

CCS: Building the world's first full-scale WtE CCS plant (?)



Hafslund Oslo Celsio
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9mo • Edited •

Fortum Oslo Varme had yesterday the privilege to present our carbon capture project in Oslo to the Prime Minister of the Republic of Estonia **Kaja Kallas**. We are pleased to see the interest for CCS is growing and we are happy to share our insights and knowledge. Thank you for visiting, and we hope to be able to show you a full-scale plant in 2026.

Fortum Oslo Varme Oslo kommune Estonia #greentransition #eugreendal #renewables #carboncapture



Kadri Simson @KadriSimson · 16h
Today, I visited Hafslund Oslo 🇳🇴 Celsio's waste-to-energy plant.

As part of the Longship project, it can become one of the first full-scale #CCS projects on waste-to-energy in the world 🌍

2/2



Energy4Europe y 2 más
8 18



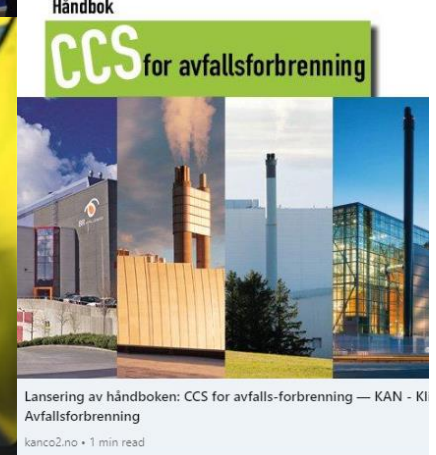
– Dette er fornybar energi
EUs energikommisær Kadri Simson var imponert over det hun så på Klemetsrud.
Foto: Ege Halby



Knut Inderhaug · 1st
4mo •

Dette er en gledens dag! I dag markerte vi byggestart for #CCS-anlegget på Klemetsrud. For etter mange år med hardt arbeid: Endelig bygger vi verdens første avfallsforbrenningsanlegg med fullskala karbonfangst- og lag ...see more

See translation



Oslo største klimasatsing kan ende på dynga

Anlegget for karbonfangst på

Galopperende kostnader kan sette en stopper for den største karbonfangstprosjektet på Klemetsrud i Oslo. Forlaget er prosjektert sett på vent i et år. Arnefinn Fagerli Strandberg

Fakta: Karbonfangst og lagring i Norge

Staten satser ca. 20 milliarder kroner på tre prosjekter som samlet utgjør en norsk satsning på CO₂-fangst og lagring som kalles Luleåalp.

Ved forberedningsarbeid på Klemetsrud i Oslo var planen at det skulle fanges opp mot 400 000 tonn CO₂ i året fra 2026. Det blir nå i beste fall ett år forsinket.



Klemetsrud de Hafslund Oslo Celsio i fjor. Ministeren Jonas Gahr Støre og byrådsleder Arnefinn Fagerli Strandberg.

Oslo største klimaprojekt her på Klemetsrud. En CO₂-veip ligger i anlegg.



28.04.2023

Celsio puts Klemetsrud carbon capture project on hold



World Business Markets Sustainability Legal More



Europe



Carbon capture project in Norway temporarily halted by high costs

By Nora Buli

April 26, 2023 3:30 PM GMT+2 · Updated 2 months ago

OSLO, April 26 (Reuters) - A project to capture carbon emissions from a waste plant in the Norwegian capital Oslo has been paused for a year amid projections of large cost overruns, potentially dealing a blow to wider Norwegian plans to foster the fledgling technology.

Vår ambisjon er å ikke ha større investeringsramme enn vi har i dag. ig i Oslo

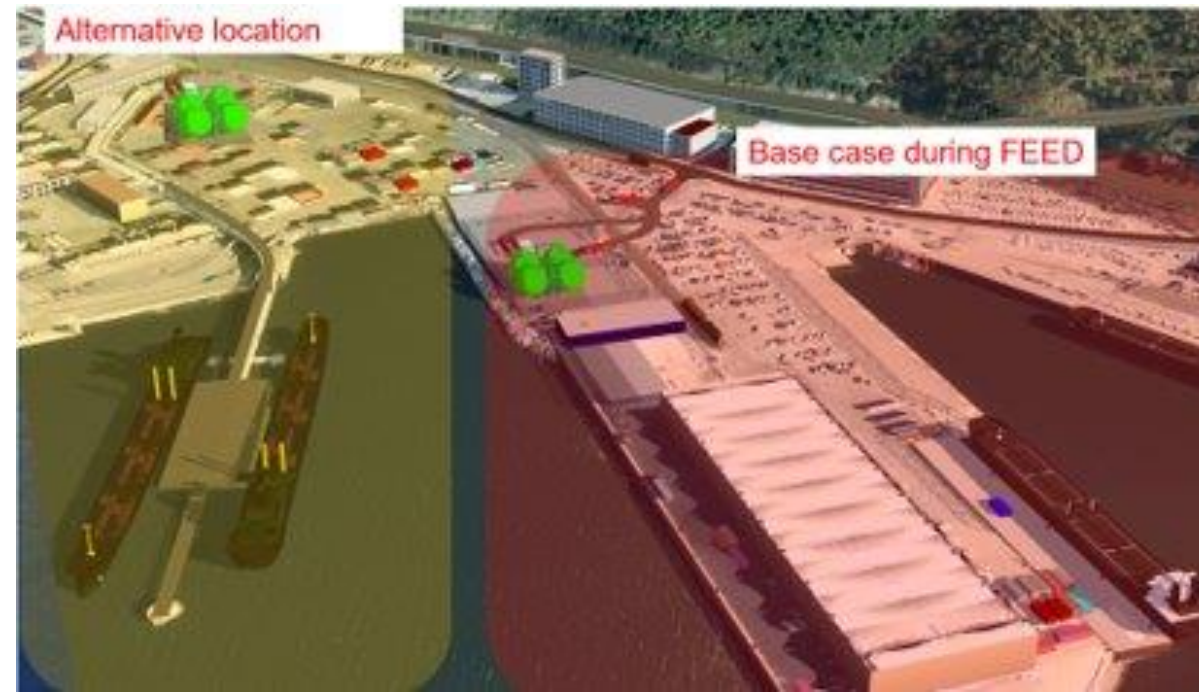
Celsio Stalls Plans For New Carbon Capture Project

by Sasha Ranevska · May 23, 2023 · 2 minute read



Cost increases causes 1 year cost-reduction phase

- 1) Inflation, power prices, market situation, currency
 - 2) Organization – necessary with more resources
 - 3) Area demand and infrastructure
 - a) Logistics and rig areas
 - b) Temporary solutions for parking, admin etc.
 - c) New entrance to incineration plant
 - 4) Final location at Port of Oslo changed
 - 5) Local power demand and timeline for new transformer station
- ≈ Cost estimate increase: 300 MILL EUR



Potential future revenue streams

1. **Carbon removal (CDR) certificates (BECCS)**
2. **Increased gate fee for carbon neutral waste services**
3. **Net Zero Plastic certificates**
4. **CO2 Port Terminal**
5. **CCS business development**

Avoided costs

- ETS
 - Waste-to-Energy to be included from 2028/2031
 - Only relevant for the fossil part of the emissions
- Norwegian CO₂ tax
 - Estimated to be increased to NOK 2000 by 2030
 - Only relevant for the fossil part of the emissions
- Uncertain if the ETS and a national CO₂ tax will co-exist





“Journalist: Therefore aren’t there any European rules against incineration of waste?”

Timmermans: No, it depends on how it’s made. We need to do it in a sustainable way. They already do this in cities like Oslo, Rotterdam.

EU CCUS Vision Paper

...Hafslund Oslo Celsio has begun construction of the world's first full-scale capture facility with permanent geological storage of 400 000 kt/year in the North Sea, having received funding from the Norwegian Longship project, the municipality, and other investors...

..Going forward, the EU and national governments should strive to equip existing plants with CCUS technology, and all new waste-to-energy plants should be built with CCUS. The future role of CCUS in the waste sector should be properly integrated into the EU's overarching strategies for the circular economy, sector integration, climate finance and the carbon removals certification scheme. ..

Source: [EU CCUS Vision paper \(appendix 1\)](#): presented at the EU CCUS Forum in Oslo, October 2022.



In-depth: Commission puts carbon capture firmly back on the policy agenda

The EU should have in place facilities to permanently store 50 million tonnes of CO₂ a year by 2030, according to a legal target in the European Commission proposal for a Net Zero Industry Act.

by Robert Hodgson



Waste-to-energy with CCS: A three-in-one solution for Europe

- Provides safe and sustainable end-treatment for unrecyclable waste
- Removes CO₂ from the atmosphere (negative emissions)
- Produces local heat and electricity



But we need the right framework conditions to roll out the technology



Hafslund Oslo
Celsio

