

Ion clean energy

Founded in 2008

Accelerating commercialization path via conscious growth and leveraging existing CO₂ capture facilities

Better solvent technology

Cost-effective, deep decarbonization with ultra-low emissions for use by power generators and industrial emitters

INDUSTRY LEADING PARTNERSHIPS

Koch Engineered Solutions, SK Inc., Denbury

strong U.s. DOE partnership

Awarded over \$85 million in highly competitive, peer-reviewed U.S. Department of Energy grants

Transformative pilot performance

Test results at National Carbon Capture Center in U.S. and Technology Centre Mongstad in Norway



Boulder, CO, USA





ICE-31 : Setting A new solvent standard

Extremely low emissions

- Emissions from our solvent fall below detectable levels of current CEMS.
Customer Benefit: This allows our customers to operate within existing air permits and avoid costly loss of revenue or CO₂ tax abatement.

Unprecedented solvent stability

- Extreme stability, even in high O₂ and/or high NO_x, extends the life of the solvent without losing capture efficiency.
Customer Benefit: Frequency of solvent replacement and disposal are decreased.
Overall capture performance is enhanced while total cost of capture is reduced.

Faster solvent kinetics

- ION solvent creates a faster and higher-capacity reaction with CO₂.
Customer Benefit: Lower overall opex and capex as less solvent and smaller equipment is required. This also provides the ability to ramp up/down in various operating environments.

Lower energy requirements

- ION solvent requires less energy for operation.
Customer Benefit: Lower operating costs as less energy is required, even at capture efficiency rates of $\geq 95\%$.



Ion at technology centre mongstad

Ion's second TCm campaign is active now – January 2024

Confirm excellent results and Scale up from NCCC's PSTU

- Demonstrating ICE-31's remarkably low emissions
- Prove ICE-31's resistance to degradation at 200 TPD scale
- Take ICE-31 from TRL 6 to TRL 7
- Gather valuable process data in greater scale than possible at smaller pilots
- Ultimately decrease financial risk for ION and our customers.

Lawrence Livermore national lab and Lawrence Berkeley national lab as independent partners to evaluate

- Determine extra cost of deep decarbonization between 95% CO₂ to >99% CO₂ with a transformational amine-based solvent, including upstream impacts.
- Evaluate add-on emissions and co-benefits of CO₂ capture.

