Turboden at COP 27 to present a first of its kind energy efficiency project in Egypt's oil and gas sector

The Dahshour waste heat recovery project represents a best practice for the decarbonization of natural gas transportation

Sharm el-Sheikh, 11 November – Turboden, Mitsubishi Heavy Industries group company, lands in Sharm El Sheik **to attend the Conference of the Parties of the UNFCCC (COP27)** in two high-level side events.
The **CEO Paolo Bertuzzi** held speeches **11 November and Thursday 17 November** to present the innovative Dahshour Project.

11 Novembre 2022 at 2 p.m. "Decarbonization day"
In the first panel, promoted by the **Egyptian Minister of Petroleum and Mineral Resources, H.E. Tarek El Molla announced the Energy Efficiency strategy 2022-2035 of Egyptian Petroleum sector,** during the "Decarbonization day" indicating Dahshour waste heat recovery project as one of the key solutions.
Turboden brings its know-how, describing the economic and environmental benefits of this project as well as giving its own point of view on the oil&gas sector and other energy intensive industries decarbonization.

17 November 2022 at 3.30 p.m. "**Energy Efficiency and Sustainability in Gas Infrastructure**"
a second high-level round table is held by **Turboden** jointly with the **Italian Embassy in Cairo**, where policymakers and stakeholders, along with representatives from European Bank for Reconstruction and Development (**EBRD**), and International Energy Agency (**IEA**), discuss on best cases and solutions for concrete deployment of energy efficiency solutions in gas infrastructure, through private-public cooperation.

The Dahshour Projects
Natural gas passing every day through pipelines all over the world is "pushed" by means of compressor stations installed along pipeline-network systems.
These stations are usually installed at intervals of about **100 km** to avoid pressure loss, approximately **3 - 5% of all gas is lost on transportation**, to feed the gas turbines driving the natural gas compressors.
These open cycle gas turbines release exhaust gases at more than 400 °C. Designing and installing a proper **waste heat recovery system** based on organic Rankine cycle technology (ORC) it is possible to produce 1/3 of gas turbines shaft power in the form of electricity. Carbon free Electric power useful to feed the compressor station captive consumption or to drive electrical motor driven compressors.

The Dahshour Project is the first in the world adopting this scheme on a large scale, combining an ORC based waste heat recovery system with electric compressor.

Turboden S.p.A. I via Cernaia, 10 I 25124 Brescia I Italy I t. +390303552001 I f. +390303552011 I info@turboden.it
turboden@legalmail.it I C.F. / P.IVA (VAT) 02582620981 I capitale sociale € 1.800.000 i.v. I registro delle imprese C.C.I.A.A. di Brescia I REA 461817 I Società soggetta alla direzione e coordinamento di Mitsubishi Heavy Industries Ltd. I Company subject to the management and coordination of Mitsubishi Heavy Industries Ltd.

In this project, Gasco with the financial support of EBRD, is increasing the pumping capacity of the compressor station of about 70%, one third of this improvement is done at zero-impact, with **65 million standard cubic meters of natural gas saved per year and reducing CO2 emissions up to 120,000 tons/year (compared to normal solution with additional gas turbines). This** also **increases energy security and reduces environmental footprint.**

Energy efficiency in gas transmission and distribution infrastructures is in fact a ready and proven solution to save gas available for internal consumption or for increasing **export volumes.**

"Our special thanks to the H.E Minister Tarek El Molla and to the Italian Ambassador in Cairo, H.E. Michele Quaroni for having us talking about a concrete project based on decarbonization in the oil & gas industries. This project today is still an "isolated best practice". However, this solution is now available, proven and economically feasible with current price of energy. Policy makers should turn these isolated cases in common normal practice soon, adopting proper incentives, effective CO2 emission trading scheme, tax credit or other supports. Turboden, as energy efficiency solution provider, we continue working on the learning curve to reduce the implementation costs and to proactively promote these success cases. Turboden has designed, developed, and installed more than 40 waste heat recovery power projects worldwide, allowing customers operating in different sectors, a remarkable cost-saving, fixed payback time and return on investment" declares Paolo Bertuzzi, Ceo of Turboden.

With the support of public funds for sustainable development as well as a proper policy framework, it will be possible **to promote replicable energy efficiency projects in several countries,** to modernize gas infrastructure, achieve gas savings, **preparing this infrastructure for future transmission of green gas such as hydrogen.**

For more information:
alessandra.costa@turboden.it
Alessandra Costa
Communication & Marketing Manager

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 decarbonization of the district heating sector and of some energy-intensive industrial processes.
www.turboden.com