

# energy

**HQ**

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Issue 4

**Vaisala lowers transformer risks with enhanced monitoring technology p.24**

## **Renewable Energy**

The World's First Flying Electric Ferry Is a Success – Stockholm Expands Service

p.07

## **Oil & Gas**

Shale and Unconventional Oil: Resilient Growth Amid Strategic Shifts in 2025

p. 13

## **Nuclear**

Fabtech And France's Groupe M Sign Agreement to Develop Equipment and Services for UAE's Nuclear Energy Sector from Dubai Industrial City

p. 16





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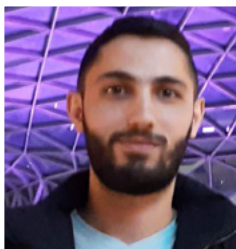
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## Advancements in Grid Asset Management and Broader Energy Industry Trends



The energy sector is undergoing significant transformation, driven by technological innovations and evolving demands. A key focus area is the modernization of grid asset management, where emerging technologies are enhancing efficiency, reliability, and sustainability.

Artificial Intelligence (AI) and Machine Learning (ML) are at the forefront of this evolution. These technologies enable predictive maintenance by analyzing real-time data from Internet of Things (IoT) sensors embedded in grid infrastructure.

Such predictive capabilities allow for the anticipation of equipment failures, reducing downtime and maintenance costs. Additionally, the integration of Geographic Information Systems (GIS) with IoT facilitates the creation of digital twins—virtual replicas of physical assets—that simulate grid behavior under various conditions, aiding in proactive decision-making.

Cloud-based asset management solutions are also gaining traction, offering utilities scalability and flexibility. These platforms support real-time monitoring and data analytics, enabling utilities to respond swiftly to changing grid conditions. Moreover, the adoption of advanced cybersecurity measures ensures the protection of sensitive operational data, safeguarding the integrity of grid operations.

Beyond asset management, the broader energy industry is witnessing substantial developments. In the United States, the surge in electricity demand, driven by data centers and renewable energy projects, is prompting significant investments in transmission infrastructure. Federal initiatives, such as the Federal Energy Regulatory Commission's Order 1920, mandate long-term transmission investment plans, aiming to enhance grid capacity and reliability.

In the United Kingdom, regulatory reforms are streamlining the grid connection process. The elimination of speculative “zombie” projects is expected to expedite connections for viable clean energy initiatives, potentially unlocking up to £40 billion in annual investments.

Energy storage is another area experiencing rapid growth. The United States has seen a fivefold increase in battery storage capacity between 2021 and 2024, reaching over 26 gigawatts. This expansion enhances grid stability and facilitates the integration of intermittent renewable energy sources.

These advancements in grid asset management and broader energy infrastructure underscore the industry's commitment to embracing technology for a more resilient and sustainable future. As utilities continue to innovate, the integration of AI, IoT, and cloud technologies will play a pivotal role in shaping the energy landscape.

### In This Issue!

**energyHQ's** April 2025 issue covers the most recent developments and events pertaining to the energy industry, as well as including valuable insights, details and spec sheets / peer reviews related to latest technologies, innovations, products, services, and projects of relevance to the industry and its audience.

- Article on page 7 talks about Emerging Renewable Technologies
- Article on page 16 focuses on The Global Nuclear Landscape
- Article on page 24 sheds the light on Grid Asset Management

Additional content is also available covering the latest activities of manufacturers, importers, and exporters – worldwide!

We hope you benefit from this issue's content and find it useful & actionable for your business. For any comments, suggestions, or feedback please don't hesitate to contact me.

Best wishes,  
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# Issue Contents

## Introduction

- 01 Opening Letter
- 02 Issue Contents
- 04 World Digest



## Renewable Energy

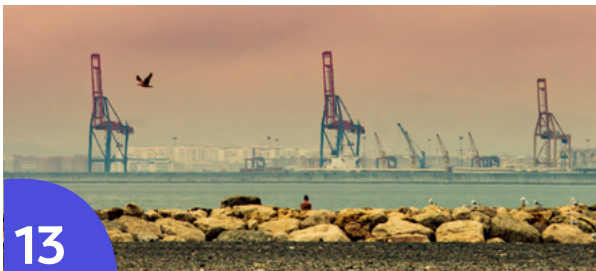
*Emerging Renewable Technologies*

- 07 The World's First Flying Electric Ferry Is a Success – Stockholm Expands Service

## Sustainability & Decarbonization

*Circular Economy & Waste Reduction*

- 10 90 new vestas wind turbines from edp renewables go up for public auction



## Oil & Gas

*Shale & Unconventional Oil*

- 13 Shale and Unconventional Oil: Resilient Growth Amid Strategic Shifts in 2025

## Nuclear

*The Global Nuclear Landscape*

- 16 Fabtech And France's Groupe M Sign Agreement to Develop Equipment and Services for UAE's Nuclear Energy Sector from Dubai Industrial City



## Hydrogen

*Hydrogen in Power Generation & Building*

- 21 GKD and KnitMesh Technologies combine expertise in H<sub>2</sub> technology and mobility



# Issue Contents

## Cover Story

*Grid Asset Management*

- 24** Vaisala lowers transformer risks with enhanced monitoring technology



## Energy Storage & Grids

*Microgrids & Decentralized Energy*

- 27** Maritronics' in house brand 'EDGE' obtains its first prestigious 'LR Type Approval' certification

## Country Reports

*Kuwait, Indonesia, Canada*

- 30** Kuwait Unites oil Giants: Merger of KNPC, KIPIC Begins
- 31** Indonesia's renewable energy industry holds up to US\$551 billion in potential
- 32** TC Energy, Industry Leaders Call on Canada to Fast-Track Pipeline, LNG Projects



## Services

- 34** Coming Events

## Info

- 35** General Inquiries

- 36** Closing Letter

# World Digest



## Kuwait

### Kuwait forms committee to promote energy and water conservation

The committee will also collaborate with the private sector, as well as scientific and research institutions, to implement joint projects that incorporate renewable energy technologies.

Dr. Subaih Al-Mukhaizeem, the Minister of Electricity, Water, and Renewable Energy, issued a ministerial decision on Monday to establish a committee aimed at raising awareness about rationalizing electricity and water consumption among citizens and residents, with a focus on sustainability, especially during the summer months.

In a press statement, the Ministry of Electricity and Water announced that the committee will be headed by Undersecretary Dr. Adel Al-Zamel. It will also include a number of specialists from the ministry, as well as representatives from the Ministries of Education, Higher Education and Scientific Research, Islamic Affairs, Commerce and Industry, Information, the Kuwait Petroleum Corporation, the Kuwait Institute for Scientific Research, the Public Authority for Applied Education and Training, and the Federation of Industries.

The committee's primary responsibility is to develop a comprehensive system of awareness programs that will emphasize the importance of rationalizing consumption and highlight its direct impact on preserving public funds and protecting the environment. These programs will be delivered through various media and social media platforms.



## Germany

### Germany generated 57% of its electricity from low-carbon sources in 2024, above the global average of 41%

Following the 2023 nuclear energy phase-out, renewables accounted for all of Germany's low-carbon generation in 2024. The combined wind and solar share was 43%, well above the EU average (29%). Wind power was the country's largest source of electricity at 28%, while solar made up 15%, bioenergy 10% and hydro 5%. Germany was the world's fourth largest generator of electricity from wind and solar in 2024.

Fossil fuels generated 43% of Germany's electricity generation in 2024, slightly above the European average of 39%. Germany's per capita emissions exceeded both the global and European averages.

Coal power has been in long term decline in Germany. In 2000, coal generated the majority of electricity (52%). Over the last decade its share has halved, down to 22% in 2024. Over the same period, wind and solar's combined share of generation rose from 15% to 43%.

On its way to net zero by 2045, Germany aims for 75% renewable electricity production by 2030 and 80% of consumption, above the global target in the IEA's Net Zero Emissions scenario of 60%.



## Nigeria

### Nigeria's energy sector urged to embrace innovative leadership amid industry challenges

As Nigeria's energy sector continues to grapple with oil theft, deteriorating infrastructure, regulatory uncertainty, and a perennially acute shortage of electricity, industry captains are demanding a different kind of leadership.

The leadership must be open to innovation and daring decision-making to retool the sector for long-term sustainable success.

Elliot Umole, a veteran oil and gas industry leader with over two decades of experience in upstream operations and strategic change, is convinced that innovative leadership is key to unleashing Nigeria's full potential in oil, gas, and renewable energy resources.

"Too often, energy leadership is reactive, focused on short-term fixes or political cycles," Umole said in an exclusive interview. "But in today's rapidly evolving global energy environment, we need leaders who think ahead, invest in innovation, and see sustainability and profitability as friends, not foes."

The Canadian-based oil and gas expert explained that innovation is not just technology. "It's not just putting sensors in or flying drones around," he said.

This kind of leadership is particularly critical when Nigeria struggles with underinvestment, old infrastructure, and policy uncertainties that deter investors.

Even though the Petroleum Industry Act (PIA) of 2021 was supposed to resuscitate the sector's trajectory, progress has been slow, Umole argues that the leadership quality of the individuals executing reforms like the PIA would decide its fate and not only the quality of the legislation leader in solar solutions.

## South Korea



### China, South Korea and Japan agree to strengthen trade ties in response to Trump tariffs

China, South Korea and Japan agreed Sunday to strengthen free trade in the face of a raft of new tariffs imposed by US President Donald Trump.

The agreement came at a meeting of top trade officials – the first at that level in five years – days ahead of the start of tariffs on a huge range of US imports, including cars, trucks, and auto parts.

South Korea and Japan are major auto exporters, while China has also been hit hard by the US tariffs.

The meeting was attended by South Korea's industry minister Ahn Duk-geun, his Japanese counterpart Yoji Muto, and China's Wang Wentao.

The three countries called for their negotiations for a comprehensive trilateral free-trade agreement to be speeded up, and agreed to create "a predictable trade and investment environment", a statement said.

### 'Uncertainties are increasing'

South Korea's Ahn said the three countries must respond "jointly" to shared global challenges.

"Today's economic and trade environment is marked by increasing fragmentation of the global economy," he said.

"The international environment surrounding us is constantly changing, and uncertainties are increasing," Japanese trade official Yasuji Komiya said in a press briefing.

## Canada



### Canada throws its weight behind \$4 billion hydro-powered floating LNG project

Given the importance of unlocking the domestic energy industry, especially in the wake of escalating trade wars, rising prices, and energy security concerns, the Canadian government has handpicked Cedar LNG, a partnership between the Haisla Nation and Canadian energy infrastructure player Pembina Pipeline Corporation, to be on the receiving end of millions in support for a floating liquefied natural gas (LNG) (FLNG) facility with a nameplate capacity of 3.3 million tonnes per annum (mtpa) in the traditional territory of the Haisla Nation, on Canada's West Coast.

According to the Canadian Association of Petroleum Producers (CAPP), said to be a non-partisan, research-based industry association that advocates on behalf of its oil and gas exploration and production member companies, Canada's economy is at a crossroads with the energy industry standing ready to play "a foundational role" in driving new investments, creating and supporting high-paying jobs, and providing a stable supply of affordable energy to Canadians and countries around the world, despite nearly a decade of ideological policy that has "stifled growth" in the sector



## Indonesia

### Fostering Strategic Partnerships: SPE and OTC Asia Engage Key Industry Stakeholders in Indonesia

The SPE Asia Pacific and OTC Asia team recently completed a series of courtesy visits in Indonesia, reinforcing their commitment to strengthening ties with key industry stakeholders. These engagements highlight SPE's ongoing efforts to align regional priorities and collaborate on opportunities that shape the future of the energy sector.

The SPE Asia Pacific and OTC Asia team recently completed a series of courtesy visits in Indonesia, reinforcing their commitment to fostering strong relationships with key industry stakeholders.

These engagements reflect SPE's continued commitment to engaging directly with national oil companies, international operators, government agencies, and professional societies to enhance alignment of regional priorities and collaborate on emerging opportunities to shape the future of the industry.

During the visit in Jakarta, the team had the privilege of engaging with Djoko Siswanto, the newly appointed Chairman of SKK Migas—Indonesia's Special Task Force for Upstream Oil and Gas Business Activities. The discussion included its support for APOGCE 2026 and underscored the growing importance of strategic partnerships in shaping the future of the country's energy landscape.

Further strengthening industry ties, the team engaged with bp Indonesia, Eni, and Petronas—each sharing their exciting ventures and growth in-country, including the areas of CCUS and deepwater.



# Renewable Energy

## *07 Emerging Renewable Technologies*





# The World's First Flying Electric Ferry Is a Success – Stockholm Expands Service



**The world's first electric hydrofoil ferry is set to return to the waters of Stockholm after a short winter break. New data from autumn operations shows that Nova has been a success—both with passengers and for the climate.**

Candela P-12 is the world's first passenger ferry that combines electric propulsion with hydrofoil technology, allowing it to literally fly above the water surface – with lower energy consumption and higher speeds. The first unit, named Nova, has operated in Stockholm's public transport system during the autumn.

As the service resumes on April 15 after the ice season, new statistics from Region Stockholm confirm that the vessel is a major success – both for passengers and the environment.

Nova emits 95% less CO<sub>2</sub> compared to the conventional diesel-powered vessels Lux and Sunnan, which operate the same route, and use 84% less energy per passenger-

kilometre.

At the same time, statistics show that Nova is extremely popular; most departures have been fully booked – often with long queues. The popularity stems from Nova reducing travel time between Tappström (Ekerö center) and Stockholm City Hall to 30 minutes, compared to about an hour by car or bus.

The data also shows that Nova attracts more people to travel on water, with a 30% increase in ridership on route 89.

“Nova is drawing commuters to the other vessels as well. That's especially exciting, since one of our goals is to show that with fast, comfortable waterborne transport, we can get car commuters to switch to waterborne transport,” says Gustav Hasselskog, CEO and founder of Candela.

Region Stockholm, which operates the service, will now increase Nova's service from five days a week to daily operations by May.

The Candela P-12 with a cruising speed of

25 knots, is the fastest electric ship in the world. It is also faster than Stockholm's fastest diesel-powered archipelago ferries. Thanks to its speed and low wake signature, the vessel is well-suited to both urban areas, where speed restrictions are typically in place due to conventional ferries causing damaging wake, and sensitive ecosystems.

"Demonstrating that the technology is mature and fit for demanding public transport use is important. This is the third generation of our foiling technology, and with lessons learned from producing over 100 leisure vessels, we're scaling up production to meet demand," says Gustav Hasselskog, CEO and Founder of Candela.

Candela already has P-12 customers around the world – from Saudi Arabia to New Zealand and the USA.

"We are incredibly happy that Region Stockholm has enabled us to demonstrate the hydrofoil technology in the city's public transport. We see that waterways in most cities have enormous potential for fast, low-cost, and emission-free transport that can relieve road networks and connect communities. This is just the beginning," says Gustav Hasselskog.

- Nova's CO emissions: 23 g/pkm; the average for other vessels on the route is 439 g/pkm.
- Nova's energy consumption: 0.39 kWh/pkm; the average for other vessels on the route is 3.31 kWh/pkm.
- Fastest travel time with Nova direct between Tappström and Klara Mälarstrand: approx. 30 minutes (with speed exemption at 22 knots from Gröndalsbron to City Hall). Other boats on the line take 45–55 minutes.
- 120 departures completed
- 2,326 total passengers carried
- Occupancy: 80.83%, in reality higher due to onboard training personnel.

The success of Nova has sparked growing interest from both policymakers and international observers. As cities around

the world grapple with rising emissions and congested roadways, Stockholm's adoption of cutting-edge waterborne transport positions it as a global leader in sustainable mobility. Urban planners and environmental experts are closely watching Nova's deployment as a potential model for similar initiatives in cities with accessible waterways.

Beyond environmental impact, Nova also provides a glimpse into the future of passenger experience. The hydrofoil system ensures an exceptionally smooth and quiet ride, eliminating the noise and motion sickness often associated with traditional ferries. Passengers have reported a more relaxing and efficient commute, which enhances the appeal of water transport over congested land-based routes.

The vessel's design also reduces operational costs. With fewer moving parts and significantly lower fuel requirements, maintenance is streamlined and running expenses are minimized. This economic efficiency makes scaling such services more viable for other cities and transport authorities.

Looking ahead, Candela has plans to develop larger models with higher passenger capacities and longer routes. The company is also exploring integration with other modes of transport, including electric buses and trains, to create a seamless multimodal network.

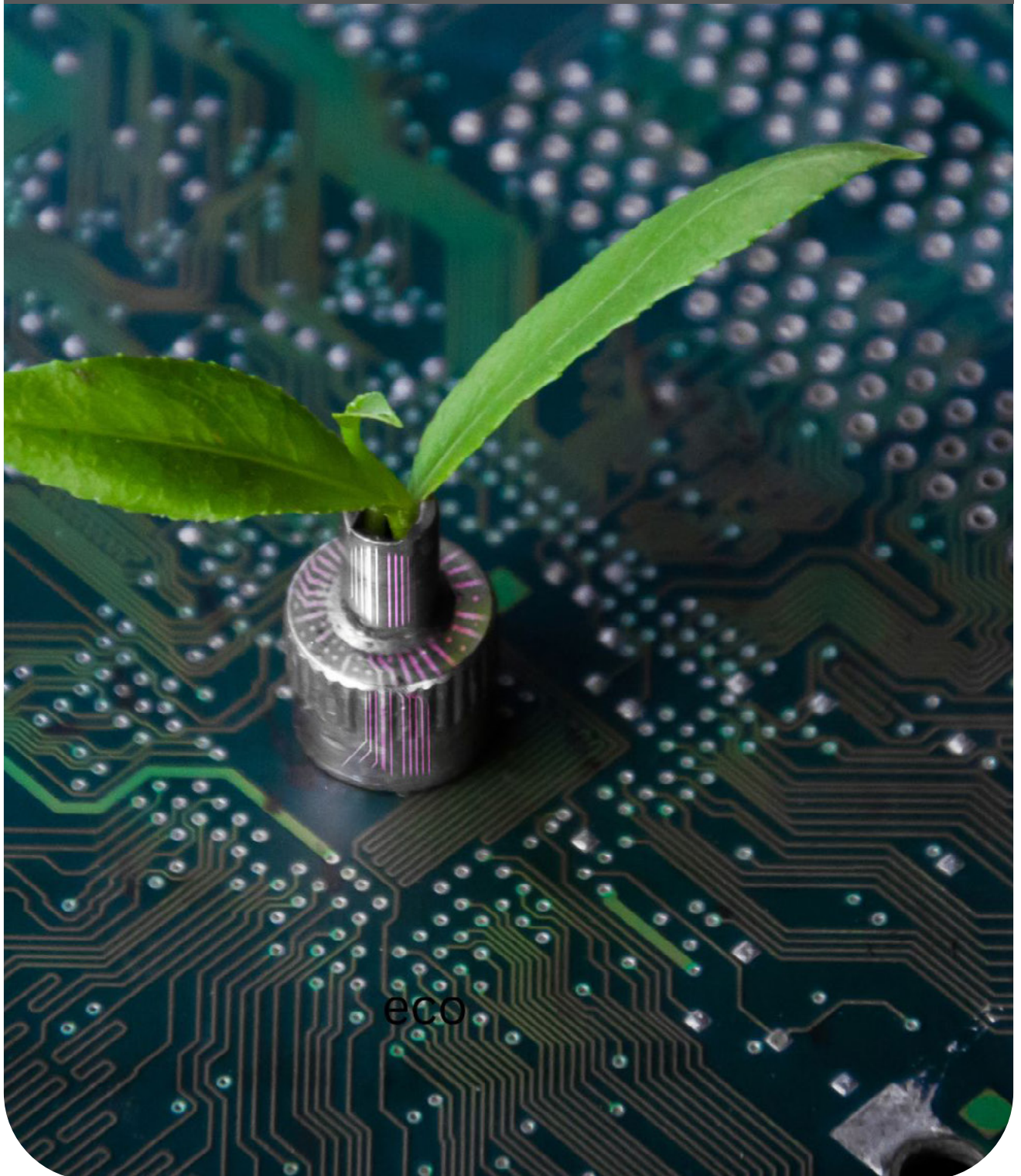
Stockholm's investment in Nova demonstrates that innovation in public transport not only supports climate goals but also transforms the daily lives of commuters. As Candela ramps up production and interest grows globally, the flying electric ferry may soon become a familiar sight in waterways far beyond Sweden.

<https://candela.com/>



## Sustainability & Decarbonization

### *10 Circular Economy & Waste Reduction*





# 90 new vestas wind turbines from edp renewables go up for public auction



EDPR's 90 Vestas V162-5.6 MW wind turbines, located in Puerto Brisa -La Guajira- and Cartagena (Colombia), are put up for auction. This operation will be carried out through an online auction process, offering an opportunity for the global wind energy sector.

EDP Renewables (EDPR) is one of the world's leading renewable energy companies, with a leading presence in the development, operation and maintenance of wind and solar farms, with more than 19 GW of installed capacity worldwide. Present in strategic markets such as Europe, North America, South America and Asia-Pacific, the company has consolidated its position as one of the main drivers of global clean energy growth.

In Latin America, EDPR has actively participated in the development of renewable infrastructures, standing out in countries such as Brazil, Mexico and Chile. EDPR entered the Colombian market in 2019 with projects in La Guajira that sought to take advantage of the country's enormous wind potential.

**Assets for sale:** 90 state-of-the-art Vestas wind turbines

The wind turbines available correspond to the Vestas V162-5.6 MW model, belonging to the EnVentus platform. These units were acquired for the aforementioned projects in La Guajira, one of the areas with the greatest wind potential in Colombia, but could not be implemented so far due to various regulatory obstacles.

The equipment, which is stored at the Puerto Brisa facilities and in Cartagena (Colombia),

includes:

- 90 nacelles.
- 90 hubs.
- 90 powertrains.
- 450 tower sections (90 towers divided into 5 sections each).
- 270 blades of 79 meters.
- Cooling units and other assembly components.

All wind turbines have been maintained by Vestas and are audited by an independent, certified company.

Additionally, all auxiliary materials (BoP) for the assembly of the wind farm (unused and top brands: Siemens, WEG, 3M, GE) located in Puerto Brisa and Uribia -La Guajira- (Colombia) will be sold through an online auction:

WEG 500/34.5 kV - 72/96/120 MVA,  
500/34.5 kV - 96/128/160 MV Transformers.

Electrical equipment (cubicles, disconnectors, switches, cabinets, control units).

Cabling (medium and high voltage cable, bare copper and fiber optic).

Splices and terminals.

Transporters and locators.

Electrical pipe, reinforced pipe and conduit coils.



Auction processes in Escrapalia: dual (wind turbines) and traditional (ancillary materials)

The sale process will be carried out through Escrapalia, SURUS' specialized auction platform, where there will be different auction processes for wind turbines and for auxiliary material (BoP).

IN THE CASE OF THE 90 V162 WIND GENERATORS, A DUAL AUCTION WILL BE CARRIED OUT: an innovative auction model that guarantees the transparency of the process and ensures that only really interested buyers with technical and financial capacity participate, thus optimizing the process:

1. Application reception phase: interested parties must sign a confidentiality agreement (NDA), after which they will receive a request for quotation (RFQ with all the detailed information on the project, the assets for sale and the bidding process), as well as a compliance questionnaire to be completed.

2. Qualification and bidding phase: Successful applications will receive additional information, have the possibility of visits and may submit their bid (together with a guarantee) until May 20, 2025.

3. Final online auction phase: selected bids will have access to a data room (with legal, tax and contractual information) and will enter a final auction on Escrapalia planned on June 24, 2025 where the winning bids will be decided.

4. Binding offer phase and form of contract: the winning bidders will submit a binding offer guarantee and formalize the purchase by signing a contract.

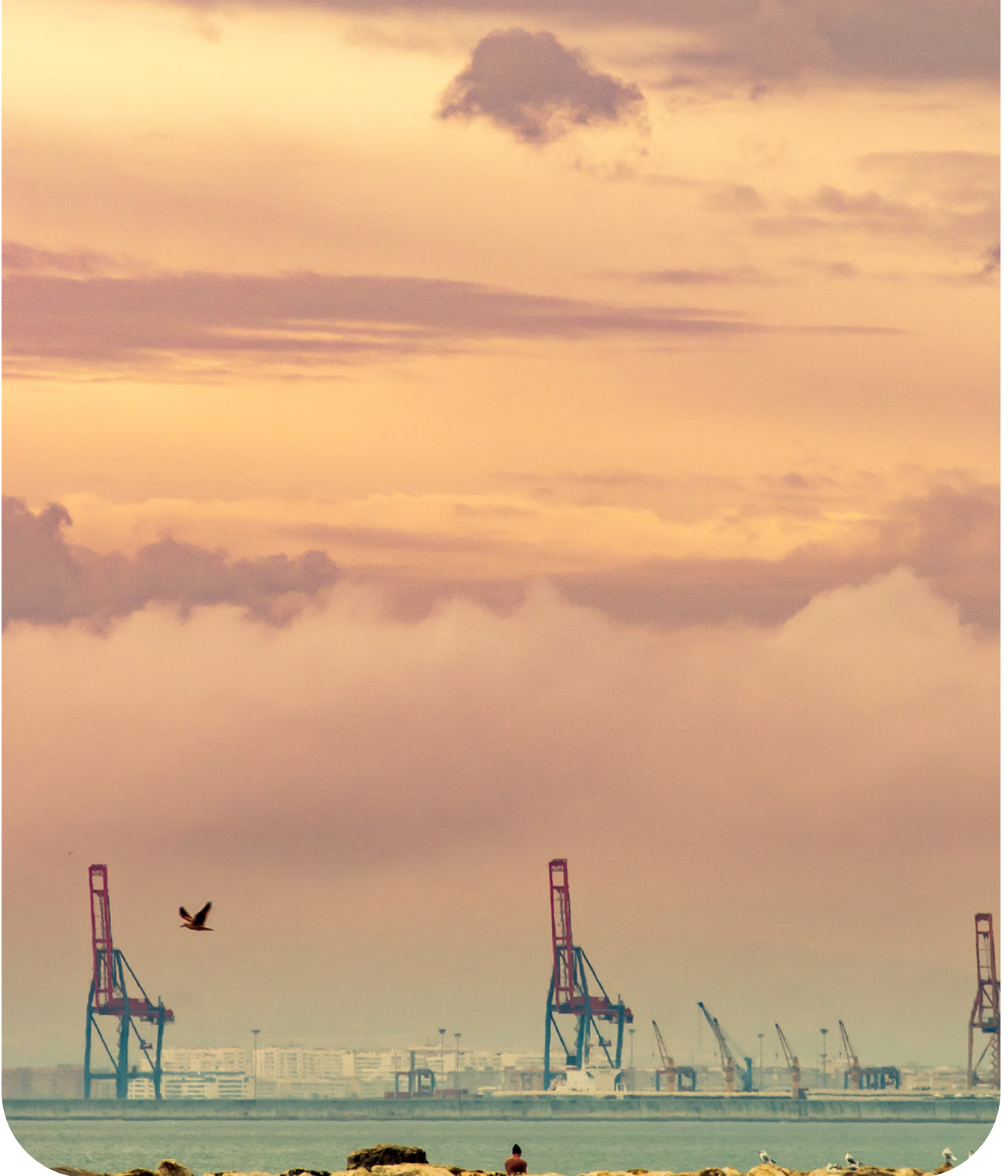
This sale represents an exceptional opportunity for companies in the wind energy sector seeking to incorporate high-efficiency turbines at competitive prices. Thanks to its strategic location in a port with sea and land access, the wind turbines can be transported to different international markets.

[windenergy.escrapalia.com](http://windenergy.escrapalia.com).



# Oil & Gas

## *13 Shale & Unconventional Oil*





# Shale and Unconventional Oil: Resilient Growth Amid Strategic Shifts in 2025



The global energy sector continues to witness a dynamic evolution, and shale and unconventional oil remain key players in this transformation. Despite macroeconomic headwinds and regulatory challenges, the industry is demonstrating remarkable resilience, innovation, and strategic realignment. As we progress through 2025, several important developments are shaping the trajectory of this sector, both in the United States and globally.

## U.S. Shale: Efficiency-Driven Expansion

The U.S. shale oil industry is on track to hit a new milestone, with production expected to climb to a record 13.9 million barrels per day this year. This surge is largely attributed to technological advancements and improved operational efficiencies. Producers are deploying more sophisticated drilling techniques, such as extended-reach laterals and optimized hydraulic fracturing, which are enabling them to extract more from each well while keeping costs under control.

However, this upward trajectory isn't without its complications. While production is rising, drilling activity has paradoxically slowed. The rig count has dipped, suggesting that producers are

becoming increasingly selective. Major players like ExxonMobil and Chevron are zeroing in on their most productive assets, aiming to maximize returns rather than merely expand output.

This cautious approach is partly shaped by investor pressure. Wall Street, still wary from previous boom-and-bust cycles, is urging companies to prioritize capital discipline and shareholder returns over rapid expansion. The message is clear: sustainable growth is preferable to aggressive overreach. As a result, even with a supportive political environment, the likelihood of a full-scale drilling resurgence remains low—at least for now.

## Global Momentum: Vaca Muerta, Algeria, and Beyond

Outside the U.S., unconventional oil developments are gaining traction in several key regions. In Argentina, Vista Energy has made a bold move by acquiring Petronas Argentina. This deal bolsters Vista's footprint in the Vaca Muerta shale formation—one of the most promising unconventional oil plays outside North America. The acquisition includes a 100% stake in the unconventional block La Amarga Chica, along with other

operational assets, positioning Vista for long-term growth in Latin America.

In North Africa, Algeria's state-owned Sonatrach has entered into memoranda of understanding (MOUs) with Occidental Petroleum and other U.S. firms to enhance cooperation in exploration and production. These partnerships mark a strategic effort to modernize Algeria's hydrocarbon sector and tap into its significant unconventional reserves.

Meanwhile, in the Eastern Mediterranean, Turkey is ramping up its shale exploration activities. Continental Resources recently inked a joint venture with Türkiye Petroleum and TransAtlantic Petroleum to develop unconventional oil and gas resources in the Diyarbakir and Thrace Basins. This collaboration signals a growing recognition of the region's untapped potential and the increasing role that smaller operators are playing in advancing global shale exploration.

### **Navigating Challenges with Innovation**

One of the defining themes of 2025 in the shale and unconventional space is the shift toward environmentally responsible operations. Producers are placing greater emphasis on water treatment, recycling, and overall emissions reduction. Startups like Espiku, in partnership with Halliburton Labs, are piloting advanced water management solutions that aim to reduce the sector's environmental footprint without sacrificing operational efficiency.

Simultaneously, operators are adopting digital tools and AI-powered analytics to better predict well performance and optimize field development strategies. This data-driven approach is not only improving production outcomes but also reducing waste and enhancing ESG performance—a growing priority for stakeholders across the value chain.

### **Looking Ahead**

As the energy landscape continues to evolve, shale and unconventional oil producers are rewriting their playbook. The focus has shifted from volume-driven growth to disciplined execution, sustainability, and long-term value creation. With record production on the horizon and strategic partnerships blossoming globally, the sector appears well-positioned to remain a cornerstone of global energy supply—provided it can balance innovation with responsibility.

In the months ahead, all eyes will be on

how operators respond to geopolitical uncertainties, regulatory shifts, and the ongoing push for decarbonization. If 2025 has made one thing clear so far, it's that adaptability will remain the industry's greatest asset.

### **Expanding Horizons: New Frontiers and Investment Trends**

Beyond the traditional strongholds, shale and unconventional oil are carving inroads into regions previously overlooked due to technological or economic constraints. In India, the government has intensified exploration initiatives in the Cambay and Krishna-Godavari basins, partnering with international oilfield service firms to unlock untapped unconventional reserves. Similarly, Australia is advancing its Beetaloo Basin development, with companies like Origin Energy and Tamboran Resources scaling up pilot projects backed by federal incentives.

These efforts are being buoyed by a growing influx of private equity and sovereign wealth funds, which are showing renewed interest in unconventional oil plays, especially those that demonstrate a clear path toward carbon-neutral development. This shift in investment behavior reflects a broader recognition that energy security and sustainability must now go hand in hand.

### **Technology and Talent: Building a Future-Ready Workforce**

The sector is also investing heavily in workforce transformation. Companies are rolling out upskilling programs to train workers in AI-based subsurface modeling, carbon capture integration, and real-time data monitoring. Educational partnerships with technical institutes and universities are expanding, helping to close the skill gap and prepare a new generation of engineers and data scientists for the challenges ahead.

### **A Sector in Strategic Transition**

As geopolitical tensions continue to disrupt global energy flows, the strategic importance of flexible, domestic, and technologically advanced oil sources cannot be overstated. In this context, shale and unconventional oil are not just surviving—they are strategically evolving, with an eye toward a more balanced, resilient energy future.

**energyHQ Staff**

# Nuclear

## 16 *The Global Nuclear Landscape*





# Fabtech And France's Groupe M Sign Agreement to Develop Equipment and Services for UAE's Nuclear Energy Sector from Dubai Industrial City



- Fabtech, based at Dubai Industrial City, will leverage synergies with Groupe M to offer locally manufactured products and services for the nuclear and sustainable energies sectors

- The agreement reaffirms the contributions by Dubai Industrial City's community towards the long-term goals of Operation 300bn, Make it in the Emirates, UAE Energy Strategy 2050, and Dubai Economic Agenda 'D33'

Fabtech Engineering, a steel fabrication specialist based at Dubai Industrial City, has entered a strategic agreement with French industrial leader Groupe M to accelerate innovation and sustainable development in the UAE's nuclear and sustainable energies sectors.

The agreement was signed during a ceremony attended by Nicolas Niemtchinow, Ambassador of the French Republic to the UAE; Anouar Mekkas, Nuclear and Renewable Energy Adviser at

the French Embassy in Saudi Arabia and the UAE; and, on behalf of Dubai Industrial City, Saud Abu Alshawareb, Executive Vice President of Industrial at TECOM Group PJSC. Fabtech Engineering's Chairman, Dr. Harry Moraes, and Vice President Business Development, Fabien Jeoffroy, signed the agreement with Groupe M's Chairman, Julien Monteiro, and Deputy CEO Pierre-Laurent Buch. Also in attendance were representatives from the French Nuclear Strategic Committee, Business France, Trouvay Cauvin, and the French Chamber of Commerce and Industry in UAE.

Fabtech is active in the heavy manufacturing segment in the GCC and global markets, and will expand its nuclear sector offering through the partnership with Groupe M by offering its 'Made in UAE' products to both local and international customers. The companies will develop comprehensive engineering, manufacturing, and on-site products



and solutions to support the nuclear and sustainable energies sector, contributing to the long-term goals of UAE Energy Strategy 2050.

Fabtech's collaboration with Groupe M will help address demand for locally sourced solutions and expedite site support operations. As part of the agreement, Fabtech will also upgrade its existing 2.1 million sq.ft. facility at Dubai Industrial City, in line with its commitment to sustainability and innovation.

The agreement builds on strong economic ties between the UAE and France, with bilateral trade exchange between the countries growing 16.8% to reach AED 29.4 billion in 2022. During the 16th session of the UAE-France Strategic Dialogue held in May 2024, senior officials from both countries reflected on successful partnerships and industrial cooperation in areas including renewables and nuclear energy, and explored ways to further expand their cooperation in areas such as new builds and small nuclear reactors.

Fabtech Engineering was established in 2010 at Dubai Industrial City to serve heavy

engineering demand in sectors including energy, utilities, food and beverage, and chemicals. Its strategic alliance with Groupe M is expected to accelerate its growth following successful collaborations with energy sector partners.

Dubai Industrial City is home to more than 1,100 local, regional, and international customers as well as 350 operational factories, including industry leaders such as A.P. Moeller-Maersk, Patchi, and Al Barakah Dates. Strategically located close to Al Maktoum International Airport, Jebel Ali Port, an Etihad Rail freight terminal, and key regional roadways, the district features an intelligent masterplan with six sector-specific zones to nurture the circular economy.

Dubai Industrial City is part of TECOM Group's portfolio of business districts that include Dubai Internet City, Dubai Media City, Dubai Studio City, Dubai Production City, Dubai Knowledge Park, Dubai International Academic City, Dubai Design District (d3), and Dubai Science Park.

[www.dubaiindustrialcity.ae](http://www.dubaiindustrialcity.ae)

“

### **Residential Energy Storage Battery (Rack-mounted)**

1. Suitable for standard 19-inch cabinet with rack-mounted design
2. Adopt lithium iron phosphate batteries with safe and long life cycle
3. Maximum charge/discharge up to 1C
4. Friendly human-machine interface
5. Compatible with multiple brands of inverters at the same time





# energy

## HQ

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# Hydrogen

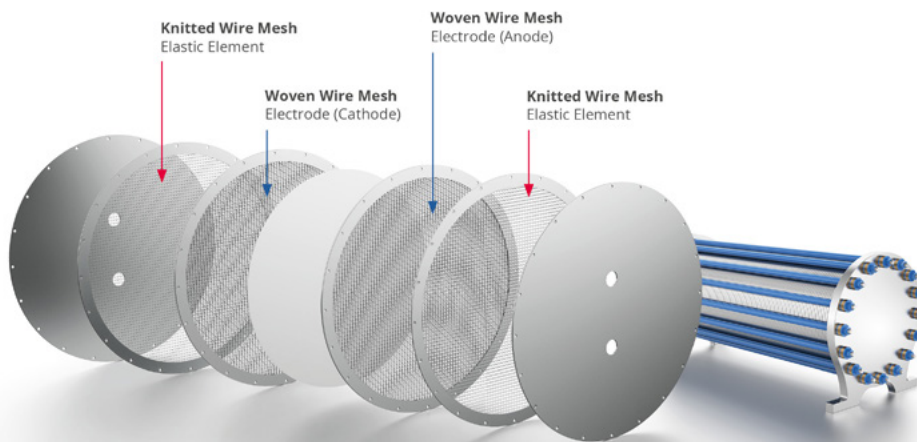
## 21 Hydrogen in Power Generation & Building



**H<sub>2</sub>**  
**HYDROGEN**

A large, vertical, cylindrical metallic tank, likely for hydrogen storage, is shown against a clear blue sky. The tank has a brushed metal finish and is marked with the chemical formula **H<sub>2</sub>** and the word **HYDROGEN** in large, bold, blue capital letters. The tank is part of an industrial facility, with other similar tanks visible in the background.

# GKD and KnitMesh Technologies combine expertise in H<sub>2</sub> technology and mobility



## Strategic partnership creates synergies for innovative complete solutions in Europe and the USA

**Düren, 31. March 2025** – GKD – Gebr. Kufferath AG, the German global market leader for technical mesh solutions, and KnitMesh Technologies, the leading international UK-based manufacturer of knitted wire mesh solutions, have entered into a strategic partnership.

The aim of the cooperation is to combine the strengths of both companies in order to offer innovative and integrated solutions for the future markets of hydrogen (H<sub>2</sub>) and mobility. Customers of both companies will benefit from an expanded product portfolio and an optimized value chain. The cooperation will initially focus on Europe and the USA.

### Complete solutions for the hydrogen industry

The advantages of the partnership can be seen for example in applications that are required in hydrogen production, particularly in alkaline electrolysis.

Technical meshes from GKD for electrodes and knitted wire mesh from KnitMesh Technologies as elastic elements can thus be offered as a complete solution. Bipolar plates and full electrolyser cell assemblies are also offered by the new partnership.

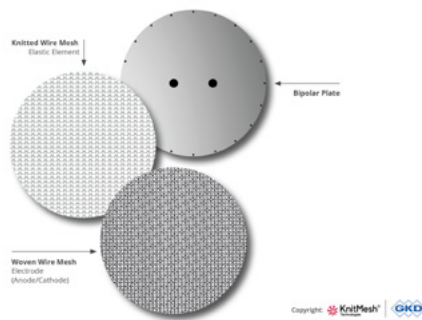
### New impulses for the mobility sector

The cooperation also offers considerable prospects in the mobility sector, which both companies already serve with numerous solutions: Vehicle components with all forms of mesh elements that are optimized with knitted wire mesh and vice versa open up new potential for suppliers and manufacturers. As a first step, KnitMesh Technologies and GKD will expand their product portfolios to include the cooperation partners' solutions.

### Strategic advantages for both partners

Dirk Leibel, Key Market Manager - Energy and Mobility, GKD Group: "Both companies can contribute their respective strengths to the cooperation: GKD as an expert in wire mesh and technological weaving



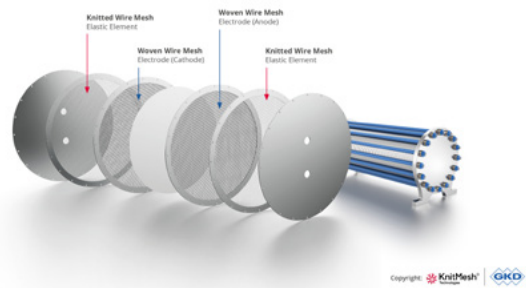


solutions, KnitMesh as a leading supplier of knitted wire mesh. We have different areas of expertise in the processing of wire - we bring them together. As a complete solution provider, we make it easier for our customers and can serve their requirements even better.“

Peter Evans, Managing Director, KnitMesh Technologies: “Through our strategic partnership with GKD, we are thrilled to combine the capabilities of KnitMesh Technologies as the leading knitted wire mesh manufacturer with GKD’s position as the leading woven wire mesh manufacturer. This collaboration will deliver a comprehensive line of knitted and woven wire mesh products, including multi component assemblies, setting a new standard for our industry. Our teams share a commitment to excellence, and we are confident that our customers will benefit greatly from our combined expertise and capabilities.”

In addition to the technological collaboration, close cooperation in customersupportandmarketdevelopment is also planned. The sales staff of both companies will be intensively prepared for the expanded product solutions through specialized training programs.

The first public appearance of the new partnership will be at the **World Hydrogen Summit in Rotterdam from May 20 to 22, 2025**. There, GKD und KnitMesh will present their **combined expertise in hydrogen technology** and showcase their innovative solutions for a sustainable



future.

## GKD Group

As a privately owned technical weaving mill, GKD – Gebr. Kufferath AG is the global market leader for metallic mesh, synthetic mesh, and spiral mesh solutions. Since 1925, the company has provided solutions for a large number of application areas in the fields of: Architecture & Design, Industry & Filtration, Process Belts, and Process Equipment. In all of these segments, GKD strives to make a key contribution to a healthier, cleaner, and safer world. With headquarters in Germany, five other production sites in the US, South Africa, China, and Chile, as well as branches in France, Spain, and representatives all over the world, GKD is never far from its customers or markets.

Further information: [www.gkd-group.com](http://www.gkd-group.com)

## KnitMesh Technologies

KnitMesh Technologies is a leading manufacturer of knitted wire mesh, with a 70 year legacy in the industry. The company is headquartered in the United Kingdom, and operates a modern manufacturing facility in Delhi, India. Clients include key global players in the hydrogen production, automotive, aerospace, and oil and gas sectors. The growing base of customers rely on an extensive and extremely capable network of representatives to support their individual, application-specific needs.

For more information about KnitMesh Technologies, please visit: [www.knitmeshtechnologies.com](http://www.knitmeshtechnologies.com).

# Cover Story

## 24 Grid Asset Management





## Vaisala lowers transformer risks with enhanced monitoring technology



**As demand grows for continuous transformer monitoring, Vaisala has released a new enhanced version of its Optimus™ OPT100 DGA monitor by adding oxygen and nitrogen parameters.**

The Optimus is designed to reduce the possibility of unplanned outages and help prevent catastrophic transformer failures.

A transformer's lifetime is determined by the condition of its solid insulation, which can be detrimentally affected by air leaks. The easiest and most robust way to reliably detect such leaks is to

continuously measure the Total Gas Pressure (TGP) of all dissolved gases in the transformer's oil, where oxygen and nitrogen are the dominating components. TGP therefore provides real-time detection – even in the very early phases – of air leaks into a sealed power transformer's tank. With the benefit of TGP, decision-makers in transformer maintenance learn whether the insulation system of a sealed transformer is exposed to air, which allows them to make informed decisions on actions such as oil degassing or sealing system repair.

The real-time monitoring of fault gases by dissolved gas analysis

(DGA) is a well-known and established method for the early detection of quickly evolving faults. However, some processes develop slowly in transformers – oxidation for example, can affect their operational life, usually taking years to show significant effects. Vaisala



has therefore developed its DGA monitors to track the key parameters and thereby automate effective transformer condition assessment.

### Why measure oxygen?

In the past, oxygen measurement failed to detect slow air leaks when active oxidation processes were simultaneously consuming oxygen. However, slow air ingress can be easily detected with increasing TGP because nitrogen, as an inert gas, would not be consumed nor produced in the transformer. The latest version of the OPT100 is therefore able to combine the TGP value with oxygen measurement to determine whether

oxygen consumption due to active oxidation is taking place.

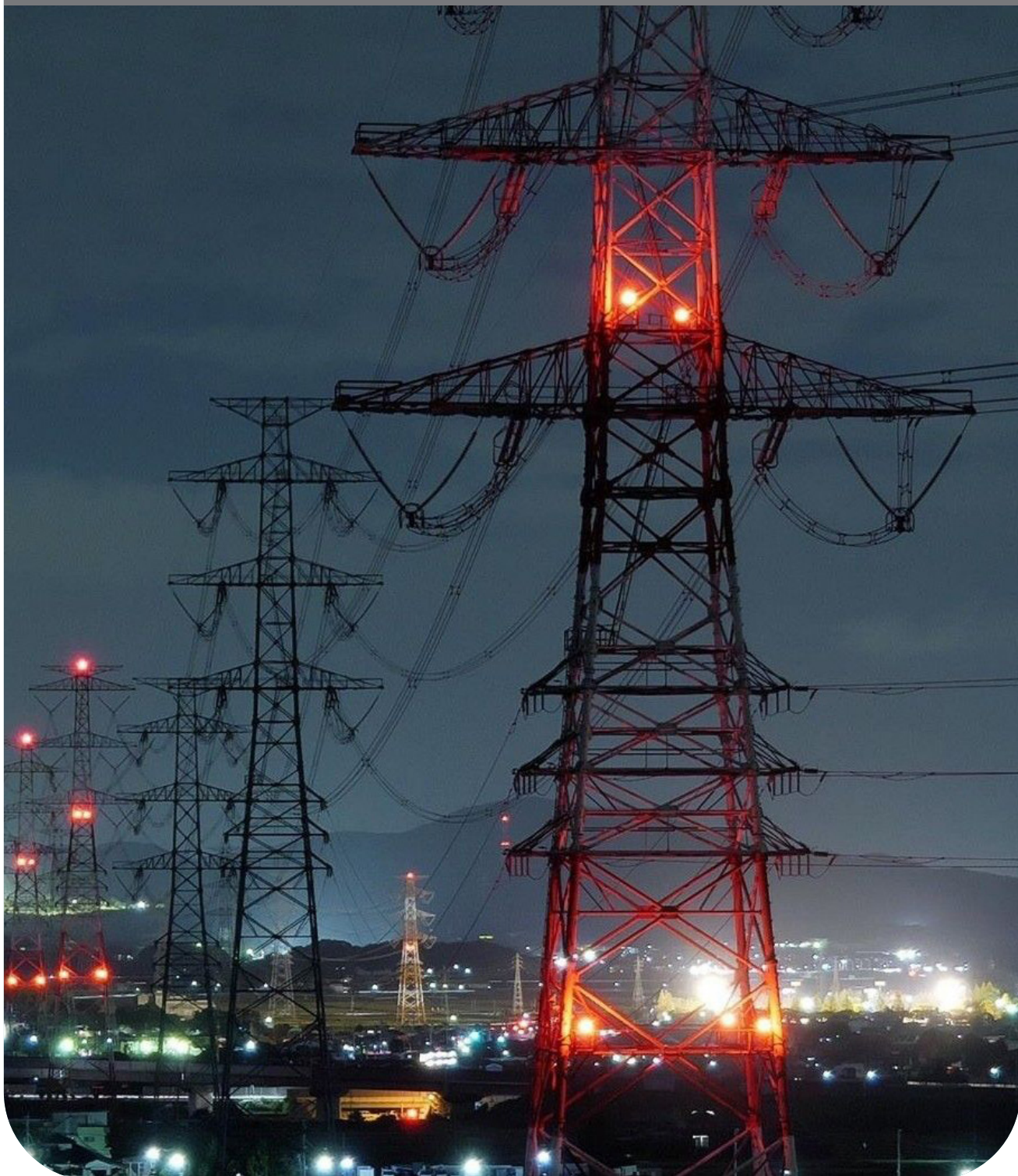
With the benefit of TGP and oxygen monitoring data, it becomes possible to weigh the expected lifespan of the transformer against the costs of investigating and repairing the air leak or implementing mitigation measures. Therefore, traditional DGA of fault gases enhanced with TGP and oxygen measurement represents the ideal monitoring concept for the reliable protection of transformers

[www.vaisala.com](http://www.vaisala.com)



# Energy Storage & Grids

## *27 Microgrids & Decentralized Energy*





## Maritronics' in house brand 'EDGE' obtains its first prestigious 'LR Type Approval' certification



Maritronics, a leading provider of marine navigation, communication, automation and calibration solutions, and a subsidiary of Centena Group, obtained the prestigious Lloyd's Register (LR) Type Approval for its in house product 'Fiber Optic Gyro' (FOG) UDHAK SX1, under its in house brand 'EDGE'. This significant accreditation for the EDGE brand affirms the product's compliance with stringent industry regulations and highlights its robust product design and manufacturing quality, reaffirming the Maritronics' adherence to the highest global standards of safety and reliability.

The FOG – EDGE UDHAK SX1 is the second product under EDGE to receive certification, with the first being IRS Type Approval for the 'EDGE ECDIS', marking a key milestone in the company's efforts. Even as the Middle East and Africa's marine vessel market is projected to reach USD 13.24 billion by 2030, the new certification further strengthens Maritronics and EDGE's credibility as a trusted partner for shipbuilders, vessel operators and system integrators globally. Additionally, the certification provides assurance to stakeholders seeking high-quality equipment that complies with Lloyd's Register's rigorous standards.

Philip Cherian, CEO of Maritronics said: “We are honoured to receive this certification, which highlights the advanced technology and practical benefits of our product, EDGE FOG-UDHAK SX1. The product has been successfully deployed across various sectors, including commercial shipping, LNG tankers, offshore operations, defence and research vessels. This further solidifies our partnerships with industry leaders, and we look forward to expanding our collaborations globally, while aiming to enhance navigation, safety and operational efficiency at sea.”



EDGEFOG-UDHAKSX1 is distinguished by its combination of advanced technology and practical advantages that feature a solid-state design, eliminating moving parts for enhanced reliability and minimal maintenance. This makes it a cost-effective solution for application in the commercial and defense sector. Furthermore, its compact and lightweight construction ensures seamless integration into various vessel types, while its plug-and-play functionality simplifies installation, reducing deployment time and costs. Equipped with advanced signal processing and a significantly faster settling time, FOG-UDHAK SX1 delivers exceptional stability and precision, even in dynamic marine environments. The product's low power consumption promotes energy efficiency, supporting sustainable maritime operations.

Philip Cherian adds: “We will continually enhance our product offerings by leveraging cutting-edge technology, adhering to the highest quality standards, and collaborating

with industry leaders. Our mission is to enable smarter, safer, and more sustainable marine operations worldwide.”

Lloyd's Register, one of the world's most respected classification societies, offers Type Approval to marine and offshore products that meet stringent international quality and performance criteria. With this certification, Maritronics' brand 'EDGE' reinforces its reputation as an industry leader, enabling shipowners and operators to integrate FOG into their navigation systems.

In line with the UAE's vision and Centena Group's mission to enhance quality of life, Maritronics showcases its commitment to broadening its product portfolio through continuous technological advancements and strategic industry partnerships.

[www.communicateme.com](http://www.communicateme.com)



# Country Reports

30 Kuwait

31 Indonesia

32 Canada



# Kuwait Unites oil Giants: Merger of KNPC, KIPIC Begins



The merger is based on well-studied legal and professional foundations aimed at strengthening Kuwait's oil sector companies under KPC.

The Kuwait National Petroleum Company (KNPC) has announced the commencement of the merger process with the Kuwait Integrated Petroleum Industries Company (KIPIC).

According to a report by the Kuwait News Agency (KUNA), this development is part of a restructuring plan by the Kuwait Petroleum Corporation (KPC).

KNPC Chief Executive Officer and Acting CEO, Engineer Wadha Al Khatib, stated that the merger is based on well-studied legal and professional foundations aimed at strengthening Kuwait's oil sector companies under KPC.

She emphasized that the initiative seeks to unite efforts based on each company's specialization, expanding their capabilities and enabling greater achievements.

## Impact of the merger

Al Khatib highlighted that the merger will ultimately result in a successful model for transitioning into a larger economic entity aligned with the strategic ambitions of both sectors and the achievement of

Kuwait's Sustainable Development Goals (SDGs).

She also noted that the rapidly evolving global oil and gas industries place a significant responsibility on Kuwait's energy sector to adapt and respond effectively to these changes.

Furthermore, she reaffirmed the sector's commitment—through KPC and its subsidiaries—to continue meeting its obligations to clients while sustaining growth in line with Kuwait's leadership in the international energy industry.

## Strategic plans of the sector

Al Khatib pointed out that the sector continually reviews its strategic plans and reassesses its goals to ensure the success of the merger, with a strong focus on measuring operational performance as part of its long-term objectives.

Addressing employees, Al Khatib reaffirmed her commitment to keeping them fully informed about the upcoming steps, underlining that staff remain a top priority for KNPC's leadership and are vital to the success of its future goals.

<https://gulfbusiness.com/>

# Indonesia's renewable energy industry holds up to US\$551 billion in potential



Indonesia has potential in three sectors of manufacturing development in new renewable energy such as solar power plants (PLTS), wind power plants (PLTB) and battery storage systems with economic potential reaching US\$551 billion (Rp9,146 trillion), says an energy expert.

Executive Director of the Institute for Essential Services Reform (IESR), Fabby Tumiwa, said that the three sectors, one of which is PLTS, has the potential to contribute the largest economic value, reaching US\$236 billion.

He said the development of wind turbines for PLTB provides an economic value of up to US\$75 billion, while the economic development of battery systems can provide economic value of up to US\$240 billion.

In addition to having the potential to provide great economic value, the development of the renewable energy

manufacturing industry can also open up to 9.7 million jobs.

The largest employment is in the manufacturing industry in the solar power sector with a contribution of 5.7 million people, then the battery energy storage system with 2.2 million people and wind turbine development with 1.8 million jobs.

Fabby said that the renewable energy industry could be part of Indonesia's long-term economic transformation if its potential could be maximized.

"If the renewable energy manufacturing industry develops, Indonesia does not have to benefit from economic growth from the sale of raw material commodities, but maximizing the use of this potential will drive long-term economic growth," he concluded

<https://indonesiabusinesspost.com/>



# TC Energy, Industry Leaders Call on Canada to Fast-Track Pipeline, LNG Projects



A coalition of Canadian energy leaders, including pipeline giant TC Energy, has issued an open letter to federal political party leaders urging immediate action to support the expansion of Canada's oil and natural gas industry.

In the letter addressed to Mark Carney, Yves-François Blanchet, Pierre Poilievre, and Jagmeet Singh, the group argues that Canada is at a critical juncture and must urgently advance energy infrastructure projects—including new pipelines and LNG terminals—to strengthen economic sovereignty and global influence.

"There is increasing public support to urgently grow our energy sector," the letter reads. "Canadians increasingly see the importance of using our abundant energy to ensure Canada can defend its sovereignty, play a role in the world as a force for good, and improve our overall economic competitiveness and prosperity."

Citing forecasts that oil and natural gas will remain among the world's dominant energy sources for decades, the energy leaders assert that Canada has a moral and economic obligation to provide democratically produced, low-emission energy to global markets—especially those grappling with energy poverty.

"More than 4 billion people live below modern standards of living, and 8.3 million die annually due to inadequate access to clean heating and indoor air pollution," the letter states. "Canada has the resources to responsibly meet this demand as one of the top five global oil producers."

The group also pointed to the environmental potential of Canadian LNG exports to displace coal-fired power in Asia and ongoing investments in carbon capture technology in the oil sands.

To unlock this potential, the energy executives laid out five key federal policy changes:

- Streamline regulation: Overhaul the Impact Assessment Act and repeal the West Coast tanker ban.
- Set firm approval deadlines: Ensure major project approvals within six months of application.
- Eliminate the emissions cap: Remove the federal, unlegislated cap to allow production growth.
- Repeal the federal carbon levy on large emitters: Enable provinces to set regionally appropriate policies.
- Support Indigenous investment: Expand Indigenous loan guarantees to encourage infrastructure co-ownership.

The letter calls for a formal declaration of a Canadian energy crisis and urges federal leaders to invoke emergency powers to accelerate project approvals and regulatory reforms.

"As leaders of the energy sector, we are ready and willing to engage with you... so that construction of critical infrastructure can begin in the near term for the benefit of Canada and all Canadians," the letter concludes

<https://pgjonline.com/>

# Services

*34 Coming Events*



## Coming Events

### Middle East Energy 2025

Dubai World Trade Centre, Dubai, UAE  
07 - 09 Apr 2025

[www.middleeast-energy.com](http://www.middleeast-energy.com)

Middle East Energy is known as the top energy event in the MENA region, connecting global buyers and sellers to showcase products and solutions for cleaner and sustainable power...

### SolarEX Istanbul 2025

Bakırköy/Istanbul, Turkey  
10 - 12 Apr 2025

<https://solarexistanbul.com/>

Solar Energy Technologies and Energy Storage Exhibition «SolarEX Istanbul» -our country's first and only solar energy themed fair- is fair which provides a chance for Turkey to take...

### Gas and Oil Technology Showcase & Conference 2025

Dubai World Trade Centre, Dubai, UAE  
21 - 23 Apr 2025

<https://www.spe-events.org/gotech>

Transforming the Industry: Innovative Energy Solutions and Empowering People. Be part of the global exchange of knowledge and ideas that shapes the future of technology...

### Petroleum Istanbul 2025

Büyükdere, Turkey  
24 - 26 Apr 2025

<https://petroleumistanbul.com.tr/en/home-2/>

Petroleum Istanbul, petroleum, LPG, lubricants, car wash, station market products, and technology fair brings together all public institutions and organizations in the energy...

### Intersolar Europe 2025

ICM, Munich, Germany  
06 - 09 May 2025

<https://www.intersolar.de/>

Intersolar Europe is a leading exhibition in the solar industry, featuring photovoltaics, solar thermal systems, and power plants. It offers a platform for global industry leaders to explore...

### Oman Petroleum & Energy Show 2025

Muscat, Oman  
12 - 14 May 2025

<https://omanpetroleumandenergyshow.com/newfront>

The Oman Petroleum & Energy Show is an all-encompassing event for the oil and gas industry, consisting of multiple co-located events. It is a valuable platform for...

### ICSMARTGRID 2025

Glasgow/United Kingdom  
27-29 May 2025

<https://www.icsmartgrid.org/>

The purpose of the International Conference on Smart Grid (icSmartGrid) is to bring together researchers, engineers, manufacturers, practitioners and customers from all over the world to share...

### Nuclear Power Plants Summit & Expo 2025

Istanbul, Turkey  
01 - 02 Jul 2025

<https://www.nuclearpowerplantsexpo.com/>

The 11th Nuclear Power Plants Expo & Summit (NPPES 2025) will be held on July 1-2 in Istanbul, bringing together global leaders in nuclear energy. The event focuses on innovations...



## General Queries &amp; Contact Info

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Media Kit 2024	Holistic Promotional Packages (HPP)
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# Renewable Energy Capacity Surged Around the World in 2024



Global renewable energy capacity grew by a record-breaking 15.1% in 2024 to reach 4,448 gigawatts (GW).

Around the world, an additional 585 GW of power was added, largely due to solar and wind energy expansion, figures released by the International Renewable Energy Agency (IRENA) show.

But despite setting a new high in annual capacity expansion, the growth still fails to reach the levels needed to deliver on the global goal to triple available renewable energy by 2030, IRENA cautions. This would require growing capacity at 16.6% each year until 2030.

“The continuous growth of renewables we witness each year is evidence that renewables are economically viable and readily deployable,” said IRENA Director-General Francesco La Camera. “Each year they keep breaking their own expansion records, but we also face the same challenges of great regional disparities and the ticking clock as the 2030 deadline is imminent.”

## An uneven global picture

The regional disparities La Camera alludes to are longstanding. In 2024, as has been the case for a while, Asia contributed the greatest share – over two-thirds – of the increase, mostly driven by China. Asia is now home to over half of the world’s renewable energy capacity.

Central America and the Caribbean sit at the other end of the scale, contributing just 3.2% of the growth.

Europe expanded its capacity by 70.1 GW (9%), in large part due to significant growth in Germany. North America grew by 45.9 GW (8.7%) with a number of new installations.

The G7 and G20 countries led 14.3% and 90.3% of new capacity growth in 2024. This means that by the end of the year, the G7 (excluding the European Union) comprised just under a quarter of the global capacity share and the G20 (excluding the EU and African Union) accounted for four-fifths.

Small Island Developing States (SIDS) meanwhile are responsible for just 0.2% of the global capacity share, adding less new capacity last year than they did in 2023. Most of the new capacity from these nations was due to expansion in the Dominican Republic and Singapore.

## Renewable technology highlights

Over three-quarters of the new renewable capacity was down to solar, which grew by almost a third over the year. China, India and South Korea led the way here.

Wind accounted for the next largest chunk of growth, driven by China and the US.

Having slumped in growth in 2023, hydropower capacity reached 1,283 GW in 2024, again driven by China. In addition, Ethiopia, Indonesia, Nepal, Pakistan, Tanzania, and Viet Nam added more than 0.5 GW each.

China and France helped bioenergy capacity grow by 4.6 GW, while geothermal projects in New Zealand contributed to energy from this source growing by 0.4 GW overall.

Charlotte Edmond  
[www.weforum.org](http://www.weforum.org)

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