NTPC and GE Gas Power Sign MoU for Demonstrating Hydrogen co-firing in Gas Turbines to Further Decarbonize Power Generation

- In a first-of-its-kind MoU with NTPC in India, GE Gas Power and NTPC will collaborate to demonstrate feasibility for carbon intensity reduction at NTPC's Kawas gas power plant in Gujarat
- The 645 megawatt (MW) gas power plant is powered by four GE 9E gas turbines
- NTPC and GE to explore hydrogen co-firing blended with natural gas in GE's 9E gas turbine installed at the power plant

New Delhi, India, October 6, 2022 — In its efforts to adopt advanced powering technology to decarbonize power generation in India, **NTPC Ltd**., the country's largest power generating utility, and GE Gas Power signed today a **Memorandum of Understanding** (MoU) to demonstrate the feasibility for hydrogen (H2) co-firing blended with natural gas in GE's 9E gas turbines installed at NTPC's Kawas combined-cycle gas power plant in Gujarat. Under this significant collaboration, the two companies will jointly explore the pathways to reduce CO2 emissions from Kawas gas power plant and **further implementation at scale across NTPC's installed units in India.**

NTPC's Kawas gas power plant is powered by four GE 9E gas turbines operating in a combined-cycle mode and has an installed capacity of 645 megawatt (MW). Further, GE's advance E- Class gas turbine portfolio currently has the capability to operate on blends of natural gas and hydrogen, up to 100 % hydrogen. This capability varies depending on the type of combustion system installed in the gas turbine. For fuels with over 5% hydrogen by volume, gas turbine accessories need to be evaluated and possibly modified to reliably deliver the fuel to the combustors.

In this first-of-its-kind MoU with NTPC in India, GE Gas Power will evaluate the possible modifications to the gas turbine unit and auxiliaries required for blending

of H2 with natural gas. Thereafter, a pilot project for 5% Co-firing of hydrogen may be implemented at the Kawas gas power plant in a safe environment based on the feasibility report. NTPC shall provide H2 required for the project.

“NTPC, with a large fleet of power generation facilities delivering more than 70 GW across India, has been at the forefront when it comes to piloting new hydrogen-related initiatives. NTPC is committed to playing a key role in India’s energy transition journey as the country marches ahead to achieve net-zero target and climate goals. In parallel, it’s crucial to invest and effectively utilize the proven technology that can generate electricity, which is affordable, accessible and reliable. This MoU is among the steps we are taking in the direction to meet the objectives under the National Hydrogen Mission. As our collaboration with GE grows deeper, we are more focused to use advanced technology and leverage our gas power assets with higher percentage of zero-carbon fuels such as H2, as the availability of the fuel becomes viable.” said, **Ujjwal Kanti Bhattacharya**, Director (Projects), NTPC Ltd.

“India’s power landscape is strengthened by the emerging technologies that are at various stages of development and industrial competitiveness. Hydrogen has a significant potential to play a complementary role along with other low-to-zero carbon fuels in generating electricity at scale. We applaud NTPC’s leadership, commitment and investment in hydrogen that can further set new industry benchmarks in terms of discovering low-cost hydrogen industry going forward and achieving energy self-reliance.” said **Deepesh Nanda**, CEO, GE Gas Power South Asia.

About GE Gas Power:

GE Gas Power is a world leader in natural gas power technology, services, and solutions. Through relentless innovation and continuous collaboration with our customers, we are providing more advanced, cleaner and efficient power that people depend on today and building the energy technologies of the future. With the world’s largest installed base of gas turbines and more than 670 million operating hours across GE’s installed fleet, we offer advanced technology and a

level of experience that’s unmatched in the industry to build, operate, and maintain leading gas power plants. For more information, please visit www.ge.com/power/gas and follow GE’s gas power businesses on Twitter @GE_Power and on LinkedIn at GE Power.

GE Gas Power is part of GE Vernova, a dynamic accelerator comprised of our Power, Renewable Energy, Digital and Energy Financial Services businesses, focused on supporting customers’ transformations during the global energy transition.

https://www.gevernova.com/
GE Vernova

Media inquiries

Aditya Singh

GE Vernova | Communications, Asia
aditya.singh3@gevernova.com

Geetanjali Nehru

GE Vernova | Communications, Asia
geetanjali.nehru@gevernova.com