

# ELECTRIC POWER DIVISION

helping our customers build a better, more sustainable world

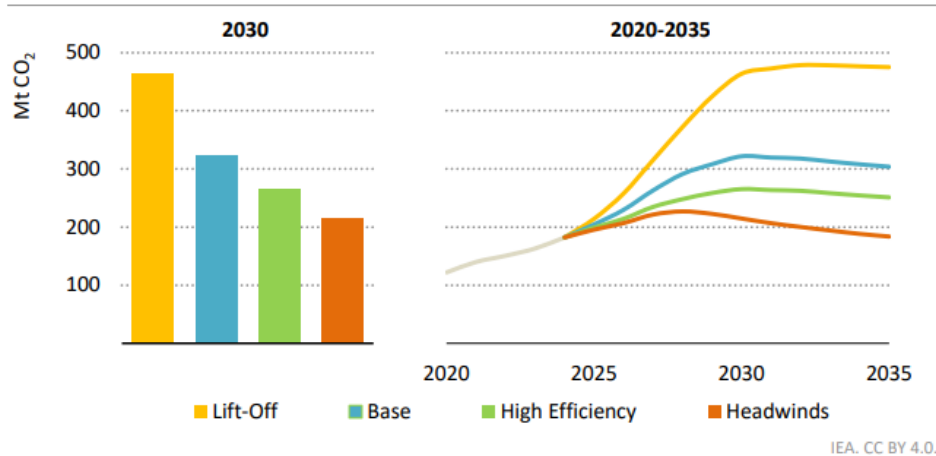
## Power Solutions for Data Centers

10 July 2025

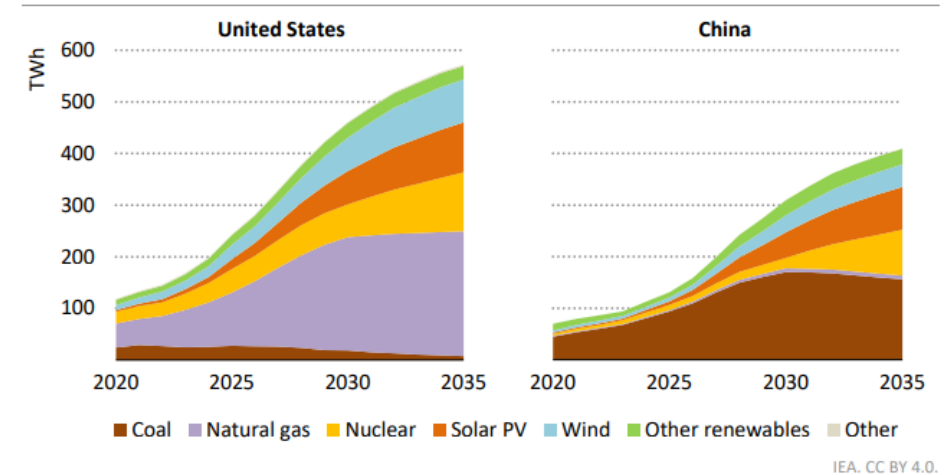
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# Data center energy projections (IEA)



Data centre electricity supply-related CO<sub>2</sub> emissions peak at 215 Mt CO<sub>2</sub> to 320 Mt CO<sub>2</sub> in all cases except the Lift-Off Case, which sees a plateau at around 475 Mt CO<sub>2</sub> in the 2030s



Natural gas is set to continue to dominate the near-term data centre electricity supply in the United States, with coal predominant in China

Data center energy demand expected to increase with natural gas being a major contributor of energy mix in the United States

Source: IEA 2024; "Energy and AI", [www.iea.org](https://www.iea.org), License: CC BY 4.0

# Power solutions

## Challenges

- » Increased power demands
- » Grid constraints
- » Carbon emissions

## Solutions



Increased efficiencies –  
integration



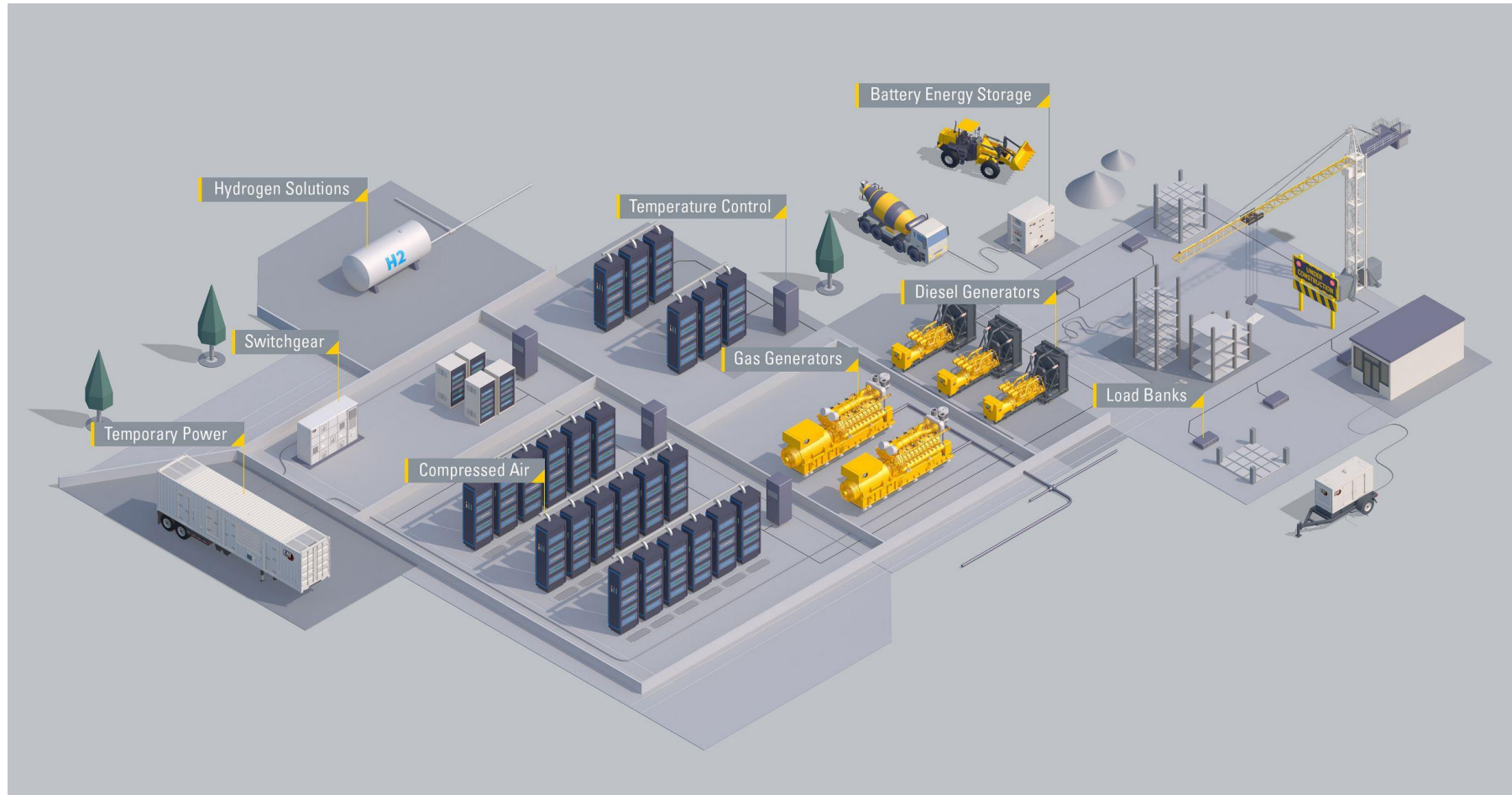
Bridge Power, Distributed  
Generation – natural gas



Carbon capture - Available



# Energy portfolio leveraging multiple energy options



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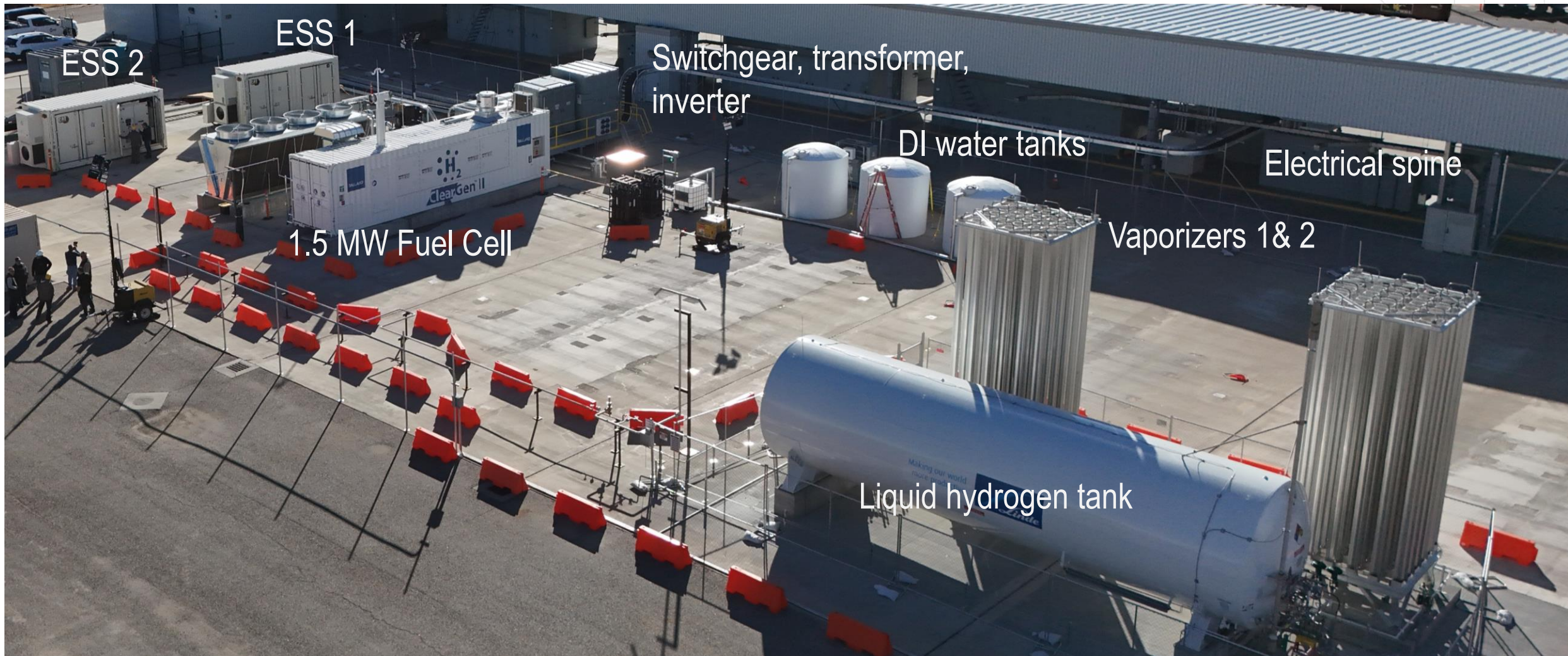
# Carbon capture

- Integrated solution for oil and gas applications today
- Continual design improvements for future installations
- Can be applied to other applications





# Example: Hydrogen Data Center Demonstration



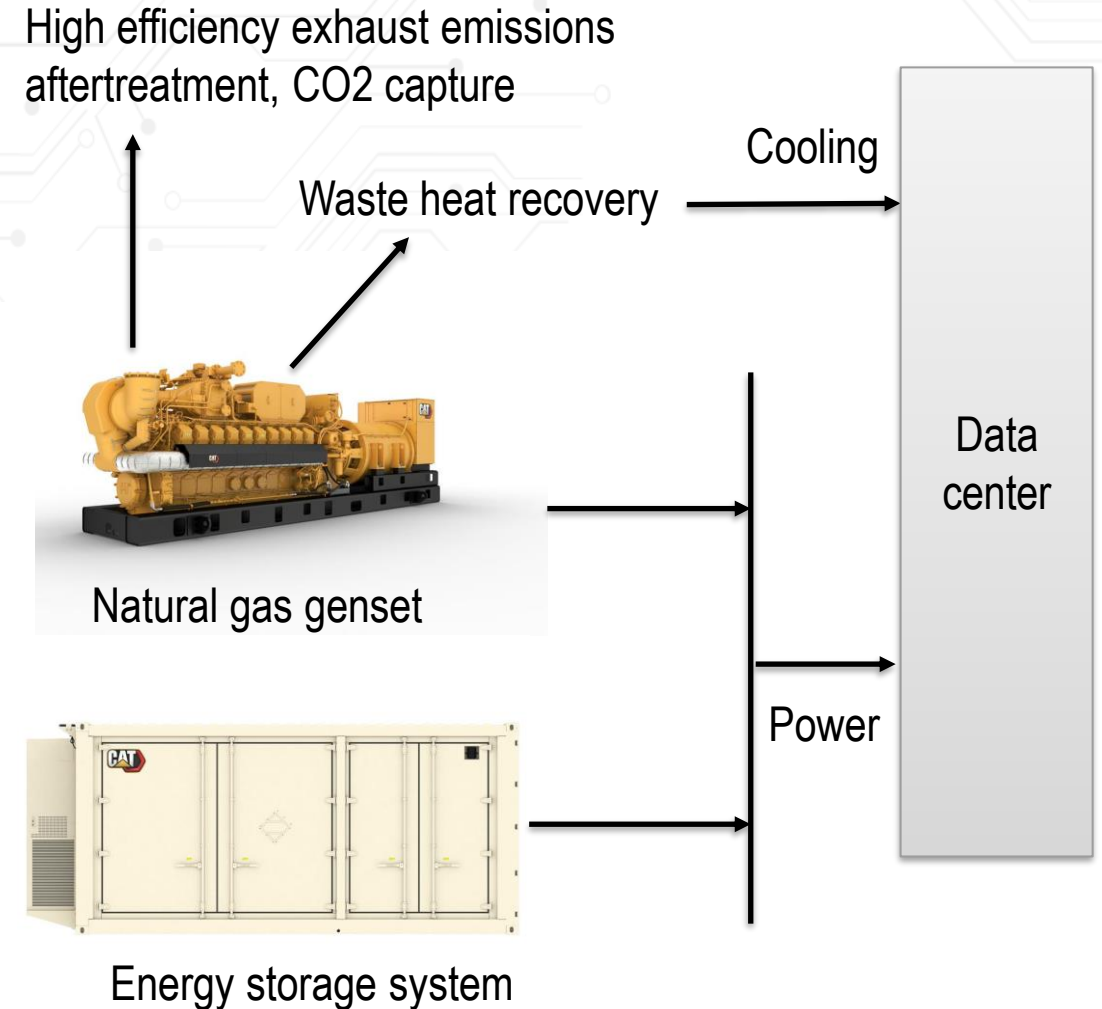
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# Concept: Highly integrated system

- » Cogeneration system (power, heat, cooling, carbon dioxide) ~ 90% fuel efficiency
- » Use case: Edge data centers – AI inference workloads





# Summary

Enhanced efficiencies - systems integration

Natural gas is anticipated to be a key component of the US energy mix.

Technologies for capturing carbon





A photograph of an industrial facility, likely a power plant or refinery, at sunset. The sky is a mix of orange, yellow, and blue. In the foreground, there are large, blue-painted metal structures, possibly part of a conveyor system or a large bridge. In the background, several tall, cylindrical storage tanks are visible, and their reflections are seen in a body of water. The overall scene is industrial and serene.

# Thank you!

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