

"Orca", The world's largest climate-positive direct air capture plant

Organization
Climeworks

Launched time
2021

Overview

- The Orca plant in Iceland is the world's largest plant capturing CO₂ from air launched by Climeworks with Icelandic carbon storage firm 'Carbfix'.
- The plant consists of eight large containers similar in looks to those used in the shipping industry, which employ high-tech filters and fans to extract carbon dioxide.
- The plant sucks out up to 4,000 tons of CO₂ per year which is the equivalent of the annual emissions from about 790 cars.



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Barriers on developing the innovation

- Scaling up the facility.
For most of firms which has a direct air capture technology, it is very risky to make a large facility since the installation cost is still expensive and forecasting the cost of its operation is currently too difficult.

Success factors to overcome the above barriers

- To reduce its installation cost, the plan is made with several small containers which would be cheaper than one huge container.
- To secure the cost of operation, Climeworks launched a subscription system. In the system, a company or an individual can carve its name for capturing CO₂ and can get a certificate from Climeworks at the end of each year.

Future action plan

- Keeping on making innovations to reduce the cost of DAC plant more for scaling up and spreading the plant all over the world.
- Inspiring and supporting more pioneering companies/individuals to act now and remove CO₂ from the air.

