

SEC, Alfanar Construction, and GE Vernova switch PP10 from running on liquid fuels to natural gas; step towards meeting Saudi Arabia's carbon emissions reduction goals

- *20 GE Vernova 7E gas turbines planned to be converted from liquid to gas fuel operation*
- *By running on natural gas instead of liquid fuel, the 20 units are expected to reduce up to 1.7 million fewer tons of carbon dioxide emissions per year for the same amount of power generated*
- *Project is aligned to SEC and Saudi Arabia's carbon emissions reduction goals*

Riyadh, Saudi Arabia: December 6, 2023 – GE Vernova's Gas Power business (NYSE: GE) today announced it has begun the execution of the fuel conversion project for [Saudi Electricity Company's](#) (SEC's) Power Plant 10 (PP10), in Riyadh, marking a significant step in Saudi Arabia's carbon emissions reduction goals. By switching the turbines from running on liquid fuels to natural gas, which has the lowest carbon emissions of traditional fossil fuels, the project will enhance the units' fuel flexibility, efficiency, and output.

Built on an area of 5 million square meters outside the capital of Saudi Arabia, PP10 is powered by 40 of GE Vernova's 7E gas turbines in a combined cycle configuration and is one of the largest combined cycle plants in the world. It can deliver approximately 3.5 gigawatts (GW) of electricity, the equivalent capacity needed to power up to 875,000 homes in Saudi Arabia.

*"We look forward to working with Alfanar and GE Vernova to convert our power generation assets to natural gas, a lower carbon intensity fuel compared to the crude oil and distillate that currently power the plant," said **Khaled AlGanoon, CEO at SEC**. "This project will help us reduce the carbon footprint and emissions of our operations at PP10, in alignment with Saudi Arabia's goal to generate a balanced mix of electricity from renewable energy and natural gas by 2030."*

Following project completion, each gas turbine's efficiency is expected to increase, which results in lower consumption and cost of fuel per megawatt hour (MWh) of power generated, and greater electricity output per unit of fuel consumed. Additionally, the units would be able to deliver more flexible power that can be ramped up or down as and when needed, while benefitting from longer inspection intervals, and longer parts life compared to gas turbines powered by liquid fuels. Furthermore, existing and future gas power plants can avoid carbon dioxide lock-in by using low or near zero-carbon fuels such as hydrogen, combined with carbon capture technologies, both of which the Kingdom is beginning to make significant investments in.

This modernization will also leverage the expertise and know-how built at GE Saudi Advanced Turbines (GESAT), a joint investment by Dussur and GE Vernova to manufacture heavy duty gas turbines and components in the Kingdom. GESAT is manufacturing gas fuel skids for the project, which consist of control valves, piping, and accessories that help manage the flow and pressure of gas supplied to the turbines.

"This project reflects our commitment to technological innovation, environmental responsibility, and advancing Saudi Arabia's energy sector. We are proud to be at the forefront of the energy transition in the Kingdom. This is also a great opportunity to work with GE Vernova and to pave the way for a sustainable energy sector in the Kingdom," stated **Jamal Wadi, President of Alfanar Projects**.

"We are honored to be part of this project with Alfanar and SEC. With electricity demand being high across the Kingdom due to factors like hot and harsh environmental conditions, a growing population, and the concentration of energy-intensive industries such as oil & gas, smelters, and petrochemicals, the availability of firm power on demand is critical in Saudi Arabia. Reducing the intensity of carbon emissions from power generation activities in the country is an important part of addressing the climate challenge," said **Joseph Anis, President & CEO of Europe, Middle East & Africa for Gas Power at GE Vernova**. *"We applaud SEC's efforts to reduce the carbon emissions of their operations for a more*



sustainable future."

The 7E gas turbine is a robust, proven platform that delivers high availability and reliability. It has a large installed base of over 1,150 units globally, with more than 270 turbines located in Saudi Arabia. The successful completion of this project can potentially provide learnings that can be applied to convert other 7E units running on liquid fuels across the Kingdom to also operate on lower carbon natural gas.

GE Vernova has contributed to the development of the Kingdom's energy infrastructure for almost 90 years, furthering economic diversification, localization, high value exports, and talent development efforts. Today, the company's investments in the country include the GE Manufacturing and Technology Center (GEMTEC) campus in Dammam, which includes a Service and Repairs Center for gas turbines, the GE MENA Decarbonization Center of Excellence, a Monitoring & Diagnostics Center for the remote monitoring of power generation assets, as well as GESAT.

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About GE Vernova

GE Vernova is a planned, purpose-built global energy company that includes Power, Wind, and Electrification businesses and is supported by its accelerator businesses of Advanced Research, Consulting Services, and Financial Services. 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 more than 80,000 employees across 100+ countries around the world. 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.



GE Vernova’s mission is embedded in its name – it retains its legacy, “GE,” as an enduring and hard-earned badge of quality and ingenuity. “Ver” / “verde” signal Earth’s verdant and lush ecosystems. “Nova,” from the Latin “novus,” nods to a new, innovative era of lower carbon energy. Supported by the Company Purpose, *The Energy to Change the World*, GE Vernova will help deliver a more affordable, reliable, sustainable, and secure energy future. Learn more: [GE Vernova](#) and [LinkedIn](#).

About Alfanar Projects

Alfanar Projects is a global company with Saudi roots that is considered a significant player in the energy sector and is committed to spearheading the path towards technological excellence. With a strong focus on forging collaborations and investing in cutting-edge technologies, Alfanar Projects is determined to contribute significantly to the global vision for energy transformation.

By leveraging its expertise and resources, Alfanar Project actively supports realizing the ambitious Saudi Vision 2030 through its involvement in renewable energy and infrastructure projects to help shape the energy industry's future.

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