Namibia energy storage applications

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The Economic Association of Namibia together with Renewable Energy Industry Association of Namibia (REIAoN) launched a study on Utilisation of Energy Storage Technologies in Namibia. Find the presentation by Dr. Detlof von Oertzen via the download link.

Key contracts have been signed for the first-ever grid-scale battery storage project in Namibia, signifying the African country"s dedication to modernising its energy infrastructure, according to a top local official.

Engineering, procurement and construction (EPC) contracts were signed today (13 December), between national electric utility Namibia Power Corporation (NamPower) with Shandong Electrical, Engineering & Equipment Group (SDEE) and battery manufacturer-integrator Narada Power.

A joint venture (JV) between the two Chinese companies will deliver the 54MW/54MWh Ombuu battery energy storage system (BESS) project in Namibia"s Erongo Region, at the existing Omburu Substation. Construction is expected to take around 18 months for the project to come online in the latter part of 2025.

At a signing ceremony for the EPC contract, Wilhencia Uiras, executive director of Namibia"s National Planning Commission said the battery storage project represented a "crucial step" towards "embracing innovative and eco-friendly solutions".

"This project not only signifies our dedication to modernising our energy infrastructure but also underscores our responsibility towards future generations," Uiras said.

As reported by Energy-Storage.news in December 2021, the Omburu BESS project is supported by a EUR20 million (US$21.58 million) grant from the German government through national development bank KfW. That represents about 80% of the total cost, with NamPower financing the remainder.

According to a fact sheet produced by NamPower and KfW, the BESS will store surplus renewable generation as well as electricity imports from the Southern African Power Pool (SAPP) to supply electricity at peak times and offset the use of the local Van Eck coal power plant.

In addition to providing local grid stability services, the BESS will enable Namibia to trade energy more effectively in the SAPP and reduce the country"s need to make expensive emergency imports from the Eskom grid in South Africa.

Namibia currently imports up to 70% of its electricity from neighbours, predominantly generated by coal. Against that backdrop, the country is targeting renewables to be 70% of the generation mix by 2030, more than double the 30% it is today. It is also targeting domestically-produced energy to represent an 80% share by

the end of this decade.

That expansion of renewables, which will include 100MW of generation NamPower itself intends to add to the grid by 2025, and a further 500MW of solar and wind which could come from liberalisation of the energy market, means there will be a growing need for energy storage to balance fluctuations in supply and demand.

The BESS will use Narada Power"s lithium iron phosphate (LFP) cells, and will perform a number of "stacked" applications: peak shifting, energy arbitrage, emergency backup power, ramp-rate control and reactive power control. Peak shifting will be the main use case, with the applications stacked in order of priority so that the system performs the most economically valuable service at any given time.