

PRESS RELEASE

Turboden, together with Siemens Energy, starts the development of a "first of its kind" high efficient gas compressor station at GASCO in Dahshour, Egypt.

A 28MWe Organic Rankine Cycle (ORC) system coupled to Electrical Motor Driven (EMD) Compressor Trains working in island mode to increase the Dahshour station compression capacity of 25% without any additional fuel consumption, consequently reducing the emission of 120'000 ton CO_2 per year, and saving more than 65 million of Sm3 of natural gas per year. A concrete path towards decarbonisation.

Brescia, Italy, 16 February 2021 - **Turboden S.p.A**., a Mitsubishi Heavy Industries Group Company, is the supplier of the largest high-temperature ORC system ever built, which, coupled with 20 MWe electric motor driven (EMD) compressors supplied by **Siemens Energy**, boosts the efficiency of GASCO Dahshour gas compressor station (GCS).

GASCO Dahshour GCS project is a first of its kind. It will exploit the heat from four existing gas turbine trains and from the new high efficient Gas Turbines with low emissions supplied by Siemens Energy.

Thanks to the recovery of exhaust gas heat and high efficient compressor trains, this integrated solution allows to generate 192 GWh per year of fuel free electricity. This energy, powering two 10 MWe EMD compressors, allows GASCO to save 65 Million of Sm3 of natural gas per year and consequently **avoiding every year the emission of 120'000 tonCO₂** (equal to the CO_2 absorption of a forest area of six times the area of Manhattan, NY).

"As this system can work completely disconnected from the electricity grid and does not need water, it is perfectly suitable to be installed in remote or deserted areas. Moreover, the opportunity to replicate the project is a concrete step ahead towards the path to decarbonisation of the oil & gas industry". Stated *Paolo Bertuzzi – Managing Director and CEO Turboden S.p.A.*

"This unique project comes as part of our commitment to support the government in adopting energy efficient and sustainable solutions and business models to further sustain the country's energy infrastructure, which Egypt already has. Dahshour project, with this game changing solution will help reinforce the availability and boosting of natural gas to support South of Egypt". Said *Emad Ghaly- Managing Director of Siemens Energy in Egypt*.

This project is financed by the **EBRD (European Bank for Reconstruction and Development) within its five-year decarbonization program**, started in 2018, and focused on modernization and energy efficiency. GASCO, the state-owned operator of the natural gas transmission networks in Egypt, intends to invest in the efficiency improvement of its infrastructure leveraging EBRD's funding, fully consistent with the Green Economy Transition Approach (GET) contributing to the enhanced sustainability of the industry.

"At **Siemens Energy** we focus on providing our customers with sustainable energy solutions, we are glad to contribute with our gas turbine and EMD compressor trains to this state of the art pioneer project in the MENA region. Our reliable equipment will ensure low life cycle cost with reduced Nox and CO emissions at GASCO Dahshour GCS". Stated **Youssef Taabouz – Regional Manager North Africa Siemens Energy Industrial Application**.



"This unique project is a concrete demonstration that ORC systems are energy efficiency solutions that allows the O&G industry to improve the sustainability of its processes, supporting the industry on its path toward decarbonization. We are very proud to cooperate with GASCO on this integrated solution which can become a best practice for a new generation of sustainable gas compressor stations," stated *Nicola Rossetti - Sales & Business Development Manager -Oil&Gas and Combined Cycle*

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Turboden S.p.A., is an Italian firm and a global leader in the design, manufacture and maintenance of Organic Rankine Cycle (ORC) systems, highly suitable for distributed generation, that generate electric and thermal power exploiting multiple sources, such as renewables (biomass, geothermal energy, solar energy), traditional fuels and waste heat from industrial processes, waste incinerators, engines or gas turbines. Today Turboden expands its solutions with gas expanders and large heat pumps to play a broader role in the decarbonisation of the District Heating sector and of some energy-intensive industrial processes. *Key numbers*: about 250 employees; expected turnover in 2020 around 70 million euros (Turkish subsidiary included); 400 plants in 50 countries; 25,000 GW/h and 19 million working hours coming from plants in operation. www.turboden.com

The Egyptian Natural Gas Company (GASCO) was established in March 1997, taking the lead as a pioneer company in Egypt in the field of gas transmission, distribution, marketing and processing, competing and standing on equal footings with other international counterparts.

Siemens Energy is one of the world's leading energy technology companies. The company works with its customers and partners on energy systems for the future, thus supporting the transition to a more sustainable world. With its portfolio of products, solutions and services, Siemens Energy covers almost the entire energy value chain – from power generation and transmission to storage. The portfolio includes conventional and renewable energy technology, such as gas and steam turbines, hybrid power plants operated with hydrogen, and power generators and transformers. More than 50 percent of the portfolio has already been decarbonized. A majority stake in the listed company Siemens Gamesa Renewable Energy (SGRE) makes Siemens Energy a global market leader for renewable energies. An estimated one-sixth of the electricity generated worldwide is based on technologies from Siemens Energy. Siemens Energy employs 91,000 people worldwide in more than 90 countries and generated revenue of around €29 billion in fiscal year 2019. www.siemens-energy.com.