



South Korea targets 18.8% share of LNG in power mix by 2030

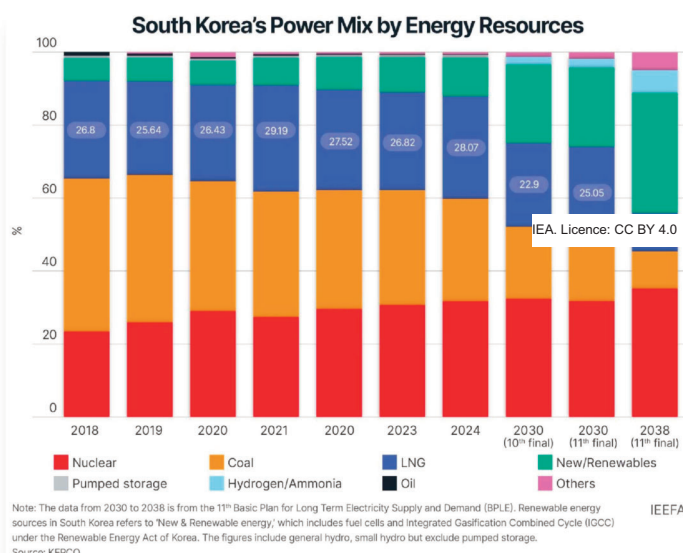
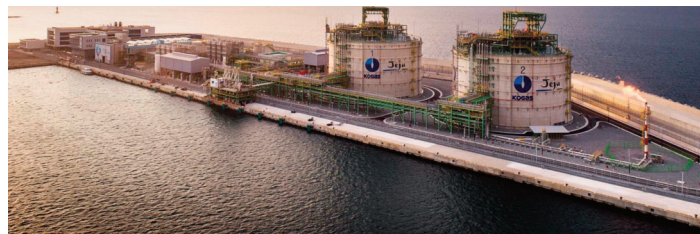
Executives South Korea's state-run utility KOGAS have visited Alaska as the Ministry of Trade, Industry and Energy (MOTIE) targets to increase the share of LNG in the power gen mix from 16.9% currently to 18.8% by 2030. US LNG imports to Korea already more than doubled year-on-year as amid a Free Trade Agreements renegotiation.

The US Trump administration has voiced concerns about America's trade deficit with South Korea and targeted specific sectors with tariffs, e.g. steel, automotive and semiconductors. By boosting LNG imports from the United States via Korean state utilities, the government is aiming to achieve concessions in other industry sectors with a view to re-negotiating and updating the US/Korea free trade agreement KORUS FTA.

"While U.S. LNG imports may appear to offer a solution to bridge the trade deficit, declining domestic LNG demand and reduced targets for gas generation in the power mix suggest that increasing LNG imports may not be economically or environmentally viable for South Korea," commented Michelle Kim, energy finance specialist at IEEFA.

In fact, South Korea's actual LNG demand is declining as utilities respond to rising prices for the imported fuel by building out wind and solar power sources. Falling capital costs and zero operating costs are making renewable energy sources increasingly attractive.

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Australian LNG to help meet Japan's winter demand

Woodside Energy Trading Singapore has signed a non-binding Heads of Agreement with Japan's largest utility JERA deliver three LNG cargoes, or approximately 0.2 mtpa, during December to February to meet Japan's peakload power demand in the winter season. LNG from Australia will be shipped over a 5-years tenure starting from 2027.

Despite decarbonisation policies set out by the Japanese government, there is still some 23 million tons of LNG and LPG imported on an annual basis mostly designated for power generation and industrial use, to a lesser degree. Electricity generation output in Japan totalled 231 Terrawatt-hours (TWh) last year, with gas-fired plants delivering the majority of this volume. Installed capacity of gas-fired plants totals 44.9 GW in Japan, and utilities aim to build out fast-ramp gas peaking plants to balance rising infeed of intermittent wind and solar power.



JERA LNG terminal with adjacent power station

Australian cargoes add to term US LNG supply

Woodside will supply the three LNG cargoes on a delivered ex ship (DES) basis, helping Japan's largest power generator to diversify its supply chain. In mid-June, JERA agreed to import up to 5.5 million tonnes of LNG annually from the US

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The Government's recently finalized 11th Basic Plan for Long-Term Electricity Supply and Demand (BPLE) aims to reduce the share of gas from 28% to 10.55% by 2038 to reach its decarbonization goals.

Meanwhile, US LNG shipments from the Freeport terminal have been beset by frequent interruptions. Over the past years, disrupted U.S. gas supply frequently lowered the electricity output from South Korea's fleet of LNG-fired power plants.

SK E&S, an off-taker from the Freeport facility, had to reduce the operating rates of its LNG-fired power plants from 79% in 2021 to 71% in 2022 due to the supply shortage. This prompted the company and KOGAS to purchase more expensive spot LNG to compensate for the losses. The LNG cargoes bought by South Korea were also costly, as prices were 16% higher than cargoes sold to Japan in 2022. According to IEEFA analysis, "this illus-

trates the potential risks of increasing LNG imports from the United States to South Korea."

The Alaska LNG project, in particular, is still a rather uncertain venture. Financial close is still pending given that, so far, no buyers have signed long-term purchase agreements. For LNG export projects to progress, at least 80% of output needs to be committed under such contracts to obtain financing. ■

IHI and GE complete test facility for ammonia gas turbine

IHI Corp and GE Vernova have completed a large-scale test facility to develop a novel combustor that will enable F-class gas turbines to burn up to 100% ammonia by 2030. Combustion tests in the new facility at IHI Aioi Work in Hyogo, Japan, are meant to start this summer.

Ammonia, a derivative from hydrogen, is carbon-free, and when combusted the gas turbine would not emit any net CO₂ emissions.

The new test facility at Aioi Work is engineered to test advanced combustion systems at GE Vernova's F-class gas turbine operating conditions, including pressure, temperature, and both air and fuel flow rates.

"IHI has developed a 100% ammonia firing gas turbine IM270 (output 2MW) and will level the technology to develop large-scale combustion technology. IHI's combustor development role lies this new flagship test facility," said Kensuke Yamamoto, IHI's general manager of Ammonia Value Chain

Project Department.

Under a Joint Development Agreement, sealed in 2024, the two partners aim to develop a combustion system that will fully run on ammonia. Starting in the summer of 2025, IHI plans to conduct rigorous combustion tests using full scale prototype combustors operating on 100% ammonia. The aim is to develop a commercially viable gas turbine by 2030.

Completion of the Combustion Test facility marks a shift from initial studies on the ammonia value chain to the practical implementation of technologies and engineering projects, said Jeffrey Goldmeer, GE Vernova Senior

Director, Technology Strategy. "This marks a new phase of our collaboration with IHI," he said, adding goal was to develop decarbonization pathways that safeguard existing power generation investments. ■



Combustion test facility at IHI's Aioi Works

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over a 20-year period. The deals include sales and purchase agreements (SPAs)

with NextDecade and Commonwealth LNG.

The SPA's provide competitive pricing, flexible terms, and robust market fundamentals, JERA pointed out. LNG shipments will come on a free-on-board (FOB) basis with no destination restrictions, allowing JERA to re-sell cargoes in response to shifting demand in Asia-Pacific. In addition, of agreement (HOAs) were signed with Sempra and Cheniere. These contracts expand JERA's existing US LNG offtake, totalling 3.5 mtpa from Freeport LNG and Cameron LNG.

Term SPA with China Resources

In early June, the Australian oil and gas major signed its maiden standalone, long-term LNG sales agreement with China Resources. The Hong Kong-based company agreed to offtake 0.6 mtpa on a delivered basis for 15 years, starting from 2027.

"This marks the first time Woodside on a

standalone basis has signed a long-term sale agreement with a customer in China, Asia's largest consuming market for LNG," chief commercial officer Mark Abbottsford said. The accord, in his view, demonstrates the depth and length of demand for LNG in Asian markets as nations in the region seek to guarantee energy supplies.

Asia's green energy transition and rapid renewables build-out bodes well for Woodside's future commodity sales given that Asian utility buyers need to secure firm gas supplies to balance renewables in their generating portfolio.

"Our LNG-weighted portfolio is well suited to capitalise on that demand," Woodside CEO Meg O'Neill told investors. "The world's demand for Woodside's products will be resilient in the coming decades as populations and economies grow, with our target markets in Asia driving primary energy demand." ■

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LNG Canada starts producing first LNG at Train 1

Shell-led LNG Canada project has officially started producing liquefied natural gas at Train 1 of its export terminal in Kitimat, British Columbia, at around 4 am local time. Train 1, with a capacity of 5.6 mtpa, is reportedly not yet operating at full capacity due to a technical glitch at one of the processing lines.

The LNG tanker 'Gaslog Glasgow' is en route to the Kitimat terminal for loading, according to ship tracking data, and anticipated to arrive on June 29.

As North America's first large-scale LNG export plant with direct Pacific access, LNG Canada significantly reduces voyage time to Asian destinations compared to US Gulf Coast terminals which makes making Canadian LNG more competitive in Asian markets. Peru's Pampa Melchorita LNG is currently the only Pacific-facing LNG export project, with

Peruvian cargoes taking on average 29 days, compared to 35 days for US Gulf Coast cargoes to reach East Asian buyers.

The debut cargo and following shipments are likely to be sold on AECO-linked pricing. Petronas, a joint venture partner in LNG Canada introduced the Canada Alberta Energy Company (AECO) index as a new option for LNG price indexation to its customers in May 2021.

Petronas owns a 25 percent share in LNG Canada and announced it will ship the first LNG cargo from its offtake share in the LNG Canada project to Toho Gas, a Japanese city gas utility. The Malaysian energy major is understood to use its own LNG carrier to transport the initial cargo. According to iGIS/LNG insight, the 174,000-cbm Puteri Sejinjang tanker, built in 2024, has signalled its planned arrival at LNG Canada on 29 June. ■



View of LNG Canada at Kitimat, B.C.

NEWS NUDGES

Supreme Court allows challenge of Clean Air Act waivers

The US Supreme Court has ruled that fuel industry groups have legal grounds to challenge the Environmental Protection Agency (EPA) waiver that allowed California to implement its Advanced Clean Car I standards. The ruling challenges California's quest to implement separate, more stringent pollution standards.

Brent price falls on news of a ceasefire

Oil prices fell sharply on Tuesday after Israel confirmed it agreed a ceasefire with Iran, brokered by the US. Brent crude initially fell for a second day, down more than 5% to \$67.65 per barrel, after tumbling by 7% on Monday, returning to levels last seen on 11th June, the day before Israel launched a series of strikes against Iran's nuclear and military sites.

Vaca Muerta output gains make Argentina pivot towards LNG

Argentina's Vaca Muerta shale play has achieved significant first-quarter gains, with oil output rising 26% and gas production up 16% yoy, underpinning the Southern Energy LNG project. Financial close on MK II – one of two FLNG vessels supplied by Golar – is slated for Q3-2025.

Apart from MK II, Golar LNG will supply a further floating LNG vessel, the Hilli Episeyo. Both units will be positioned off the coast of Rio Negro province, collectively offering an export capacity of 6 mtpa.

FID for MK II is anticipated in October this year, with first production from Hilli Episeyo slated for late 2027 and MK II projected to come online by the end of 2028.

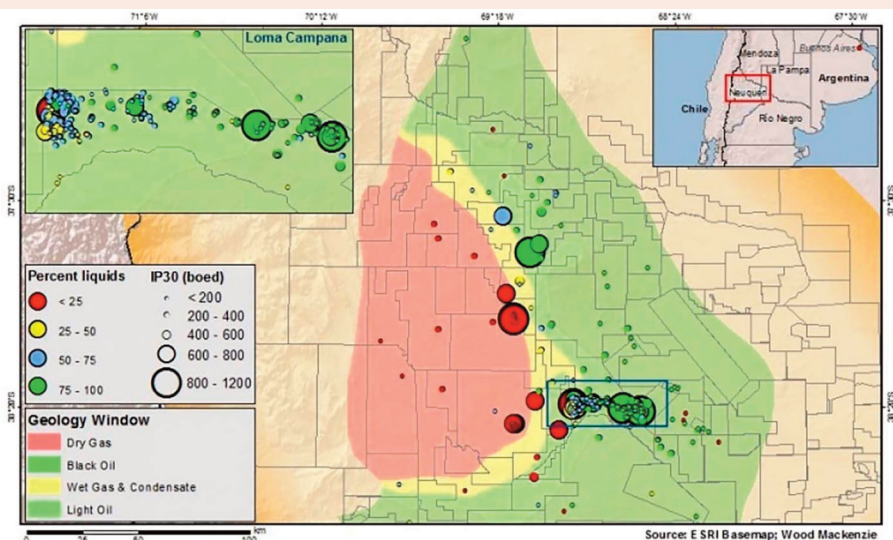
Amid steady gains in unconventional gas production at Vaca Muerta, the Argentine oil major YPF is striving to realise additional LNG export developments. The second phase, ARGFLNG 2, is a partnership with Shell (which joined in late 2024) and is expected to achieve a capacity of 10 mtpa. Following this, the third phase, ARGFLNG 3, with Eni as a potential strategic partner, could contribute an additional 12 mtpa.

While each phase features distinct partners and capacities, stakeholders such as YPF increasingly view them as integral components of a unified LNG export vision. Rystad Energy anticipates these FLNG developments will reach full capacity by the late 2030s.

The Vaca Muerta Oil Sur (VMOS) pipeline project helps facilitate LNG ex-

ports. Scheduled to enter operations in 2027, VMOS will establish a direct link between the Neuquen Basin and the Atlantic Coast via Punta Colorada port.

Analysts expect this new corridor will alleviate inland bottlenecks and enhance export logistics, reinforcing Vaca Muerta's long-term viability as a global energy hub. ■





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Automotive, power gen industry face rare earth bottlenecks

Manufacturers of cars and power generation equipment are struggling with rare earth shortages as China tightens its grip these raw materials. According to Wood Mackenzie figures, there was a 51% drop in Chinese rare earth magnet exports in April 2025 compared to March – far exceeding seasonal norms.

Rare earth elements are used in various types of power generation equipment. Neodymium, praseodymium, and dysprosium, for instance, are used in permanent magnet generators, particularly in direct-drive wind turbines. These magnets allow for gearless designs and enable the assembly of compact and high-torque machines.

The sharp fall in rare earth magnet is also disrupting the supply of these critical components for electric vehicle (EV) and hybrid drivetrains. Thomas Jones, senior analyst,

rare earths at Wood Mackenzie, said “the sudden drop in exports has exposed the automotive industry’s vulnerability to supply chain disruptions. With China controlling over 90% of global processing capacity for rare earth magnets, the impact on vehicle production has been severe and far-reaching.”

The United States experienced a 58% decline in imports, while India saw a staggering 78% drop. South Korea and Germany were also significantly affected, with decreases of 73% and 47% respectively.

earth shortages: For nuclear power, rare earths such as gadolinium are used as neutron absorbers in control rods. In solar power systems, meanwhile, some rare earths are used in sensors, control systems, and high-efficiency electric generators.

Special rare earth elements are sometimes used in generator magnets and electrical sensors which are used for both hydroelectric and thermal power generation.

Rush to develop alternative supply chain

The US and Australia are hence in a rush to develop an alternative rare earth supply chain. The US has already invested US\$1.4 billion in various rare earth mining, separation, and refining projects. Despite these efforts, analysts reckon it will take several years before commercial production reaches the scale required to meet global demand.

“These short- and medium-term responses, while encouraging, are unlikely to fully resolve the underlying supply risk,” said Thomas. “Developing long-term strategies to secure alternative sources of rare earth elements outside China will be critical for the industry’s resilience.”



Quest for short-term alternatives

Manufacturers strive to for short-term alternatives to rare earth in a desperate effort to keep manufacturing chains in operations. Some are considering importing sub-assemblies and components containing magnets, which are not currently subject to the same export restrictions. However, this workaround could drive up costs, particularly for US automakers facing tariffs.

The green energy transition could also slow down due to rare

Energy as a Service market to grow 8.7% through 2034

The Energy as a Service (EaaS) market has reached \$126 billion in market valuation and is projected to grow at a rate 8.7% through 2034. According to GM Insights, operational and maintenance services could generate \$132.5 billion by 2034 as businesses prioritize solutions that enhance efficiency and sustainability.

Government policies help accelerate EaaS adoption. In the United States, investment tax credits, energy efficiency grants and net metering programs have made solar and energy-saving upgrades financially attractive. The US solar capacity alone has doubled in the last five years and is expected to exceed 350 GW by 2030, un-

derpinning solar-as-a-service models.

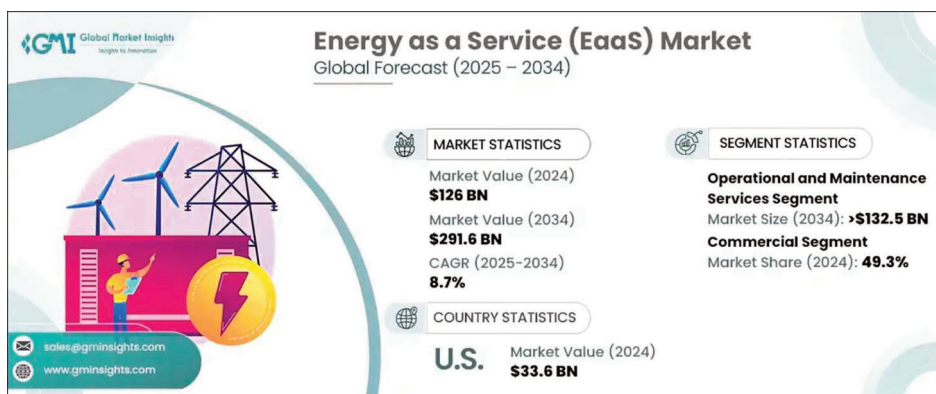
Similarly, Europe and Asia-Pacific are advancing regulations that prioritize decarbonization, grid modernization, and digitalization — catalysing EaaS deployment across industries. Countries like Germany, Japan, and India have set up incentives to accelerate clean energy procurement and energy performance contracting.

EaaS helps tackle infrastructure strain

Global energy demand for manufacturing, data centers, and healthcare keeps rising. EaaS offers these industries a reliable, scalable, and cost-predictable way to meet growing energy needs without overburdening the grid or incurring CAPEX for new infrastructure.

In Asia-Pacific, for example, the commercial EaaS market is growing at a rate of nearly 7%, driven by urbanization, industrial development, and the demand for clean, uninterrupted power.

The utility EaaS segment, though smaller – valued at \$2.1 billion in 2024 – is growing even faster, at a 11.1% rate. It and is projected to surpass \$5.6 billion by 2034, reflecting utilities' increasing interest in outcome-based services and distributed energy resources.



Turtle Creek Station (450 MW) begins operation in Nebraska

Omaha Public Power District (OPPD) has officially started up Turtle Creek Station. The dual-fuel power plant, situated near Papillion, can deliver up to 450 MW of electricity — enough to power roughly 337,500 homes at peak output.

At the heart of the plant are two combustion turbines, with 225 MW each, capable to each full output in less than 11 minutes. That is a major improvement over OPPD's Cass County Station units, which require up to 45 minutes to come onstream. Fast-start capability is vital for balancing the grid as more and more intermittent renewable power sources get added to the power network in Nebraska.

The turbines at Turtle Creek can operate on either natural gas or fuel oil, allowing seamless fuel switching — even during operation, which enhances the plant's reliability.

Dispatch on 'as-needed basis

The 450 MW plant will be dispatched on an as-needed basis, supporting both local power needs and the broader Southwest Power Pool, which coordinates electricity across 14 central and southern U.S. states.

"As we experience increasingly volatile weather patterns and a changing energy landscape, Turtle Creek Station is an essential addition to our diverse generation portfolio," said OPPD President and CEO Javier Fernandez. "It ensures we can continue to provide reliable, affordable energy to southeast Nebraska as our communities grow."

Construction of a third turbine is underway and scheduled for completion by 2027. ■



Aerial view of Turtle Creek Station

Ansaldo inaugurates '8 November' CCGT in Azerbaijan

Ansaldo Energy today inaugurated the '8th November' combined-cycle power plant, developed by Azerenergjı in Mingachevir. The CCGT is powered by four AE94.3A gas turbines ready to burn up to 40% hydrogen in blend with natural gas.

With more than 125 units sold worldwide and over 5 million equivalent operating hours accumulated, the AE94.3A gas turbine has become a trusted choice for utilities. It is known for its outstanding operational flexibility, proven reliability, and cost-effectiveness.

The Mingachevir CCGT project was realised through close and effective coordination between Ansaldo Energia, Azerenergjı, and local contractors.

Relations between the Italian manufacturer and Azerenergjı have been solidified by a Memorandum of Understanding (MoU) signed during COP29 in Baku in

November 2024, covering cooperation in hydrogen technologies, grid flexibility, workforce training, and broader energy transition objectives. ■



Italy's energy minister Adolfo Urso and Azerbaijan's President Ilham Aliyev

US utilities plan to add nearly 19 GW of CCGT capacity by

Developers and US utilities plan to add 18.7 gigawatts (GW) of combined-cycle capacity to the grid by 2028, with 4.3 GW already under construction. Only one CCGT came online last year, adding 98 MW to the existing gas power station at Plaquemines LNG terminal.

Though gas-fuelled generators have been the largest source of electricity in the United States over the past decade, hardly any new gas power capacity came online last year. Government analysts attribute the latest fall in CCGT additions to the growing build-out and cost effectiveness of wind and solar power sources.

Utilities also deploy more battery storage capacity, often paired with solar PV. Fast-falling construction cost for renewables as well as federal tax incentives and other further encourage investment in renewable energy projects.

According to the government's latest Preliminary Monthly Electric Generator Inventory, which compiles the current status of existing and proposed utility-scale generating units. Two of the four new plants—the Intermountain Power Project in Utah and Magnolia Power in Louisiana—will include the capability to co-fire with hydrogen and have a combined capacity of 1.5 GW.

More than half of the 3.3 GW of capacity that developers expect to bring online in 2026 is already under construction. Most of the 3.3 GW capacity developers plan to bring online in 2027 is still on the drawing board, some lacking firm financing.

Another 10.6 GW might be added in 2028. "If realized, that would be the most CCGT capacity coming online in any year since 2018," EIA analysts led by Lindsay Aramayo and Mark Schipper commented.

However, they cautioned "developers of all those planned units are working through regulatory approvals and securing needed equipment, both of which add uncertainty to their construction costs and initial operation date." ■

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