Muscat grid modernization



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MUSCAT: A submarine cable proposed to link Masirah Island with the national grid of the Sultanate of Oman is not only the first of its kind, but will also be technologically cutting-edge, according to Oman Electricity Transmission Company (OETC), the operator of the grid.

A number of international contractors are currently participating in a competitive tender for a contract to lay the cable, which will enable the supply of cost-competitive natural gas-powered electricity to the island, thereby displacing expensive and carbon-intensive diesel-based generation used to power the island.

Work on the landmark project - the most notable of OETC"s strategic investments planned this year, aside from the ongoing North-South Interconnection Project (Rabt) - will be launched during 2024, the majority state-owned grid operator said.

"OETC is set to embark on a historic project in the Sultanate of Oman. This project aligns with Oman"s Vision 2040 that aims to achieve carbon neutrality by marking a significant step towards reducing carbon emissions," OETC noted in its 2023 Annual Report issued earlier this week.

"The key project involves linking the island of Masirah to OETC"s Transmission Network through a 35-kilometre submarine cable with a voltage of 132 kilovolts and 60 kilometres of overhead power transmission lines. The connection will extend from the Mahout substation at 400/132kV kilovolts to the Masirah 132/33kV grid station. This project includes a unique technological component in the form of the submarine cable, which employs complex and highly critical technologies," the company further stated.

OETC has been ploughing sizable sums into the expansion and modernization of the country's transmission system in recent years, in part to support Oman's transition to renewables, as well as the achievement of its Net Zero goals.

In 2023 alone, the company invested around RO 200 million in a number of strategic projects. The bulk of this investment has gone into the construction of Phase 1 of the North-South Interconnection Project (Rabt). As many as five major grid stations were launched as part of the initiative in 2023, alongside the roll-out of 660 kilometres of overhead transmission lines.

"The projects completed in 2023 had a combined cost of roughly RO 197 million. They improve the transmission grid in line with the operational and strategic plan. They were established to ensure that the system has the capacity and readiness to handle the rising demand for electricity throughout Oman," the company stated in its report.

Also in 2023, OETC successfully completed all the required tests to remotely control generation at the Ibri



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Solar IPP - the first major solar power project to be connected to the national grid. It was also the first renewable energy plant to be controlled remotely from OETC''s Load Despatch Centre in Muscat.

Another key project that was delivered last year was the Cyber Security Operations Centre (CSOC), a first of its kind facility that integrates cyber security monitoring systems with operational and information technologies.

Finally, an Online Condition Monitoring (OLCM) system was launched to monitor the company's assets remotely. The initiative is expected to make a quantum leap in monitoring and improving the health of OETC''s assets, it added.

MUSCAT : Oman Electricity Transmission Company (OETC), which owns and operates the country's transmission system, says it has successfully completed the first phase of its North-South Interconnection Project (Rabt), a landmark initiative to link Oman's two standalone grids into one integrated national network.

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