monitoring

How to proceed?

1. Proceed as last presented in November 2019 (Chatou)
 - Report + ppt with traffic light
 - 1-2 pager for CEM CCUS Ministers

2. Do with only ppt with traffic lights
 - 1-2 pager for CEM CCUS Ministers

Any solution requires re-establish of task force. With members Norway (lead), PIRT, Academic TF, other volunteers?