

# GUYANA BUILDS ENERGY STORAGE POWER STATION



Will Guyana build a new hydropower plant? Oct 28 (Reuters) - Guyana plans to meet an unprecedented growth expected in its power demand by building a new gas-fueled plant and expanding its hydropower capacity, a key step to leave behind fossil fuels for generating electricity, President Irfaan Ali said this week.



What is Guyana's Energy Project? The project will be an immediate boost to the reliability of Guyana's electricity system and will support near term integration of renewables into the grid. The order was booked with Wartsil in December 2019. Oil exploration activities in the offshore waters of Guyana have resulted in significant finds of crude oil and associated gas.



Does Guyana have electricity? Guyana has some of the highest electricity rates in the region but power outages are frequent. Many manufacturers have opted to generate their own electricity. Most Guyanese live along the coast, where power is generated from old diesel plants that are mostly in need of upgrade or replacement.



How much power does Guyana need? Demand on its main power grid, which supplies 78% of the country's energy needs, is expected to rise to 415 megawatts (MW) in 2025 from 126 MW last year, the president said. Guyana has some of the highest electricity rates in the region but power outages are frequent. Many manufacturers have opted to generate their own electricity.



What will Guyana's Power Supply look like in 2025? Guyana's transmission and distribution lines also will undergo upgrades. Demand on its main power grid, which supplies 78% of the country's energy needs, is expected to rise to 415 megawatts (MW) in 2025 from 126 MW last year, the president said. Guyana has some of the highest electricity rates in the region but power outages are frequent.

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Do Guyanese produce electricity? Many manufacturers have opted to generate their own electricity. Most Guyanese live along the coast, where power is generated from old diesel plants that are mostly in need of upgrade or replacement. The nation, which depends about 97% on imported fossil fuels, spent \$100 million to generate electricity last year.



The government of Guyana has made the CH4/Lindsayca consortium agree to build a 300 MW gas-fired power plant and an NGL plant at a reduced price. The EPC contract was awarded at \$759 million ??? instead of \$898 million as initially agreed ??? after some components of the original bid were weeded out, with the plants requested to be ready by



The last phase of the Gas-to-Energy project is moving apace as a new \$8.6 Million US contract was signed between the Government of Guyana and a Chinese company known as Power China to construct a building to house the National Control Centre. Power China was one of the competitive bidders among three other companies shortlisted [???



On November 16, Fujian GW-level Ningde Xiapu Energy Storage Power Station (Phase I) of State Grid Times successfully transmitted power. The project is mainly invested by State Grid Integrated Energy and CATL, which is the largest single grid-side standalone station-type electrochemical energy storage power station in China so far.



Tehachapi Energy Storage Project, Tehachapi, California. A battery energy storage system (BESS) or battery storage power station is a type of energy storage technology that uses a group of batteries to store electrical energy. Battery storage is the fastest responding dispatchable source of power on electric grids, and it is used to stabilise those grids, as battery storage can ???

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CEOG is an innovative multi-megawatt power plant designed to produce reliable and clean electricity. CEOG will provide cheaper and firm power all year long, day and night, to 10 000 homes in Western Guiana. Combining a photovoltaic plant and mass storage of energy in the form of hydrogen, CEOG is the alternative to a classic diesel power plant.



"The Gas-to-Energy Task Force has made substantial progress in the integrated power plant and NGL facilities, with 6.8 per cent of site preparation already completed. The scope of Guyana's gas-to-energy project consists of the construction of 225 kilometres of pipeline from the Liza field in the Stabroek Block offshore Guyana, where



The new power plant will, therefore, operate on five W?rtsil? 34DF dual-fuel engines that will initially run on liquid fuel, and on natural gas when that fuel becomes available. As part of the project, W?rtsil? will also supply a 69 kV sub-station to be integrated within the existing Garden of Eden sub-station.

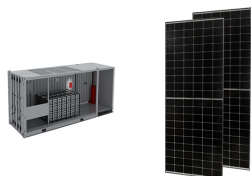


It comes six months after the country received US\$83 million in financing from Inter-American Development Bank (IDB) and Norwegian Agency for Development Cooperation, as reported by Energy-Storage.news at the time.. The eight ground-mounted solar PV plants will total 33MWp while the battery energy storage systems (BESS) will amount to 34MWh of capacity.



The power plant will be equipped with five W?rtsil? 34DF dual-fuel engines, which will operate on liquid fuel and natural gas. The Finnish company intends to deliver the power plant later this year. Once completed, the power plant is expected to enhance Guyana's electricity system and support future renewables integration into the grid.

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Longer-term plans point to 500 MW of gas-fired generating capacity, and by 2030 Guyana anticipates having 70% of its energy supplied through a mix of natural gas and renewables, including



United States (U.S.) Ambassador to Guyana, Nicole Theriot this week talked up the Wales gas-to-energy project as a pathway to cleaner energy, and sent a strong signal that the American government was poised to approve a loan for the 300 megawatt natural gas-fired power plant. "We're literally this close to finalising the EXIM loan that???"



Background. The Wales power station is part of a proposed gas-to-power project (the Gas-to-Energy Project) that would make use of natural gas from the Liza oil and gas field in the Stabroek Oil and Gas Block off Guyana's Atlantic coast. Natural gas for the power station would be transported onshore via the proposed Liza Gas Pipeline.. During early 2021, locations for the ???



Guyana Power and Light (GPL) has awarded W?rtsil? Georgia Power has filed for permission to add for battery energy storage sites with a combined capacity of 500 MW, slated to start operations in 2026. Arkansas Electric Corp. (AECC) is forging ahead with plans to build a 900 MW open-cycle gas power plant in Texas, near Naples



The technology group W?rtsil? and electric utility Guyana Power and Light Inc. (GPL) have signed an Engineering, Procurement and Construction (EPC) contract for a 46.5 ???

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Welcome to the Guyana Energy Agency; Opening hours: Mon - Thur: 8am - 4 Besides the natural gas-fired power plant, and to provide the necessary firm capacity, new reciprocating 46MW dual fuel (HFO/NG) engines were added to the DBIS grid in 2021. (including storage capacity and run-of-river). It is anticipated that Guyana will build two



Guyana's proposed Gas to Energy project will use natural gas from the country's offshore wells to produce electricity for 68% of Guyana's population???those that are connected to the Demerara- Berbice Isolated System, owned and operated by Guyana Power & Light (GPL). Using natural gas can supplement any shortfall in the supply and storage



The costly infrastructure investments if coupled with the right maintenance practices have a quite long lifespan, between 30-50 years for the Gas power plants and the NGL plants and an average of 50 years for the natural gas transmission pipelines; long enough to pay off the hundreds of millions of dollars it takes to build them and longer in



The Bath County Pumped Storage Station has a maximum generation capacity of more than 3 gigawatts (GW) and total storage capacity of 24 gigawatt-hours (GWh), the equivalent to the total, yearly electricity use of about 6000 homes.. Construction began in March 1977 and upon completion in December 1985, the power station had a generating capacity of ???



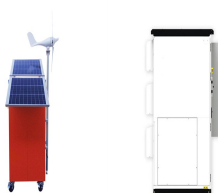
During the earnings call, Woods was asked about the benefits of the model Gas-to-Energy (GtE) Project in Guyana which includes the construction of an Integrated Natural Gas Liquid (NGL) plant and a 300-megawatt (MW) combined cycle power plant at Wales, West Bank Demerara (WBD), utilising natural gas from oil production activities in the



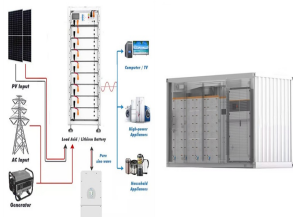
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Hydro-electric power storage plants that require man-made dams to produce energy can cost billions of dollars to construct, although they can store significantly more energy than 100MW. The largest hydro storage plant in the world is the Bath County Pumped Storage Station in Virginia, US, which cost \$1.6bn in 1985 and has a storage capacity of



Guyana Energy Agency e 4 The completion of the installation of a 400kWp solar PV system with storage along with a Building Energy Management System at the Caricom Secretariat building under a Japanese grant was delayed due to the pandemic and subsequent travel restrictions. The installation is expected to be completed in 2021.



The rising oil producing nation relies on imported fuels in its shaky electric grid and has promised to use its oil wealth to construct a 140-mile (225 km) pipeline, gas processing facility and up to 300 megawatt (MW) power plant. Winston Brassington, a government consultant involved in the project, said the combined-cycle power plant is delayed and full operation will ???



It was announced In April 2023 that Guyana had applied for a US\$646 million loan from the US Exim Bank to finance the Gas-to-Energy Project, which includes the construction of an Integrated Natural Gas Liquid (NGL) plant and a 300-megawatt (MW) combined cycle power plant at Wales, West Bank Demerara, utilising natural gas from the country's



-watt system can power two nine-watt LED lamps, one 12-watt stand fan, and is equipped with a USB port for charging portable electronic devices. battery energy storage system, and associated balance-of-system components. The electrical network interconnects the system to the public/community buildings via a 13.8 kilovolt (kV) medium

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The BBC Echo Vessel last week successfully berthed at the Muneshwers Shipping, John Fernandes and Guyana Shore Base Inc (GYSBI) terminals offloading transformers for Guyana's gas-to-energy and



W?rtsil? power plant will add reliability to Guyana's electricity supply and support future use of renewables. Our offering comprises flexible power plants, energy management systems, and storage, as well as lifecycle services that ensure increased efficiency and guaranteed performance. W?rtsil? has delivered 72 GW of power plant



Consortium building gas-to-energy power, NGL plant to hire 1500-2000 Guyanese. over 30 members of Guyana's delegation to the Houston, Texas event were given the opportunity to tour oil and gas consortium Lindsayca/CH4's (LNDCH4) facility and updated on employment opportunities for over 1500 Guyanese. storage and offloading (FPSO



When completed, Guyana will have a natural gas-fired power plant and natural gas to liquids plant, capable of producing at least 4,000 barrels per day, including the fractionation (or separating



Silicon Valley Power (SVP) has selected Ameresco, a Massachusetts-based renewable energy developer, to build a 50MW/200 megawatt-hour (MWh) battery energy storage system (BESS) in Santa Clara, California, US. The BESS project, known as Kifer Energy Storage, will offer additional local area capacity with a reliable and flexible electrical system.