

# **WORLD POWER SYSTEMS REVIEW**

**15 August 2023**

**1 August 2023**

## **Bangladesh: coal shortage - Rampal power plant production halted again**

Electricity production at the Rampal Thermal Power Plant in Bagerhat has been suspended again due to coal shortage. Power generation was cut off from 4:30am on Sunday, Bangladesh-India Friendship Power Company Ltd (BIFPCL) Deputy General Manager Anwarul Azim said.

He said: "The power plant would resume operations upon the arrival of new coal imports. A shipment of 31,000 metric tons of coal was received from Indonesia on July 13. Unfortunately, the power generation came to a halt as the coal supply depleted." Earlier, power generation and supply were suspended from June 30 to July 9. The plant resumed production on July 10 after maintenance work. But six days after the commissioning, the plant's turbine fault stopped power generation and supply to the national grid from July 16. In the past, Rampal coal-fired thermal power plant has been closed several times due to various problems including mechanical faults and maintenance. The first unit of 660MW of Rampal Maitri Super Thermal Power Project went into commercial production on December 23, 2022.

*Dhaka Tribune*  
<http://www.dhakatribune.com/>

**2 August 2023**

## **US doubles renewable subsidies to \$15.6 billion in last seven years**

U.S. subsidies for renewable energy producers more than doubled between 2016 and 2022, forming nearly half of all federal energy-related support in that period, a U.S. government [report](#) released on Tuesday showed.

Most of those subsidies took the form of tax incentives in recent years, with solar applications making up the largest share of the subsidies due in part to rapid industry growth, the report showed. That growth also helped solar overtake the share of biofuels, which was the largest beneficiary of tax incentives in 2016, the report said. In 2021, funding for the Low Income Home Energy Assistance Program, which assists with energy bills and other energy-related costs, saw a one-time doubling to nearly \$10 billion, after Congress approved additional funding for the program under its COVID-19 relief plan.

Meanwhile, subsidies related to natural gas and petroleum became a net cost to the U.S. government, which gave tax breaks worth \$2.1 billion in fiscal year 2022 compared with a revenue inflow of \$2.2 billion in fiscal years 2016 and 2017 combined. These include provisions ranging from incentives for domestic production, write-offs and deductions tied to foreign production and income, and approved accounting methods that can reduce the stated taxable value of assets.

*Reuters*  
<http://reuters.com>

**2 August 2023**

## **JERA starts operation at Anegasaki thermal power station New Unit 3**

Japan's Energy for a New Era (JERA), a joint venture between TEPCO and Chubu Electric Power, has achieved commercial operation at the 650MW New Unit 3 of the Anegasaki thermal power station in Japan. New Unit 3 is part of the now completed Anegasaki thermal power station upgrade which involved the replacement of four ageing oil and gas-fired units with three liquefied natural gas (LNG)-fired power generation units. The combined capacity of the new units is 1.95GW. Installed by JERA's subsidiary JERA Power Anegasaki, each of the new units utilises a gas turbine combined-cycle power generation

# **WORLD POWER SYSTEMS REVIEW**

**15 August 2023**

system (GTCC). The new units have a capacity of 650MW each. According to JERA, New Unit 3 will help deliver a stable electricity supply as well as mitigate environmental impact by lowering carbon dioxide emissions. The company stated: “JERA will continue to move steadily forward in replacing aging equipment with state-of-the-art power stations as it works to contribute to a stable electricity supply and reduce CO2 emissions.”

New Unit 1 and New Unit 2 at the upgraded Anegasaki thermal power station started operations in February 2023 and April 2023, respectively. Located in Ichihara-shi, Chiba, the original Anegasaki power station had six gas-fired steam power generation units (Unit 1 to Unit 6) with a generation capacity of 600MW each. JERA decommissioned Unit 1 to Unit 4 at the Anegasaki thermal power station in December 2021. Unit 5 and Unit 6 started operations in April 1977 and October 1979, respectively. The units were closed, as per a long-term planned shutdown, in April 2021, but resumed operations in late 2022. Last month, JERA completed the acquisition of Belgian renewable energy company Parkwind from Virya Energy.

*NS Energy*

<http://www.nsenergybusiness.com/>

**3 August 2023**

## **China builds the world’s first large-scale gravitational accumulator**

The Swiss company Energy Vault announced the completion of construction and commissioning of the world’s first commercial gravitational energy storage. The plant was built in China. Its power reaches 25 MW, and the capacity is 100 MWh. It converts electrical energy into kinetic energy when concrete blocks are raised to a height and releases it again when the blocks are lowered to the ground.

The China-built gravitational energy storage facility is the first of its kind on a commercial scale. Prior to this, Energy Vault built a 5 MW demonstration plant in Switzerland, but a project in China overshadows it. Moreover, on the wave of success, China requires the construction of five more such storage facilities with a total capacity of 2 GWh.

According to the physics of the process, gravity storage resembles pumped-storage power plants, but without pumps and capricious equipment. Cargo in the form of monolithic 24-ton blocks rises to a height of 100 meters or more and descends at hours when energy is required. This is a good buffer for energy sources from renewable resources and, above all, from the Sun and wind.

The efficiency of the Energy Vault gravity station starts at 75% and can exceed 80%. Loading blocks (energy storage) can last from 2 to 12 hours or more, depending on the tasks and sources. The commissioning system in Jiangsu province near Shanghai will operate for 4 hours. It will be connected to the power transmission network in the fourth quarter of this year. Local authorities liked the project so much that they ordered another such drive.

It is interesting that a trained algorithm with a machine vision function manages all this economy. It will be an interesting location for filming the next “Terminator” against the backdrop of 24-ton concrete blocks scurrying up and down. By the way, somewhere in the United States, Energy Vault is also building a similar gravitational installation.

*Aroged*

<http://www.aroged.com/>

**6 August 2023**

## **Texas PUC Approves ERCOT’s ORDC Modifications**

Texas regulators last week endorsed ERCOT’s proposed modifications to the operating reserve demand curve (ORDC) designed to retain and attract dispatchable generation. “I believe that near-term action is important to retain our long-duration,

# *WORLD POWER SYSTEMS REVIEW*

*15 August 2023*

dispatchable thermal generation assets that I believe are extremely necessary to maintain reliability during extreme weather conditions,” Commissioner Lori Cobos said during the Public Utility Commission’s open meeting Thursday.

Under ERCOT’s multistep proposal, price adders of \$20/MWh and \$10/MWh will be set when operating reserves hit floors of 6,500 MW and 7,000 MW, respectively. Staff’s analysis indicates the floors would have increased revenues to generators by about \$500 million during the 2020 and 2022 pricing years. Thermal generators would have received 80% of those revenues.

ERCOT says the ORDC increasing during substantial operating reserve surplus periods will improve pricing signals, help retain existing assets, add new dispatchable generation and reduce the frequency of reliability unit commitments (RUCs). Cobos filed a memo before the meeting explaining the need for a “market-based tool” that incents generators’ self-commitment in the real-time market to help reduce RUCs. To ensure the ORDC modification’s goals are met, she also laid out three metrics ERCOT will be required to track and report back to the commission:

- The amount of new revenue specifically resulting from the adders;
- The specific type of generation resources that received the new revenue; and
- Performance data showing whether the adders have reduced ERCOT’s use of

RUC.

“I think these metrics will help us keep track of whether or not this action is accomplishing what we set out to do,” Cobos said. She also recommended the PUC re-evaluate the need for the price-floor adders after ERCOT deploys dispatchable reliability reserve service in December 2024 to check that RUCs are reduced by the amount of the new ancillary service ERCOT procures. Commissioner Jimmy Glotfelty said he struggled with ERCOT’s proposal but joined the PUC’s unanimous decision. “It’s not clear to me that we are creating a bridge solution to eliminate RUC or that we’re creating a bridge solution to bridge us to a reliability capacity issue to solve our resource adequacy issue,” he said. “If we want to eliminate RUC, I think we should be looking at all of the solutions that could eliminate RUC, not just one. I know RUC is problematic for generators, but what I don’t want is another out-of-market solution to solve an out-of-market solution that we created which solved a conservative operations out-of-market solution that we created. We’re just piling on by trying to fix the market with other modifications.”

The PUC in January directed ERCOT to propose a bridge to the commission’s proposed market redesign, a performance credit mechanism (PCM). However, the design’s chief proponent, former commission Chair Peter Lake, stepped down from his post in June after Texas lawmakers suggested other market structures during their recent legislative session.

The grid operator’s stakeholders and Board of Directors approved the staff’s proposal in April. ERCOT’s ORDC values the wholesale market’s operating reserves on their scarcity, reflecting that value in energy prices.

The curve has been modified several times since it became part of the market in 2014. The value of lost load, which is set equal to the system-wide offer cap, was changed from \$9,000/MWh down to the \$2,000/MWh low-system-wide offer cap after the 2021 winter storm, then back up to \$5,000/MWh in January 2022. The minimum contingency level also was increased last year from 2,000 MW to 3,000 MW.

In other actions, the PUC approved an unopposed settlement that increases Entergy Texas’ base rate revenues by \$54 million, resulting in a nonfuel revenue requirement of \$1.23 billion. PUC staff, the Office of Public Utility Counsel and Texas Industrial Energy Consumers were among the signatories to the agreement. At the same time, the commission severed into a new proceeding two contested issues related to Entergy’s

# **WORLD POWER SYSTEMS REVIEW**

**15 August 2023**

proposed electric vehicle charging riders. The PUC will determine whether it is appropriate for a vertically integrated utility to own EV charging facilities or other transportation electrification and charging infrastructure. The commission also rejected rehearing requests by Texas Energy Association for Marketers, Alliance for Retail Markets and Texas Competitive Power Advocates over the approval of a partial settlement that reduced CenterPoint Energy's distribution cost recovery factor by \$7.8 million.

*RTO Insider*

<http://www.rtoinsider.com/>

**6 August 2023**

## **EDF Renewables Israel to model solar energy data for trading insights**

EDF Groups' Israel business has announced use of an AI and machine learning platform to derive insights from energy meter data in its solar farms for enhanced energy trading decisions.

The platform, Predict+, which has been developed by California based Tigo Energy, uses AI and machine learning technology to automatically forecast electricity generation and consumption for utilities, IPP's and grid planners. EDF Renewables Israel will use the platform in an extended partnership with Tigo Energy, which develops intelligent solar and energy storage solutions, to enhance the performance of solar farms in Israel through the predictive tech.

In the collaboration, Predict+ will be used to:

- Forecast and model energy meter data for enable energy trading decisions, including precise day-ahead and long-term forecasting of EDF Renewables Israel consumers' consumption
- Manage market insights about demand, renewable supply and utility pricing in the Israeli energy market
- Conduct profit analyses using predicted and actual revenues from end-customers, as well as an API-level integration with billing systems for end-customer consumption data and invoicing
- Produce accurate, consistent, and regulation-compliant reporting data for Israeli grid operator Noga

According to Tigo, the platform provides "high-fidelity visibility into the performance of solar and wind energy systems through precise predictions, market insights, profit analysis and regulation functions," they stated in a release announcing the upgrade to their existing collaboration.

Predict+ is part of the Tigo Energy Intelligence (EI) platform, a digital platform designed to oversee solar installations' planning, installation, commissioning, monitoring and maintenance phases, from individual residential systems to commercial, industrial and utility-scale solar fleets. "With Predict+, EDF Renewables now has the power of reliable and self-adaptable forecasting and a customisable, software-driven model to maximise the value of solar assets," said Zvi Alon, chairman and CEO at Tigo Energy.

*Smart-Energy*

<http://www.smart-energy.com/>

**7 August 2023**

## **Adani Energy Solutions Secures \$1 Billion Financing for Green HvdC Link Project in Mumbai**

The 80-km multi-faceted project will offer a technological upgradation to the Mumbai city. The construction work for this link will begin in October 2023, AESL (erstwhile Adani

# **WORLD POWER SYSTEMS REVIEW**

**15 August 2023**

Transmission Ltd) said Adani Energy Solutions Limited (AESL) on Monday said it has achieved financial closure for its \$ 1 billion green high voltage direct current (HVDC) link project, that will increase renewable energy supply to Mumbai. The 80-km multi-faceted project will offer a technological upgradation to the Mumbai city. The construction work for this link will begin in October 2023, AESL (erstwhile Adani Transmission Ltd) said in a statement. "AESL has announced successful financial closure for its \$ 1 billion Green HVDC link project, which will enable further 'greening' of the Mumbai Grid by supplying more renewable power to the city while supporting its rising electricity demand," it said.

HVDC transmission technology is superior to other conventional technologies as it stabilizes power distribution networks, where sudden new loads or blackouts in one part of the network may lead to synchronization problems and cascading failures.

Besides, it is the only technology suitable for islands where submarine cables are used for procuring power supply and results in lower energy losses. The link shall bulk inject an additional 1,000 MW of renewable power into the city, thus ensuring uninterrupted power supply in future. Adani Electricity Mumbai Ltd (AEML), being the largest electricity distribution company, has committed to increasing the share of renewable energy in the overall mix to 60 per cent by 2027. "This link is the need of the hour for the city and will support its growth aspirations. It showcases our commitment to offering Mumbai a brighter and greener future.

The credit facility is part of the \$ 700 million revolving project finance facility tied up in October 2021 for its under-construction transmission assets portfolio. This platform Infrastructure Financing Framework (IFF) that funds various under-construction assets offers project access to funds that another project in the portfolio has paid back. "The banking consortium for the platform infrastructure financing framework comprised nine international banks including DBS Bank Ltd, Intesa Sanpaolo S.p.A., Mizuho Bank Ltd., MUFG Bank Ltd., Siemens Bank GmbH, Socit Gnrale, Standard Chartered Bank, Sumitomo Mitsui Banking Corporation and The Hong Kong Mortgage Corporation Limited," the company said.

Mumbai's electricity demand is expected to touch 5,000 MW by FY25, from the current peak demand of 4,000 MW. The island city has only 1,800 MW of embedded generation capacity and the existing transmission corridors face capacity constraint risks. On October 12, 2020, the entire city witnessed a major power blackout event due to the grid constraints. The HVDC transmission link will enhance grid stability by providing an interface with the state and national grids.

*Hindustan Times*

<http://www.hindustantimes.com/>

**7 August 2023**

## **China adds another pumped-storage power station in Qinghai**

Northwest China's Qinghai Province on Sunday started construction on a pumped-storage power station with a maximum energy storage capacity of about 20 million kWh, marking another key project in western China, which is abundant in clean energy resources.

The power station is a hydropower station that uses electricity to pump water to a higher place for storage and then releases the water to generate electricity when the power supply is insufficient.

With a total investment of nearly 16 billion yuan (about 2.24 billion U.S. dollars), the project in Guinan County of Qinghai is expected to be the pumped-storage power station with the largest installed capacity in western China. The new station's total installed capacity can reach 2.8 million kilowatts. If put into operation, it is estimated to help slash standard coal consumption by about 1.82 million tonnes and reduce carbon dioxide emissions by

# **WORLD POWER SYSTEMS REVIEW**

**15 August 2023**

about 4.55 million tonnes per year. Qinghai expects to see its installed new energy capacity exceed 100 million kilowatts by 2030.

*Xinhua*

<http://news.cn/>

## **7 August 2023**

### **First TP-Less Monopiles In Place at Ørsted's German Offshore Wind Projects**

Jan De Nul Group's newest crane vessel, *Les Alizés*, has kicked off its maiden assignment by installing the first of 107 monopile foundations at Ørsted's Gode Wind 3 and Borkum Riffgrund 3 offshore wind farms in Germany.

Delivered in early 2023, *Les Alizés* arrived in the Dutch Eemshaven at the end of June, where the first monopiles were loaded before departing to the installation location in the German North Sea. At the beginning of this year, Jan De Nul selected BOW Terminal's marshalling yard in Eemshaven for the two offshore wind projects. BOW Terminal will offer the marshalling services for the project at their new location in Eemshaven, based in the Beatrix harbour in the northern part of the Province Groningen. Jan De Nul and Ørsted signed a contract in October 2021. *Les Alizés* will transport and install 106 wind turbine monopile foundations and one offshore substation foundation, including the associated topside for the German offshore wind projects. Both projects will feature 11 MW Siemens Gamesa wind turbines. Ørsted will use monopiles without transition pieces. Before installation, scour protection will be installed at all 107 locations.

The TP-less monopiles will be manufactured by Bladt Industries and Steelwind Nordenham. The 913 MW Borkum Riffgrund 3 will be located adjacent to Ørsted's existing offshore wind farms Borkum Riffgrund 1 and Borkum Riffgrund 2. The 253 MW Gode Wind 3 will be close to Ørsted's Gode Wind 1 and 2. Ørsted won the rights to develop Borkum Riffgrund 3 at the German auction held in 2018 by bidding EUR 0, making it the world's first large-scale offshore wind farm to be awarded with a zero bid. Once completed, the offshore wind farms will generate enough renewable electricity to power 1.2 million German households.

*Offshore.biz*

<http://www.offshorewind.biz/>

## **8 August 2023**

### **PJM, ERCOT, SPP and MISO Join Together on Comments on EPA Emissions Rule**

On August 8, PJM joined MISO, ERCOT and SPP in submitting comments in response to a proposed EPA rule on New Source Performance Standards for Greenhouse Gas Emissions. The geographic reach of the Joint ISOs/RTOs encompasses an area of approximately 2 million square miles, in all or parts of 30 states and the District of Columbia, providing electric service to 154 million Americans. In their Joint Comments, the Joint ISO/RTOs explained their concern with the potential reliability impacts of the proposed greenhouse gas rule. Specifically, the Joint ISO/RTOs stated:

"As the penetration of renewable resources continues to increase, the grid will need to rely even more on generation capable of providing critical reliability attributes. With continued and potentially accelerated retirements of dispatchable generation, supply of these reliability attributes will dwindle to concerning levels.... New technologies and industry practices are developing to enable the integration of significant inverter-based generation that provide needed essential reliability services, but the Joint ISO/RTOs are concerned about a scenario in which, similar to that stated above, needed technologies are not widely commercialized in time to balance out large amounts of retirements."

The Joint ISO/RTOs also addressed the potential impact on investment:

# **WORLD POWER SYSTEMS REVIEW**

**15 August 2023**

“The Joint ISOs/RTOs are also concerned about the chilling impact of the Proposed Rule on investment required to retain and maintain existing units that are needed to provide key attributes and grid services before the compliance date required by the rule.” The Joint ISO/RTOs also raised concern with EPA’s finding that co-firing with hydrogen or deployment of carbon capture and sequestration is sufficiently economic and technically viable to be deemed the Best System of Emissions Reduction, or BSER: If the EPA is inclined to move forward with the Proposed Rule, the Joint ISOs/RTOs in their comments urge the EPA to at least include several additional features in the rule to help mitigate, although not eliminate, these reliability impacts. These features include:

- Specification of a new sub-category for existing units, providing a time-limited means for ISOs/RTOs to designate classes of units that are needed to maintain local or region-wide reliability until alternatives, which may be new transmission, new generation or storage resources, are available to address the specific identified reliability need;
- Building into the Rule a process to monitor and adjust the compliance schedule as applied to existing gas and coal units based on an examination as to whether the CCS and hydrogen co-firing infrastructure is developing at a sufficient pace to allow implementation in the time frame contemplated by the Proposed Rule. Such an ongoing review built into the Rule itself will ensure a better balance of the pace of retirements of dispatchable generation needed to provide critical grid services with the new additions providing such grid services;
- Providing specific recognition in the Rule of the availability of allowance trading on a regional, if not national, level to allow for greater flexibility and incentivize early and effective ‘over-compliance’ by those units that are capable of doing so;
- Updating the definition of ‘System Emergency’ to reduce uncertainty around when a unit may be called upon for reliability.

In conclusion, the group urges the EPA not to adopt the final rule before allowing “for a more thorough exploration of the reliability impacts of the proposed Rule and its impact on investment decisions, and to discuss these conclusions with the ISOs/RTOs.”

The filing notes that the EPA has engaged with the four grid operators productively on other rulemaking processes: “The Joint ISOs/RTOs look forward to continuing their constructive dialogue with the EPA as it proceeds to the next step in this process. We appreciate our past work with EPA and stand ready to work constructively to address the reliability issues surrounding the Proposed Rule as well.”

*Insidelines PJM*  
<http://insidelines.pjm.com/>

**8 August 2023**

## **GE Vernova Building New 1.35-GW Gas-Fired Plant in Nigeria**

Construction has begun on major natural gas-fired power plant in Nigeria, part of a plan by the country’s government to help improve the supply of electricity amid frequent power shortages. The 1,350-MW Gwagwalada Independent Power Plant, which will burn domestically sourced gas, is expected to provide about 11% of the country’s electricity once the facility is fully operational. The plant near the Nigerian capital of Abuja will be built in three phases, with GE Vernova among three groups leading the facility’s engineering and construction. State oil firm NNPC said the first phase of construction began August 4. The facility is the first major energy project developed under the administration of President Bola Tinubu, who took office in late May.

Nigeria, which has the largest economy and the largest population—about 224 million—in Africa, is one of several countries on the continent struggling with inadequate power generation capacity and a power grid prone to disruptions. Mele Kyari, chief executive

# **WORLD POWER SYSTEMS REVIEW**

**15 August 2023**

of NNPC, in a news conference said the Gwagwalada plant would enable the country to “monetize our abundant gas resources.” Nigeria has the largest reserves of natural gas on the continent, and is among the top 10 exporters of liquefied natural gas.

NNPC officials said the first phase of the plant, being built by GE Vernova and China Mechanical Engineering Corp. in partnership with NNPC, is expected to be completed next year. Tinubu, speaking at a groundbreaking ceremony last week, said the power plant is a “first bold step” for his administration.

The president has said his government wants to make a strong energy sector a leading part of efforts to improve Nigeria’s economy. The country has about 12.5 GW of installed power generation capacity, but many homes and businesses across Nigeria rely on generators to produce their electricity, due to problems with power delivery. NNPC has said the Gwagwalada plant is one of three projects planned along a 384-mile natural gas pipeline corridor. The three plants in total would add about 3.6 GW of power generation capacity, according to NNPC.

*Power Mag*

<http://www.powermag.com/>

**8 August 2023**

## **EPRI launches initiative to ready grid for increased EV loads, joined by Amazon, Xcel, ConEd**

The Electric Power Research Institute launched on Monday a three-year initiative to manage the expected grid stress from increased electric vehicle charging, with collaborators like Amazon joining the program since it was announced in April. The program, EVs2Scale2030, is working on a mapping platform that can “zoom down to the feeder level” to provide granular data to utilities about EV and charging deployments, in conjunction with a secure data exchange where users, including fleet operators, can provide those deployment plans at an “aggregated, anonymized level,” said EPRI Director of Transportation Britta Gross in an interview. Since April, “the program has really rounded out,” Gross said, with requests from more and more stakeholders to join the advisory board – including fleet operator Amazon. EPRI had intended to solicit input from fleet operators for EVs2Scale2030, but did not anticipate high-level involvement such as advisory board membership, Gross said. “But Amazon said, ‘No, we need to be in this program, this program needs to succeed,’” she said. “And that is, of course, also a major marker of the criticality of the program.” Amazon, which has a pledge to achieve net-zero carbon emissions across all its operations by 2040, is committed to bringing 100,000 electric delivery vehicles on the road by 2030 in partnership with Rivian, according to a July release from the company.

Other members of the advisory board include Xcel Energy, whose Executive Vice President, Group President of Utilities and Chief Customer Officer Brett Carter serves as the board’s chairman, commercial vehicle manufacturer Daimler Truck, the Edison Electric Institute, and utilities like Consolidated Edison and National Grid. The program is collaborating with more than 500 stakeholders overall, including the Department of Energy, “to ready the electric grid in support of the accelerated development of EV charging infrastructure,” EPRI said in its press release. The U.S. Energy Information Administration projected earlier this year that electricity consumption from the transportation sector will increase from 12 billion kWh in 2021 to more than 145 billion kWh in 2050.

“Every stakeholder is thinking about how to get the job done,” Gross said. “For fleet operators, you need the attention of the utility industry, you want to send a very clear demand signal.” Gross said the need for early demand signals is “becoming crystal clear.” Demonstrating demand to the utilities has to be done “years in advance, not three months in advance,” she said. “The grid interconnections just don’t happen in three months,” Gross



# **WORLD POWER SYSTEMS REVIEW**

**15 August 2023**

said. “Utilities are going to need, in some cases, two to four years of heads-up time to react and to do planning and plan and prioritize their investments.” She urged anyone with interest in solving the challenges posed by transportation electrification — such as utilities, manufacturers, fleet operators, charging providers, fueling retailers, and commercial charging as a service providers — to contribute to EVs2Scale2030. “That’s really important if you want in on helping shape these tools, these processes, how all 3,200 utilities are going to interact with all of the folks making this transition to electric transportation happen,” Gross said. “This is the time, right now, to get involved.”

*Utility Dive*

<http://www.utilitydive.com/>

**8 August 2023**

## **New Zealand Government Fast-Tracks Solar and Wind Projects to Achieve Renewable Energy Goals**

The New Zealand Government has successfully expedited the approval process for nine solar panel projects and three wind farm projects as part of its effort to transition to clean renewable energy. Under the Covid-19 Recovery (Fast-track Consenting) Act, the government has referred 1.9 million solar panels for consent since 2020, potentially generating more than twice the output of the Clyde Dam, New Zealand’s third-largest hydroelectric dam.

The accelerated projects include large-scale solar investments in five North Island regions, which would add power from approximately 829,000 solar panels to the national grid. Additionally, the approved wind farm projects would generate about 419 megawatts of electricity at peak output, equivalent to the power generated by the Clyde Dam. Fast-tracking renewable energy generation aligns with the government’s goals to reduce reliance on fossil fuels and cut carbon emissions. It also supports New Zealand’s domestic and international commitments to combat climate change.

The government aims to have 50% of the country’s total energy coming from renewable sources by 2035 and achieve 100% renewable energy generation by 2050. By fast-tracking renewable energy projects, the government hopes to create job opportunities, reduce greenhouse gas emissions, and improve the country’s energy resilience. The temporary fast-tracking process, introduced during the pandemic, is expected to become permanent through the Natural and Built Environment Bill. This legislation will provide a streamlined pathway for infrastructure and housing projects of regional significance.

The government’s efforts to expedite renewable energy projects are part of a broader strategy to transition to a more sustainable and resilient energy system. In addition to solar and wind projects, the government is also exploring other sources of renewable energy, such as geothermal power, to further diversify its energy mix.

*evwind*

<http://www.evwind.es/>

**8 August 2023**

## **Shell-EDF Joint Venture Submits Bid in New Jersey’s Third Offshore Wind Solicitation**

Atlantic Shores Offshore Wind, a 50:50 joint venture between Shell New Energies US and EDF-RE Offshore Development, has submitted a proposal to the New Jersey Board of Public Utilities (NJBPU) in the state’s third offshore wind solicitation.

New Jersey opened the solicitation in March and is looking to award between 1.2 GW and 4 GW of offshore wind capacity, building on the previously awarded 3.75 GW. Developers had until 23 June to submit applications and the deadline for applying for

# **WORLD POWER SYSTEMS REVIEW**

**15 August 2023**

Offshore Wind Renewable Energy Certificates (ORECs) was 4 August. The NJBPU is expected to announce the results in January/February 2024.

Atlantic Shores Offshore Wind, which has also submitted a prebuild infrastructure (PBI) bid, says that its bid is “the most ‘make-ready’ proposal available in the third offshore wind solicitation”, based on “distinct advantages” of the joint venture’s advanced permitting program, combined with a total resource capacity of more than 5 GW across its portfolio. “

If selected, Atlantic Shores would supply renewable energy to hundreds of thousands of New Jersey households beyond the 1,510 MW already being delivered as part of Atlantic Shores Project 1”. The joint venture already has an OREC in place for its 1,510 MW Atlantic Shores Offshore Wind Project 1, which was selected by the New Jersey Board of Public Utilities in June 2021.

Shell and EDF Renewables jointly hold leases for three offshore wind areas, which are under active development. Two of the areas are located approximately 10-20 miles (16 to 32 kilometres) off the coast of New Jersey, between Atlantic City and Barnegat Light, and one in the New York Bight. The lease block OCS-A 0499 off New Jersey, which was first secured by US Wind in 2015/2016 and acquired by EDF Renewables Development in 2018, was split into two areas in 2021.

The southern part of the block contains the 1,510 MW Atlantic Shores Offshore Wind Project 1 and the 1,327 MW Atlantic Shores Offshore Wind Project 2, while the northern part of the block was given a new lease number, OCS-A 0549. Aside from the two lease areas, the joint venture also holds lease rights for OCS-A 0541, which it won in last year’s New York Bight auction.

In May this year, the US Bureau of Ocean Energy Management (BOEM) published the draft Environmental Impact Statement (EIS) for Atlantic Shores Offshore Wind Project 1 and Atlantic Shores Offshore Wind Project 2, collectively called the Atlantic Shores South Wind Project in the Construction and Operation Plan (COP) submitted in the federal permitting process.

[Offshore.biz](http://www.offshorewind.biz)

<http://www.offshorewind.biz/>

**9 August 2023**

## **California to Keep Old Gas Plants Operating for Reliability**

The California Energy Commission agreed Wednesday to keep three old, environmentally damaging gas-fired plants operating along the Southern California coast for grid reliability, despite an outpouring of opposition from local residents and environmental groups.

It was the second three-year extension given to the once-through cooling plants, which had been scheduled to retire because of their harm to marine life and polluting of oceanside neighborhoods. But the state has deemed them necessary as it struggles to keep the lights on during heat waves while transitioning to 100% clean energy by 2045. Energy Commission Chair David Hochschild called keeping the OTC plants operating a “collective failure,” even as he and his fellow commissioners voted to approve capacity agreements between the state Department of Water Resources (DWR) and the plants in Long Beach, Oxnard and Huntington Beach, Calif.

“I look forward to the day not just when these three facilities are retired, but when all fossil fuel generation is retired,” Hochschild said. “We have to build that future, and I believe we can. What’s aggravating for me is that we’re doing it, but we’re late.” The vote followed more than two hours of impassioned testimony from those who live near the plants, saying they and their family members had been sickened by emissions and wanted the plants closed down, as planned, this year.

# **WORLD POWER SYSTEMS REVIEW**

**15 August 2023**

“What I hear here is this is a crisis of betrayal, a feeling of absolute trauma that communities feel over and over,” CEC Vice Chair Siva Gunda said in response to the residents’ pleas. Gunda said he found the decision difficult but was bound by the state’s need to avoid blackouts. An extreme heat wave led to rolling blackouts in California in August 2020, followed by energy emergencies caused by heat waves and wildfires in the next two summers. The commission’s decision approved DWR’s plan to spend up to \$1.2 billion to maintain selected units at the Alamitos Generating Station in Long Beach, the Huntington Beach Generating Station in Orange County and the Ormond Beach Generating Station in Oxnard for three more years, until Dec. 31, 2026.

The once-through cooling plants, which had originally been set to retire in 2020, had already gotten a reprieve until 2023 for the sake of reliability. AES Corp., based in Arlington, Va., owns the Alamitos and Huntington Beach plants, while Houston-based GenOn owns the Ormond Beach facility. Collectively, the units to be kept online can generate nearly 2,900 MW of capacity. DWR will issue the companies fixed monthly capacity payments of \$8.82/kW-month to \$10.95/kW-month, for a three-year total of as much as \$1.19 billion. The department runs the state’s Electricity Supply and Strategic Reliability Reserve Program, which acts as a backstop to provide incremental power during extreme events. Legislation passed hastily in June 2022 assigned the role to DWR and approved Gov. Gavin Newsom’s proposed \$5.2 billion strategic reliability reserve consisting of “existing generation capacity that was scheduled to retire, new generation, new storage projects, clean backup generation projects, [and] diesel and natural gas backup generation projects.”

Critics lamented the bill in large part because the once-through cooling plants would likely be retained as part of the reliability reserve. The plants, built in the 1950s and 1960s, use ocean water for cooling, killing billions of marine organisms. In 2010, the State Water Resources Control Board ordered the phase-out of 19 OTC plants along the coast. Some plants retired, and others updated to air-cooling or alternative water-cooling technologies. The last three plants — Alamitos, Huntington Beach and Ormond Beach — still use their original cooling designs. The hulking plants loom over densely populated coastal communities, wetlands and sandy beaches.

Many residents and elected officials have wanted them closed for years because they are noisy, unsightly and polluting, but California’s energy shortfalls have extended their lifespans. The State Water Resources Control Board must still sign off on the DWR to keep the OTC plants online. It has scheduled a hearing for Aug. 15 to consider the extension, which it is expected to approve.

*RTO Insider*

<http://www.rtoinsider.com/>

**10 August 2023**

## **PJM Generation and Transmission Resources Reliably Served Demand During July Heatwave**

PJM detailed conservative measures taken to ensure reliability in advance of the late-July heatwave at the Aug. 10 meeting of the Operating Committee. Ten Hot Weather Alert events coincided with four heat spells during July, the most severe occurring July 27-29, said Donnie Bielak – Senior Manager, PJM Dispatch. To conservatively prepare for the forecasted heat in late July, PJM issued several types of alerts to inform members to prepare to meet extreme hot weather demand. The first of these was a maintenance outage recall, which PJM called on July 23 in advance of heavy electricity loads forecasted for July 27-28. This notification successfully recalled generation units back to operation readiness from previously scheduled maintenance outages, he said. PJM may recall generation back to

# **WORLD POWER SYSTEMS REVIEW**

**15 August 2023**

service from maintenance outages up to 72 hours in advance. It was the first use of this procedure in 2023.

On July 24, PJM also issued a Unit Startup Notification Alert to notify units with start-up times greater than 48 hours to prepare to come online if necessary. On evenings prior to the operating days of July 27 and July 28, PJM also issued Maximum Generation Emergency/Load Management Alerts as informational notices to all generators to be prepared to serve expected heavy load conditions across the PJM region and to let them know that load management tools such as demand response may be used. Demand response customers are contractually bound to reduce energy usage when called upon and receive compensation for the service they provide.

On July 27 and July 28, rain and storms ended up suppressing the forecasted temperatures, and load reached about 147,800 MW on July 27 and about 145,400 MW on July 28. PJM had conservatively prepared to serve loads in the low to mid-150,000 MW range, based on weather forecasts, Bielak said. PJM cancelled the RTO-wide Maximum Generation Alert/Load Management Alert at 5 p.m. on July 28 along with the NERC EEA-1 Alert, which is issued along with a Maximum Generation Alert. A Hot Weather Alert remained in effect for PJM's Mid-Atlantic and Southern regions through July 29. "We had sufficient generation online, and general performance was pretty strong from the transmission and generation side during this hot weather event," Bielak said. The all-time recorded peak electricity demand on PJM was 165,563 MW on August 2, 2006.

*Insidelines PJM*

<http://insidelines.pjm.com/>

## **10 August 2023**

### **EIB approves €1.4bn financing for 2.5GW Baltica offshore wind farm**

PGE Group announced that the European Investment Bank (EIB) has approved the financing for Baltica offshore wind farm project, being developed by PGE and its Danish partner Ørsted. The EIB is committed to providing a total financing package of up to €1.4bn, which will support the construction of PGE's first offshore wind farm in the Baltic Sea. The 2.5GW Baltica project will be developed in two different stages, the 1.5GW Baltica 2 that is planned to be commissioned in 2027, and the 1GW Baltica 3 by the end of this decade.

Under the project finance formula, PGE will disburse one tranche amounting up to €350m for each stage, based on guarantees from financial institutions, banks or credit agencies. PGE Polska Grupa Energetyczna management board president Wojciech Dąbrowski said: "Obtaining a preliminary credit decision from the European Investment Bank is a significant step for financing the construction of the largest offshore wind farm in the Baltic Sea." "The presence of a recognized and experienced international financial institution in financing the project is a signal that we are a reliable partner for financial institutions, the projects we run meet the highest standards, and the interest of the financial sector in cooperation with PGE in the field of offshore wind energy is really high." EIB said that advancing energy transformation is its priority, and has established the REPowerEU initiative, together with the European Commission (EC)

The financing for the Baltica project will help European Union (EU) states stay independent from Russian energy resources and advance the energy sector towards renewable energy, said EIB. EIB vice-president Teresa Czerwińska said: "Diversification of energy sources and independence from fossil fuels are key tasks for Poland and the European Union, and Baltica Offshore Wind Farm is a very important project implementing these goals.

*Reuters*

<http://reuters.com>

# **WORLD POWER SYSTEMS REVIEW**

**15 August 2023**

**10 August 2023**

## **Germany awards four More offshore wind sites for EUR 784 Million**

After awarding four offshore wind areas to BP and Total Energies for EUR 12.6 billion through its first dynamic bidding process last month, the German Federal Network Agency (BSH) has now awarded further sites for a total of EUR 784 million in the process organized for four centrally pre-investigated areas.

Three of the new four areas in the North Sea (N-3.5, N-3.6, N-6.6 and N-6.7) have been secured by RWE and one by Waterkant Energy, with Vattenfall holding step-in rights for one of the sites that were awarded to RWE, which the Swedish company can exercise until 14 September. The bidding process was based on qualitative criteria. In addition to the willingness to pay in Euros for a respective area, criteria such as the decarbonization of offshore operations and the use of environmentally friendly foundation technologies were taken into account.

The wind farms at the four sites, which could house a total of 1.8 GW of offshore wind capacity, are scheduled for commissioning in 2028. RWE has secured the N-3.6 and N-3.5 areas, for which the company already held step-in rights, without a negative bid component. The two sites are where RWE plans to build its Nordseecluster B project which comprises two wind farms with a total capacity of 900 MW. The company already secured sites for the 660 MW Nordseecluster A development in 2021.

The BSH has also provisionally awarded RWE the N-6.6 site for an offshore wind farm with a capacity of 630 MW. The further development of the project by RWE is still subject to the exercise of the step-in right by Vattenfall, with the Swedish company having until 14 September to do so, according to information from the BSH. Last year, Vattenfall exercised its step-in right for an area won by RWE with a zero-subsidy bid. The area, N-7.2 in the German North Sea, is where Vattenfall plans to build its Nordlicht I (Northern Light I) 980 MW offshore wind farm. For the N-6.6 site, now provisionally awarded to RWE, the step-in right is held by Vattenfall's project company Vattenfall Nordlicht II Offshore Wind.

The fourth site that BSH awarded through the last auction round in Germany, N-6.7, was secured by Waterkant Energy. The Federal Network Agency will use 90 per cent of the fees to be paid by the winners, which total EUR 784 million, to reduce electricity costs for consumers, five per cent for marine nature conservation and another five per cent for the promotion of environmentally friendly fishing.

The proportions of the bid values awarded for marine nature conservation must be paid into the federal budget within one year. Starting with the completion date of the wind farms in 2028, the electricity cost reduction component is to be paid over a period of 20 years in constant annual instalments to the transmission system operator who is responsible for the project's grid connection. The BSH has the same plan for the use of the proceeds from the previous auction round, in which BP and Total Energies were each awarded two sites.

*Offshore.biz*

<http://www.offshorewind.biz/>

**11 August 2023**

## **Terna: regional approval finalized for three key projects for the Sardinia electricity grid**

Terna obtained formal approval from the Autonomous Region of Sardinia for three key projects that will increase the regional and national grids' efficiency, while at the same time, facilitating the development and integration of energy produced by renewable sources: the Tyrrhenian Link – Western Branch; SACOI 3 and the new 150 kV cable connection for the Terra Mala PC. Today's outcome is a decisive step that initiates the final stage of the

# **WORLD POWER SYSTEMS REVIEW**

**15 August 2023**

authorization process for the three projects with the Ministry of the Environment and Energy Security and is the result of the close collaboration at institutional level between Terna and the Sardinia Region. Specifically:

The Tyrrhenian Link – Western Branch is the approx. 480 km-long section of the € 3.7 billion undersea power line that will connect Sicily and Sardinia. From the Terra Mala landing site of the cable in the province of Cagliari, the underground cables will run mainly along existing roads for around 30 km — leaving the environment and landscape unaltered — before arriving at Selargius, where the converter station will be built in areas near the existing electrical substation. The Sardinian Municipalities affected by the route of the underground cable all fall within the Cagliari metropolitan area, and include: Maracalagonis, Quartucciu, Quartu Sant’Elena, Settimo San Pietro and Sinnai.

The project is one of the main infrastructures works in Italy, continuing to improve the security, adequacy and flexibility of the transmission grid, reduce imbalances on the internal market and decarbonize the energy system in accordance with Paris Agreement targets. The connection will improve the capacity for electricity exchange between Campania, Sicily and Sardinia, significantly accelerating the development of renewable energy sources and phasing out coal in the generation of electricity. The new interconnection is a state-of-the-art project that will involve the construction of two 1000 MW direct current undersea power lines, one from Campania to Sicily and the other from Sicily to Sardinia, for a total length of around 970 km, with approximately 60 km running overland. The project will become fully operational in 2028

SACOI3 is the new 200 kV connection that with modern technology, will upgrade the current undersea cable between Sardinia, Corsica and the Italian mainland. The project, in which Terna will invest € 950 million, aims to ensure greater stability and reliability to the electricity system, improve service quality, grid efficiency and integrate renewable sources. The project envisages a converter station located in the vicinity of the existing electrical substation in Codrongianos, two overland cables corresponding to the landing site of the undersea cables in Santa Teresa di Gallura and two undersea connection cables between Sardinia (Santa Teresa di Gallura landing site) and Corsica.

The 150 kV Terra Mala PC connection includes a new underground cable of around 3 km connecting the existing Quartucciu-Villasimius power line and the future Primary Cabin owned by the local distributor. The works will increase the meshing of the Cagliari electricity grid, thus increasing the quality of the electricity transmission service in the area.

**Terna**

<http://www.terna.it/>

**14 August 2023**

## **California grid warns heat wave will stoke power demand**

California's Independent System Operator (ISO) warned of high temperatures and increased electricity usage during the coming week as the grid operator prepares for tight conditions works to ensure adequate supply. In a notice released on Saturday, ISO said it is closely monitoring the power grid as widespread heat waves can cause supply shortages, with resources stretched thin across multiple Western states.

ISO said energy supplies are sufficient to meet demand. But if weather or grid conditions worsen, it may issue emergency notifications to secure additional resources, and prepare for potential shortages and conservation. The operator could also issue a Flex Alert, urging consumers to reduce power use during the late afternoon and evening on some days.

Current demand stood at 35,472 megawatts as of Sunday evening in California, compared with an available capacity of 43,873 MW, the ISO website showed. In California, the northern interior could experience temperatures of 98-108 (37-42°C) degrees Fahrenheit

# **WORLD POWER SYSTEMS REVIEW**

**15 August 2023**

from Monday to Wednesday, while the desert Southwest may see highs of 105-118°F from Tuesday to Friday — 5-15 degrees hotter than usual for mid-August, ISO said.

*Reuters*

<http://reuters.com>

**14 August 2023**

## **ORLEN reaches conditional investment decision on Baltic Power offshore wind farm**

ORLEN Group's supervisory board has reached a conditional investment decision on the 1.2GW Baltic Power offshore wind farm in Poland. It will allow the finalisation of the design phase of the Polish offshore wind project. The construction phase of the Baltic Power project is scheduled to commence later in 2023 following the completion of the construction permits and the financing process.

To be located 23km to the north of the Polish coastline, on the level of Choczewo and Łeba, the offshore wind facility is developed by Baltic Power, a joint venture (JV) between PKN ORLEN and Northland Power. Upon the completion of the construction in 2026, the project is anticipated to deliver clean energy to over 1.5 million Polish households. The Baltic Power offshore wind farm involves a total finance plan of about €4.73bn and covers capital expenditures and contingency along with financing costs and additional reserve.

Besides, the offshore wind project has all the permits for the onshore part of the project and a permit for the construction of an offshore power connection. It has also secured contracts for all key components of the farm including turbines, offshore and onshore substations, cables and foundations as well as their manufacture, transport and installation, said ORLEN. The final investment decision is subject to several conditions including the acquisition of construction permits for the offshore part of the project.

ORLEN management board president Daniel Obajtek said: "By 2030, ORLEN Group will have made a leap in the development of renewable energy sources, reaching 9 GW of installed capacity. "Offshore wind energy will be a key element of this development. As regional pioneers in this area, we have had to do an enormous amount of preparatory and administrative work and build new competencies that we will be able to use in future projects. "Today's decision is a milestone that brings us significantly closer to achieving the company's strategic objectives." Separately, Vestas has signed a conditional agreement to deliver wind turbines for the Baltic Power offshore wind project.

*NS Energy*

<http://www.nsenegybusiness.com/>