IHI and GE Vernova complete large-scale combustion test facility for ammonia gas turbine development

- Under a Joint Development Agreement signed in 2024, IHI Corporation and GE Vernova continue to develop a new gas turbine combustor aiming to enable GE Vernova's F-Class gas turbines to burn up to 100% ammonia by 2030

- A series of ammonia combustion tests in the new facility at IHI's Aioi Works in Hyogo, Japan is expected to accelerate the development of the new gas turbine combustors starting in the summer of 2025

- Project is expected to play an important role in the energy transition to burning fuels with less or zero CO2 emissions when combusted

TOKYO, JAPAN – CAMBRIDGE, MA (June 23, 2025) – IHI Corporation (IHI) and GE Vernova Inc. (GEV) announced today the completion of a new Large-scale Combustion Test facility (LCT) at IHI's Aioi Works facility in Hyogo, Japan.

This facility is expected to play a crucial role in advancing the capabilities of next-generation combustion technologies using ammonia, a derivative from hydrogen, which is carbon-free, and when combusted the gas turbine would not emit any net CO_2 emissions. The new test facility is engineered to test advanced combustion systems at GE Vernova's F-class gas turbine operating conditions, including pressure, temperature, and both air and fuel flow rates.

"This milestone marks a significant step forward in the joint technology roadmap sealed with a Joint Development Agreement in 2024 aiming to lead to a 100% ammonia capable combustion system by 2030" said **Kensuke Yamamoto, IHI Executive Officer, VP of Business Development Division and GM of Ammonia Value Chain Project Department**. "IHI has developed a 100%

ammonia firing gas turbine IM270 (output 2MW) and will level the technology to develop large-scale combustion technology. IHI's combustor development role lies this new flagship test facility, which will be a crucial hub for IHI's and GE Vernova's project. The establishment of the LCT underscores IHI's and GE Vernova's commitment to driving innovation in more sustainable energy solutions, with ammonia as a promising fuel for future power generation."

Starting in the summer of 2025, IHI plans to conduct rigorous combustion tests using full scale prototype combustors operating on 100% ammonia, aiming to develop a commercially viable gas turbine by 2030. The collaboration between the two companies includes synergies across IHI ammonia combustion expertise and GE Vernova global technical teams, and shared best practices developed at GE Vernova's advanced combustion test facility in Greenville, South Carolina, USA.

"This announcement signals a shift from initial studies on the ammonia value chain to the practical implementation of technologies and engineering projects, aiming to decarbonize power generation by using ammonia as a fuel," said **Jeffrey Goldmeer, GE Vernova Senior Director, Technology Strategy.** "This marks a new phase of collaboration between GE Vernova and IHI, with the goal of developing decarbonization pathways that safeguard existing power generation investments."

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Notes to editors

Decarbonization as used in this article is intended to mean the reduction of carbon emissions on a kilogram per megawatt hour basis.

Ammonia is utilized today in industrial applications such as fertilizer, chemical raw material. When used as a carrier for hydrogen, ammonia enables an efficient, lower-cost transport and storage. In addition, ammonia is expected to be utilized directly in power generation as a carbon-free fuel, since ammonia contains no carbon, it does not emit carbon dioxide when burned and may therefore enhance the power sector's efforts in reducing carbon emissions.

Forward-Looking Statements

This document contains forward-looking statements – that is, statements related to future events that by their nature address matters that are, to different degrees, uncertain. These forward-looking statements often address IHI and GE Vernova's expected future business and financial performance and financial condition, and the expected performance of its products, the impact of its services and the results they may generate or produce, and often contain words such as "expect," "anticipate," "intend," "plan," "believe," "seek," "see," "will," "would," "estimate," "forecast," "target," "preliminary," or "range." Forward-looking statements by their nature address matters that are, to different degrees, uncertain, such as statements about planned and potential transactions, investments or projects and their expected results and the impacts of macroeconomic and market conditions and volatility on the companies' business operations, financial results and financial position and on the global supply chain and world economy.

About IHI

IHI is dedicated to creating Value Chains that generate new value for customers, originating from the establishment of Japan's first modern shipyard in 1853. It leveraged its shipbuilding technology to expand into onshore machinery, bridge, plant, aero-engine, and other manufacturing fields. IHI has provided an array of solutions in recent years. These are principally in the Resource, Energy and Environment; Social Infrastructure; Industrial Systems and General-Purpose Machinery; and Aero Engine, Space and Defense business segments. In power generation, the Company manufactures boilers and gas turbines for thermal power plants. It is developing technology for ammonia firing and is constructing carbon-free fuel ammonia supply chain to help decarbonize the economy. Click below for more information about IHI: https://www.ihi.co.jp/en/

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About GE Vernova

GE Vernova Inc. (NYSE: GEV) is a purpose-built global energy company that includes Power, Electrification and Wind segments and is supported by its accelerator businesses. Building on over 130 years of experience tackling the world's challenges, GE Vernova is uniquely positioned to help lead the energy transition by continuing to electrify the world while simultaneously working to decarbonize it. GE Vernova helps customers power economies and deliver electricity that is vital to health, safety, security, and improved quality of life. GE Vernova is headquartered in Cambridge, Massachusetts, U.S., with approximately 85,000 employees across approximately 100 countries around the world. Supported by the Company's purpose, The Energy to Change the World, GE Vernova technology helps deliver a more affordable, reliable, sustainable, and secure energy future.

GE Vernova's **Gas Power** business engineers advanced, efficient natural gas-powered technologies and services, along with decarbonization solutions that aim to help electrify a lower carbon future. It is a global leader in gas turbines and power plant technologies and services with the industry's largest installed base.

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