

**For Bulgaria-Japan Business Forum,**

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# **IHI group's efforts to achieve global decarbonization**



June 2025

**I H I Corporation**



Year of establishment

**1853**



Revenue (Consolidated)

Approx. **12** billion USD  
(@¥140, fiscal 2024)



employees (Consolidated)

**28,237**

**30** Overseas bases and

Presence in **22** Countries



**4**

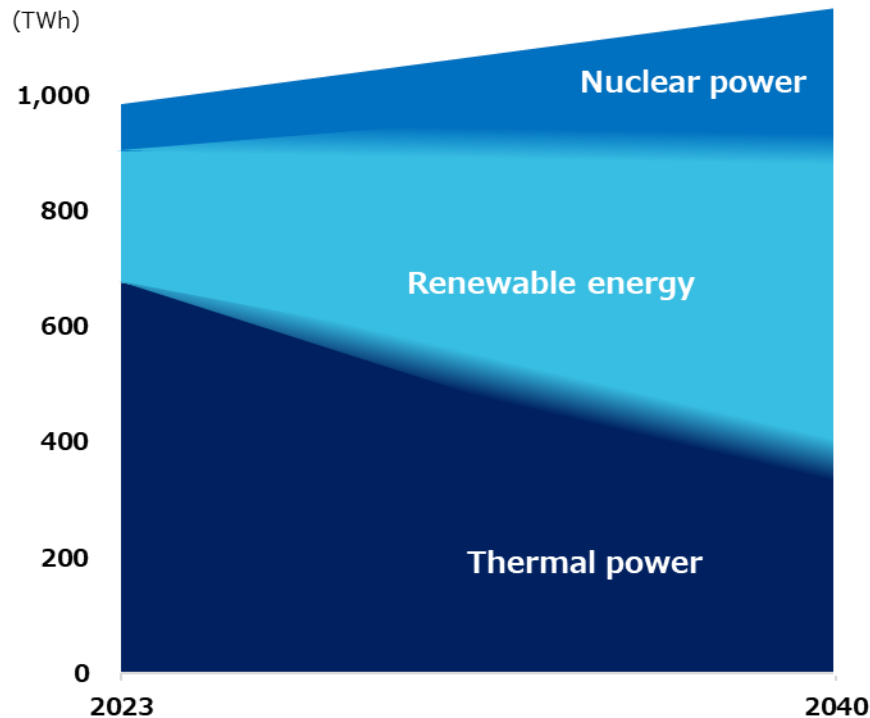
Areas of expertise



## Rising electricity demand underscores need to establish an economically viable power generation mix

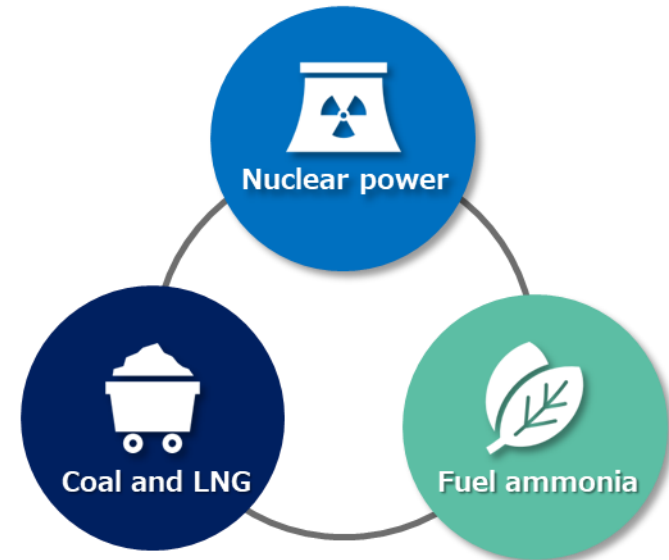
- ✓ **Electricity demand should increase** with digital and green transformation progress
- ✓ Progressing toward carbon neutrality through **economically viable energy mix**

### Japan's 7<sup>th</sup> Strategic Energy Plan (Power generation mix)



### IHI Group Energy business strengths

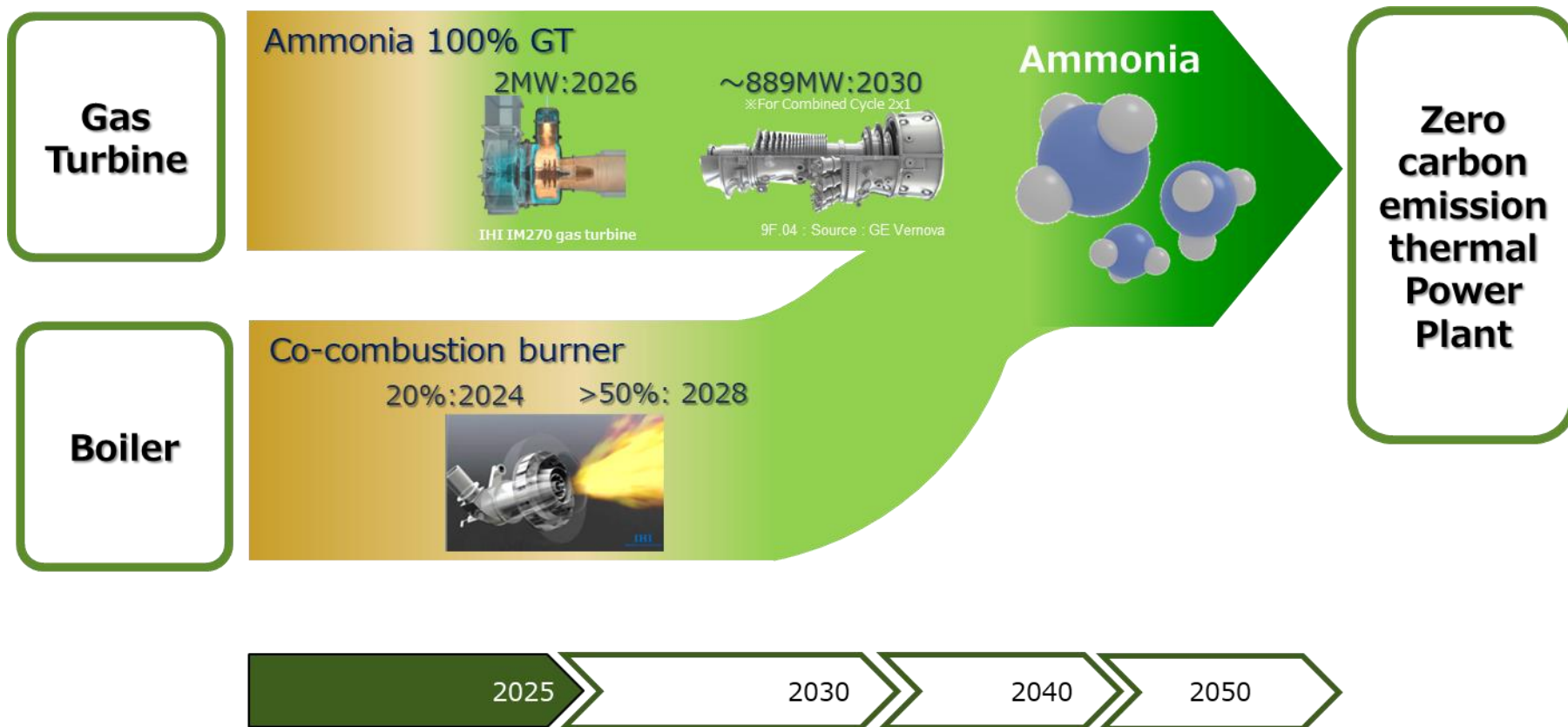
- ✓ World-class manufacturing technologies and capabilities



- ✓ Advanced thermal energy combustion and materials technologies

- ✓ Global value chain leader

## Stepwise increase of combustion ratio toward zero CO<sub>2</sub> emissions



- *Track Record in Nuclear field*
  - *One Stop Supply Chain*
  - *Solution for Nuclear Lifecycle*
- *for 70 years*
  - *Engineering to Installation*
  - *New Build to Back-End*

## NPP Components & Engineering

### BWR

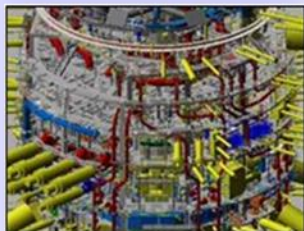


Reactor Pressure Vessel

### PWR



Containment Vessel



System Engineering



Structural Module

[Photo Source: Southern Nuclear Operating Company Website]  
<https://vogtgallery.georgiapower.com/>

## Advanced Reactor/Small Modular Reactor

### SMRs

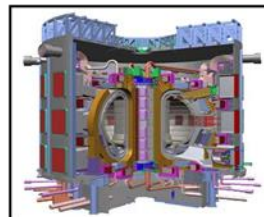


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### HTGR Intermediate



### ITER Equipment



Source : ITER Organization HP

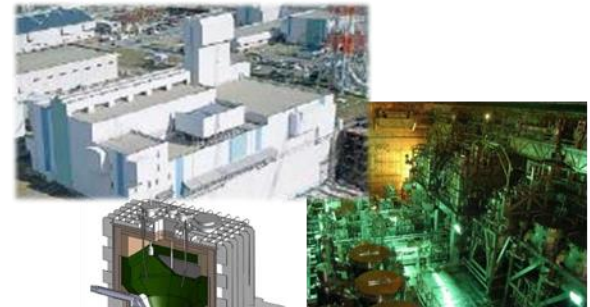
## Operation & Maintenance



Primary Piping Replacement



## Nuclear Fuel Cycle Plant



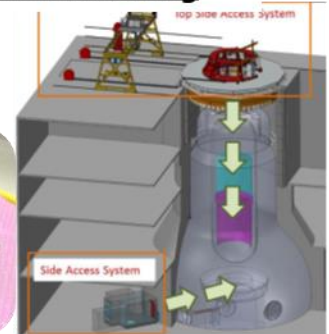
HLW Vitrification & Storage Facility

## De-Contamination & De-Commissioning

Source :  
 Proceedings of WM2015,  
 Fukushima Inspection  
 Manipulator – 15485



Remote Equipment



Fukushima  
 Fuel Debris Retrieval

Source :  
 Proceedings of WM2016, Conceptual Study of Fuel Debris  
 Retrieval System for Fukushima Daiichi Reactors – 16111



In Japan, IHI is working for,

- ✓ Re-start Reactors – *Reliable Construction*
- ✓ High Level Radioactive Waste – *Development to Realize Plant*
- ✓ Fukushima Recovery – *Joint Work with Operator*

And for recent US AP1000 for the components critical to plant construction.

*The Key success factors,*

- (1) **Planning** - With nuclear culture, manufacturability, constructability.
- (2) **Full Communication** – With all stakeholders (including local players)

## IHI components for recent US AP1000



Structural Modules



Containment Vessel



Shield Building Roof

[Source of pictures of construction site:  
Georgia Power Company Website]  
<https://vogtlegallery.georgiapower.com/>

## Small Modular Reactor (SMR)

IHI invested to SMR technology with Japan, US and Korean partners, to realize another nuclear solution.

Team "Japan NuScale Innovation"



Technology



EPC



Finance



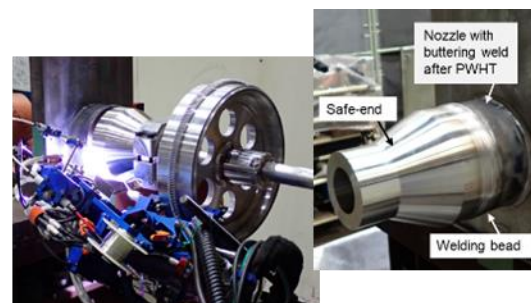
CHUBU  
Electric Power

Operator

**IHI and the integrated team to contribute for stronger Energy mix !**



**Completion of real-size Mock-up of SC Wall**



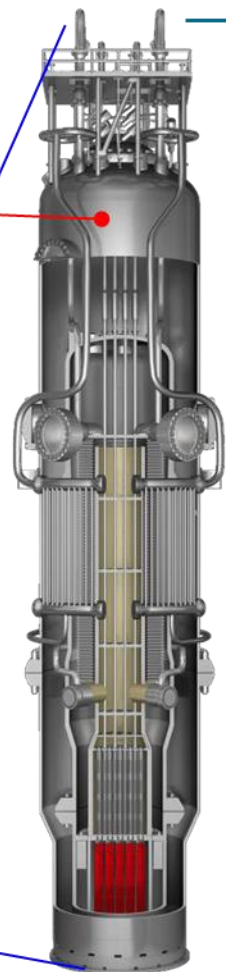
**Real-size Mock-up of  
Containment Vessel**

**6-module plant**



**462 MWe (gross)**

**NuScale SMR**



**23m**

**Reactor Module**

