

# CAPE VERDE LARGE ENERGY STORAGE PROJECT



When will Cape Verde's energy storage centre be operational? During the presentation of the project, Cape Verde's National Director for Industry, Trade and Energy, Rito Vora, announced that the energy storage centre is scheduled to be operational by 2030, with the aim of injecting 7% of renewable energy into the national public grid and 18% into that of the island of Santiago.



How can Cape Verde meet its goal of 50% renewables? Cape Verde can meet its goal of 50% renewables today by integrating energy storage. A 100% Renewable System is achieved from 2026, with a 20 year cost from 68 to 107 M???. Current paradigm doubles emissions in 20 years and costs ranges from 71 to 107 M???. The optimal configuration achieves 90% renewable shares with a cost from 50 to 75 M???.



What is Cape Verde's goal? Cape Verde's goal is 100% renewable energy by 2025. Why it may just do it Cape Verde's goal is 100% renewable energy by 2025. Why it may just do it Cape Verde's renewable energy resources account for about 25% of total energy production. Shutterstock



What technology could be integrated into Cape Verde's electricity generation offering? Another technology that could be integrated into the electricity generation offering is the country's desalination systems. Many of Cape Verde's communities depend partially, or entirely, on these for drinking water.



Are Cape Verde communities using a solar and wind-based micro-grid? At least three communities in Cape Verde are already using a solar and wind-based micro-grid. A microgrid is a local electricity grid. It includes electricity generation, distribution to customers, and, in some cases, energy storage.

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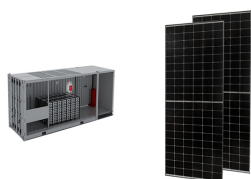
Does Cape Verde have solar power? Like many African countries, Cape Verde's tropical location has good potential for solar photovoltaic (PV) electricity. One study suggests that the solar PV capacity potential is more than double the currently installed electrical generating capacity. Most of the potential development is on the densely populated island of Santiago.



The combined CAES and BESS will create a multi-duration energy storage project which Corre may model at its other sites. It is developing large-scale projects internationally with the most advanced of these in Netherlands and Germany- we interviewed the company earlier this year (Premium access). The firm is primarily a project developer



2 Under these circumstances, stand-alone electrification systems that use renewable energy sources are a suitable alternative to provide electricity to isolated communities in a reliable and



Along the same lines, Ciliana Lima, with a master's degree in Electrical and Computer Engineering, stresses that the resources already exist in Cape Verde, but in order to improve their use, much work will still be needed, namely through the improvement of the Electrical Systems and the investment in new technologies and storage systems



The island state, Cabo Verde, also known as Cape Verde, relies heavily on imported thermal energy for its power supply and the energy-intensive process of desalination for clean water. Consisting of a cluster of 10 islands in the Atlantic Ocean, it is well known for its white sandy beaches, dry tropical climate and unique culture, influenced by

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In related news, ENGIE EPS, the microgrid and energy storage division of the major European utility, revealed that its proposed hybrid large-scale solar-plus-storage project was selected by Hawaiian Electric (HECO) as one of 16 solar-and-battery or standalone project proposals through a competitive solicitation process.



Cape Town Mayor Geordin Hill-Lewis announced that the city would design, build and operate a solar PV plant with battery storage to the tune of 1.2 billion Rand (US\$65 million). The Paardevlei project near Somerset West will "yield up to 60MW of renewable energy" although the official size of the either portion was not revealed.



Longroad's latest Arizona project will include a 214MWac/855MWh lithium-ion (Li-ion) battery energy storage system (BESS). Image: Longroad Energy. Longroad Energy has achieved financial close on



The 63.3MW Calatagan Solar Farm, which was the largest in the country when it was commissioned in 2016. Image: Solar Philippines. The Board of Investments (BOI) in the Philippines has given a "green lane certificate" for a solar and storage project said to be the largest in the world, enabling it to proceed at a quicker pace.



As frequent readers of Energy-storage.news might know, the majority of BESS projects built and in construction in Chile are paired with a solar PV project. Although a standalone project, the Arena BESS facility is still located in the northern region of Chile, where most of the solar PV capacity is located, due to its high irradiation levels.. Its proximity to solar resources ???

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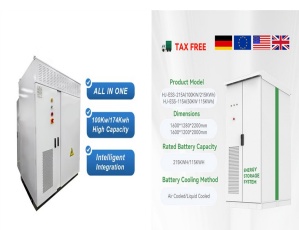
114KWh ESS



Notable energy storage developments for the company during 2022 included the January approval of two large-scale solar-plus-storage projects totalling 600MW PV and 480MW battery energy storage systems (BESS), which would be aimed at replacing the role on the grid played by a retiring coal power plant in Winnemucca.



Local authority approval for 2,000MW California mixed Li-ion and flow battery energy storage project. By Andy Colthorpe. December 10, 2021. US of Supervisors of Imperial County voted unanimously at a meeting on 7 December to grant a conditional use plan for the large-scale Westside Canal Battery Storage Project proposed by Con Edison



The project was a huge success and to this day remains one of the most important and influential strategic studies in the energy sector of Cape Verde. The Renewable Energy Atlas includes the strategic identification of resource potential, location and analysis of the solar, wind, pumped-storage, geothermal and wave resources, and resulted in

APPLICATION SCENARIOS



ESB Networks has announced that Ireland's electricity grid now has 1GW of energy storage available from different energy storage assets. This figure includes 731.5MW of battery energy storage system (BESS) projects and 292MW from Turlough Hill pumped storage power station ??? which is celebrating its 50th anniversary this year.



That doesn't just apply to standalone energy storage projects; GEMS is an EMS from which any type of energy asset can be controlled, including the gas-fired engine power plants which W?rtsil?'s legacy business divisions manufacture and sell around the world. From a technical perspective, delivering an EMS fit for very large projects

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The two projects (pictured) are sited at a Southern California Edison substation in Santa Ana, California. Image: Convergent Energy + Power. Convergent Energy + Power has celebrated the successful commissioning and start of commercial operations at two battery energy storage system (BESS) projects with a combined capacity of 60MWh in California, US.



In concurrent news, Giga Storage hopes to start construction on its 300MW/1,200MWh Leopard BESS project in the Netherlands this year, CCO Lars Rupert told Energy-Storage.news whilst at the ees Europe trade show and conference last week.. Leopard is also planned for a location in the north of the country, at a former aluminium smelting site of ???



Speaking to Energy-Storage.news at last week's Energy Storage Summit CEE 2024, its Poland country manager Przemek Zielinski said it could be the first to make it to the market with a grid-scale battery energy storage systems (BESS) there. "In Poland we will have 52MW of PV by the end of the year, and we are closing a deal and will initiate construction on ???



Hyme Energy has inaugurated a molten hydroxide salt energy storage project in Denmark, the first such deployment in the world, it claimed. The system has been built as part of a project called "Molten Salt Storage ??? MOSS", located in Esbjerg, Denmark, and is the world's first MW-scale thermal energy storage unit based on molten

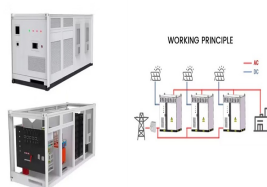


Akaysha Energy, rapidly becoming one of the country's best-known and most prolific new developers, has received planning approvals for two of its pipeline of around 10 projects in development: the 200MW/800MWh Elaine battery energy storage system (BESS) project in Victoria, and the 100MW/200MWh Palmerston BESS in the island state of Tasmania.

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A double-header of large-scale solar and storage project news from Arizona, US, with PPAs between Recurrent Energy and utility APS, and developer Avantus selling a co-located project to D. E. Shaw. 100MW thermal solar salt energy storage system in Xinjiang, China, to be complete by end of 2024



The government of Cape Verde, an archipelagic Small Island Developing State (SIDS) off the coast of Senegal, has established a goal to achieve 100% of its electricity from renewable sources by 2025.



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The Pillswood Battery Energy Storage System (BESS) near Hull in northern England was officially opened by Harmony Energy and its investment company, Harmony Energy Income Trust, in March 2023. This 98MW/196 MWh scheme is Europe's largest by capacity, using a Tesla 2-hour Megapack technology system.



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The project was one of a total eight projects representing 343MW/1,440MWh of battery storage resources selected by Eskom through a competitive tender in mid-2022, along with 60MW of solar PV, aimed at increasing the utility's available capacity as outlined in its 2019 integrated resource plan (IRP).. The buildout of that portfolio is happening in two phases, with ???



The first example of the latter was the Energy Storage for Commercial Renewable Integration (ESCRI) project in South Australia, which uses advanced inverters at a 30MW/8MWh battery energy storage system (BESS) supplied by Hitachi ABB Power Grids (now Hitachi Energy). ESCRI was commissioned in 2018.



This is the largest storage portfolio under construction in Mississippi, and Origis expects to commission all three projects next year. "Golden Triangle II is the first step in fostering a zero-carbon economy across the state that supports our nation's economic and energy security goals," said Origis chief commercial and procurement officer Johan Vanhee."



Ambri, provider of long-duration energy storage, announced that SA energy company Earth & Wire has placed an order for Ambri's Liquid Metal battery system. When completed, it will be the largest battery energy storage system to be deployed in South Africa. The Liquid Metal battery system will serve a 300MW, 1,200 MWh combined wind- and solar ???