


The logo for JERA, consisting of the word "Jera" in a bold, blue, sans-serif font.

Energy for a New Era

An isometric illustration of various energy infrastructure elements. On the left, there are battery storage units labeled "Battery storage" and a wind turbine labeled "Wind power" with a worker in a blue uniform and green vest holding a tablet. In the center, there are solar panels labeled "Solar power" and an offshore oil rig. On the right, there is a thermal power plant labeled "Thermal power" with a worker in a blue uniform and green vest holding a clipboard. A ship is also visible in the lower center. The background features a bar chart and a gear icon.

3rd International Conference on Fuel Ammonia September 29, 2023

Hisahide Okuda
President, Director, CEO and COO
JERA Co., Inc.

JERA takes on the challenge of Zero CO₂ emissions by 2050

- JERA's mission is to provide cutting-edge solutions to the world's energy issues.

The Three Approaches of JERA Zero CO₂ Emissions 2050

1

Complementarity between **Renewable** and **Zero CO₂ Emission Thermal Power Generation**



2

Establishment of Roadmaps Suitable for Each Country and Region



3

Adoption of "Smart Transition"



¹ JERA Zero CO₂ Emissions 2050 is premised on the continual development of decarbonization technology, economic rationality, and consistency with government policy. JERA is continuing to develop original decarbonization technologies and is taking the initiative to ensure economic rationality.



JERA Environmental Target 2035

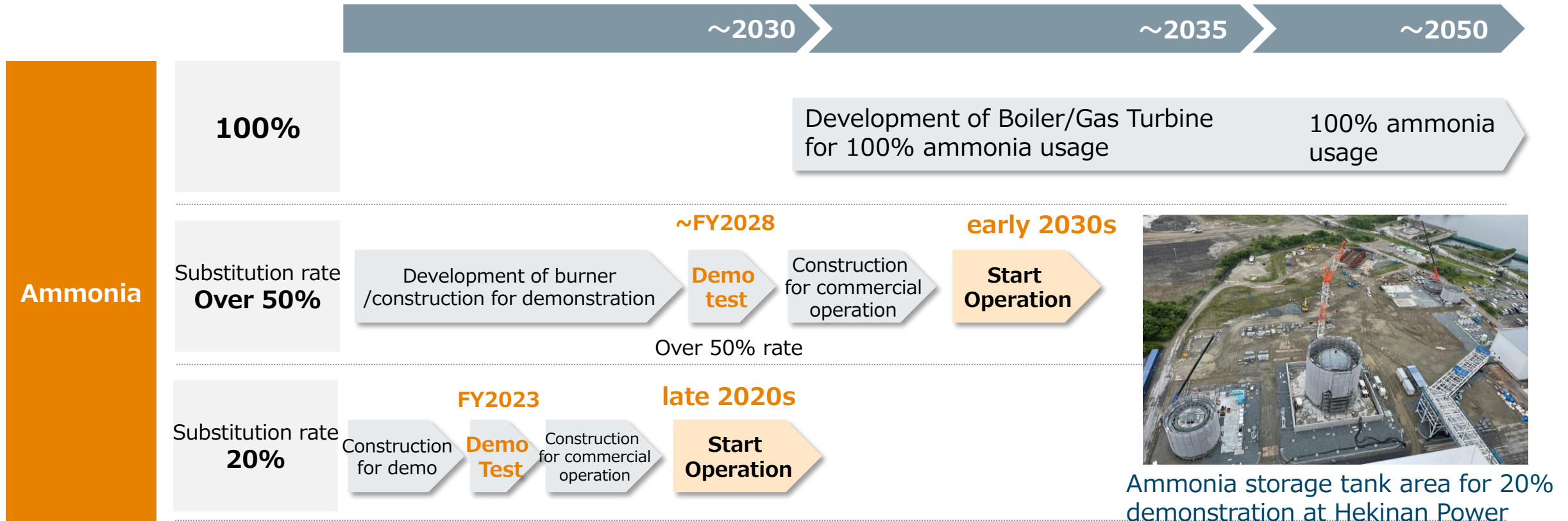
JERA aims to reduce CO₂ emissions from our operations in Japan by at least 60%* by 2035 through the following:

(relative to FY 2013)

- JERA strives to develop and adopt renewable energy.
- JERA works to reduce carbon emission intensity from thermal power generation by hydrogen and ammonia.

JERA's Zero Emission Technologies' Development Timeline

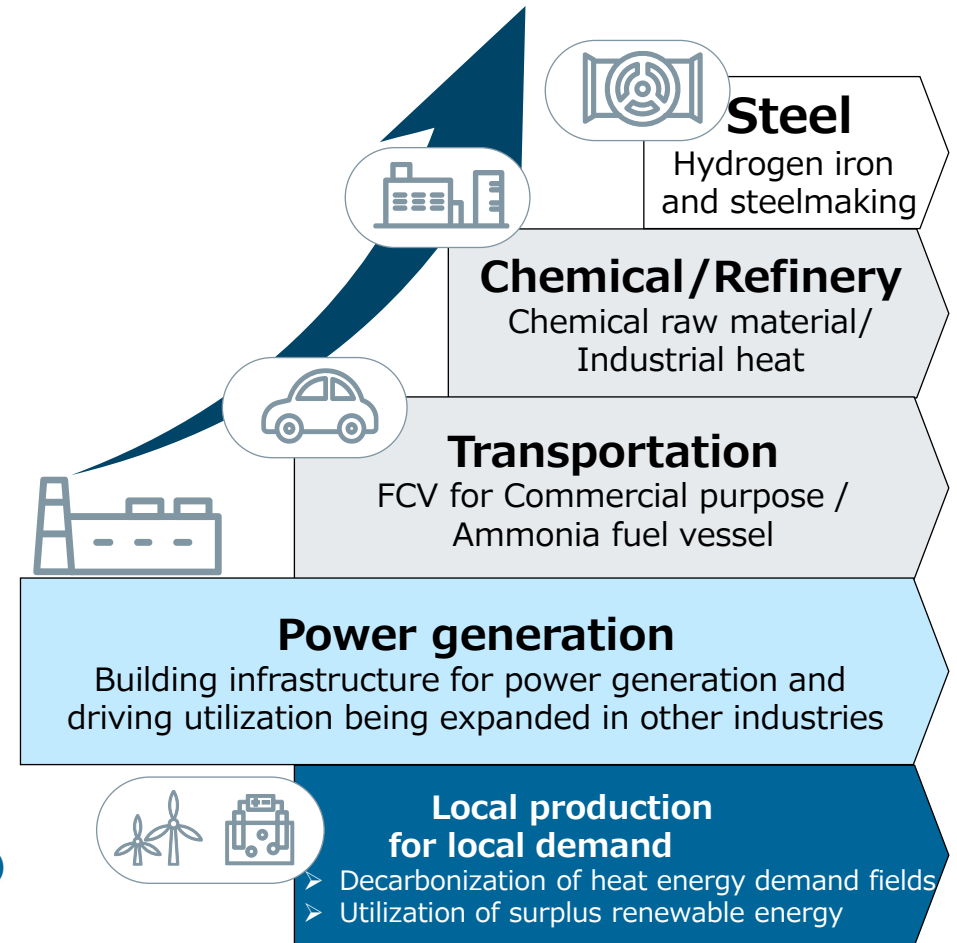
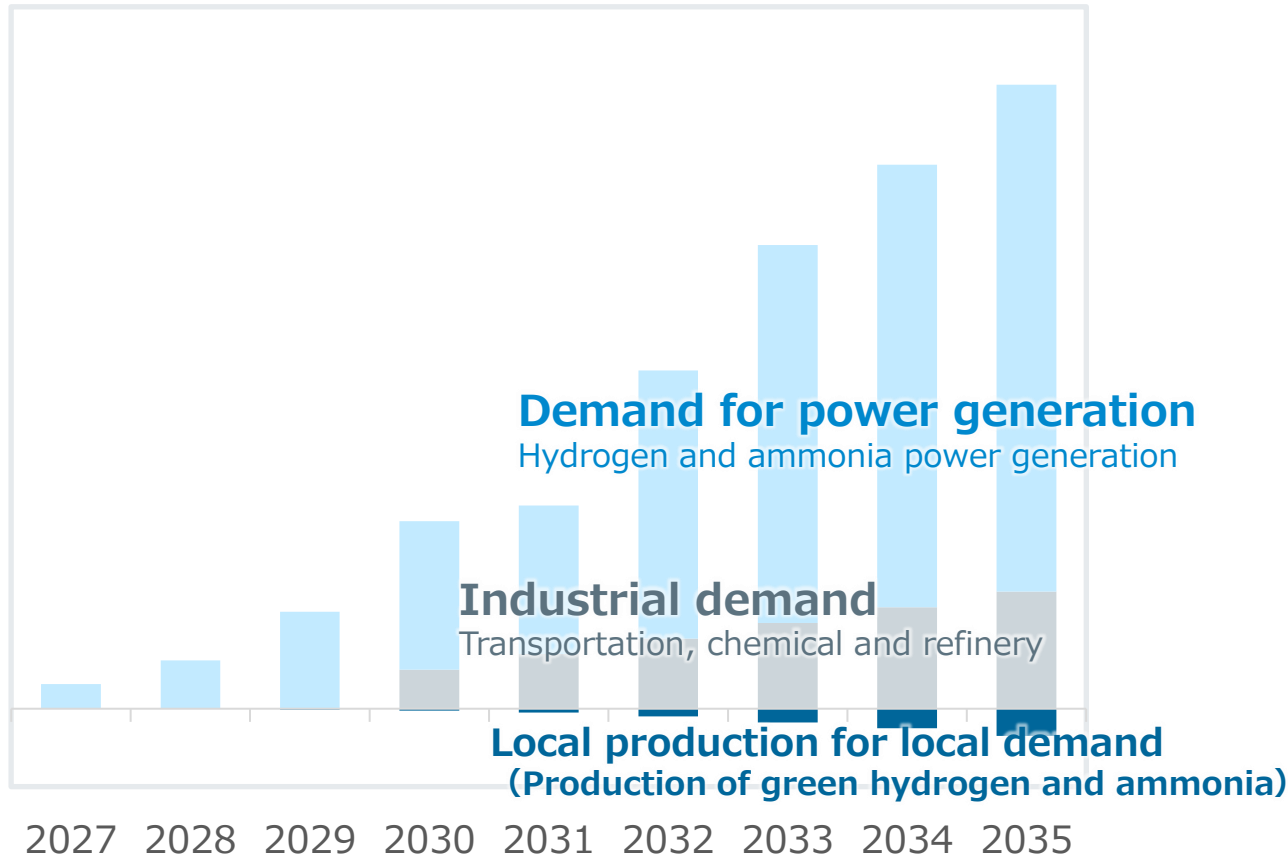
- Demonstration of **20% ammonia power generation** will start in **FY2023** at Hekinan Power Plant. Demonstration of **over 50% substitution to ammonia** will be conducted **by FY2028** at **Hekinan and other Power Plants**.
- Commercial operation will start after the construction of the facilities for full operations.



Leading the early building ammonia supply chains

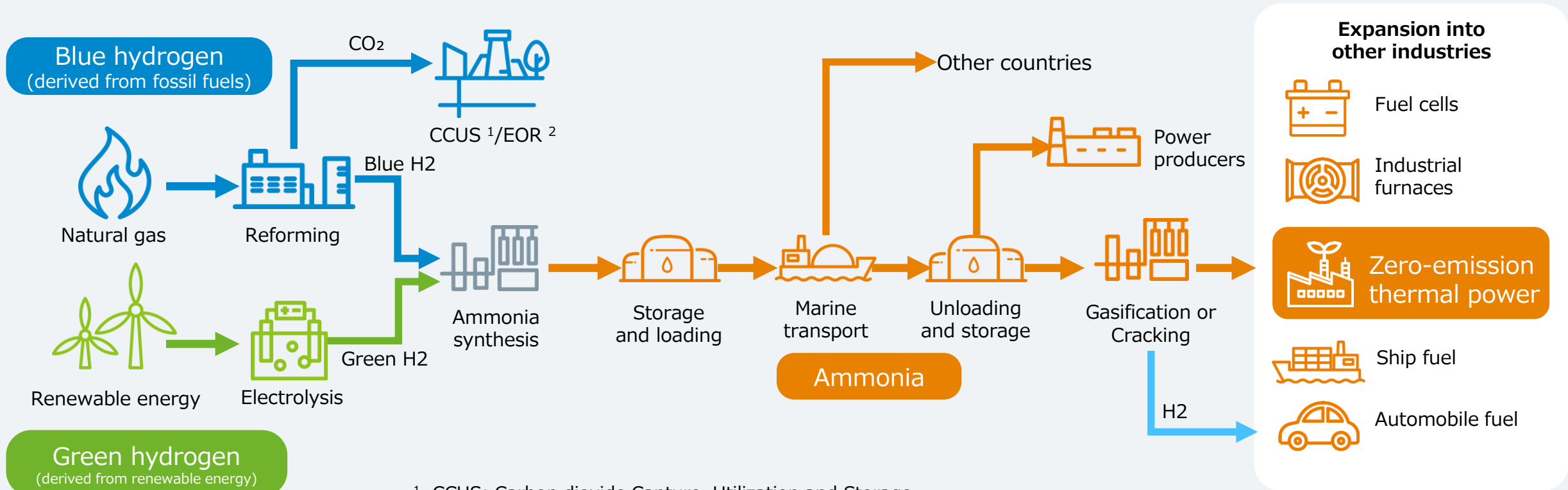
- Building the large-scale infrastructure of ammonia for thermal power and driving utilization in industries being expanded

Expanding the use of hydrogen and ammonia



Hydrogen/Ammonia Supply Chain

- Several large-scale hydrogen/Ammonia production projects from renewable energy and natural gas are being developed around the world.
- Ammonia is expected to be used as a hydrogen energy carrier and Ammonia cracking technology is developed for supplying hydrogen around the world.



¹ CCUS: Carbon dioxide Capture, Utilization and Storage
² EOR: Enhanced Oil Recovery

Jera

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