



Carbon ReUse

FINLAND OY



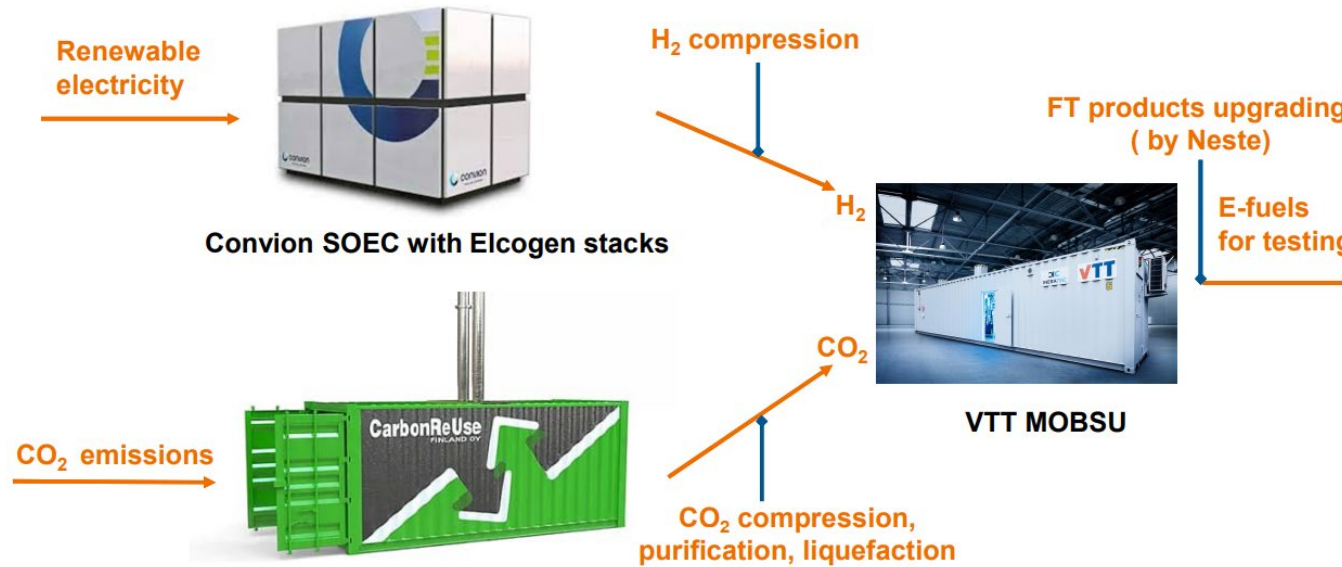
<https://co2value.eu/vtt-and-neste-to-build-an-integrated-power-to-liquids-e-fuels-demonstration-facility-at-vtt-bioruukki-pilot-centre-in-finland/>

VTT and Neste to Build an Integrated Power-to-Liquids (e-fuels) Demonstration Facility at VTT Bioruukki Pilot Centre in Finland

18/07/2022

<https://www.tekniikkatalous.fi/uutiset/kukaan-ei-keksinyt-tata-283-vuoteen-nyt-suomalainen-pikkuyhtio-teki-sen-ja-pelastaa-maailmaa-puhtaalla-vedella-co-kaapataan-talteen-10-metrisessa-tornissa/152f72ca-9546-45ff-8252-7f72d1c06dc7>

E-fuel demonstration – Integration of 3 units



3.6.2022 08:58 | KEMIA



Kukaan ei keksinyt tätä 283 vuoteen – Nyt suomalainen pikkuyhtiö teki sen ja pelastaa maailmaa puhtaalla vedellä: CO₂ kaapataan talteen 10-metrisessä tornissa



Talteenotokontti. Carbon Reuse Finlandin tekniikka valittiin VTT:n ja Nesteen johtamaan synteettisten polttoaineiden E-Fuel-tutkimushankkeeseen. Kuva toukokuun alusta 2023, muutama viikko ennen demonstraation käynnistämistä. KUVA: CARBON REUSE FINLAND

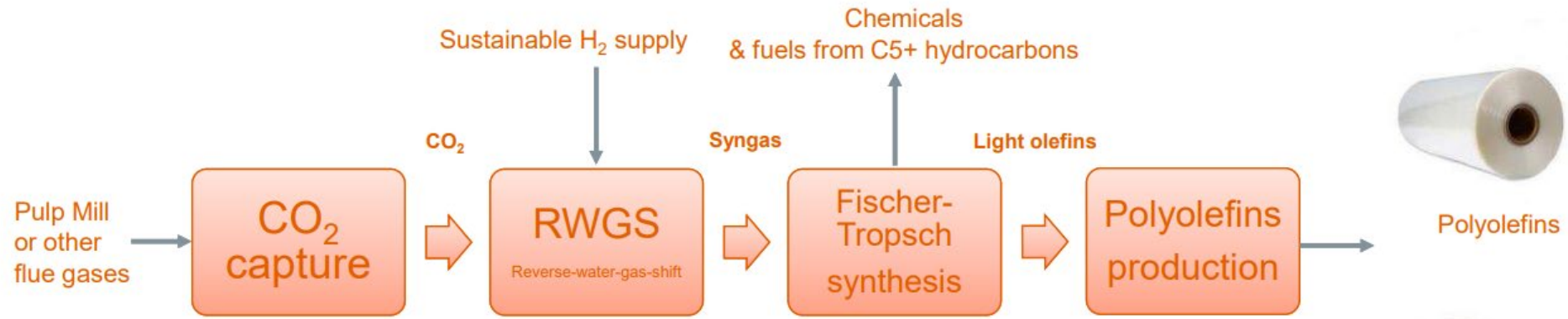


During the E-fuel demonstration 300 kg of liquid e-fuel was synthesized from captured CO₂ and H₂

Forest-CUMP

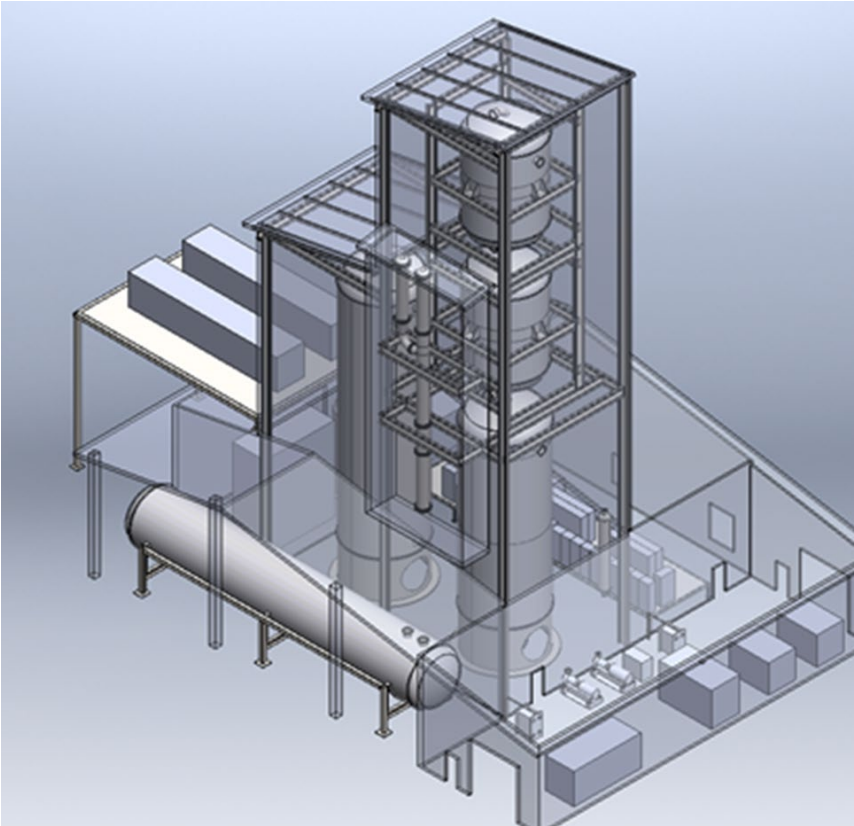
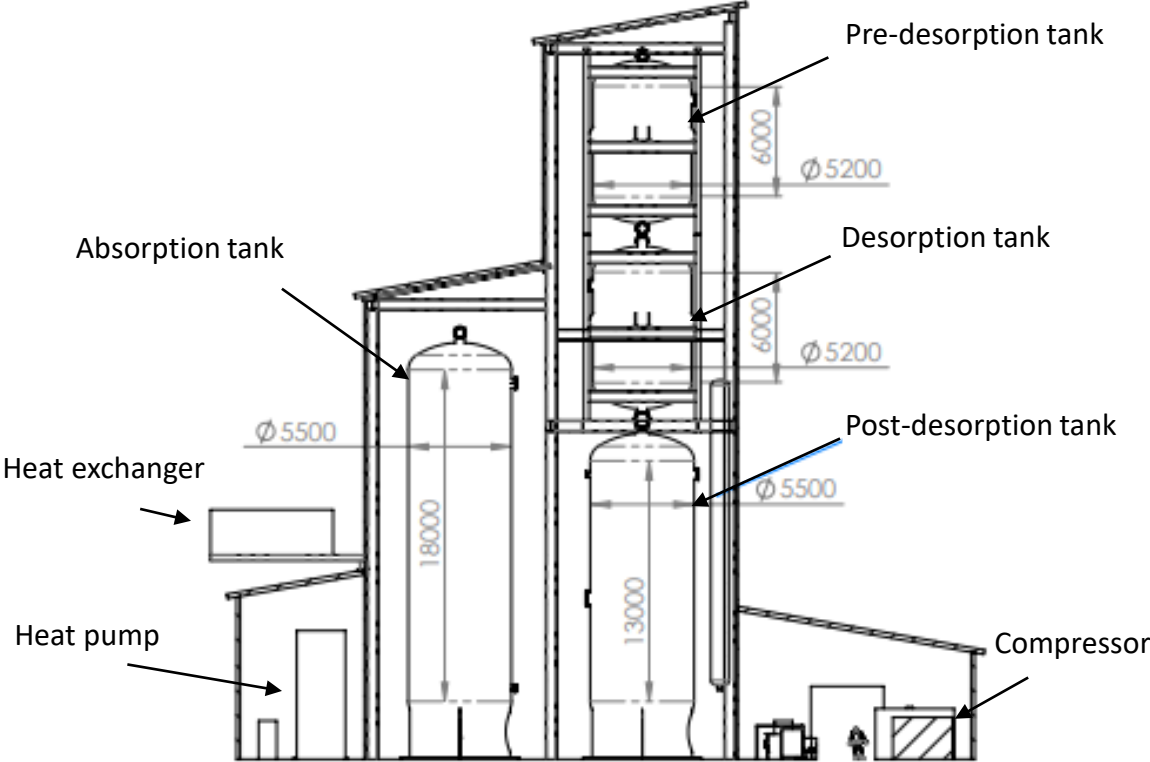
Forest-CUMP – Forest Industry Carbon dioxide Utilization for Materials and Plastics

Targeted CCU concept



Light olefins production	Products	CO2 demand
	Mt/a	Mt/a
Acrylic acid	8	15
Polyolefins (PE, PP)	180	565
Light epoxides (EO, PO)	40	80
Total	228	660

Carbon capture plant



Why CarbonReUse Technology?

- **Clean and environment friendly process.**
The solvent is only water without using any chemicals or other hazardous components
- **Patented and proofed process technology**
- **Competitive and Cost-efficient technology.**
Because CRUF technology is physical, if CO₂ concentration in the raw gas is over 15 mol-%, it's a most cost-efficient process than any other carbon capture technology (CO₂ capture cost even 10 €/t)
- **Energy recovery.** It's possible to recover waste energy by using proper devices.
- **Best choice for the food industry.** Unlike other carbon capture technologies, CRUF uses no chemicals and it's applicable for the food industries like breweries
- **No need for steam or heat energy.** CRUF technology uses only electricity which is available from the clean energy
- **Low maintenance.** Because CRUF uses no chemicals and heat, there is not any corrosion or damage, so it requires low maintenance.
- **Easy to Scale-Up and applicable to various industries:** Lime kilns and pulp mills, power plants, breweries refineries etc.

Thank you for your attention!

Team CarbonReUse

Timo Juutilainen | CEO

tel. +358 50 0751164

timo.juutilainen@carbonreuse.fi

Juha Silvennoinen | CO2 Capture Expert

tel. +358 44 9881430

juha.silvennoinen@carbonreuse.fi

Heshmat Rezai | CO2 Process Designer

tel. +358 44 2353017

heshmat.rezai@carbonreuse.fi

Role of Partner

- Technology development
- Marketing
- Assist to get projects and implementation
- Scaling up the process and potential problem analysing
- Partnership