



# Scaling green hydrogen with industrialized electrolysis

*Hydrogen Tech World Conference, Düsseldorf 14 May 2025*



# Innovation with impact

A history of technological innovation, industrialization and modularity



Private photo, Henrik Stiesdal



Siemens Gamesa Renewable Energy

# Over 10 MW in operation since 2023

Glansager Biomethanisation Plant (DK)  
Three Electrolyzer Units

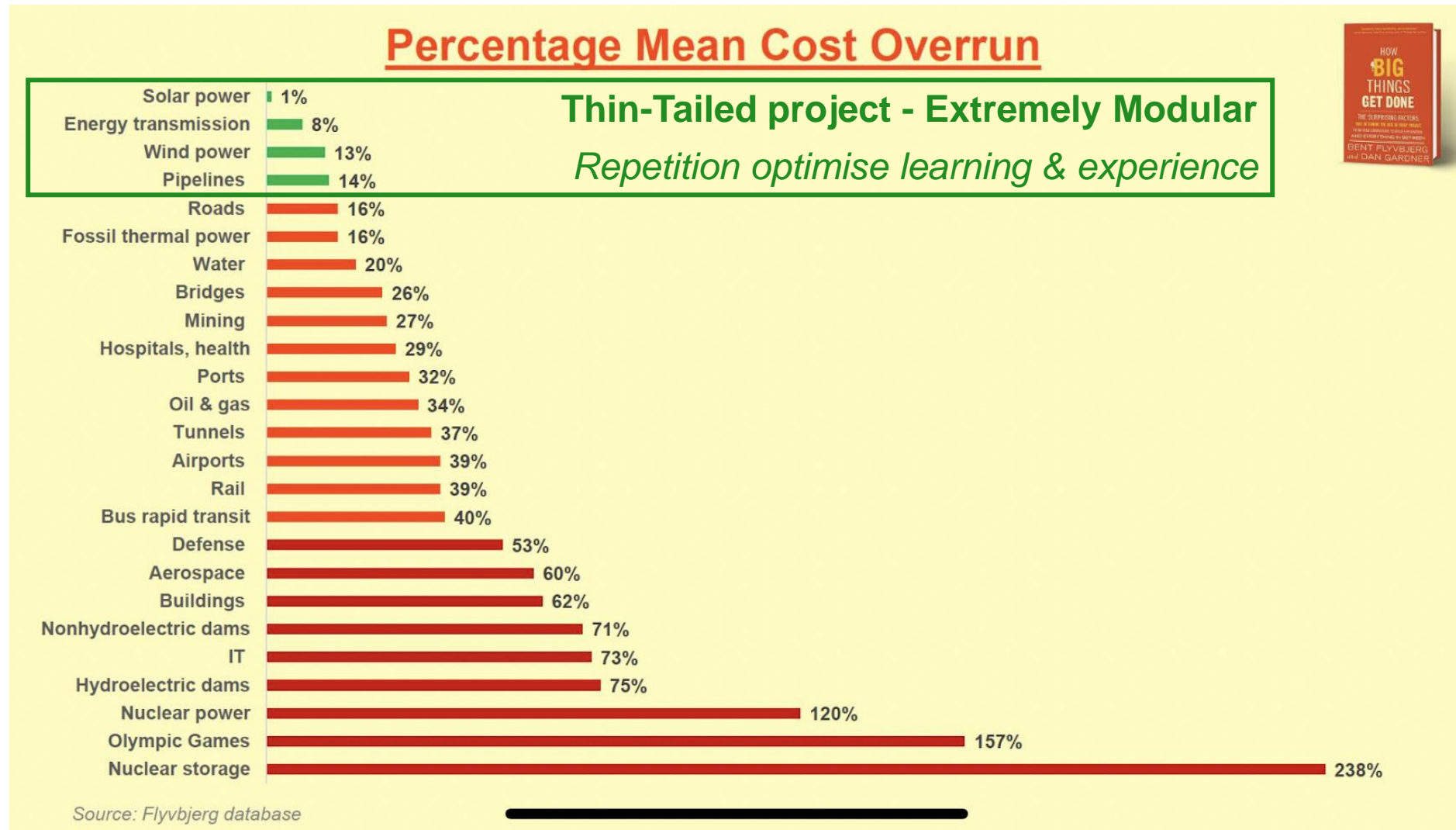


Måde Trailer Filling (DK)  
One Electrolyzer Unit



# How big things get done

Bent Flyvbjerg





# Building hydrogen plants like wind farms

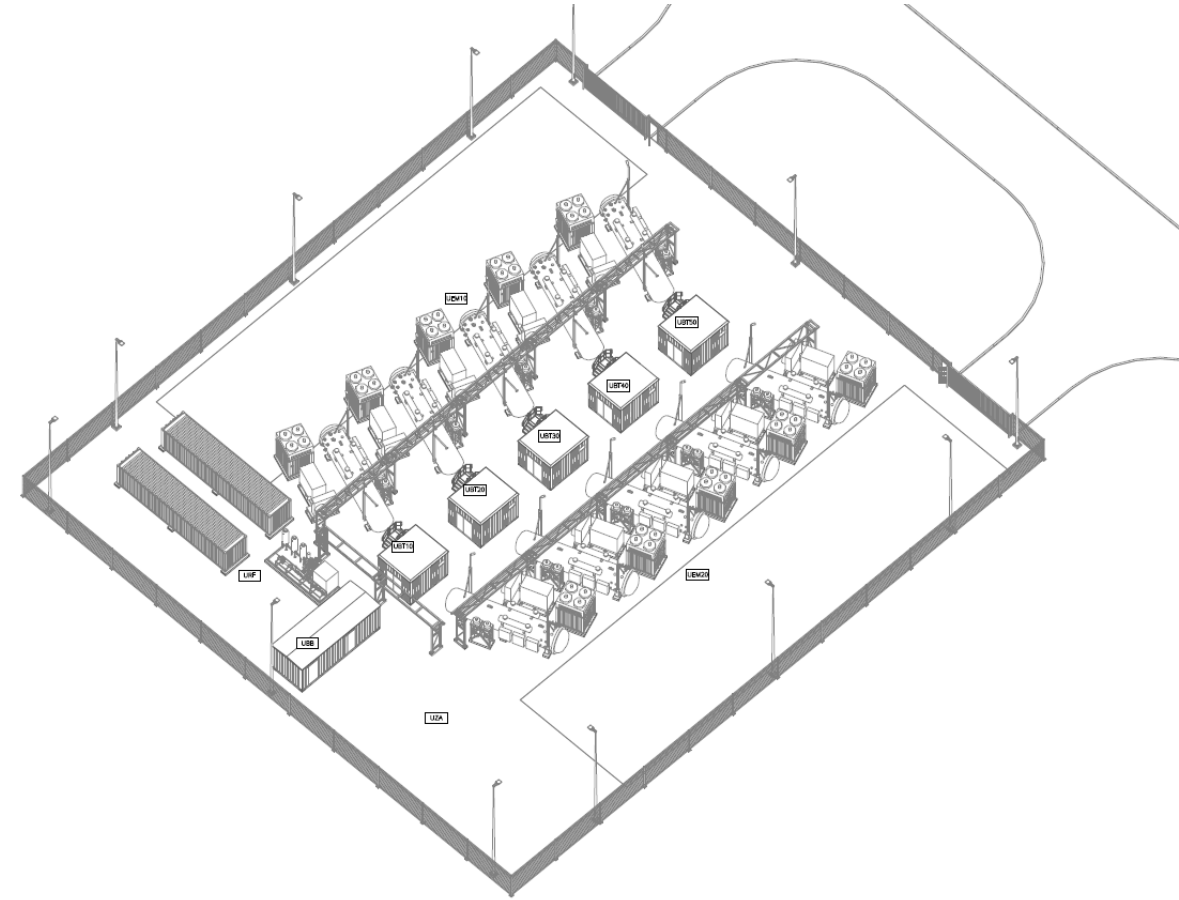
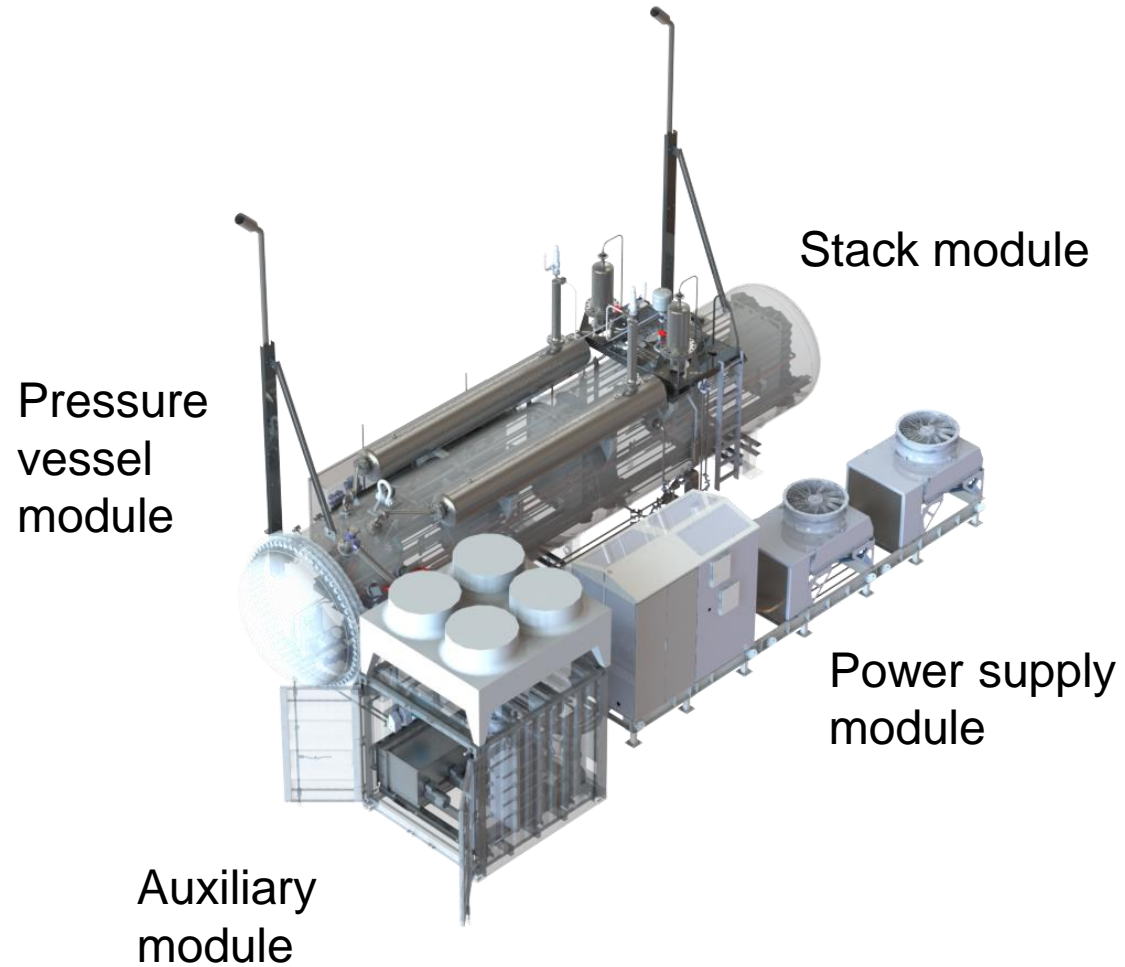
Modular and decentralised unit make up gigawatt power plants



Gemini Offshore Wind Farm

# Modularity in unit and plant design

### 3.1 MW pressurized alkaline electrolyzer & 31 MW Hydrogen Plant





# Modular Electrolyzer Design

## Stiesdal 3.1 MW Electrolyzer

- Maximizing advantages of standardization and prefabrication
- Simple transportation and installation
- Minimizing execution time and risk
- Standardized and prefabricated Balance of Stack included
- Enabling simple Balance of Plant
- Reduced Civil Work with no building and less steel structures



# Modular Hydrogen Plant

93 MW Stiesdal Hydrogen Block

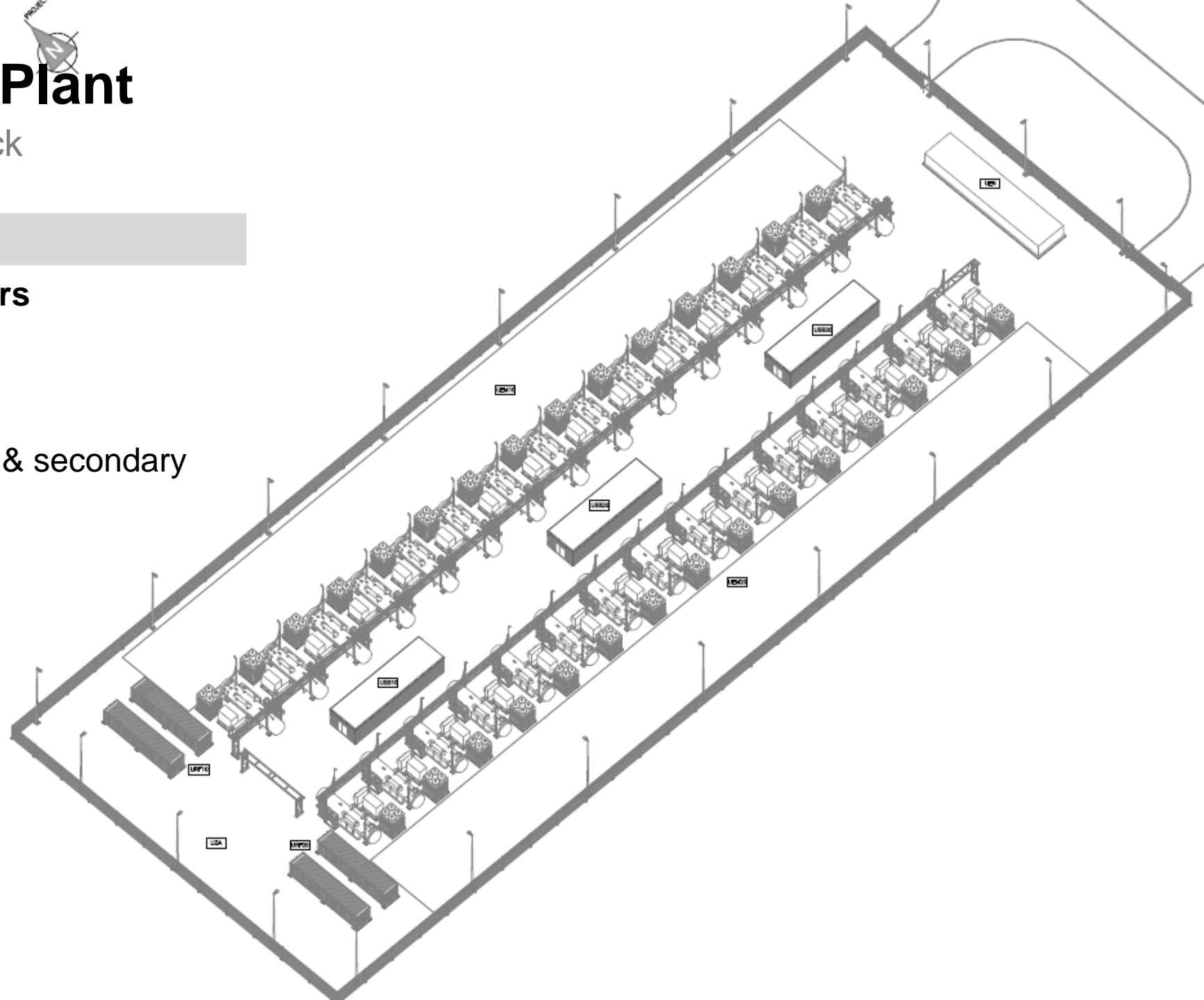
15.480 tons h<sub>2</sub> / year – 9.145 m<sup>2</sup>

## 30 x 3.1 MW Stiesdal electrolyzers

- Stack
- Vessel
- Power Supply incl. cooling
- Auxiliaries incl. heat exchanger & secondary cooling

## Balance of Plant

- MV transformers & switch gear
- Water purification
- Drier and deoxidation
- Nitrogen generator





# Supply chain

Scalability, quality and cost efficiency



Stack



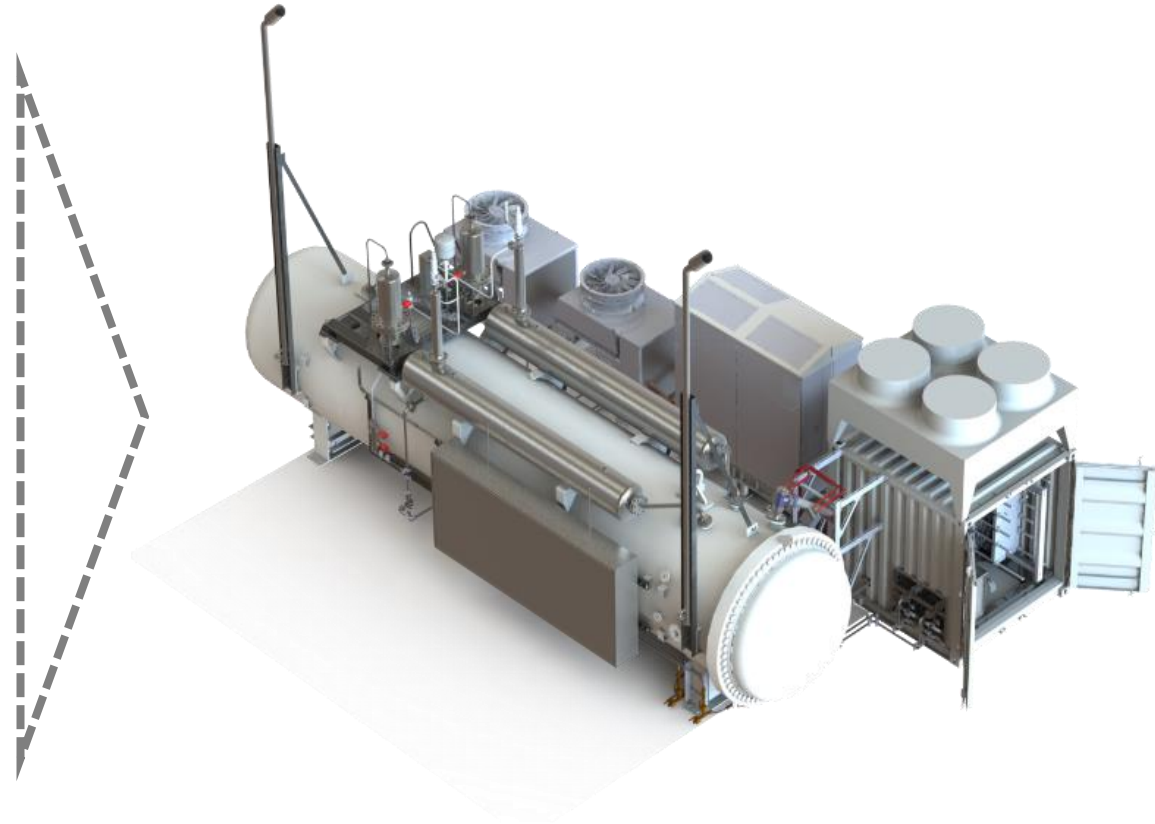
Power supply



Pressure Vessel



Auxiliary Container



# Thanks for your attention



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