

# Cryogenic CO<sub>2</sub> Separation

## Carbon Capture Invented for a Changing World

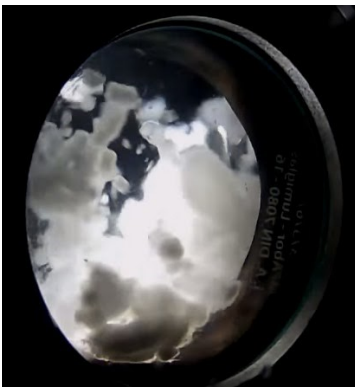
Sustainable Energy Solutions' (SES) Cryogenic Carbon Capture (CCC) technology can significantly reduce the cost of producing a high-purity stream of liquid CO<sub>2</sub> from power plants and other industrial sources while enabling grid-scale energy storage.

### Technology Highlights

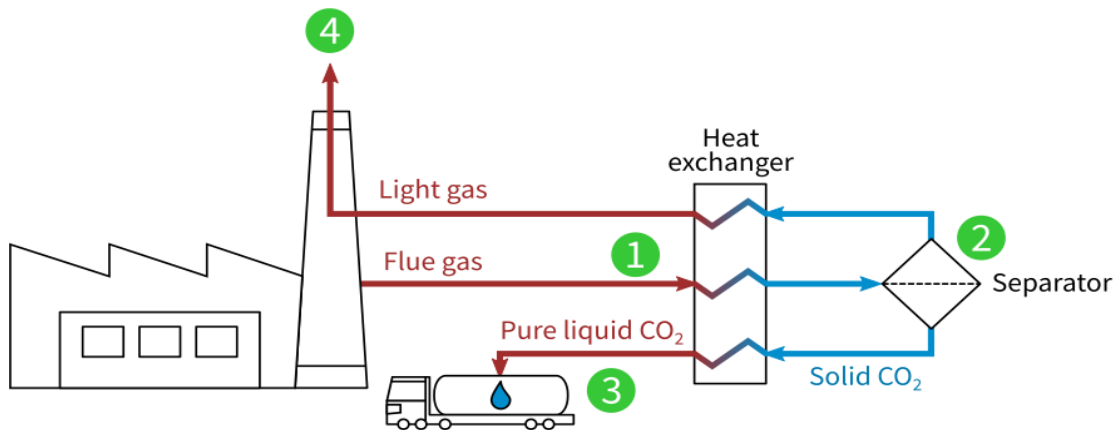
- Half the cost of current alternatives
- CO<sub>2</sub> produced as high-purity liquid ready for sale
- Easily retrofits to existing plants

### Current Efforts

Continuing demonstration of small-pilot system.  
Building team for first commercial-scale demonstration. Potential host-sites and technical partners are desired to build a 30 to 100 ton per



The CCC process produces a high-purity, liquid stream of CO<sub>2</sub> that is ready for existing CO<sub>2</sub> markets, CO<sub>2</sub> utilization or conversion, or geologic sequestration. The process can be bolted on to nearly any stationary, industrial process (power plant, cement plant, chemical plant, etc.). The CCC process costs significantly less than leading alternatives without any disruption to the upstream process. At large scale the CCC process can also shift a significant power load from peak to off peak times adding significant value to the process and allowing for better integration with renewables on the grid.



### Legend

- 1 Flue gas is cooled
- 2 CO<sub>2</sub> is separated as a solid from the light gases
- 3 CO<sub>2</sub> is melted and prepared for transport
- 4 Light gases are reheated and released to atmosphere

### Chart/SES Highlights

- 50+ Cryogenic Carbon Capture Patents
- Decades of Cryogenic Process Experience
- Field tested at 1 TPD liquid CO<sub>2</sub>



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