

WORLD POWER SYSTEMS REVIEW

15 May 2026

1 May 2026

ISO-NE forecast shows steady increase in regional electricity use through 2035

The region's annual electricity consumption will increase by about 9% over the next decade, ISO New England projects in its 2026-2035 Forecast Report of Capacity, Energy, Loads, and Transmission (CELT Report).

Slightly lower than last year's edition, the energy forecast reflects more conservative assumptions around future adoption of electric vehicles and heat pumps in light of government policy changes.

Every year, load forecasters at ISO-NE examine past electricity use, historical weather patterns, expected economic growth, state-level carbon reduction goals, and other factors to develop the long-term projections at the heart of the CELT Report. Data published in the report are a foundational resource for the ISO's system planning and reliability studies.

In addition to forecast data, the CELT Report provides detail on New England's energy resource fleet, including:

- The potential output of resources participating in the capacity market
- The total generating capability of resources in the region
- A breakdown of the region's generators by fuel/unit classification

New England's net annual energy use has trended downward since 2005, mainly due to more efficient heating and cooling systems, appliances, and lighting, as well as the increased prevalence of behind-the-meter photovoltaics (BTM PV) generation. ISO-NE predicts that trend will reverse over the next decade. Steady growth in net annual energy use is expected as state policy goals for carbon emissions reductions continue to incentivize electrification of heating systems and transportation in the region.

This year's forecast builds on techniques developed during the 2025 CELT Report cycle that allow ISO-NE to model future demand on an hourly basis. This approach treats evolving patterns of energy production and consumption with greater precision than earlier forecasts, which focused primarily on annual energy and seasonal peak projections.

For the 2026 CELT Report, the long-range forecast is made up of six components, as illustrated in the slideshow below. The base forecast models typical electricity use in homes and businesses. For several years, ISO-NE forecasters have been tracking rising demand from electric vehicles and electrified heating systems, as well as demand reductions associated with BTM PV. This year the ISO incorporated two additional forecasts into the CELT Report.

The large load forecast models major new users of electricity that could include data centers, crypto mining facilities, and industrial agriculture. Prospective large loads in New England remain limited in number and scale. However, large loads are presenting challenges for electric grids in other parts of the country. ISO-NE is proactively developing methods to analyze large loads to be prepared for possible future growth in this area. The final forecast component assesses growth in battery energy storage systems (BESS) co-located with behind-the-meter solar. These battery systems increase demand for grid electricity when charging and decrease demand when discharging. BTM BESS is expected to have a relatively small impact on overall demand over the forecast horizon.

The ISO combines all six forecast components to create a long-range projection that models electricity demand in each hour of the day — for many years into the future. The 2026 CELT Report focuses on forecasted annual energy use and seasonal peak demand over the next 10 years.

Overall electricity use in New England		
Total Annual Use (GWh)	2026	2035
Net Forecast	116,679	127,660

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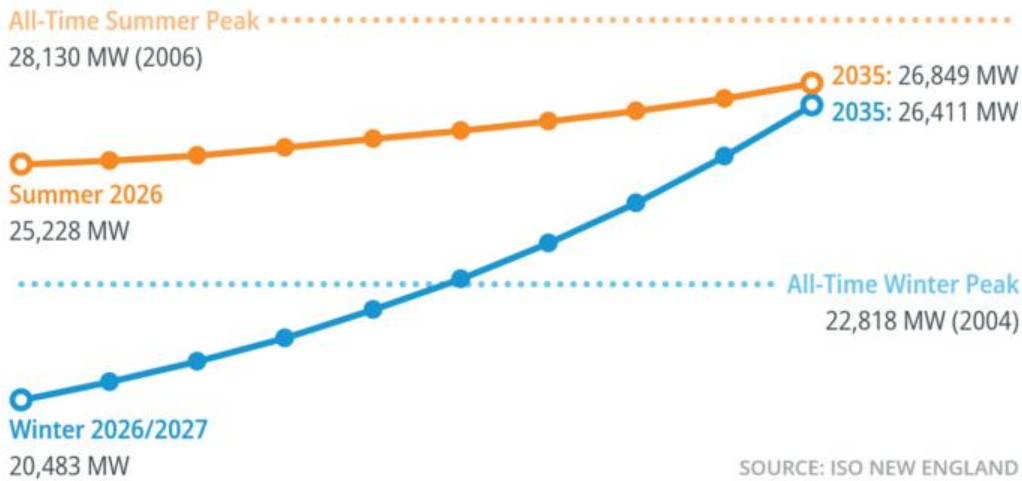
Net annual energy use is expected to grow by 0.9% annually over the 10-year period. BTM PV is projected to reduce consumption of grid electricity by 7,056 gigawatt-hours (GWh) this year, rising to 10,179 GWh in 2035. In other words, without BTM PV, annual energy use would be about 6% higher in 2026 and 8% higher in 2035.

Electric vehicles are expected to increase energy use by 7,074 GWh in 2035, while heating electrification increases use by 7,165 GWh that year.

Peak demand is a measure of the highest amount of electricity used in a single hour. The CELT Report includes forecasts for both summer and winter peaks. ISO New England analysts use extensive climate-adjusted weather data to derive typical peak conditions reflected by the 50/50 forecast, which corresponds to a 50% chance that peak demand will be above or below the forecast. Traditionally, the expected annual peak in New England occurs during the summer. But by 2035, the ISO predicts the winter 50/50 net peak will nearly match the summer 50/50 net peak as the electrification of heating accelerates.

Heating electrification drives rise in winter peak demand

Future values reflect 50/50 net seasonal peak forecasts



SOURCE: ISO NEW ENGLAND

The 90/10 forecast — which reflects hotter, more humid peak conditions in the summer and colder temperatures in the winter — means there is a 10% chance that peak demand will be higher than the forecast.

Summer Peak Demand (MW)	2026	2035
50/50 Net Forecast	25,228	26,849
90/10 Net Forecast	26,473	28,503

Under typical summer weather conditions, net peak demand is expected to rise at an annual rate of 0.6%. For hotter weather, the net peak is expected to rise by 0.7% annually.

BTM PV reduces the summer peak by an average of 1,936 megawatts (MW) in each year of the 10-year forecast. Although in past years the summer peak typically occurred in the afternoon, widespread adoption of BTM PV has effectively pushed the peak toward sunset. This means that even as more BTM PV comes on line, its impact on summer peaks will not significantly increase.

Transportation electrification is expected to contribute 594 MW to 50/50 summer peak demand in 2035.

Winter Peak Demand (MW)	2026/2027	2035/2036
50/50 Net Forecast	20,483	26,411
90/10 Net Forecast	21,457	28,623

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Under typical winter conditions, net peak demand is expected to rise by an average of 2.6% annually through the winter of 2035/2036. For colder weather, the net peak is expected to increase by 2.9% annually.

Heating electrification is projected to contribute 5,533 MW to the 50/50 winter peak in 2035/2036. Transportation electrification is forecast to contribute 1,509 MW to the 50/50 winter peak in 2035/2036. BTM PV is forecast to have a growing impact on 50/50 winter peak demand, reducing it by 316 MW in 2035/2036.

Isonewswire

<http://isonewswire.com/>

1 May 2026

European Power Plunges to Record Negative Prices on Solar Surge

European power prices slid to record lows for Friday, with hugely negative hourly rates in Germany and France, as strong solar generation coincides with public holidays across much of the region.

Hourly power prices neared minus €500 per megawatt-hour for early afternoon delivery, close to the lower limit on the Epex Spot exchange. This helped push down the French day-ahead price to -€41.4, the lowest ever. Hourly prices have turned negative across Europe this week, with strong solar generation expected likely to extend the trend as demand remains subdued.

French and German Power Prices Drop Close to -€500

Lowest hourly price in day-ahead market

Sub-zero prices are becoming more frequent across the continent due to the boom in renewables, with sunnier weather boosting solar generation during the spring months. This phenomenon highlights the challenge the region faces as insufficient storage and grid bottlenecks prevent the system absorbing all the power produced, forcing some solar parks to temporarily shut down.

Still, prices below -€100 per megawatt-hour remain rare — recorded for just 17 hours in Germany and 15 in France so far this year, Epex Spot data compiled by Bloomberg show.

German solar output on Friday is set to come close to Thursday's record of about 53 gigawatts, according to Bloomberg models, potentially exceeding demand. French solar generation is also due to be strong, exceeding 15 gigawatts on Saturday.

High solar output in France often means that nuclear generation drops to balance the grid. On Thursday, the country's grid had a 6 gigawatts drop in output over the course of the morning as solar production rose.

"The weather is great, solar generation is high, and it's a long weekend in many countries," said Stephan Späth, a meteorologist and power trader at ANE. There are holidays on either Friday or Monday in nations including Germany, France, the UK and Spain.

Bloomberg

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

1 May 2026

Sungrow completes the world's first large-scale grid-forming validation

PV inverter and energy storage system (ESS) provider Sungrow has successfully completed the world's first large-scale grid-forming validation, involving 14 scenarios, performed over 138 hours, meeting international standards, confirming reliable operation under complex grid conditions and verified by TÜV Rheinland

Grid-forming (GFM) inverters are advanced power electronics that establish and regulate voltage and frequency in modern power grids, acting as a voltage source to mimic

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traditional synchronous generators. They are crucial for integrating renewables and provide the necessary inertia, system strength, and black-start capabilities to stabilize grids with high inverter-based resource penetration.

As demand for grid-forming technologies grows, independent, full-scale validation is increasingly important. Sungrow's test base features a 30 MW grid simulation platform, real short-circuit capacity regulation equipment, and advanced arc-fault testing devices, enabling replication of complex and extreme grid conditions. The tests align with grid requirements across major global markets, including Europe, Australia, and China.

“Based on two decades of experience on grid-forming technology and in-depth understanding of power system stability requirements, Sungrow has built a 30 MW large-scale simulation platform and conducted 14 comprehensive real-world extreme test scenarios” said Henry Liu, General Manager of the Microgrid and Grid Solutions Center at Sungrow. “These results demonstrate grid-forming capabilities and mark a critical step toward the large-scale deployment of grid-forming technologies.”

Here the most important results:

A short-circuit test using real arc-fault equipment simulated severe fault conditions. Under identical scenarios, the grid-forming system remained connected and continuously supplied fault current, while conventional systems are more likely to disconnect. The response time was at 10ms, the test saw stable and continuous fault current contribution and a strong fault ride-through capability.

Compared with conventional grid-following systems, which may lose stability under the same disturbance, Sungrow's solution maintained continuous operation and restored frequency stability within milliseconds. The test showed Millisecond-level response to frequency deviations, Stable operation under sudden disturbances and improved system resilience in weak grids.

In a full blackout test, all external power was disconnected from the site. During this test, Sungrow's grid-forming Power Conversion System established system voltage within 19s, then successfully restarted the entire facility, restoring loads and infrastructure without external support. This capability enables industry-leading GW-scale black start and significantly enhances system restoration speed with virtually no circulation current.

In addition to the tests mentioned above, eleven further tests - including on/off-grid switching, load switching, and oscillation damping - were also successfully completed.

Sungrow has also successfully completed the conformity assessment conducted by the Notified Body (NB) TÜV Rheinland (NB No. 1008) in accordance with the EU Battery Regulation (EU 2023/1542) becoming the first company globally to complete NB assessment across utility-scale, commercial and industrial (C&I), and residential energy storage segments under the currently applicable provisions of the regulation.

The assessment covered requirements already in force, including safety, labeling and marking obligations, restrictions on hazardous substances, performance and durability, and battery-management parameters such as state of health (SOH) and expected lifetime.

“Sungrow's energy storage portfolio demonstrates strong performance in safety design, system reliability, and key technical metrics, fully meeting the stringent requirements of the EU Battery Regulation for stationary energy storage systems” said Bowen Dong, General Manager of PV&ES Product Services at TÜV Rheinland Greater China. “As the first company globally to complete NB assessment across utility-scale, C&I and residential energy storage segments under the applicable provisions of the regulation, Sungrow's achievement provides a valuable reference for the industry in addressing the evolving regulatory landscape in Europe.”

Renewable Energy Magazine

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

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Governments reveal 'biggest electricity boost in WA history'

Ten Western Australian projects amounting to 1.9 gigawatts (GW) of renewable generation and 3.68GWh of battery storage will receive financial underwriting from Federal and WA Governments. Six onshore wind farms, three battery energy storage systems (BESS) and one solar–battery hybrid, all located in WA, were selected as part of Tender 5 and 6 of the Capacity Investment Scheme (CIS).

Three Neoen Australia assets were recognised, including the Yathroo and Narrogin wind farms, and the Yathroo BESS. Elsewhere, Atmos Renewables' Parron Maam Maran wind farm will receive CIS underwriting, along with Synergy's Tathra wind farm and Tilt Renewables' Waddi wind farm, with Trina Solar's Killawarra hybrid project the only solar asset receiving support. The Enpowered's Collie BESS and Frontier Energy's Waroona renewable energy project were the other battery projects recognised.

The assets, which represent \$5 billion in new energy infrastructure investment, are expected to generate enough electricity to power more than one million WA households, with 400,000 households to benefit from four hours of utility-scale BESS dispatch during peak demand. "This is the biggest electricity boost in WA's history and is exactly what the Capacity Investment Scheme was designed to deliver," Federal Minister for Climate Change and Energy Chris Bowen said. "WA's energy system is changing, and the Albanese Government is making sure that change means more reliability, more investment, more jobs and lower bills and emissions." Assistant Minister for Climate Change and Energy Josh Wilson said this was a "historic investment". "The success of these tenders demonstrates a strong pipeline of renewable energy projects in Western Australia, particularly for onshore wind," he said.

"We've already seen renewable generation reach 46.1 per cent in the WEM (Western Energy Market) between January and March, which is more than 5 per cent higher than the same period last year. This will drive WA's renewable energy capacity to the next level." Seventy-five projects have received CIS endorsement to this point, translating to 13GW of renewable generation and 21.6GWh of battery storage capacity.

Energy Magazine

<http://www.energymagazine.com.au/>

4 May 2026

NYISO Preparing Contingency if CHPE is Further Delayed

NYISO is preparing to file tariff revisions with FERC in June to head off a potential market parameter misalignment that would be caused if the Champlain Hudson Power Express fails to come online by the end of summer. The transmission project's construction was completed in January, and FERC in April approved the ISO's proposed rules to incorporate it into its markets, with the assumption that it would begin operating May 1

"Why are we here?" Alexis Drake, a senior market design specialist for the ISO, told the Management Committee on April 29. "This all results from the fact that NYISO has had several ongoing efforts in the past year, both with the Winter Reliability Capacity Enhancements project ... and with the triggering resources proposal." Drake explained that the ISO needed an interim solution to make sure the markets were based on assumptions that made sense given the large change to the New York City system that CHPE represents.

The potential problem arises from an interaction between the recently implemented "triggering resource" rules and the winter reliability project. If CHPE enters the market during the 2026/27 capability year, NYISO said this will cause a market parameter misalignment in

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the winter because of seasonal capacity availability assumptions in the installed capacity demand curve and differences in seasonal resource availability.

NYISO proposes that if CHPE says it will participate in the ICAP market by Aug. 10, the ISO will develop alternate winter demand curve reference prices and maximum clearing prices incorporating the project's capacity. NYISO would also update New York City's load zone locational minimum requirement for the winter peak months to reflect a scenario representing CHPE out of service. The winter shoulder months would use an in-service case. In future years, this misalignment will not be an issue because of the implementation of the Winter Reliability Capacity Enhancements project, which introduces seasonal capacity requirements, but that will not be ready until 2027/28.

Under the triggering resource rules, NYISO developed two sets of market parameters to reflect different potential assumptions for the ICAP market. They reflect different transmission security floors, capacity accreditation factors and minimum capacity requirements that would change without the inclusion of CHPE's 1,250 MW of capacity. The committee approved a motion recommending the Board of Directors authorize filing the tariff revisions with FERC. NYISO intends to file them only if CHPE sends them a valid notice to participate in the capacity market by Aug. 10.

Hydro-Québec built the 339-mile HVDC line between Québec and New York City with Transmission Developers Inc. Serge Abergel, COO of Hydro-Québec Energy Services, told RTO Insider via email that the line is undergoing testing that would be completed before the end of May. "Testing will not be completed before May 10," Abergel wrote. He said this would prevent CHPE from filing with NYISO in time to participate in the July capacity auction. "We're still looking at the August auction since we expect everything to be complete by the end of the month of May."

RTO Insider

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

6 May 2026

Belgium moves to nationalise nuclear

The Belgian State, Power group Engie and Electrabel (an Engie subsidiary) have signed a Letter of Intent (LOI) setting out the framework for exclusive negotiations for the potential acquisition by the Belgian State of all of Engie's and Electrabel's nuclear activities. The LOI does not constitute a binding commitment to conclude the transaction, the completion of which remains subject to, "among other things, the negotiation and execution of definitive agreements and the required third-party and regulatory approvals", Engie said. The final transaction will still require regulatory approval, including from the Federal Agency for Nuclear Control (FANC).

The transaction will comprise the full scope of the nuclear activities currently owned and operated by Engie and Electrabel and their affiliates, including the nuclear fleet of seven reactors, associated personnel, all nuclear subsidiaries, as well as all associated assets and liabilities, including decommissioning and dismantling obligations.

This reflects the Belgian Government's strategic decision to assume direct ownership of nuclear assets, in support of plans to extend the operation of existing reactors and to develop new nuclear capacity. "By doing so, the Belgian Government is taking responsibility for Belgium's long-term energy future, with the objective of building a financially and economically viable activity that supports security of supply, climate objectives, industrial resilience and socio-economic prosperity," Engie said in a press release.

NEI magazine

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

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DOE's Hydropower and Hydrokinetic Office to Release \$430 Million to Improve America's Hydropower Fleet

The Department of Energy's Hydropower and Hydrokinetic Office (H2O) announced it will soon resume negotiations to issue nearly \$430 million in payments to American hydropower facilities. This funding will support 293 projects at 212 facilities selected by the Maintaining and Enhancing Hydroelectricity Incentives program.

The Hydroelectric Incentive program, now managed by H2O, funds projects that improve grid resiliency, dam safety, and ensure facilities meet current state and federal regulatory requirements. Combined with private investments from each facility, this funding will catalyze a \$2.8 billion investment in America's hydropower fleet.

Hydropower currently accounts for 5.86% of total U.S. utility-scale energy generation, while pumped storage hydropower accounts for 88% of all utility-scale energy storage. Hydropower also plays a key role in keeping the grid stable with its ability to quickly ramp up or down to meet energy needs.

This funding will be used to support efforts to renew aging infrastructure and maintain the reliable, affordable power Americans depend on every day. Although hydropower plants have low operating costs, many of these plants were constructed decades ago and need improvements to ensure they continue to generate power for generations to come.

H2O will begin processing the applications of the 293 projects across 212 hydropower facilities and expects to start distributing payments in the coming months.

DOE

<http://www.energy.gov>

8 May 2026

Europe Is Losing the Energy-Security Battle to China

The war in Iran has triggered a dramatic redistribution of global wealth. US oil and gas companies stand to pocket at least \$60 billion in windfall profits this year, while Russia could gain up to \$100 billion in additional fiscal revenues. But nearly every economy, including energy exporters, is grappling with slower growth, rising inflation, and the prospect of persistently high interest rates.

The clearest fault line runs through the Strait of Hormuz, as its closure has exposed Asia's heavy dependence on Gulf energy. Europe, too, is paying a steep price: since the Iran war began, the European Union has spent an additional €24 billion (\$28 billion) on fossil-fuel imports.

At the same time, the current crisis is redefining energy security. In the 20th century, it meant reliable access to oil and gas. Today, energy security increasingly rests on the ability to electrify rapidly, produce clean power domestically, and control the technologies and supply chains on which the electricity systems of the future will depend.

By those measures, China holds a clear competitive advantage. Electricity already accounts for roughly 30% of its total energy consumption, compared with about 20% in the United States and Europe. The EU, for all its climate ambition and electrification targets, remains dependent on imported fossil fuels and foreign clean technologies.

The divide within Europe is just as striking. Spain, for example, has built a partial buffer against fossil-fuel volatility: renewables now set wholesale electricity prices roughly 80% of the time, averaging €60 per megawatt-hour. Italy, by contrast, remains heavily exposed to natural-gas markets, with electricity prices hovering near €130 per megawatt-hour.

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The European Commission's Accelerate EU initiative reflects the urgency of electrification. This package of measures seeks to curb rising energy costs and reduce the bloc's dependence on imported fossil fuels by scaling up electric vehicles (EVs) and heat pumps, expanding renewables, strengthening power grids, and building storage capacity. But it lacks the financing needed to achieve its stated objectives. Without a credible investment strategy, it risks remaining a tissue of ambition rather than a coherent plan. China, by contrast, has spent decades building an integrated electrification system, securing access to critical minerals, expanding its dominance in refining, scaling up renewables, batteries, and EVs, and electrifying its industrial base. As a result, it now controls strategic chokepoints across the clean-energy value chain.

Given that industrial electricity prices in Europe were roughly twice as high as in China even before the current energy shock, the transition from a world dominated by petrostates to one shaped by electrostates is likely to accelerate. Access to low-cost electricity will translate directly into strategic autonomy and geopolitical leverage. While the US and Russia may benefit most from the fossil-fuel shock in the short term, the balance is set to shift toward China over time.

Europe could still benefit from the energy transition, but that will require more than new targets and regulations. Success depends on large-scale investment and a well-designed industrial policy. Otherwise, Europe risks trading dependence on Gulf oil and gas for dependence on Chinese clean technologies.

Encouragingly, the EU has begun to put in place the regulatory framework needed to support this shift. Most notably, the Net-Zero Industry Act, the Critical Raw Materials Act, the European Chips Act, and the Industrial Accelerator Act are aimed at securing control over key parts of the electrified economy by strengthening Europe's industrial base, ensuring access to vital inputs, and bolstering technological capabilities.

These initiatives also signal a more assertive approach to industrial policy. Public procurement, state aid, and other tools are increasingly geared toward supporting low-carbon products made in Europe or within trusted supply chains. In this sense, Europe is beginning—albeit cautiously—to play the same strategic game as China.

The main constraint, however, is financing. As the 2024 Draghi report on EU competitiveness made clear, the investment required for the clean-energy transition far exceeds the bloc's current resources. This underscores the urgent need for common financing instruments, including Eurobonds, to support the necessary spending.

Europe still has time to catch up. But unless it matches its regulatory ambition with sustained investment, it will remain strong on rules and weak on delivery. In a world defined by industrial policy and geopolitical competition, there is little room for half measures.

Project Syndicate

<http://www.project-syndicate.org/>

11 May 2026

ADB and Acwa sign US\$116 million financing package to support wind power in Uzbekistan

The Asian Development Bank (ADB) has signed a US\$116 million financing package with Acwa to support the development, construction, operation, and transfer of a 300 MW wind power plant in Uzbekistan's Bukhara region, further accelerating the country's transition to renewable energy.

The financing comprises loans of US\$50 million from ADB's ordinary capital resources, US\$41 million mobilised from commercial lenders, with ADB acting as mandated lead arranger and bookrunner, and US\$25 million from the Leading Asia's Private Infrastructure Fund 2 (LEAP 2). ADB also serves as environmental and social co-ordinator

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for the Asian Infrastructure Investment Bank (AIIB) and Standard Chartered, which are parallel lenders.

The power plant – known as Bash 2 – is an extension of the Bash wind power project, which was co-financed by ADB in 2023. Bash 2 will feature 39 wind turbine generators, each with a nameplate capacity of up to 8 MW, a new 35/500 kV substation, and approximately 1.5 km of overhead transmission line to connect the plant to the national grid.

Acwa, the world's largest private water desalination company, a leader in the energy transition, and a first mover into green hydrogen at scale, is a listed developer, owner, and operator of power generation and desalination projects across 15 countries, with a market capitalisation of approximately US\$35 billion as of March 2026. ADB has financed several of Acwa's landmark renewable energy projects in Uzbekistan, including the 500 MW Bash and 500 MW Dzhankeldy wind power projects, the 200 MW Nukus 2 wind and battery energy storage (BESS) project, and the Samarkand 1 and 2 solar photovoltaics and BESS projects.

LEAP 2 is an ADB-managed fund with a US\$1.5 billion commitment from the Japan International Cooperation Agency. Established in 2023, it focuses on sustainable private sector infrastructure projects that reduce carbon emissions, improve energy efficiency, and provide affordable health care, education, and communication services to ADB's developing member countries.

UZ Daily

<http://www.uzdaily.uz/>

11 May 2026

Global OTEC completes world's first offshore ocean heat energy platform

Ocean thermal energy conversion has spent decades sitting at the edge of the renewable energy industry, often discussed as a promising technology that never reached commercial viability. That may be starting to change. UK-based developer Global OTEC recently completed installation of what it describes as the world's first purpose-built offshore platform for ocean thermal energy conversion, or OTEC, off the coast of Gran Canaria. The project marks a technical milestone for a sector that has historically struggled with engineering complexity, financing hurdles and doubts around scalability.

Unlike solar and wind generation, OTEC systems are designed to deliver continuous baseload electricity by exploiting the temperature difference between warm surface seawater and colder deep ocean water. In tropical regions, where temperature gradients remain relatively stable year-round, advocates argue the technology could provide a dependable renewable power source for island economies that continue to rely heavily on imported diesel. The platform installation forms part of the PLOTEC project, supported by the European Union's Horizon Europe program. The deployment is taking place at PLOCAN, the Oceanic Platform of the Canary Islands, which has become a testing ground for offshore renewable technologies.

For the offshore energy industry, the project is less about immediate commercial output and more about proving that one of marine energy's most persistent engineering challenges can be addressed in real operating conditions.

OTEC systems generate electricity through a relatively simple thermodynamic process. Warm surface seawater heats a working fluid with a low boiling point, creating vapor that drives a turbine. Cold seawater pumped from deep below the ocean surface then condenses the vapor back into liquid form, allowing the cycle to repeat continuously.

The concept itself is not new. Engineers and researchers have studied OTEC for more than a century. The problem has largely been economics and infrastructure. Traditional onshore OTEC systems require extremely long cold-water intake pipes extending

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deep into the ocean. These pipes are difficult and expensive to manufacture, transport and maintain. Storm exposure and corrosion risks add another layer of operational uncertainty.

Global OTEC argues that offshore deployment changes the equation significantly. By positioning the platform directly above deep water, the company says pipe lengths can be reduced by as much as 80%, potentially lowering installation costs and improving long-term system reliability. One of the most important parts of the recent deployment involved installation of the platform's vertical seawater intake riser. The structure is responsible for transporting cold seawater from deep below the surface to the energy conversion system above. Offshore Energy reported that the operation represented one of the most technically difficult stages of offshore OTEC development.

The platform itself remains relatively small in scale. Its purpose is validation rather than commercial electricity production. Still, proving that critical offshore components can operate in open-water conditions is an important step for a sector seeking investor confidence.

The broader offshore renewables market has seen similar development paths before. Floating wind projects, once considered prohibitively difficult, gradually advanced through years of pilot demonstrations before attracting large-scale capital investment. Island economies are becoming the proving ground for continuous ocean energy

The strongest commercial case for OTEC may not emerge in major industrial economies first. Island nations and remote coastal regions are increasingly viewed as the technology's most realistic early market.

Many tropical islands remain heavily dependent on imported fossil fuels for electricity generation. Diesel imports expose utilities and governments to volatile fuel prices, shipping disruptions and high electricity costs. Grid systems are often small and isolated, making energy resilience a persistent challenge. Solar and wind power have expanded rapidly across island markets, though intermittency remains a constraint. Battery storage can help stabilize supply, though scaling storage infrastructure remains expensive for many developing economies.

This is where OTEC's baseload capability becomes commercially attractive. Unlike weather-dependent renewables, ocean temperature gradients remain relatively constant in suitable regions. That allows OTEC plants to operate continuously throughout the day and night. Global OTEC estimates that more than 25 GW of fossil fuel electricity generation across tropical islands could eventually be replaced by OTEC systems. The company's long-term strategy centers on modular offshore systems that can be deployed near island communities with suitable ocean conditions.

The next commercial phase may take place in Hawaii, where Global OTEC plans to deploy its first operational OTEC Power Module following offshore testing and validation work in the Canary Islands. For island governments pursuing decarbonization targets, the appeal extends beyond emissions reductions. Stable locally produced electricity could improve energy security while reducing exposure to imported fuel costs.

The challenge is whether OTEC can reach cost competitiveness quickly enough to establish itself before battery economics improve further. Marine renewable energy has a long history of ambitious concepts struggling to reach commercial scale. Wave energy developers, tidal projects and other ocean technologies have often faced difficult economics alongside demanding offshore operating environments.

OTEC has faced similar skepticism for years. High capital expenditure, large infrastructure requirements and relatively low thermal efficiency have historically limited investor appetite. Governments are increasingly searching for dispatchable low-carbon electricity sources capable of supporting grid stability as renewable penetration rises. Offshore engineering capabilities developed through oil and gas and floating wind projects

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are also creating new opportunities for marine energy technologies once considered impractical.

The International Renewable Energy Agency has previously estimated that global OTEC generation potential could theoretically reach 10,000 TWh annually, though practical deployment would represent only a fraction of that figure. European funding support is also helping the sector move beyond laboratory-scale research. Horizon Europe backing for projects such as PLOTEC reflects growing institutional interest in technologies that could support energy independence in remote or geographically constrained regions.

Energy Oil Gas
<http://energy-oil-gas.com/>

12 May 2026

SPP, PJM, CAISO anticipate being able to meet power demand this summer

Although their regions might see hotter-than-average temperature days over the summer, the Southwest Power Pool, California Independent System Operator and PJM Interconnection project that they have enough power supplies to meet electricity demand, according to recent releases from those organizations.

PJM said in a May 7 release that although the National Weather Service is forecasting “hotter-than-normal conditions this summer in the PJM region’s mid-Atlantic and southern states, as well as West Virginia, Kentucky and Tennessee,” it should have adequate reserves to maintain reliability.

The RTO said it expects energy demand to peak around 156 GW over the summer, but has 182 GW of capacity ready, along with 7.8 GW of contracted demand response.

SPP meteorologist Jeff Baskin said in a Monday release from the RTO that “forecasts indicate the potential for higher-than-normal temperatures and drought conditions across parts of our region” this summer, but SPP said it’s highly likely that the region’s supply will be able to meet its demand.

“We remain confident in our ability to keep the lights on for our member utilities and the 20 million people they serve through the summer,” said SPP Vice President of Operations C.J. Brown.

CAISO said in a May 4 blog post that its summer assessment indicates “a surplus of capacity of [2.5 GW] relative to what is needed to meet the 1 in 10 loss of load expectation criteria, which in this context means no more than one event every ten years where insufficient resources require emergency measures to balance supply and demand.”

CAISO’s footprint is also likely to see higher-than-average temperatures this summer, the ISO said. Warm coastal sea surface temperatures “increase the likelihood of a hotter than usual coastal summer, in contrast to the milder conditions observed in recent years,” and above-normal temperatures are expected throughout the West for June, July and August.

“While sufficient capacity is available to meet expected summer demand, risks do remain,” CAISO said. “Abnormally dry conditions, increased wildfire risk, and the potential for extended, widespread heat events and related disruptions could challenge grid operations as the season progresses.”

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