Utility-scale solar belmopan

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On November 7, 2024, the University of Belize campus in the capital city of Belmopan was buzzing with excitement as the Ministry of Public Utilities, Energy, Logistics, and E-Governance (MPUELE) hosted an Energy Fair under the CARICOM theme, "Invest in Sustainable Energy - Accelerating the Energy Transition." The event, aimed at promoting sustainable energy practices and innovations, drew a large number of both public and private industry professionals, local and international stakeholders, and students, all eager to learn about the latest advancements in energy technology.

The fair, the second of its kind, showcased a diverse array of exhibitors, including renewable energy companies, local innovators, government agencies, and the banking sector. Visitors had the opportunity to explore booth displays, and participate in informative discussions about the future of energy in Belize.

In his keynote address, Minister of Public Utilities, Energy, Logistics, and E-Governance, Hon. Michel Chebat spoke about Belize"s unique potential, given its geographical location, to leverage and drive the energy transition agenda in the Caribbean and Central America. He continued by saying that, "The energy transition is not merely an investment shift, but a call for all sectors of society to consider their role in this transition to take decisive, bold actions towards a transformative journey that will shape the future of Belize and our region."

During the fair"s opening ceremony, Minister Chebat also signed a memorandum of understanding between the Ministry of Energy and the University of Belize for the establishment of an Energy Center on UB"s campus.

Belize is working towards strengthening and stabilising its energy sector by investing in domestically produced energy. The country is developing sustainable energy project policies, including expanding biomass power and solar-based distributed power systems. Belize"s solar energy is currently limited to off-grid use, primarily in remote areas by residential consumers, hotels, and resorts.

Off-grid solar systems are completely self-contained and self-sufficient, providing electricity 24 hours a day. These systems have their own set of batteries to store and supply power, and they can also utilise other power sources such as small wind turbines or hydropower to become hybrid systems. In Belize, off-grid solar is used by those who are not connected to the national grid, including tourist destinations such as eco-tourism lodges in the rainforest and resorts in remote areas.

The Government of Belize (GOB) has expressed intentions to encourage investment in utility solar-energy facilities, although no public announcement has been made yet. On a smaller scale, the GOB has installed solar micro-grids and solar-powered streetlights in rural communities not yet connected to the national grid. Additionally, the GOB launched a pilot project introducing electric vehicles in 2022 and plans to eventually

replace the country"s diesel school bus fleet with electric buses.

Belize is also pursuing initiatives to promote energy sustainability, such as a project to convert sargassum seaweed to electricity, and exploring opportunities in large-scale solar and liquefied natural gas (LNG). Despite these efforts, Belize remains a net importer of electricity from Mexico, resulting in high and unpredictable energy import costs.

Belize is committed to developing sustainable energy practices and has invested in domestically produced energy to strengthen and stabilise its energy sector. The country is currently a net importer of electricity from Mexico, which makes energy imports expensive and unpredictable.

Belize"s solar energy usage is limited to off-grid use, primarily in remote areas by residential consumers, hotels, and resorts. However, the Belizean government is taking steps to encourage investment in utility solar-energy facilities to enhance its energy sustainability and become a net exporter of energy.

The government has not yet announced a request for proposals for utility-scale solar projects, but it has implemented solar micro-grids and solar-powered streetlights in rural communities disconnected from the national grid. Belize also offers 100% financing for installing solar panel systems for homes, businesses, and agricultural operations.

Solar panel systems in Belize can be Off-Grid, Grid-Integrated, or Grid-Tied. Off-Grid systems are completely self-contained and self-sufficient, providing 24-hour electricity to homes, hotels, resorts, and farms. Grid-Integrated systems are connected to the national grid but also have batteries to store and supply power. Grid-Tied systems are connected to the grid but do not have batteries, making them more affordable upfront but less effective at saving money.