



2022

Capital Markets Day

A cleaner tomorrow

Energy Division



Innovation



Presence

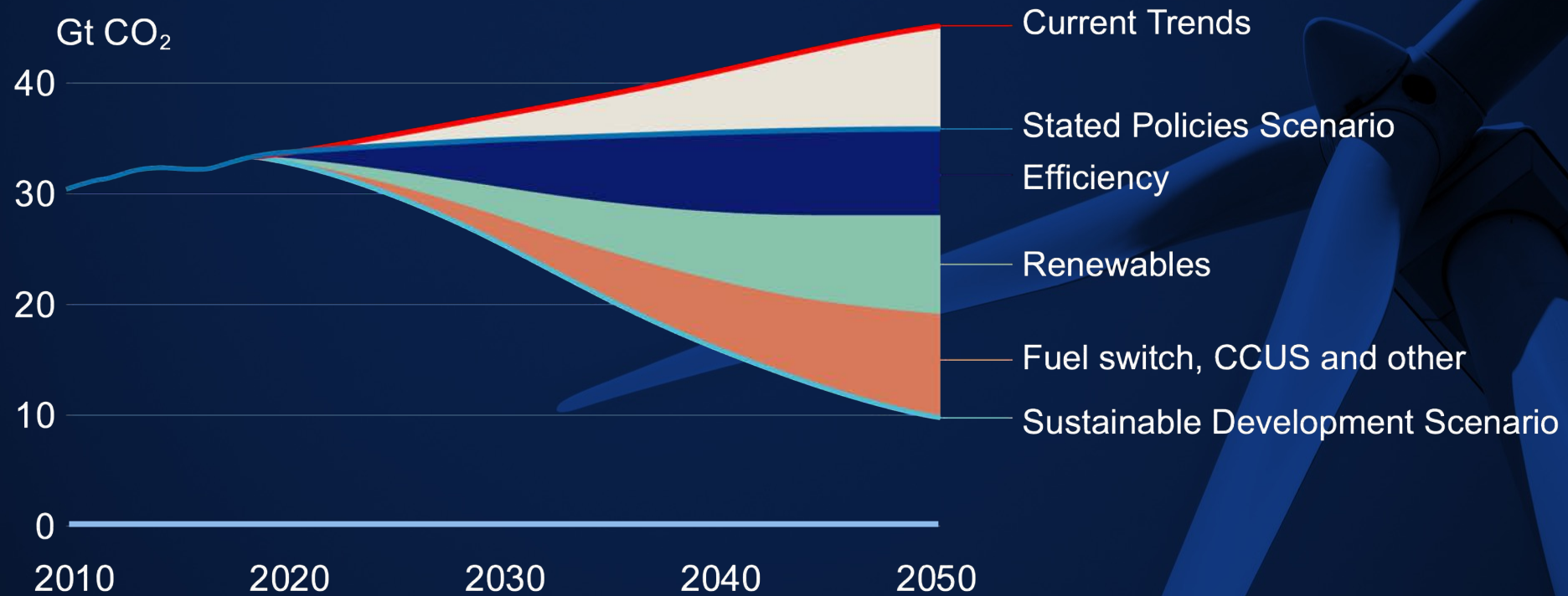


Service



CleanTech

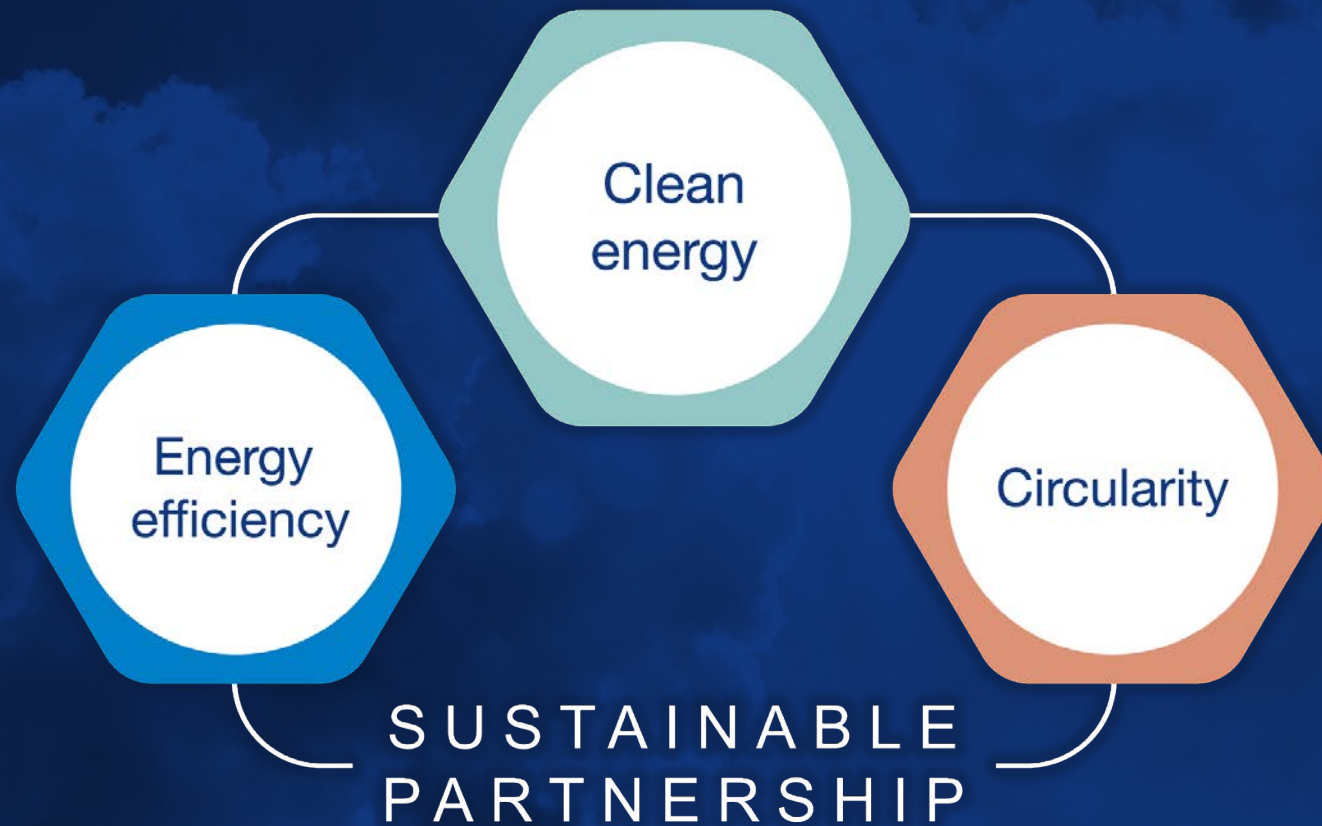
The need for de-carbonization



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Our CleanTech offering



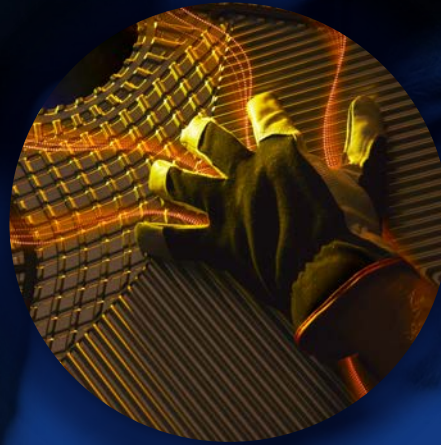
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The lifecycle value proposition boosting energy efficiency



Capital sales
50 GW energy savings



Service
50 GW energy savings



Actions
Energy hunter &
Energy efficiency movement

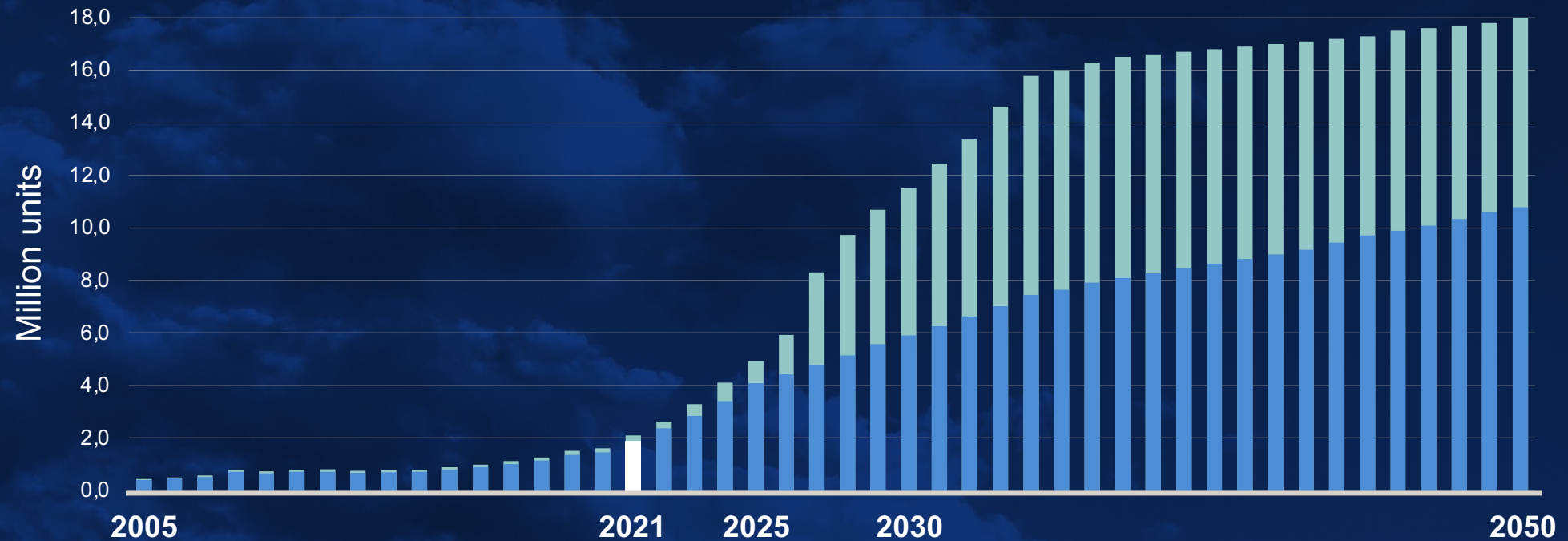
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Heat pump growth



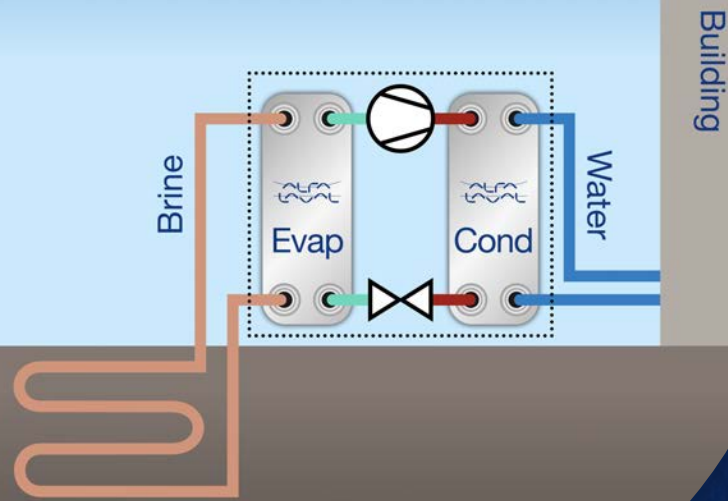
- **Scenario 1:** +7 CAGR sustainability driven projection
- **Scenario 2:** Full decarbonization in 30 years



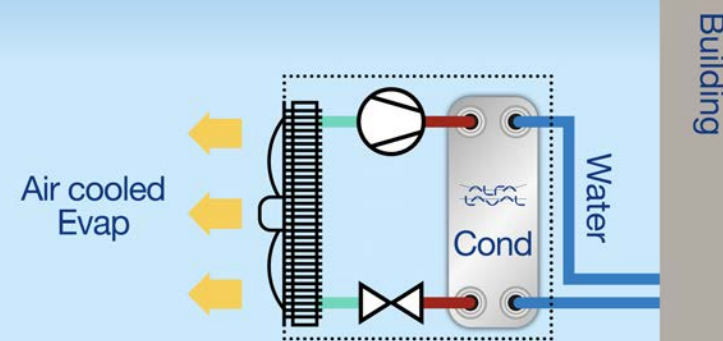
Heat pumps

2 typical liquid heating types

Ground Source Heat Pump



Air-to-Water Heat Pump



100%

Total energy
sources

Electricity **38.4%**

.....

HVAC, transport
and process **61.6%**

Energy wasted **67.1%**

Energy used **32.9%**

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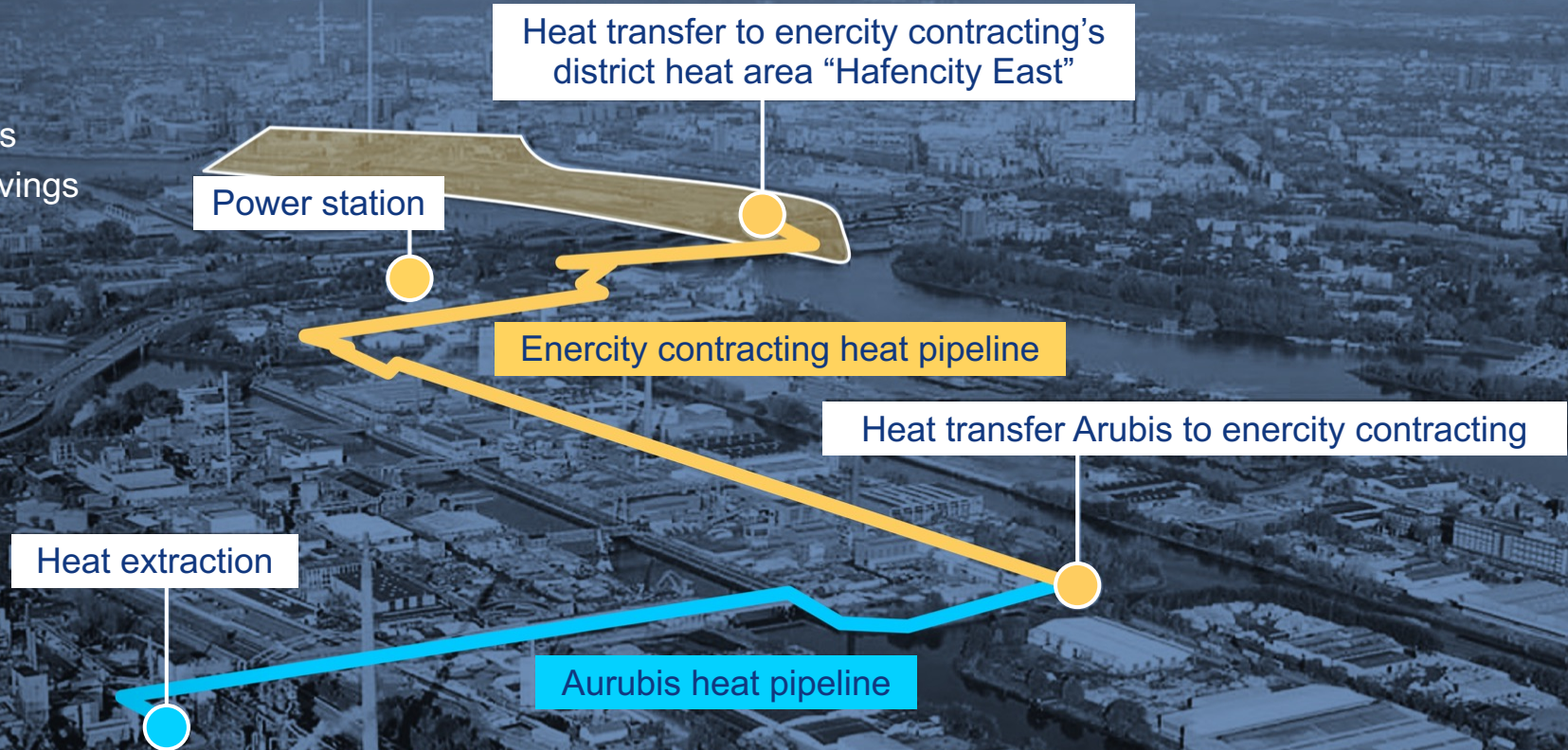
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Industrial waste heat recovery for district heating

Hamburg, Germany



- **800,000 MWh** Energy savings
- **100,000 tonnes** Emission savings
- Heating of **23 000 homes**

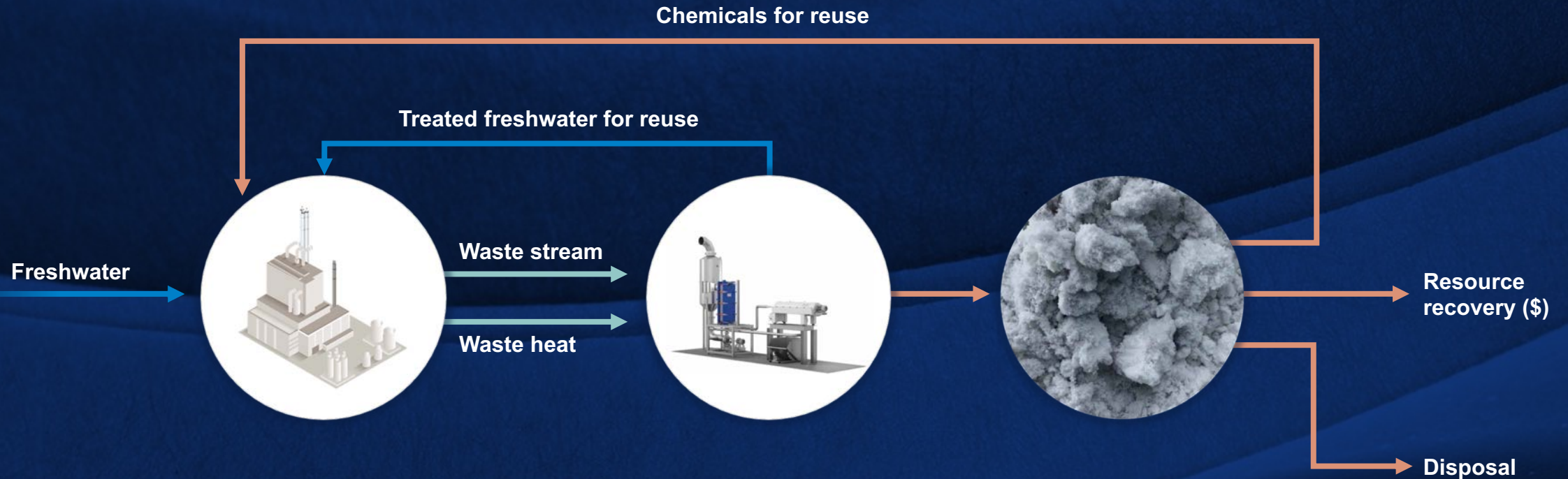


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Using waste heat to create value & circularity

Zerlo Liquid Discharge example



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Energy efficiency acceleration

Data Centres

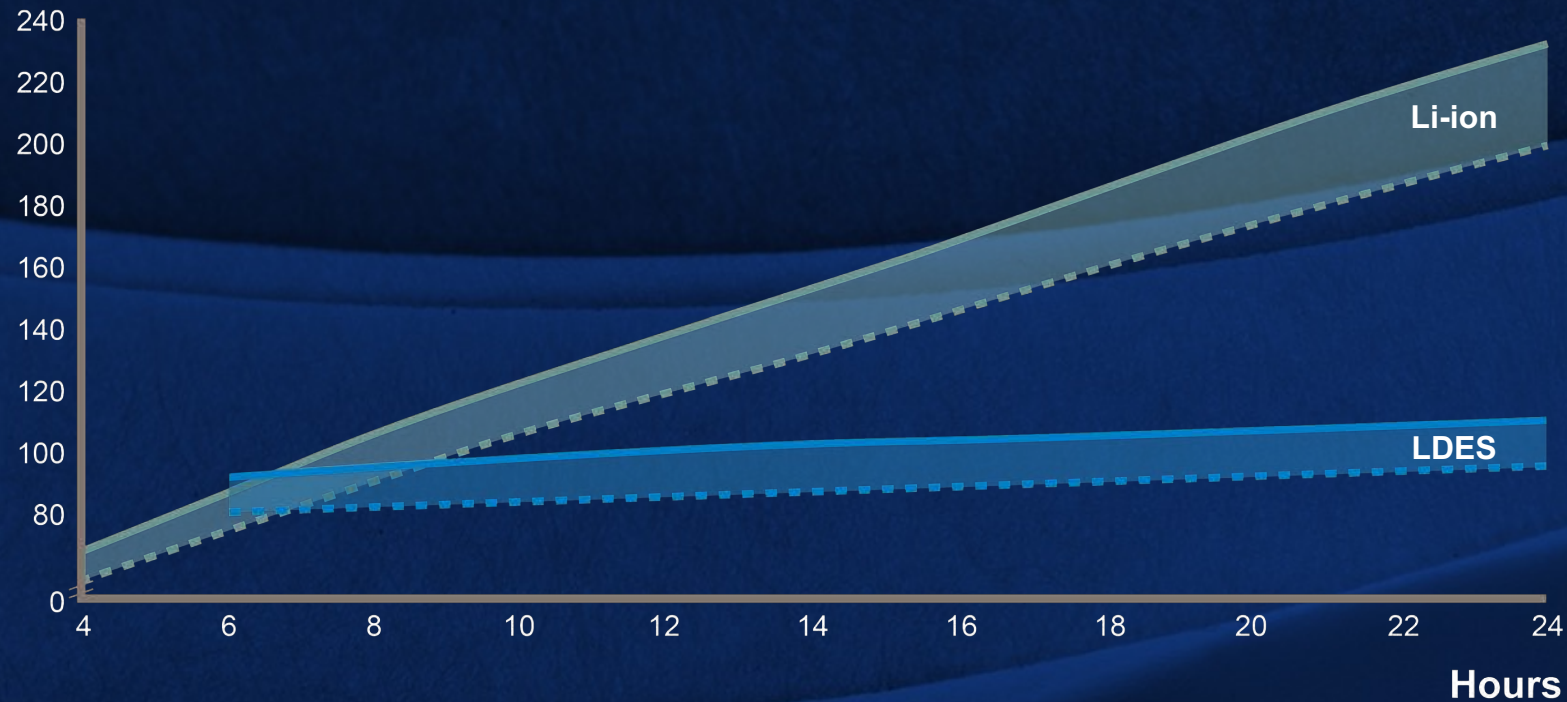


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Energy Storage

USD/MWh



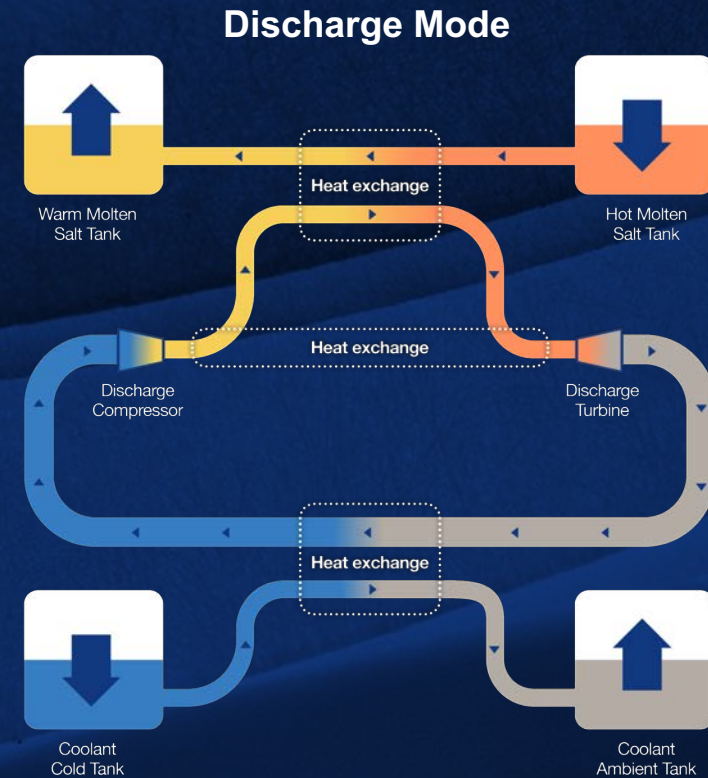
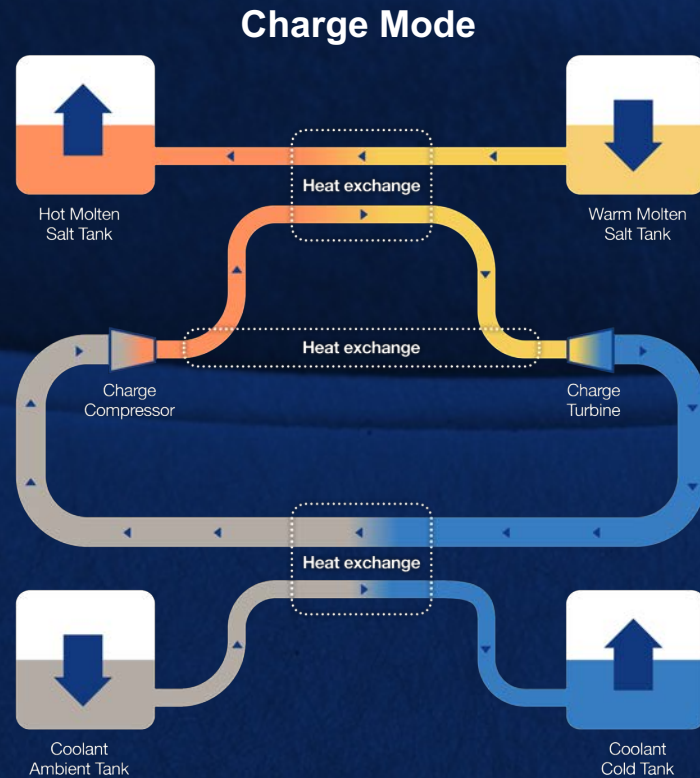
- Central (conservative learning rate)
- Progressive (ambitious learning rate)
- 8-24 hour archetype
- Li-ion

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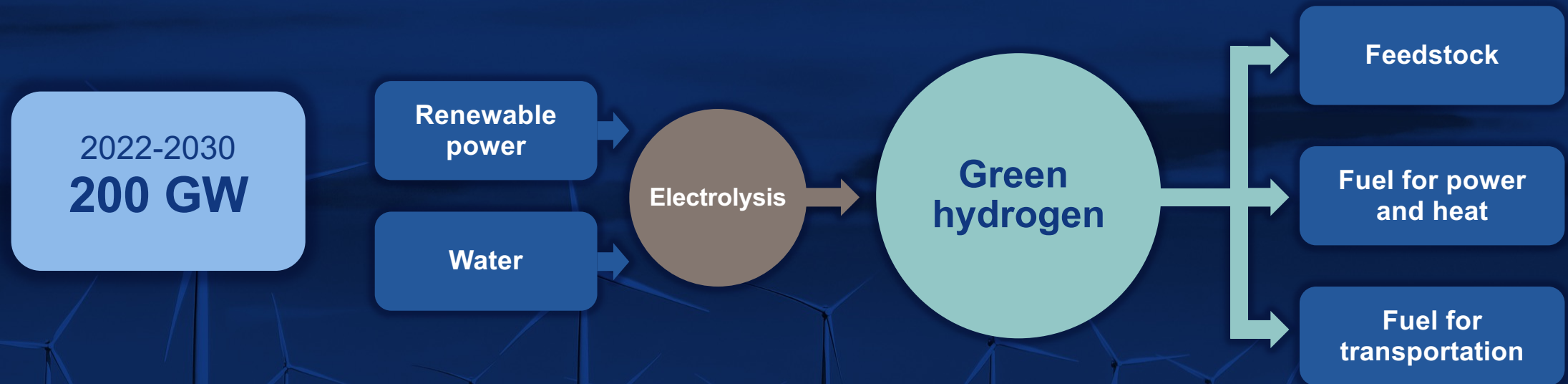
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Long duration energy storage

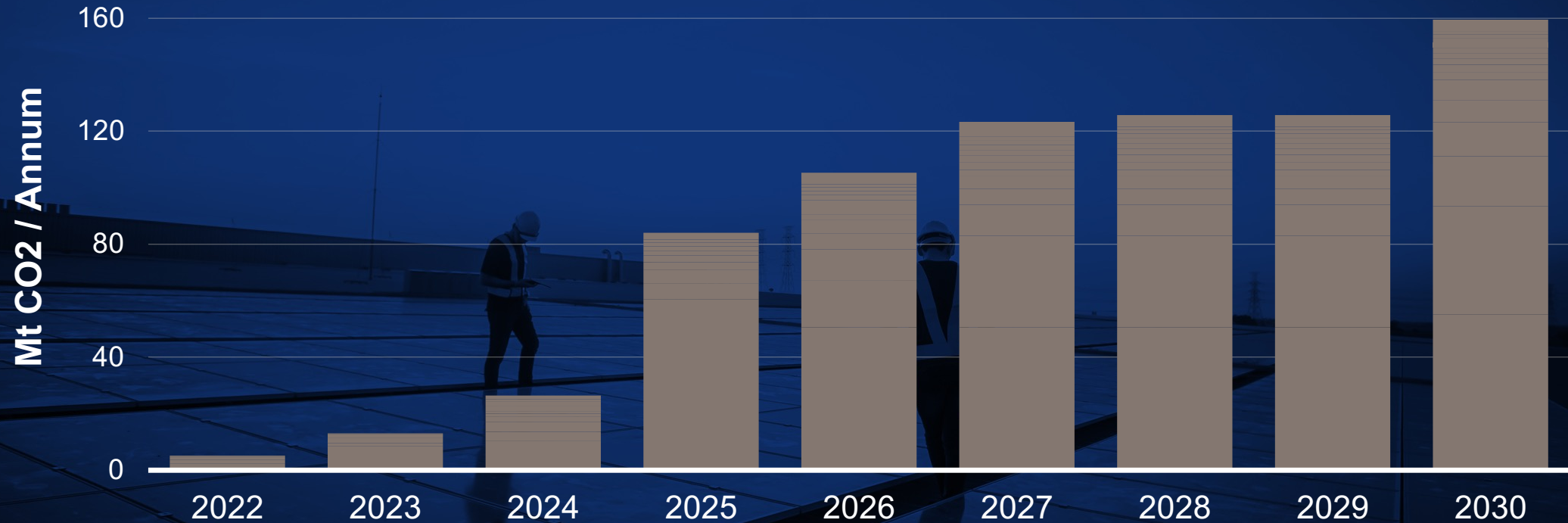
Thermal energy storage – Example



Green hydrogen value chain



Carbon Capture Usage & Storage



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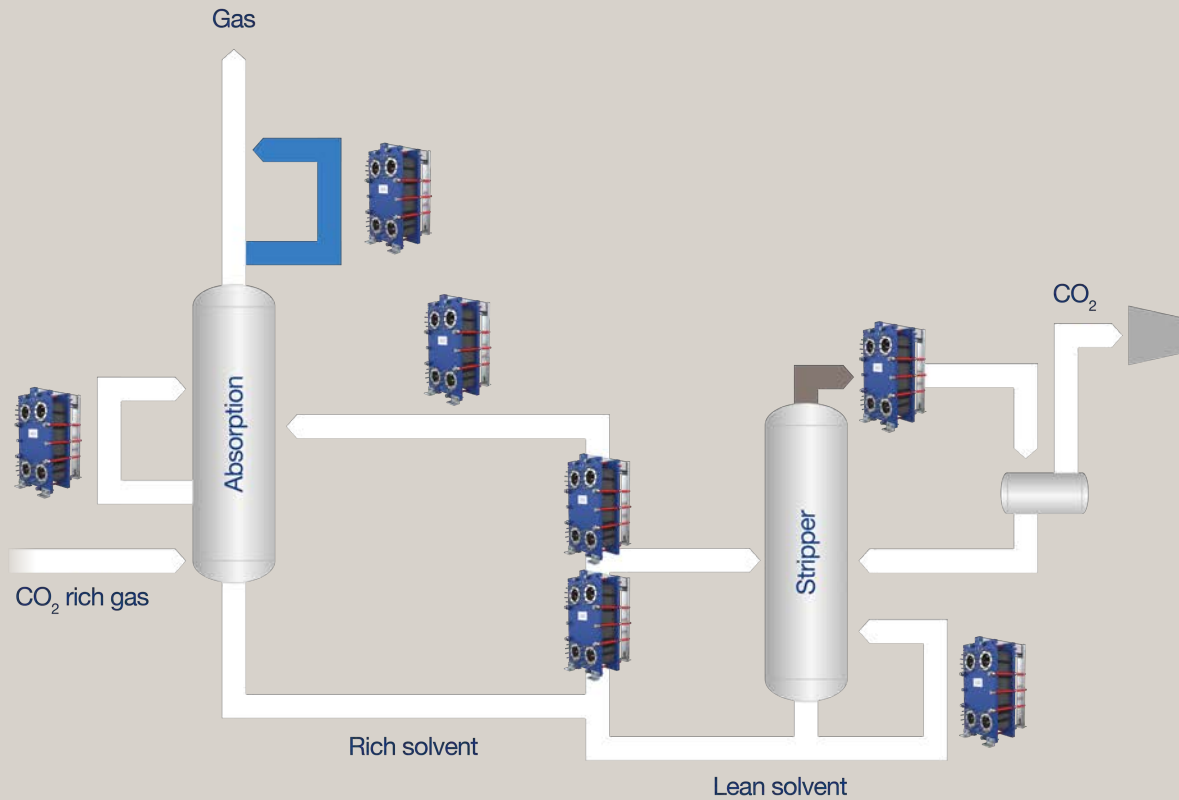
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Carbon Capture processes

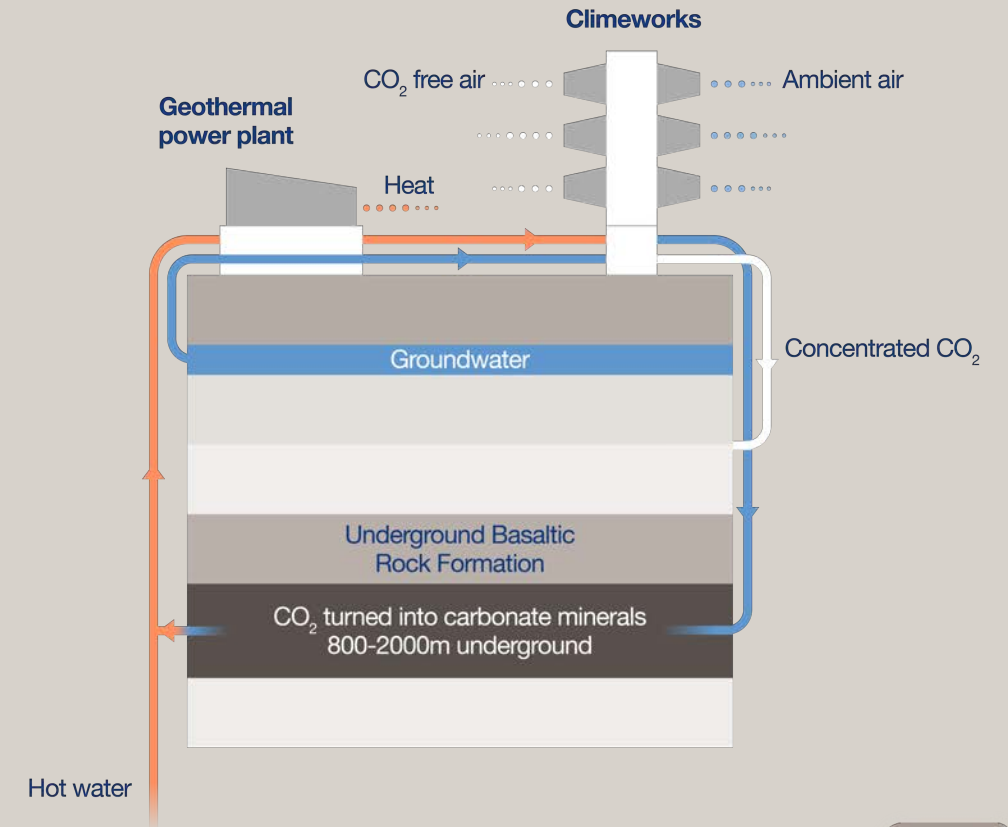
Two examples



Carbon Capture from point source



Direct Air Capture



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Market leadership through innovation



New energy landscape

We are accelerating
sustainable solutions



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