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#cleanenergy

CONTENTS



EDITOR'S NOTE	01
LOCAL SCOOP	02
Regional developments in the industry	
GLOBAL SCOOP	18
Learn about the latest industry news around the world	
HAPPENINGS	26
Current affairs about clean energy and more	

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EDITOR'S NOTE

As Pakistan moves toward the peak summer months, the familiar strain on our energy systems returns with renewed urgency. Rising temperatures bring increased demand for cooling, placing immense pressure on an already fragile power infrastructure. For households and businesses alike, the season often becomes synonymous with load shedding, rising costs, and uncertainty.

Yet, this year, the conversation around energy feels different—more immediate, more global. Political unrest across key regions has once again exposed the vulnerabilities of a fossil fuel-dependent world. Disruptions in supply chains, fluctuating oil prices, and geopolitical tensions continue to ripple across borders, shaping what we pay for energy and how reliably we can access it. Pakistan, like many developing economies, finds itself particularly exposed to these external shocks.

Amid these challenges lies a clear and compelling opportunity: the acceleration of sustainable energy solutions. With abundant sunlight for most of the year, solar power is not just an environmental choice for Pakistan—it is a practical, economic necessity. Encouragingly, we are seeing growing adoption at both the residential and commercial levels, alongside increasing interest from policymakers and investors.

This moment calls for more than short-term fixes. It demands a shift in mindset—from consumption to conservation, from dependency to taking it day by day, step by step.

Local Scoop.

Here we bring you the latest updates on the green revolution happening in your region. Read about how your community is harnessing the power of renewables to shape a sustainable future and create positive environmental impact, one innovation at a time. We talk about breakthrough technologies, and local initiatives driving the renewable energy movement forward.





Oman envoy tells petroleum minister request for priority energy cargoes will receive positive consideration

Oman's ambassador to Pakistan, Fahad Bin Sulaiman Bin Khalaf Alkharusi, has indicated a positive response to Islamabad's request for preferential energy shipments, according to a statement from the Petroleum Division following his meeting with Petroleum Minister Ali Pervaiz Malik on Thursday.

During the meeting in Islamabad, the envoy expressed support for Pakistan's efforts to diversify its energy mix, noting that Oman is prepared to assist in strengthening the country's energy security. The minister, in turn, voiced hope that Oman would extend favourable consideration to Pakistan's request for priority energy cargoes to meet rising demand—an assurance the ambassador responded to positively.

Both sides reviewed the shifting regional energy landscape and explored ways to expand bilateral cooperation. Malik highlighted the deep-rooted ties between Pakistan and Oman, built on shared history and strong people-to-people connections, and reiterated Islamabad's intent to broaden collaboration in the energy sector.

The minister also briefed the ambassador on Pakistan's strategy to diversify import sources and ensure supply resilience, including exploring alternatives beyond the Strait of Hormuz amid evolving regional challenges. According to the statement, Pakistan imported three petrol cargoes and one diesel shipment from Omani ports in March, with two additional petrol consignments expected within the same month.

Globally, fuel markets remain under strain following the ongoing US-Israel conflict with Iran, which has disrupted traffic through the Strait of Hormuz—a key route for roughly 20% of the world's liquefied natural gas and a quarter of seaborne oil.

Despite these challenges, Malik recently noted that Saudi Arabia continues to supply crude oil to Pakistan via the Red Sea, while the United Arab Emirates is facilitating shipments through Fujairah, bypassing the Strait.

Officials monitoring fuel supplies have reported that incoming cargoes remain on schedule, with most shipments for March and April already secured and additional imports planned to bolster reserves. However, the government has cautioned that prolonged conflict could worsen the situation, prompting measures such as a Rs55 per litre increase in petrol and diesel prices earlier in March, alongside fuel conservation initiatives.

The statement also noted ongoing discussions between Pakistan State Oil and Oman Trading International regarding potential additional shipments. Opportunities for deeper collaboration in upstream activities, including exploration and production, were also explored, with both sides reaffirming their commitment to strengthening long-term energy cooperation between Pakistan and Oman.

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Hall# 2 | C2: 7-10, 17-20



PAKISTAN IMPOSES BROAD AUSTERITY CURBS AS IRAN CONFLICT SPARKS OIL SUPPLY CRISIS

Pakistan has rolled out wide-ranging emergency austerity and fuel-saving measures following disruptions in oil and gas supplies triggered by the ongoing US-Israel conflict with Iran and rising tensions across the Middle East.

In a televised address, Prime Minister Shehbaz Sharif warned that interruptions to shipping through the Strait of Hormuz—a critical artery for global energy trade—pose a serious threat to Pakistan's economy.

Describing the region as being “effectively at war,” the prime minister unveiled a series of measures aimed at cutting fuel consumption. These include a temporary four-day workweek for government offices and extended spring holidays for schools through the second half of March.

Half of all government employees will work remotely on a rotating basis, with the private sector encouraged to adopt similar arrangements. Key industries such as banking, however, have been exempted.

Educational institutions will remain closed for two weeks, though exams will proceed as scheduled. Universities have been instructed to shift to online classes to further reduce fuel use.

Additional austerity steps include federal and provincial cabinet members giving up their salaries and perks for two months, while lawmakers will face a 25% pay cut during the same period. Officials have also been directed to limit foreign travel to essential trips only, and strictly in economy class.

All in-person government meetings have been suspended in favour of virtual sessions, and fuel allocations for official use have been reduced. The public has also been urged to limit gatherings, with weddings and events capped at 200 guests and restricted to a single main dish.

Pakistan's heavy reliance on imported energy—over 80% of its oil needs—has intensified the impact of the crisis. The recent supply shock has driven a sharp surge in fuel prices, marking one of the steepest increases in the country's history.

Experts note that transport accounts for the bulk of petroleum consumption, meaning structural changes—such as shifting freight from road to rail—are essential for long-term relief. Others warn that currency depreciation could further amplify the economic strain by driving up inflation.

The crisis also extends to natural gas. Pakistan has depended on imported liquefied natural gas (LNG) since 2015, with a significant portion of its electricity generation tied to these imports. Much of this supply passes through the Strait of Hormuz, where ongoing hostilities have disrupted energy flows.

The timing has compounded difficulties for households, as the fuel crunch coincides with the final days of Ramadan and the lead-up to Eid al-Fitr. Rising transport and food costs are placing added pressure on families during a period typically marked by increased spending. For many workers, especially those reliant on daily mobility, the surge in fuel prices is directly affecting livelihoods—forcing difficult choices and scaling back plans for the upcoming holiday.

KSTAR SHOWCASES HIGH-PERFORMANCE BLUESPARK RESIDENTIAL ESS AT SOLAR PAKISTAN 2026

As an exhibitor at Solar Pakistan, KSTAR proudly presents its latest advancement in residential energy storage: the BlueSpark Residential ESS (IP66 series). Designed for reliability, scalability, and modern energy demands, this project showcases a high-performance installation tailored for real-world applications.

The system features two parallel towers, each equipped with a 12kW three-phase hybrid inverter and four 5kWh lithium battery packs, delivering 20kWh capacity per tower. Combined, the configuration achieves a total output of 24kW power and 40kWh energy storage. The installation reflects a clean, structured layout that prioritizes accessibility, efficient wireless commissioning, and robust system protection. Its IP66-rated design ensures safe outdoor deployment, offering strong resistance against dust and water—ideal for Pakistan's diverse environmental conditions.

From a technical standpoint, the BlueSpark ESS delivers up to 97% efficiency and supports both on-grid and off-grid operations. It enables multiple intelligent working modes, including self-consumption, peak shaving, time-

of-use optimization, and battery priority. With full support for parallel expansion and 100% three-phase unbalanced output, the system ensures stable performance even under uneven load conditions.

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Solar Pakistan
Booth: D-1-1, Hall 1

Expo Centre, Lahore, Pakistan
17-19 April, 2026



Stakeholders slam Neptra, Power Division over proposed net-metering changes

ISLAMABAD: The National Electric Power Regulatory Authority (Neptra) and the Power Division faced strong criticism from stakeholders over proposed changes to net-metering regulations, with critics warning the move could slow Pakistan's solar energy growth and make the power system more expensive and unreliable.

The objections were raised during a public hearing convened by Neptra to seek feedback on its proposed Prosumers Regulations 2025, which aim to reduce incentives for solar consumers using net-metering. While Neptra drafted the proposals, they were largely defended during the hearing by the Power Division and its affiliated utilities, including distribution companies and K-Electric. Participants — including think tanks, politicians, chambers of commerce, solar installers, industrialists and domestic consumers — argued that the changes could undermine Pakistan's transition to clean energy and weaken consumer rights.

Under the draft rules, existing registered prosumers would be shifted from net-metering to net-billing, with exported electricity units credited for one month instead of the current three-month adjustment period. Other contract terms would remain unchanged until the expiry of existing seven-year agreements.

For new consumers, the proposed regulations

suggest five-year contracts with surplus electricity purchased at Rs11 per unit, significantly lower than the current rate of around Rs26 per unit.

Stakeholders also criticised procedural limitations during the hearing, saying they were barred from presenting alternative proposals. Neptra's former Member (Law) Amina Ahmed, who assumed charge as Member Finance and Technical on Friday, directed participants to confine their comments strictly to the draft regulations.

Pakistan Peoples Party leader Nadeem Afzal Chan opposed the proposals and announced his party would challenge them. He alleged the country's power system was corrupt, inefficient and unaffordable, while solar energy had enabled farmers and small rural businesses to reduce electricity costs. He also claimed consumers were often forced to pay unofficial fees and finance repairs of faulty transformers.

Mr Chan also requested that the hearing be broadcast live to allow broader public participation, but Neptra declined the request. Business groups and industry representatives demanded similar consultations in provincial capitals, arguing that an issue of national importance should not be restricted to a single hearing in Islamabad. The regulator did not respond to the demand.

Some participants alleged that distribution companies had already begun discouraging new solar applications and were not properly accounting for electricity supplied by existing prosumers. Nepra Chairman Waseem Mukhtar and Member (Development) Maqsood Anwar termed such actions illegal and assured participants that regulatory action would be taken. The chairman also sought a detailed report from distribution companies.

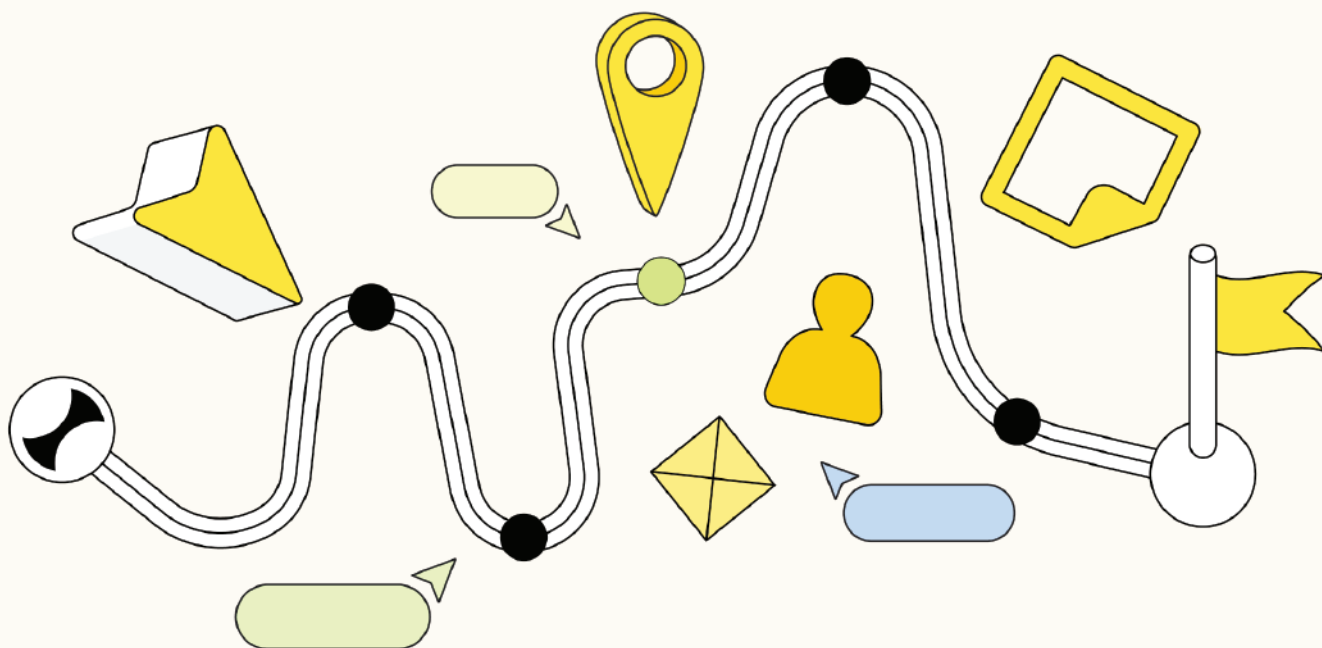
While the Power Division and its entities were given about 90 minutes to present their case, other participants were limited to three minutes each. The hearing continued for more than three hours.

Think tanks warned that the proposed regulations could conflict with Pakistan's commitments under the Paris Agreement and the UN Sustainable Development Goals. They argued that encouraging surplus solar power purchases could

help Pakistan earn carbon credits estimated at \$40 million annually.

The Power Division, however, said the government was not discouraging solar adoption but aiming to ensure sustainable growth while addressing system misuse. Officials said Pakistan's clean energy share had increased from 40 per cent in 2015 to 55 per cent in 2025, with grid-connected solar capacity reaching 7,000 megawatts and off-grid systems exceeding 13,000MW.

Officials maintained that rapid solar expansion had created grid stability challenges, including sharp demand fluctuations, voltage management problems and backfeed issues, necessitating regulatory intervention.



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AIKO TO SHOWCASE NEXT-GENERATION ABC TECHNOLOGY AT SOLAR PAKISTAN 2026

Lahore, Pakistan – AIKO, recognized as the absolute leader in Back Contact (BC) technology, is set to make a significant impact at Solar Pakistan 2026 as a Platinum sponsor of the event. The company invites all attendees to visit its booth at the Lahore Expo Centre (Booth A-1-1) to experience firsthand the latest innovations in high-efficiency solar modules.

The highlight of AIKO's presence will be the brand new INFINITE series, which achieves an industry leading module efficiency of over 25%. Designed for Pakistan's diverse energy needs, these next generation ABC modules deliver more power per square meter, making them ideal for industrial, residential, and agricultural applications.

To demonstrate real world performance advantages, AIKO will conduct three live interactive experiments at its booth. These demonstrations will clearly show the benefits of partial shading optimization (available across all AIKO products, not limited to the GEN3 series), superior high temperature resistance with a temperature coefficient of $-0.26\%/^{\circ}\text{C}$, and outstanding micro crack resistance enabled by unique copper interconnection technology.

Beyond product innovation, AIKO brings unparalleled global credentials. The company has achieved over 190 GW of cumulative cell and module shipments worldwide.

It has also held the world's number one ranking for mass produced module efficiency for three consecutive years (since March 2023). As the undisputed pioneer in BC technology with more than 1,400 related patents and the world's first TÜV SÜD Explosion Protection certification, AIKO continues to set new benchmarks for performance, durability, and safety.



PAKISTAN CUTS GAS FOR SOME INDUSTRIAL BUYERS AS CONFLICT DISRUPTS SUPPLY

Pakistan's largest gas distributor is preparing to cut supplies to certain industrial customers, highlighting mounting pressure on an economy heavily reliant on energy imports from Qatar. An escalating conflict in the Middle East has triggered the most significant disruption to global energy trade since Russia's invasion of Ukraine in 2022. The turmoil has blocked the Strait of Hormuz and forced the shutdown of major energy facilities, including Qatar's Ras Laffan liquefied natural gas export plant.

During the previous energy crisis four years ago, Pakistan faced severe economic stress and struggled to afford soaring fuel prices, leading to widespread power shortages and hours of daily blackouts.

In the near term, however, the crisis may offer a limited upside for the strained economy. Analysts say it could allow Pakistan to avoid expensive LNG purchase agreements with Qatar that it increasingly finds difficult to sustain. Samiullah Tariq, head of research at Pakistan Kuwait Investment, said shifting toward cheaper alternatives such as imported coal "could prove to be a blessing in disguise."

Despite this, Sui Northern Gas Pipelines Ltd. has informed customers that it cannot supply regasified LNG to fertilizer plants from midnight Wednesday after receiving notice of disruptions from Pakistan State Oil just five days into the

Gulf tensions. Analysts warn that prolonged interruptions could quickly become both painful and costly for the country.

Masanori Odaka, an analyst at Rystad Energy, said the situation "could become serious" if five or more LNG shipments are affected. "Current spot prices are well beyond what Pakistan is likely willing to pay," he noted, adding that alternatives for sourcing LNG cargoes remain limited.

For March, Pakistan has received two LNG cargoes, meaning any shortfall may be temporarily managed through domestic production and coal imports. However, analysts expect supply gaps to widen in April and May.

Bound by expensive long-term LNG contracts with Qatar, Pakistan had already been reducing domestic production to manage costs. Last year the country received an average of nine LNG shipments per month, according to shipping data. To address potential oil shortages, Pakistan has also requested supplies through alternative routes, including via Saudi Arabia's Yanbu port. Riyadh has assured full support, the petroleum ministry said in a statement citing Minister Ali Pervaiz Malik.

The emerging energy crunch comes as Pakistan grapples with a sluggish economy and rising regional tensions, including clashes with neighboring Afghanistan.





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SOLAR PAKISTAN: A RECORD-BREAKING SHOWCASE OF CLEAN ENERGY INNOVATION

As Pakistan prepares to enter another demanding summer, the spotlight turns once again to sustainable solutions—and few platforms embody this urgency better than Solar Pakistan 2026, set to open its doors from April 17th to 19th in Lahore. Building on the extraordinary success of last year's edition, the upcoming exhibition arrives at a critical moment for the country's energy landscape.

Solar Pakistan Karachi, marked a defining milestone. Hosted at the Karachi Expo Centre and organized by Fakt Exhibitions Pvt. Ltd., the event brought together over 200 exhibitors from 10 countries. More than just an exhibition, it became a convergence point for policymakers, investors, and innovators committed to reshaping Pakistan's energy future.

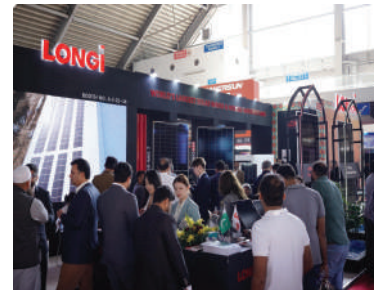
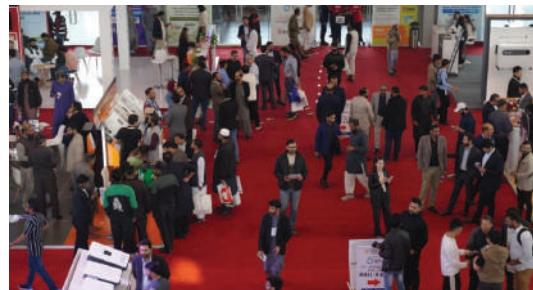
The success of Solar Pakistan 2025 was not measured solely in scale, but in substance. It created space for meaningful dialogue—between local stakeholders and international partners—on financing models, regulatory frameworks, and technological adaptation. Live demonstrations and product showcases translated abstract sustainability goals into tangible, deployable solutions for households, industries, and agriculture alike.

As global energy markets continue to feel the strain of political unrest, regional conflicts, and disrupted supply chains, the ripple effects are being felt acutely in countries like Pakistan. Rising fuel costs, currency pressures, and increasing demand during peak summer months have intensified the need for energy independence. In this context, solar energy is no longer just an alternative—it is a strategic necessity. Now solar Pakistan returns with that momentum

in Lahore, expanding its reach to the country's largest economic hub. It represents not just continuity, but acceleration—of investment, dialogue, and real-world implementation.

With greater participation expected, expanded international interest, and a sharper focus on scalable solutions, this year's exhibition is poised to deepen Pakistan's integration into the global renewable energy ecosystem.

At a time when energy security and climate resilience are deeply intertwined, Karachi becomes the stage where ideas translate into action. The message is clear: Pakistan's solar future is not on the horizon—it is already unfolding, powered by innovation, collaboration, and an urgent will to transform.



Global Scoop.

Here we dive into the latest developments in the industry as we explore the remarkable strides countries are making towards sustainable power sources, highlighting groundbreaking innovations and initiatives that promise a greener future for our planet. From cutting-edge solar technologies to revolutionary wind farms, this is your gateway to staying informed on the global transition to clean energy.





TRUMP'S IRAN WAR AND ENERGY POLICIES OUTLINE 'DANGEROUS VOLATILITY' OF FOSSIL FUEL PUSH

Critics say Donald Trump has, perhaps inadvertently, highlighted the fragility of the fossil fuel era through his aggressive stance on Iran, threats to seize its oil, and simultaneous curbs on clean energy initiatives in the United States. The ongoing US and Israeli military campaign in

Iran and southern Lebanon has inflicted significant humanitarian and environmental damage, with the risk of further escalation likely to intensify emissions, deepen climate impacts, and disrupt access to essential resources such as clean water.

Iran's move to disrupt the Strait of Hormuz—a corridor that carries roughly one-fifth of global oil supplies—has unsettled international markets, sending energy prices higher and adding more than \$100 billion in extra costs for consumers worldwide since the conflict began. Fuel prices in the US have also risen sharply

Energy expert Alice Hill said the crisis underscores the inherent risks of fossil fuel dependence, noting that countries investing in renewables such as wind and solar are better positioned to absorb such shocks, while those resisting the transition face greater vulnerability.

Scientists have consistently warned that a swift shift away from fossil fuels is critical to avoiding severe climate consequences. Although emissions remain elevated, the declining cost of renewable technologies has driven record levels of global investment.

Nevertheless, Trump has continued to push for expanded oil and gas production, downplaying environmental concerns and even suggesting control over oil resources in countries like Iran and

Venezuela. The fossil fuel dimension of the conflict is also evident in threats to critical infrastructure, including Kharg Island, where the bulk of Iran's oil is processed. Analysts caution that targeting such facilities could breach international law and further drive up global energy costs.

Recent developments have also highlighted the environmental toll of fossil fuels. Strikes on Iranian oil sites have released toxic pollution, while in the US, climate-linked heatwaves have coincided with oil spills and industrial incidents.

At the same time, the administration has moved to slow the growth of clean energy by halting projects, reducing subsidies, and even compensating firms to abandon renewable plans. Environmental safeguards have also come under strain, with proposals to weaken protections for endangered species to facilitate more drilling.

Critics argue that such policies entrench reliance on fossil fuels, heightening exposure to geopolitical tensions, environmental harm, and economic instability, rather than accelerating the transition to cleaner, more resilient energy systems.





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ROOFTOP SOLAR BOOM SAVES PAKISTAN \$12BN IN LNG IMPORTS

Pakistan's rapid rooftop solar adoption has saved the country an estimated \$12 billion in liquefied natural gas (LNG) imports, according to a study by UK-based energy think tank Ember.

The report said solar generation in Pakistan has surged sharply in recent years, placing it alongside hydropower and gas as one of the country's largest sources of electricity.

As a result, gas-based power generation declined, while demand for other fossil fuels also dropped significantly. The study noted that if fossil fuels had met the same increase in demand instead of solar, gas usage would have risen substantially, increasing import costs.

Ember said Pakistan's solar boom has been driven by rising electricity tariffs linked to reforms backed by the International Monetary Fund, prompting consumers to shift to rooftop solar systems.

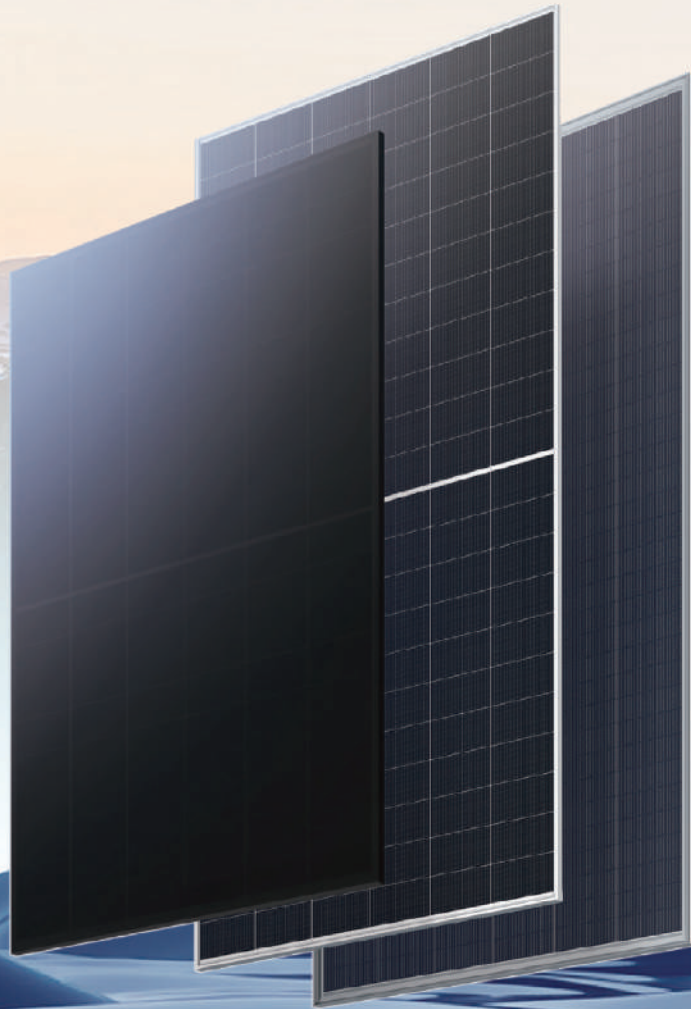
The expansion has also been supported by net metering policies and the availability of low-cost solar panels, particularly from China. The shift has reduced reliance on imported fuels at a time of global price volatility, though the report warned that declining grid demand could increase electricity tariffs as fixed system costs are spread across fewer users.

It urged authorities to maintain a financially stable power grid to support continued solar growth, especially in the absence of large-scale battery storage.

Separately, Pakistan's Power Minister Awais Leghari said around 55% of the country's electricity generation currently comes from clean sources, with a target to exceed 90% by 2034. He added that about 74% of electricity generation is now based on local resources, with plans to increase this share to over 96% in the coming years.

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Booth : B-1-1

ARGENTINA'S GENNEIA OPENS \$180 MILLION SOLAR PARK IN MENDOZA

Argentine renewable energy company Genneia has officially brought the San Rafael Solar Park online in the western province of Mendoza, marking a major milestone in the country's clean energy expansion. The project represents an investment of around \$180 million and further strengthens Genneia's position as one of Argentina's leading renewable power producers, the company said in a statement on Tuesday.

San Rafael is Genneia's third solar park in Mendoza, a province that has emerged as a key hub for renewable energy development due to its strong solar resources. The facility is equipped with approximately 400,000 solar panels and has an installed capacity of 180 megawatts, making it one of the largest solar power plants currently operating in the country.

According to the company, the park will generate enough electricity to meet the annual needs of roughly 135,000 households, helping to reduce reliance on fossil fuels and lower carbon emissions. The project is expected to play an important role in improving energy security while supporting Argentina's transition towards a more sustainable and diversified energy matrix.

"This level of capacity makes the San Rafael Solar Park a benchmark for large-scale solar power generation," Genneia said, adding that the project will contribute significantly to improving the overall efficiency and resilience of the national energy system. With the launch of San Rafael, Genneia continues to expand its renewable portfolio and reinforce its long-term commitment to clean energy development in Argentina.

MALAYSIA TO DEVELOP \$6 BILLION RENEWABLE ENERGY CORRIDOR

Malaysia has signed a collaboration agreement with the World Bank Group to develop the Southern Johor Renewable Energy Corridor (SJREC), a landmark project valued at 6 billion USD.

The agreement—finalized on Monday—brings together the International Finance Corporation (IFC), Permodalan Darul Ta'zim (the Johor state government's strategic investment arm), and Ditrolic Energy. According to a joint statement, the 2,000 sq km hybrid solar and battery energy storage zone in Johor is designed to supply clean power for the state's industrial expansion and support the ASEAN Power Grid through future cross-border electricity trade.

Signed alongside the launch of the Johor Renewable Energy Policy 2030, the collaboration outlines cooperation on project development, technical expertise, and potential financing. As a central pillar of the Johor-Singapore Special Economic Zone master plan, the first phase of SJREC will feature up to 4 GWp of solar capacity and 5.12 GWh of energy storage across a 10,000-acre site.

Judith Green, the World Bank Group's country manager for Malaysia, said the project will advance Johor's sustainable development goals, generate employment, attract foreign investment, and enable clean energy exchange between Malaysia and Singapore.

WHAT IS RENEWABLE ENERGY?

The Answer is Blowing in the Wind

We hear a lot about renewable energy, but what is it, exactly?

It is an energy source that is perpetual ... inexhaustible... "to infinity and beyond!" Renewable energy has storage limitations, however, and some types are not available 24/7.

A FEW FACTS

- According to the University of Michigan (U-M) Center for Sustainable Systems, about 80% of the nation's energy comes from fossil fuels, 8.4% from nuclear and 11.4% from renewable sources.
- In 2019, renewable energy sources accounted for about 17% of energy generation, according to the U.S. Energy Information Administration (EIA).
- The EIA projects that the share of renewables used for U.S. electricity generation will increase from 21% in 2020 to 42% in 2050.
- Wind and solar are the fastest-growing renewable sources, but they provide just 3.8% of total energy used in the U.S., according to the U-M center.

THE MAJOR TYPES OF RENEWABLE ENERGY SOURCES ARE:



**BIOMASS,
INCLUDING
BIOFUELS**
(comes from plants
and animals)

WATER OR HYDROPOWER



GEOHERMAL
(comes from the heat
of the earth)

WIND

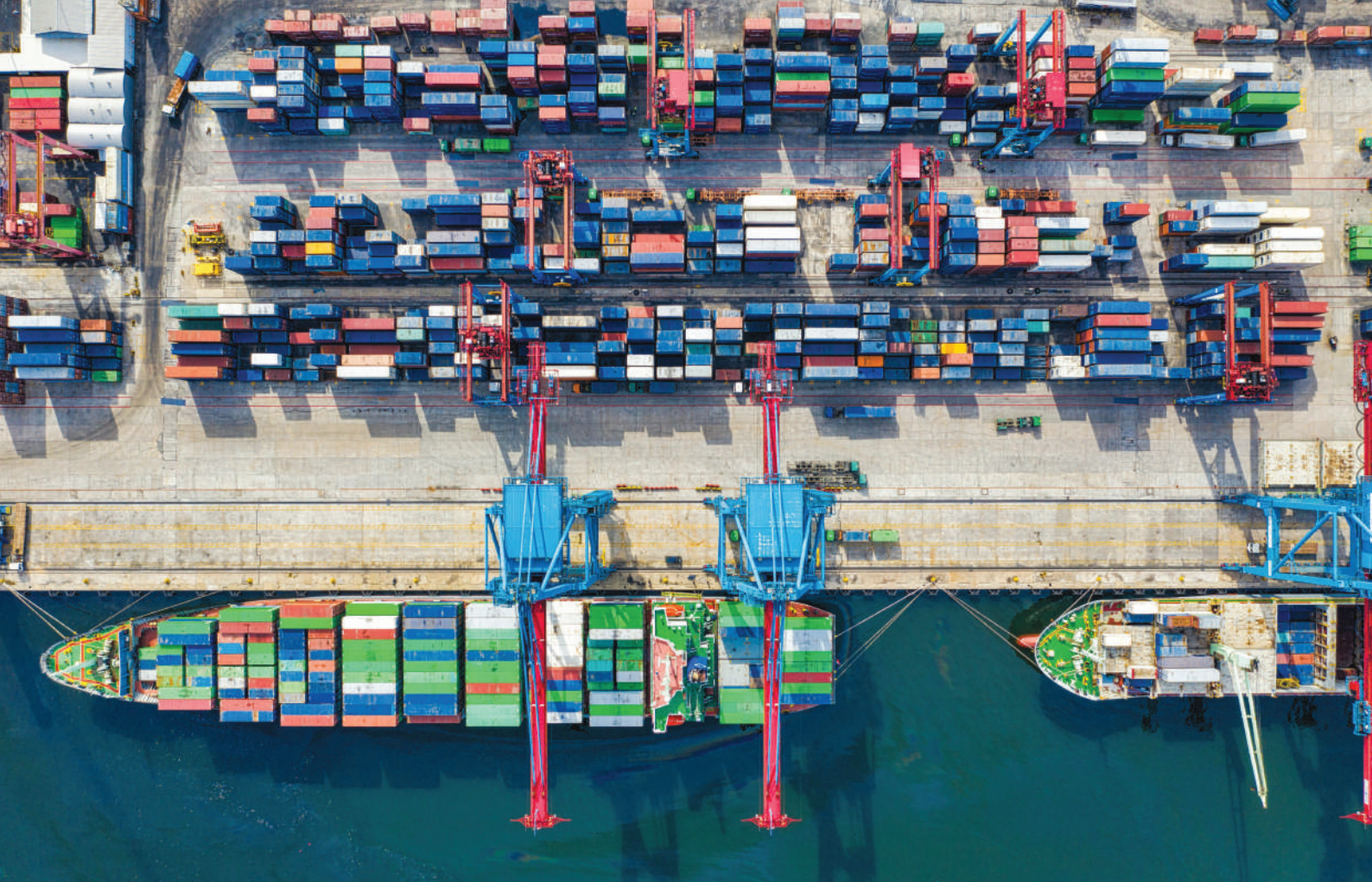


SOLAR

Happen- ings.

Get ready to immerse yourself in a comprehensive exploration of the dynamic world of renewable energy and beyond. Here we will uncover the latest trends, breakthroughs, and impactful events shaping the global transition to sustainable practices, empowering you with the knowledge and inspiration to be at the forefront of the green revolution.





EMERGENCY FUEL MEASURES AS STRAIT OF HORMUZ DISRUPTION THREATENS SUPPLIES

Pakistan is preparing a set of emergency measures to maintain fuel market stability as trade flows tighten following the closure of the Strait of Hormuz. The steps under consideration include shifting petroleum price adjustments to a weekly schedule, compensating oil companies for sharply rising insurance and import premiums, and introducing conservation policies such as mandatory work-from-home arrangements where feasible.

According to informed sources, a summary outlining these proposals is being sent to the federal cabinet's Economic Coordination Committee (ECC) for urgent review as international oil prices continue to climb.

Even before a formal decision is taken, state-run Pakistan State Oil (PSO), with government approval, has issued precautionary tenders to import two cargoes each of petrol and diesel through routes

that bypass the Strait of Hormuz. The move comes despite current domestic stocks of both fuels being relatively comfortable.

Officials said petrol and diesel reserves currently exceed 500,000 tonnes each, providing roughly 26 days and 25 days of coverage respectively. Pakistan has also approached Saudi Arabia to facilitate oil shipments through alternative routes via the Red Sea.

Authorities have asked provincial chief secretaries to attend a meeting of a newly established 18-member cabinet committee on petroleum price monitoring scheduled for Thursday. Among the proposals to be discussed is the introduction of work-from-home requirements in both public and private sectors where possible, along with other coordinated demand-management measures.

While petrol supply remains relatively secure, diesel imports face greater vulnerability. Pakistan depends heavily on long-term diesel shipments from Kuwait arranged through PSO, all of which pass through the Strait of Hormuz. At the same time, more than 20 percent of global oil cargoes are reportedly stranded within the strait, creating a shortage of available shipping for diesel deliveries.

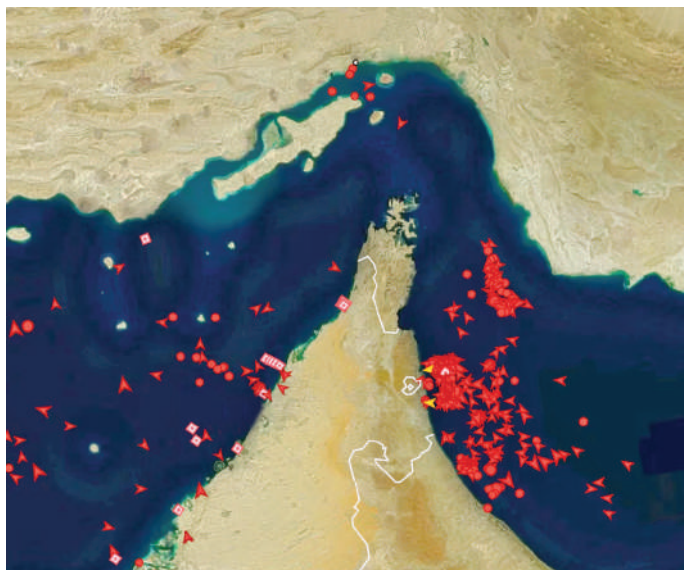
Industry officials said the cost of insuring oil shipments has surged dramatically—from around \$30,000 per vessel to nearly \$400,000. Import premiums for petroleum products have also climbed sharply.

Earlier cargoes booked by PSO in February carried premiums of roughly \$3–5 per barrel, but new orders are expected to be significantly more expensive. Freight charges have also soared, with charter rates now exceeding \$4 million per vessel compared to about \$900,000 before the crisis.

Officials warned that the combined effect of higher insurance, premiums, and freight costs could be difficult for oil marketing companies (OMCs) and refineries to absorb. Without compensation mechanisms, companies may have grounds to suspend imports under force majeure provisions.

To address this risk, the ECC summary proposes a framework to reimburse OMCs for extraordinary costs, enabling them to continue imports and maintain the supply chain down to the retail level. Authorities are also considering shifting the current fortnightly fuel price revision system to weekly adjustments. This would help ensure that rising costs are gradually passed on to consumers, reducing financial pressure on both the government and fuel suppliers while sustaining regular supplies.

Officials noted that within the first week of the crisis, the price differential has already widened to around Rs45–50 per litre for diesel and Rs25–26 for petrol, with further increases possible in the coming weeks if global disruptions persist. Amid complaints from fuel dealers about limited deliveries, the Oil and Gas Regulatory Authority (Ogra) and OMCs have decided to supply petrol and diesel to retailers based on their average sales over the previous eight months. Unlimited supply allocations have been temporarily suspended to prevent disruptions in distribution. Despite these restrictions, officials insist that there is currently no shortage of petrol or diesel anywhere in the country.



Responding to concerns from dealers that companies were not fulfilling supply orders, Ogra said the temporary regulation of deliveries is intended to discourage hoarding during periods of extreme price volatility. The regulator stressed that allocating supplies based on historical sales is a standard supply management practice designed to maintain stability in the distribution system. Authorities also reassured the public that national fuel reserves remain well within required limits. "There is no shortage of petroleum products," Ogra said, urging citizens not to rely on rumours and to follow only official information channels.

Separately, Finance Minister Muhammad Aurangzeb chaired a meeting of the cabinet committee responsible for monitoring petroleum prices. The committee reviewed developments in regional and global energy markets and assessed petroleum stock levels and supply chains across Pakistan.

Officials briefed participants on reserves of crude oil and refined fuels including petrol, diesel, aviation fuel, and LPG, along with current consumption patterns and the number of days of supply available.

The committee also examined global oil market trends, including movements in benchmark prices, freight rates, insurance costs, shipping route disruptions, and conditions in major maritime corridors.

Members noted that the international energy environment remains highly uncertain, particularly due to tensions surrounding the Strait of Hormuz and its importance to global energy trade. Developments in liquefied natural gas (LNG) and liquefied petroleum gas (LPG) markets were also reviewed.

Officials explained that while LNG imports under long-term contracts remain a key component of Pakistan's energy mix, disruptions to shipping routes could still affect global LNG logistics. Cross-border LPG inflows are also being closely

monitored to ensure stable domestic supply. The committee discussed contingency measures to strengthen supply security, including deeper engagement with international partners and exploring alternative import routes. Members were informed that diplomatic and commercial discussions are underway with friendly countries and regional suppliers to secure additional crude oil and petroleum shipments if necessary.

Authorities are also exploring procurement diversification through regional energy hubs and ports in the Red Sea and Gulf region to maintain refinery operations and ensure supply resilience. Energy conservation measures were also reviewed as part of contingency planning aimed at managing demand while keeping markets stable.

The committee emphasised that although supply conditions remain stable for now, responsible energy consumption would strengthen national preparedness if international uncertainties continue. Finance Minister Aurangzeb stressed that ensuring uninterrupted fuel availability remains the government's top priority and will guide all policy decisions.

The committee also highlighted the need to prevent hoarding, diversion, or smuggling of petroleum products during periods of global volatility and directed authorities to maintain strict monitoring while coordinating closely with provincial governments. It was decided that provincial chief secretaries would attend the committee's next meeting to review the final summary and discuss a coordinated national action plan.

The committee will continue consultations to finalise a comprehensive strategy aimed at protecting energy supplies and maintaining market stability with the cooperation of all stakeholders.

KUWAIT PETROLEUM CORPORATION TO FACILITATE DIESEL, JET FUEL SUPPLIES AMID REGIONAL DISRUPTIONS

Kuwait's state-owned oil company, Kuwait Petroleum Corporation, has assured it would facilitate Pakistani-flagged vessels with diesel and jet fuel supplies, Pakistan's petroleum ministry said, amid widespread energy and cargo disruptions linked to the United States-Israeli war on Iran.

The move follows Pakistan's announcement of a Jet A-1 fuel supply disruption, after which authorities urged foreign airlines to carry return fuel and limit refueling as a precaution due to concerns about availability.

Iran's chokehold of the Strait of Hormuz in response to US-Israeli attacks has upended tanker traffic along a route that once carried around 20 percent of global oil, driving up energy prices worldwide.

Pakistan's Petroleum Minister Ali Parvez Malik met Kuwaiti Ambassador Nasser Abdulrahman Jasim Al-Mutairi to discuss Kuwait's facilitation of Pakistani-flagged ships.

"Kuwait Petroleum Corporation has assured of fully facilitating possible supply of diesel and jet fuel to Pakistani flagged ships from Kuwait," the petroleum ministry said in a statement, expressing gratitude for the support.

Ambassador Al-Mutairi said Kuwait would continue to support Pakistan, while Minister Malik appreciated the assistance despite global and regional challenges.

Separately, Deputy Prime Minister Ishaq Dar said Iran had allowed additional ships to pass through the Strait of Hormuz. Pakistan has also finalized arrangements to import petrol for April as it works to conserve fuel stocks amid global supply disruptions.

The government recently raised petrol and diesel prices by Rs55 per liter, reflecting concerns that a prolonged Middle East conflict could trigger shortages or push global oil prices higher, affecting Pakistan's balance of payments.

Meanwhile, the Cabinet Committee to Monitor Petrol Prices met under Finance Minister Muhammad Aurangzeb to review petroleum stocks and developments in the energy sector.

Officials said the current supply position remains stable, with diesel stocks covering approximately 23–24 days and petrol availability described as comfortable. Crude oil stocks were reported to provide around 11 days of cover, with additional cargoes in transit expected to sustain refinery operations and product availability through April.

Authorities added that import plans are being actively managed, with significant volumes already secured through commercial and government-to-government arrangements, while refinery operations continue at optimal levels to meet domestic demand.





MOL Pakistan announces gas discovery in Tal Block

MOL Pakistan has announced the successful appraisal of a major natural gas and condensate discovery at the Bilitang-1 ST-1 exploratory well in Khyber Pakhtunkhwa, as reported by the Daily Times.

Located in Kohat District, the well produced 26.5 million standard cubic feet of gas per day—equivalent to around 5,065 barrels of oil equivalent per day (BOEPD). This is the second significant discovery by the MOL-led joint venture in Pakistan over the past 18 months, following the Razgir-1 find in August 2024.

Drilled to a total depth of 4,004 metres, the well

employed sidetrack drilling to access higher-quality reservoir rock within the Lumshiwal Formation. MOL Pakistan, a wholly owned subsidiary of the Budapest-based MOL Group, operates the Tal Block and holds an 8.4% production share, contributing approximately 400 BOEPD to its global output.

Commenting on the development, CEO Ádám Zsolt László stated that the second major discovery within 18 months highlights the team's commitment and adaptability in delivering strong results, even in a mature area that has been under exploration for 27 years.



SEEKING AUSTRIAN INVESTMENT IN CITRUS PROCESSING, MINING AND RENEWABLE ENERGY DURING PM VIENNA VISIT

Pakistan has invited Austrian companies to collaborate with local firms in citrus value addition, mining, and renewable energy, with Prime Minister Shehbaz Sharif saying Austria's global expertise could help fast-track the country's economic growth. He made the remarks at the Pakistan-Austria Business Forum in Vienna during his two-day official visit — the first by a Pakistani premier to Austria in more than three decades, according to the foreign office. The trip is centered on expanding trade, investment, and economic ties, and includes engagements with the International Atomic Energy Agency, the United Nations Office on Drugs and Crime, and the United Nations Industrial Development Organization.

Addressing business leaders, Sharif noted that Pakistan is largely agrarian, with nearly 60 percent of its population living in rural areas. He said Austria could support Pakistan with modern

technology to enhance citrus processing — producing marmalade and juices for export to Austria, the Middle East, and other global markets. He also highlighted opportunities in mining, pointing to Pakistan's extensive reserves, including rare minerals in Khyber Pakhtunkhwa, Gilgit-Baltistan, Balochistan, and Azad Kashmir.

The visit comes as Pakistan works toward economic stabilization under a \$7 billion bailout program from the International Monetary Fund and seeks to strengthen trade and attract foreign investment to sustain recent economic gains. Beyond agriculture and mining, Sharif encouraged Austrian participation in renewable energy and grid modernization initiatives, saying Austria's strengths in engineering, environmental technology, and advanced manufacturing align well with Pakistan's development goals.

Illegal immigration and skilled workforce
Sharif also addressed concerns over illegal migration from Pakistan and other countries to Europe, stating that his government is committed to curbing the practice while offering certified, skilled workers to meet European labor demands. Each year, thousands from Pakistan, Afghanistan, Bangladesh, and elsewhere attempt dangerous journeys to Europe in search of better opportunities.

In December, Pakistan's interior ministry reported a 47 percent decline in illegal migration to Europe in 2025, alongside the arrest of over 1,700 human smugglers in a nationwide crackdown.

Sharif said Pakistan is working with European partners — including Austria, Germany, and France — to end illegal migration and instead provide internationally certified skilled labor tailored to European requirements. He also expressed hope that Austrian firms would participate in the upcoming European Union-Pakistan Business Forum scheduled for late April

in Islamabad.

Earlier, Sharif met Austrian Chancellor Christian Stocker and co-chaired a CEOs' forum featuring leading Austrian and Pakistani companies from sectors such as renewable energy, manufacturing, construction, IT, textiles, surgical instruments, leather, sports goods, healthcare, tourism, hospitality, and agro-industries.

In a post on X, Sharif described the meeting as warm and productive, saying both sides reaffirmed their commitment to deepen cooperation in trade, investment, tourism, education, IT, healthcare, and human resource mobility.

The visit marks 70 years of diplomatic relations between Islamabad and Vienna and is the first by a Pakistani prime minister since 1992, when then-premier Nawaz Sharif visited Austria. Officials say the trip is expected to open new avenues in Pakistan-Austria relations, building on existing cooperation in trade, culture, and education.





PAKISTAN-KOREA SOLAR TESTING LAB MOVES TOWARD ISO ACCREDITATION TO STRENGTHEN QUALITY STANDARDS

The Pakistan-Korea PV Module Testing Laboratory is preparing to officially launch its commercial operations as it pursues ISO/IEC 17025 accreditation from the Pakistan National Accreditation Council — a step expected to reinforce quality assurance across Pakistan's rapidly expanding solar sector.

Official documents reviewed by Wealth Pakistan state that the facility is now fully operational after the installation and commissioning of advanced equipment capable of conducting up to 40 different tests on solar panels. The lab has been set up to carry out technical assessments of photovoltaic (PV) modules in accordance with internationally recognized standards.

The laboratory plans to apply for accreditation in May 2026, following the completion of its final round of specialized training in Korea scheduled for March–April 2026. The accreditation process is projected to conclude by mid-2026.

Once accredited, the facility will be authorized to issue internationally recognized test reports, allowing regulators to more effectively enforce quality standards in the solar market.

Meanwhile, the Pakistan Standards and Quality Control Authority is expected to move toward including solar panels in its mandatory certification regime to curb the entry of substandard products into the domestic market. The Pakistan-Korea lab will support this effort by providing accredited testing services, strengthening regulatory compliance and enhancing consumer protection. Industry experts say the initiative is likely to improve investor confidence, support domestic manufacturing, and expand export opportunities for Pakistan's solar equipment industry.

Overall, the lab's operational launch and upcoming accreditation are viewed as significant milestones in enhancing transparency, ensuring product reliability, and aligning Pakistan's renewable energy framework with global quality standards.

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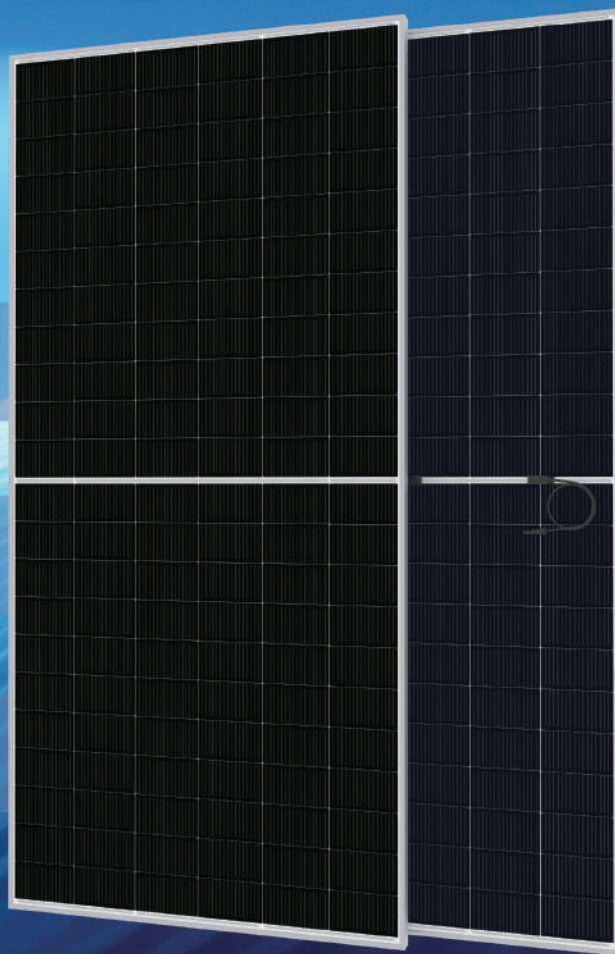
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SHRINKING THE CARBON FOOTPRINT OF CHEMICAL MANUFACTURING WITH LASERS, SOLAR RADIATION

Scientists have developed a new method that uses solar energy to power a key chemical reaction widely used in manufacturing. The breakthrough could significantly reduce the energy required for industrial processes, eliminate harmful oxidizing byproducts, and cut carbon emissions.

The process involved is known as olefin epoxidation. While unfamiliar to many people, the epoxide chemicals produced through this reaction are essential for industries such as textiles, plastics, chemicals, and pharmaceuticals. Currently, the standard industrial method relies on strong peroxide-based oxidants to drive the reaction. These chemicals are difficult to dispose of safely and generate carbon dioxide during production, contributing to environmental pollution.

Water could theoretically serve as a cleaner oxidant, but breaking the strong bonds between hydrogen and oxygen atoms in water requires extremely high temperatures. This makes the process energy-intensive and increases carbon emissions. As a result, researchers have been searching for greener alternatives that could reduce the environmental footprint of chemical manufacturing.

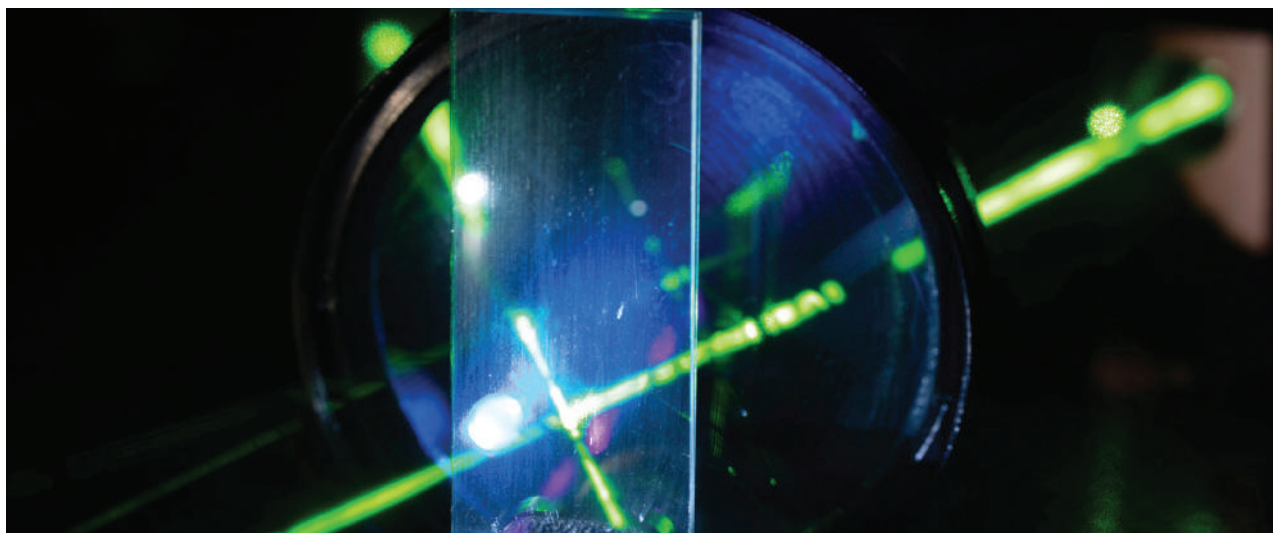
A research team led by Professor Prashant Jain from the University of Illinois Urbana-Champaign has been exploring

ways to use solar energy in industrial chemistry through a technique known as plasmonic chemistry. This approach uses light energy to activate chemical reactions, potentially replacing energy-heavy industrial methods.

In the new study, conducted in collaboration with scientists from the Universidade de São Paulo and Northwestern University, researchers developed a system that combines electricity with visible light to drive the epoxidation reaction. The system uses specialized “antenna” catalysts made from gold nanoparticles and manganese oxide nanowire electrodes. These materials absorb light and generate energetic charge carriers that weaken the bonds in water molecules.

By weakening these bonds, oxygen atoms can be extracted from water and added to other molecules to produce epoxides, effectively turning water into a clean oxidant without the need for high temperatures.

Although the laboratory results are promising, researchers say further work is needed to scale the technology for industrial use and develop more efficient light sources to power the process.



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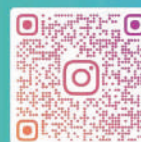
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PowerBrick SC
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16.07kWh

System up to
2.58MWh



"THE GREATEST THREAT TO OUR PLANET
IS THE BELIEF THAT SOMEONE ELSE WILL
SAVE IT."

— **ROBERT SWAN**





2040 CLIMATE TARGET: COUNCIL GIVES FINAL GREEN LIGHT

The Council has formally adopted the amended European Climate Law, setting a new binding intermediate climate target for 2040. Under the updated framework, the European Union will aim to reduce net greenhouse gas (GHG) emissions by 90% compared to 1990 levels, strengthening its pathway toward achieving full climate neutrality by 2050 across all sectors of the economy.

The revised law also introduces a limited role for international carbon credits. From 2036 onwards, high-quality international credits may account for up to 5% of the EU's 1990 net emissions to help meet the 2040 target in a cost-effective manner. However, the regulation ensures that at least 85% of emissions reductions must occur within the EU itself. Any credits used must come from credible greenhouse gas reduction activities in partner countries and remain fully aligned with the Paris Agreement.

According to Maria Panayiotou, the EU remains determined to lead global climate action while safeguarding economic competitiveness and ensuring an inclusive transition. She said the adoption of the 2040 climate target will provide industries, citizens and investors with greater certainty as Europe accelerates its shift toward a cleaner economy over the coming decade.

The amended law also outlines key factors the European Commission must consider when preparing climate legislation for the post-2030 period. These include maintaining competitiveness, simplifying regulatory frameworks, ensuring social fairness, improving energy security, and keeping energy affordable.

Among the additional measures included in the revision are provisions for EU-based permanent carbon removals, which involve capturing carbon dioxide from the atmosphere and storing it long-term to offset hard-to-abate emissions under the EU emissions trading system. The law also introduces greater flexibility across sectors and policy instruments to help countries meet targets in a more efficient and cost-effective way.

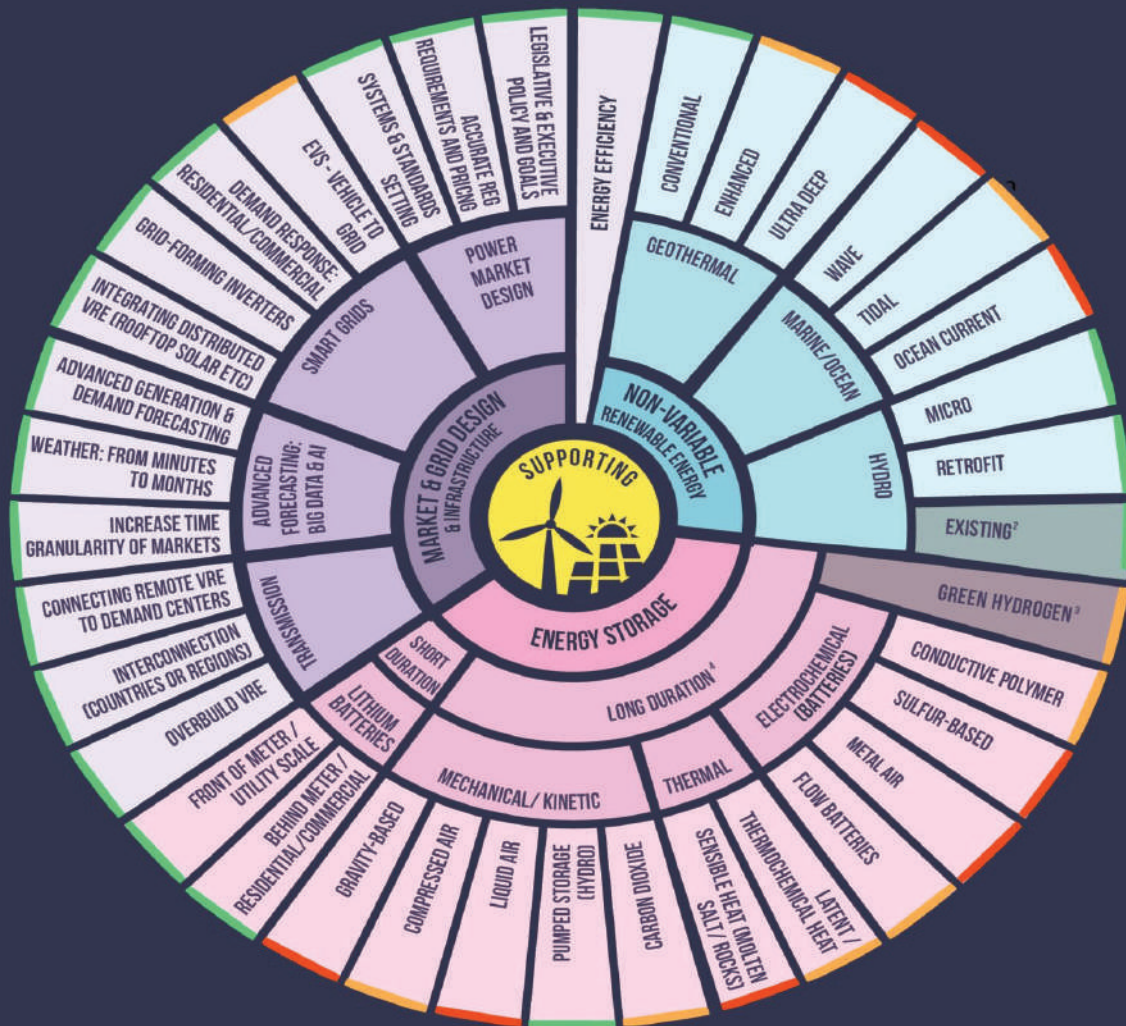
Additionally, the timeline for the EU's emissions trading system for road transport, buildings and other sectors (ETS2) has been pushed back by one year, meaning it will become fully operational in 2028 instead of 2027.

The amended regulation will enter into force 20 days after its publication in the Official Journal of the European Union and will apply directly across all EU member states. The European Commission will now prepare legislative proposals to implement the new 2040 climate target.

The regulation also mandates a biennial review of the European Climate Law, allowing policymakers to assess progress based on scientific developments, technological advances, EU competitiveness, energy prices, and the role of carbon removals and international credits in meeting future climate goals. If necessary, the Commission may propose further revisions or additional measures to support Europe's long-term prosperity while advancing its climate ambitions.

Achieving Fossil-Free Electricity¹

Policies, Tools and Technologies for Supporting Wind and Solar



Key: Market Readiness

■	Commercial
■	Newly Commercial
■	Demo/Pilot

Footnotes:

1. Infographic shows the many choices available for supporting wind & solar to achieve reliable, dispatchable fossil-free energy. There is no one silver bullet. Not all are necessary, although most Market & Grid Design reforms are. List is not exhaustive.
2. No new large hydropower dams should be built. Existing projects should be operated in a way that minimizes impact on vulnerable communities.
3. Converting electricity to hydrogen and back again is inherently inefficient but may make sense in some contexts. Hydrogen should be manufactured, stored, and converted back to electricity, all at the same location, in order to limit inefficiencies and leakage risks.
4. Long Duration storage is mostly not needed until over 50% VRE penetration.

“SOLAR BATTERY” SUPPLIES HYDROGEN FROM SOLAR ENERGY AT THE TOUCH OF A BUTTON

A newly developed “solar battery” can store sunlight and release it later as hydrogen at the push of a button — even in the dark. The breakthrough material, created by researchers from Ulm University and Friedrich Schiller University Jena, allows solar energy to be captured, stored for days, and converted into hydrogen on demand. The findings were published in Nature Communications.

Green hydrogen is a key pillar of the global energy transition, typically produced directly from sunlight through photocatalysis. While many technologies can convert and store solar energy as chemical energy, this is the first material capable of holding that energy for several days before releasing it as hydrogen when triggered. Professor Sven Rau of Ulm University describes it as “a combination of a solar cell and a battery at the molecular level.”

At the core of the system is a water-soluble, redox-active copolymer — a macromolecule built from different organic components and engineered with enhanced electron-storage capability. The material achieves a charging efficiency of more than 80 percent and can retain the stored energy for days. When hydrogen is needed, adding acid and a hydrogen evolution catalyst releases the stored electrons, which combine with protons to generate hydrogen with an impressive efficiency of 72 percent. Notably, this discharge

process works even without sunlight.

The system can be reset using a simple pH switch. Once neutralised, it can absorb light and recharge again. Because the polymer’s redox reactions are reversible, the material supports multiple cycles of charging, storage, and hydrogen production without needing to be isolated or replaced. The process also produces a visible colour change: violet when charged, yellow when discharged, and back to violet once reactivated by light.

Beyond its technical innovation, the project bridges two rarely connected areas of chemistry — macromolecular polymer science and photocatalysis. Researchers believe the technology could support industrial applications requiring reliable green hydrogen supplies, such as climate-neutral steel production. By enabling cost-effective and scalable solar energy storage, the development marks an important step toward a sustainable, hydrogen-based energy economy.





EARTH'S HEAT HARNESSSED TO SUPPLY 10,000 HOMES ENERGY MILESTONE

The UK's first deep geothermal power plant has been switched on, marking a breakthrough in renewable energy by generating electricity from superheated water drawn from deep underground.

Located in Cornwall, the project has taken nearly two decades to develop. Geothermal Engineering Ltd (GEL) drilled the deepest onshore well ever constructed in the UK—reaching three miles below the surface—to access water heated to almost 200°C by granite rock formations. The steam produced will drive turbines capable of powering up to 10,000 homes. In addition to electricity, the site will also deliver the UK's first domestic supply of lithium, a critical mineral used in electric vehicle batteries and other green technologies.

The British Geological Survey described the development as a “major step forward” for geothermal energy, though it cautioned that high drilling costs may limit how quickly similar projects can be replicated. The £50m scheme was funded through a mix of private investment and support from the European Development Fund.

Geothermal energy works by harnessing the Earth's natural heat. While shallow systems—such as ground source heat pumps—are already used in parts of the UK, including district heating networks in places like Southampton, this project taps much deeper heat reserves capable of generating electricity continuously, 24 hours a day.

Granite is particularly well-suited to the process because it effectively retains and conducts heat.

Power generated at the United Downs site has been sold to Octopus Energy, which will distribute it via the national grid. The company described the project as a “game-changer” that delivers reliable, home-grown green power without the price volatility associated with gas or the intermittency of wind and solar.

Beyond electricity, the plant will extract lithium carbonate from underground fluids—initially around 100 tonnes annually, enough for batteries in about 1,400 electric vehicles. GEL aims to scale this up significantly in the coming years. With the UK's lithium demand expected to surge as green technologies expand, domestic production could reduce reliance on imports, particularly from countries such as China, which dominates global processing.

Although deep geothermal projects remain costly, industry leaders argue that stronger government backing could unlock further investment. The appointment of Lord Whitehead as the UK's first geothermal minister last year signalled growing political interest in the sector, which experts say could play a larger role in strengthening the country's long-term energy security.

GLOBAL EVENTS



SOLAR PAKISTAN
Date: 09-11 Oct, 2026
Venue: Karachi Expo Centre



SNEC
Date: 3 – 5 June, 2026
Venue: Shanghai, China



Intersolar Europe Exhibition
Date: 23 – 25 June, 2026
Venue: Messe, München



SOLAR PAKISTAN
March 2027
Venue: Lahore Expo Centre

Global Events



RE+
Date: 16 – 19 Nov 2026
Venue: Las Vegas, NV

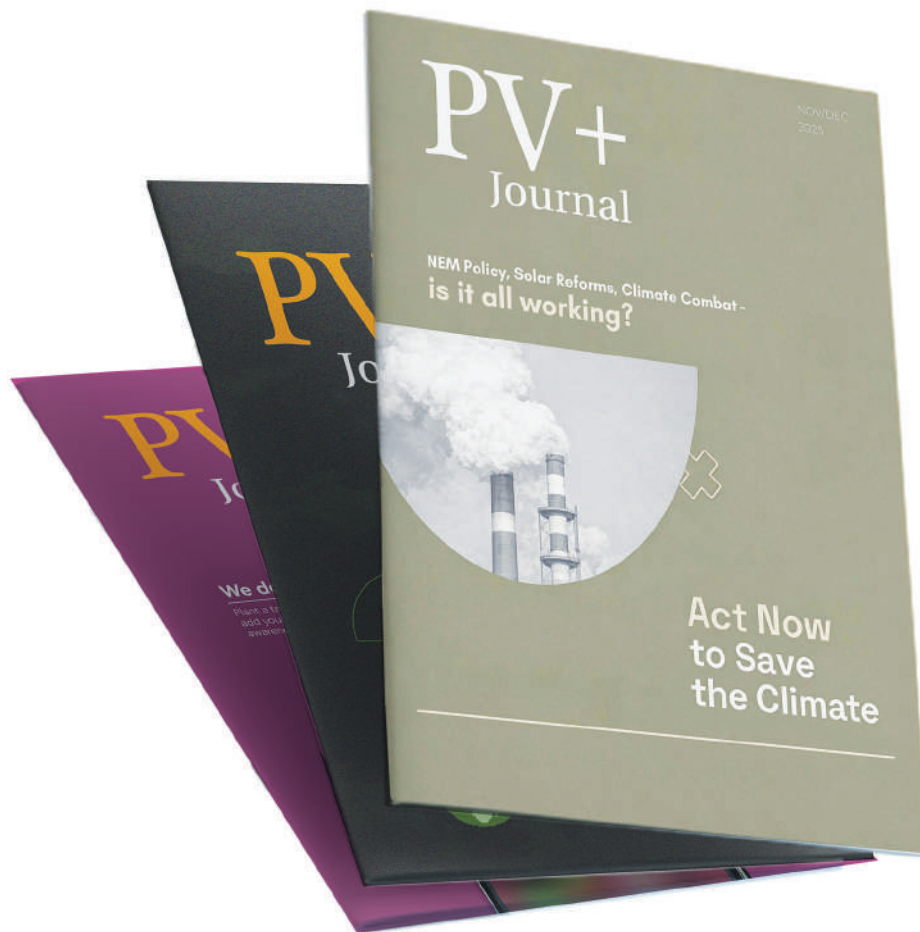


WETEX & DSS
Date: 20 – 22 Oct, 2026
Venue: Dubai World Trade Centre (DWTC)



WORLD BATTERY & ENERGY STORAGE INDUSTRY EXPO
世界电池、储能产业博览会

WBE
Date: 16 – 18 Sep, 2026
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