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Powering Europe's future: How AI and digital grids can secure Europe's climate and industrial leadership

Executive summary

The integration of artificial intelligence (AI) and digital technologies into energy grids is a strategic imperative for Europe. According to the International Energy Agency (IEA), by 2035, AI could enable the energy sector to reduce CO_2 emissions up to three times more than the total emissions produced by today's data centres.[1] AI-driven grid monitoring alone can increase line capacity by 60 per cent, unlocking the integration of hundreds of megawatts of renewables. These advances promise not only accelerated progress towards Europe's climate goals, but also lower energy costs and enhanced economic growth for citizens and industry alike.

Europe has a global leadership in energy technologies today. Maintaining it amid the rise of AI and digital tools is vital.

To realise this vision, Europe must demonstrate sustained political leadership and foster a shared commitment between the European Commission and Member States. Only through coordinated action at EU level can we maintain momentum and prevent fragmentation across the Union. The European Grids Package and the forthcoming strategic roadmap on digitalisation and AI in energy are critical levers for strengthening Europe's competitiveness, climate leadership and industrial resilience.

To achieve these ambitions, we recommend:

- **Fostering access to high-quality energy data** by using common, standardised data frameworks to improve reliability, interoperability and effective data sharing across grid operators and systems;
- **Aligning regulatory frameworks** by ensuring consistent implementation of new EU rules, clear and proportionate AI risk classification and timely availability of harmonised standards;
- **Investing in scalable, cross-border pilots that apply AI and digital tools** to build smarter, more secure systems in critical infrastructure, including energy. Our Copenhagen Project[2] builds on this

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[1] International Energy Agency et al *Energy and AI*, a World Energy Outlook Special Report, available at https://iea.blob.core.windows.net/assets/601eaec9-ba91-4623-819b-4ded331ec9e8/EnergyandAI.pdf

[2] See DIGITALEUROPE, *The Copenhagen project*, available at: https://cdn.digitaleurope.org/uploads/2025/10/Final-Version-The-Copenhagen-Project.pdf

vision, calling for mobilising unspent EU and national funds as a bridge toward a dedicated funding envelope under the next MFF;

- **Modernising investment approaches** by adopting a total expenditure (ToTEx) approach and productivity metric to make digital assets fully recoverable, and to drive intelligent grid upgrades;
- **Streamlining and automating permitting processes** through digital tools and AI, extending fast-track measures to grid infrastructure;
- **Developing of new flexibility mechanisms** by conducting holistic assessment of flexibility needs and establishing a broad and inclusive EU-wide definition of flexibility; and
- **Boosting digital skills in the energy sector** by including the energy sector in national skills strategies.

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Increasing AI and digital technologies in the energy sector

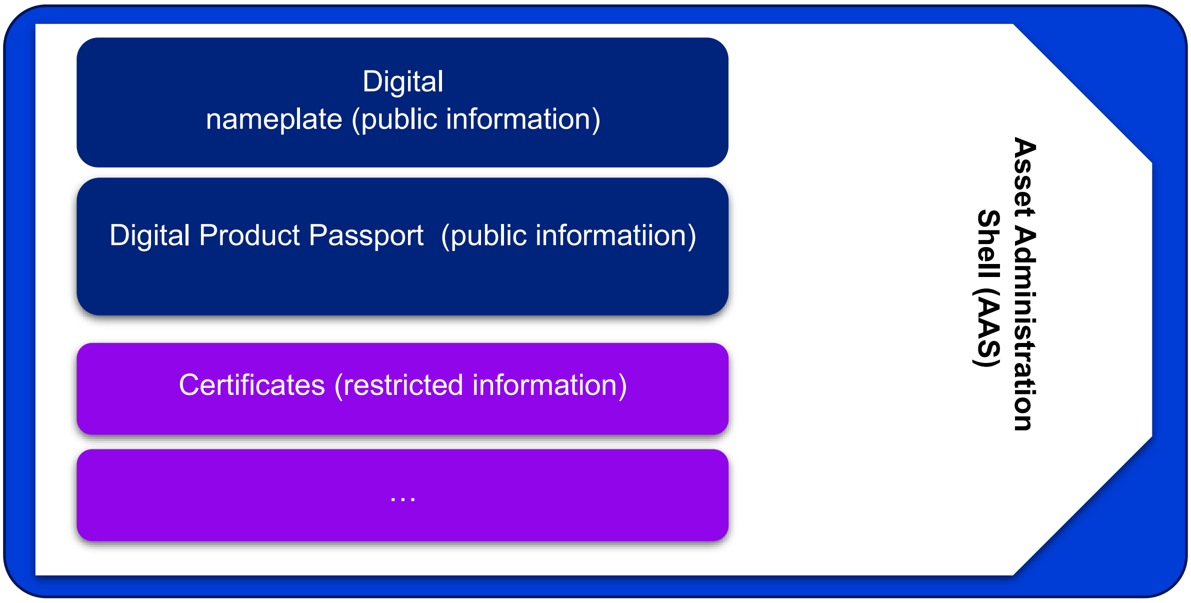
Access to high-quality data

The EU should harmonise data quality, accessibility and interoperability to fully reap the benefits of digitalisation. Digitalisation cannot happen without building out the required communication and data acquisition infrastructure with the deployment of grid measurement technologies, e.g. digital substations, smart ring main units, IoT devices, smart meters and sensors.

Today's data challenges in energy systems stem from siloed, inconsistent and error-prone datasets across transmission system operator (TSOs), distribution system operator (DSOs) and retailers, which hinder AI deployment, slow decision-making and limit cross-department collaboration. The lack of standardised benchmarks makes it difficult to compare AI approaches or validate their performance, whilst grid problems are often expressed in technical language that AI cannot directly interpret, requiring translation into machine-learning-ready formats.

We recommend:

- **Leveraging the Asset Administration Shell (AAS):** To improve data quality and reliability via a single source of truth concept, the asset administration shell could be an example of an existing data structure which can be used by asset manufacturers and users.[3] Network operators can start by consolidating existing data and implementing an integrated data management approach using this structure, before expanding in collecting additional data from grid assets. It is important to start with what is already available and accessible.



[3] As defined in standard IEC 63278.

Digital product passport (DPP) for grids: The Ecodesign for Sustainable Product Regulation (ESPR) introduced the DPP, with a harmonised set of possible values to be provided by the product asset across all Member States.[4] This can be a role model approach for other sectors, like energy.

The Asset Administration Shell (AAS) is a key concept in Industry 4.0, serving as the standardised digital representation of an asset. It acts as a digital twin, providing a structured way to exchange information about physical assets throughout their entire lifecycle. This allows various users to get access to product information across the entire value chain based on their needs. It protects from technology lock in effects and ensures vendor neutrality.

- **Enabling energy data spaces:** Robust energy data spaces serve as the technical backbone for seamless, horizontal data exchange amongst all energy stakeholders, including providers, distributors and users. However, their success depends on the establishment of a harmonised governance framework that ensures secure and interoperable connections with other domain data spaces and across diverse use cases. Developing sustainable business models around these data spaces requires clear and consistent guidance on data ownership, provision and user rights. It is equally important to define and uphold agreed benchmarks for data quality, building on the expertise of established standardisation groups and platforms. Finally, the adoption of standardised communication protocols between energy users and the broader energy sector will further enhance collaboration, efficiency and innovation. For data spaces to be successful, flexible and open, data governance frameworks are essential. Data governance policies should not restrict data sharing models or mandate a specific protocol. This is particularly relevant in the context of AI and digitalisation of the energy sector, where different new use cases will emerge.
- **Strengthening communication infrastructures:** Grids must avoid incomplete data due to mismanagement or low reliability in connectivity. Connectivity is essential for managing energy grids, with 5G standalone and mission-critical networks providing the speed, low latency, security and real-time data control required for AI deployment. Europe needs a dedicated communication infrastructure policy for critical sectors like electricity to ensure safety, resilience and trustworthiness.
- **Promoting systematic access to machine-readable data and problem statements:** The European Commission should encourage systematic access to this data to the solution providers, whilst ensuring robust cybersecurity and privacy protections.
- **Developing standardised data and evaluation frameworks for AI models:** This would allow innovators and other parties to spot larger trends and potential vulnerabilities, and to propose novel solutions before major disturbances occur. Certain TSOs, such as in France, already adopt an open data approach. Priority areas include power flows, grid conditions, models, cross-border exchanges, outage schedules and aggregated demand and supply data.

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[4] COM (EU) 2024/1781. More information available at https://data.europa.eu/en/news-events/news/eus-digital-product-passport-advancing-transparency-and-sustainability.

Digitalisation and fast-tracking of permitting procedures

DIGITALEUROPE supports the digitalisation of permitting procedures as a strategic enabler for accelerating clean energy deployment across the EU. Streamlining elements of permitting processes that are common across Member States can help establish a level playing field for investment, reducing fragmentation and avoiding disparities that make certain markets more attractive than others. AI-powered permitting solutions are already demonstrating their potential to transform regulatory workflows.

As noted by the International Energy Agency, nearly half of the time required to construct a high-voltage transmission line is consumed by permitting procedures.[5] Digitalising these processes, particularly for grid development, could be a game changer for decarbonising European industry and meeting the EU's climate and energy targets.

We recommend:

- **Digitalising the permitting process and extend the one-year permitting acceleration measures introduced in the revised RED to grid infrastructure,[6] including grid-enhancing technologies and innovative networks:** Applying the same principles to grid permitting, for both demand and generation projects, would ensure consistency and coherence across the energy system. This includes: establishing clear, enforceable and significantly shorter timelines for all permitting processes; classifying the development of grids as being in the overriding public interest; offering dedicated infrastructure areas; and digitalising permitting processes and creating 'one-stop shops' within competent authorities to streamline decision-making processes. Where relevant, the Trans-European Networks for Energy framework should also issue EU guidelines and establish priority electrification acceleration zones for early deployment of grid infrastructure projects.[7] In addition, the Net Zero Industry Act provisions can be used to facilitate faster permitting procedures and promote timely grid development.[8]
- **Equipping authorities with sufficient resources and staffing:** This is key to manage the increasing volume of grid connection requests and permitting procedures efficiently.
- **Reforming grid planning processes to better anticipate and accommodate long-term system needs:** There should be a recognition that current load and generation growth are outpacing grid expansion efforts. This requires a more forward-looking approach to system planning that considers future demand growth to reduce delays and facilitate the energy transition.

Need for workforce transformation in the energy sector

Europe's leadership in clean technologies and artificial intelligence will hinge on its ability to equip its workforce with the skills required to drive the twin transitions of digitalisation and decarbonisation. By 2030,

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[5] International Energy Agency et al *Building the Future Transmission Grid*, available at [Building the Future Transmission Grid]

[6] Art. 16a Directive (EU) 2023/2413 sets a 12-month permitting limit for renewables in acceleration areas, or 2 years for offshore projects, with limited extensions.

[7] Regulation (EU) 2022/869.

[8] Regulation (EU) 2024/1735.

over one million new roles will be needed to support the energy transition and scale up clean tech manufacturing. These roles will span emerging domains such as smart grids, renewable energy systems and data infrastructure, requiring not only engineering capabilities but also advanced competencies in AI, cybersecurity and digital technologies.

Building and operating the next generation of AI-powered, data-intensive energy infrastructure will demand a hybrid workforce, one that bridges the physical and digital realms. Electricians, pipefitters and technicians must work alongside AI engineers, data scientists, cybersecurity experts and systems architects. This convergence of skill sets is essential to Europe's industrial resilience and climate ambition.

DIGITALEUROPE supports initiatives such as the Commission's Union of Skills and the AI Continent Action Plan,[9] which provide valuable frameworks to scale digital and AI capabilities across the economy. These efforts must now be extended to the energy sector, where labour shortages and technological disruption are particularly acute.

We recommend:

- **Integrating upskilling of the energy sector in national skills strategies with an Energy Skills Academy:** To meet this challenge, national strategies should prioritise energy-related upskilling and be co-designed with industry to ensure relevance and speed. By investing in dual-skilling and fostering agile learning ecosystems, Europe can empower its workforce to lead the clean energy transformation. Building on the Union of Skills and other EU initiatives such as the AI Skills Academy[10] and the Cyber Skills Academy,[11] the Commission should consider launching an Energy Skills Academy, a dedicated workstream to help national authorities design and scale programmes that upskill the current and future energy workforce.
- **Providing AI training for energy experts:** Lack of knowledge leads to a loss of trust. AI and grid expertise currently struggle to go hand in hand – digital expertise needs to be valued and requires sector wide investments. A voluntary AI trust label, or comparable pilot schemes, could help bring transparency and build experience, expertise and trust in the sector.
- **Enabling responsible AI experimentation to build customer trust in AI usage**: AI is often met with concerns about losing human control, though this is unfounded. Properly designed, AI enhances decision-making whilst keeping final authority with human experts. Addressing these human oversight concerns requires a mindset shift, reinforced by clear cybersecurity standards and differentiated approaches for business-to-business (B2B) and business-to-consumer (B2C) contexts. For B2B applications, regulatory experimentation clauses and responsible data-use initiatives can foster trust and innovation.

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[9] COM (EU) 165 final.

[10] More information available at https://digital-skills-jobs.europa.eu/en/latest/news/eu-launches-digital-skills-academies-bridge-critical-talent-gaps-key-technological.

[11] More information available at https://digital-skills-jobs.europa.eu/en/cybersecurity-skills-academy.

Integrating digital technologies in the grids

Building an AI-ready and sustainable grid

As digitalisation and AI reshape energy systems, building intelligent, resilient grids is now essential for Europe's climate and industrial goals. This means speeding up grid digitalisation whilst ensuring AI's computing power is supplied sustainably. The underlying digital infrastructure is crucial for the success of Europe's digital grid infrastructure – where different sensors collect, and public and mission critical 5G networks distribute the data.

In parallel, modern hardware solutions are equally important to support a digital, AI-enabled grid. For instance, grid-forming batteries represent a scalable alternative to traditional synchronous condensers. These software-driven assets combine hardware, firmware and advanced control capabilities, allowing rapid adaptation to evolving grid needs, offering scalability and agility.

In line with our earlier response to the European Grids Package consultation,[12] we recommend:

- **Adopting a ToTEx approach and introduce a grid productivity metric***:* This is key to make digital investments fully recoverable. Including these in the Regulatory Asset Base (RAB) would help regulators justify spending by showing measurable efficiency gains. Since digital assets, such as smart hardware, software and AI, are key to future grids, ToTEx would remove barriers that currently favour CapEx (capital expenditure) over OpEx (operational expenditure), enabling more cost-effective and innovative solutions.
- **Increasing Member State accountability for grid development:** Member States should regularly report on grid investment and planning in their national energy and climate plans.[13] This will strengthen accountability, thereby accelerating grid expansion and supporting anticipatory investments. Delays in grid expansion risk stalling digitalisation and Europe's clean energy transition. AI and cloud technologies can boost efficiency, integrate renewables and ease grid stress, but long connection delays, of up to 12 years in key markets, hold back progress.
- **Promoting an EU-level stakeholder consultation group:** The Commission should facilitate stakeholders' exchanges with TSOs and other stakeholders, including data centres, to assess the needs for grid flexibility and the market gap that remains unaddressed for each flexibility service. Such a platform group would facilitate structured dialogue between energy users, national regulators and grid operators. It would also guarantee inclusive representation in industrial load connection processes and planning, and support harmonisation across Member States. To complement these efforts, the EU could launch a platform at European level to share best practices on deploying AI-enabled grid solutions and speed up their uptake across EU countries.
- **Requiring a transparent and non-discriminatory framework for managing connection queues:** The Commission, supported by the agency for the Cooperation of Energy Regulators (ACER), should issue common requirements and operational benchmarks for Member States on grid connection principles and process efficiency. Specifically, prioritising projects based on clear,

[12] See DIGITALEUROPE, *Feedback on the European Grids Package consultation*, available at: https://cdn.digitaleurope.org/uploads/2025/08/DE_response-to-Grids-Package-consultation-1.pdf.

[13] Under Regulation (EU) 2018/1999.

objective and measurable criteria (e.g. land control, permits, creditworthiness) and added value to the grid (e.g. competitiveness, relevance to national climate goals, flexibility, digitalisation potential, alignment with smart readiness indicators), with strong safeguards to prevent arbitrary decision-making and ensure accountability. Member States should move away from the 'first-come, first-served' model, where connection applications are processes in order of arrival regardless of readiness, often causing delays and inefficient grid use. They should instead opt for a 'first-ready, first-out' approach, removing speculation from the grid and prioritising projects that are ready first for connection, as well as providing value to the grid and the public.

Regulatory alignment

The EU is in a transitional phase, with several new pieces of legislation not yet implemented across all Member States. The focus should be on ensuring consistency and harmonised implementation of these regulations. This includes providing specific guidelines to support both the sector and national authorities.

We recommend:

- **Ensuring that AI risk classification remains proportionate:** The Commission's forthcoming guidelines on the classification of high-risk AI systems under the AI Act should actively promote, not hinder, the integration of digital technologies and AI in the energy sector.[14] We caution against an overly broad interpretation of what constitutes a 'high-risk' AI system, particularly when applied to AI used as safety components in electricity grids. Such an approach would delay the deployment of AI solutions that are essential to modernising Europe's energy infrastructure.
- **Ensuring that AI rules do not duplicate existing sector regulations:** For AI components embedded in products covered by sectoral legislation listed in Annex I AI Act, such as machinery used in electricity grids,[15] AI-specific obligations should be integrated into those sectoral laws.[16] For energy infrastructure and operational technology, cybersecurity obligations are already addressed comprehensively through existing frameworks such as the Cyber Resilience Act, NIS2 and standards like IEC 62443.[17]

Grid functionality, flexibility and diversity of business models

Europe's future energy system will be increasingly dynamic, shaped by variable renewable generation and widespread electrification. This evolution demands not only the expansion of existing ancillary services but

[14] Regulation (EU) 2024/1689.

[15] Regulation (EU) 2023/1230 covers electricity-sector machinery including circuit breakers, switchgear, transformers with on-load tap changers, converter stations and cooling or pumping systems used in substations.

[16] Instead of applying the AI Act directly to products like machinery, medical devices or radio equipment, which are already covered by comprehensive sectoral rules, the Commission should introduce AI requirements through these existing frameworks when necessary. This would align all Annex I products with the more flexible approach already used for some of them (Section B). See our AI recommendations for the upcoming digital omnibus at https://cdn.digitaleurope.org/uploads/2025/06/Digital-simplification-package-AI.pdf.

[17] Regulation 2024/2847, Directive 2022/2555 and the ISA/IEC 62443 series of standards for the cybersecurity of industrial automation and control systems.

also the development of new flexibility mechanisms, where all grid users, including data centres, have a critical role to play.

Data centres, when designed appropriately, can already contribute to frequency regulation in markets where system operators recognise the need and where market structures allow participation. However, flexibility in the form of peak shaving or demand shifting cannot be a one fits all approach. Many data centres support essential services including emergency operations and commercial platforms, that require uninterrupted performance. These facilities are designed for maximum reliability and operational continuity, especially during periods of grid stress when demand for digital services often increases.

At the same time, as electricity demand grows and more renewables come online, Europe's power system must become more flexible to stay stable, efficient and resilient. Introducing tangible incentives and removing barriers across Member States for introducing and scaling flexibility services on a voluntary basis are vital to maintain security of supply. To ensure the effectiveness of these incentives, it is essential to align them with the national flexibility needs assessments due by July 2026, as required under the revised Electricity Market Design Regulation,[18] mandating that Member States regularly assess their flexibility needs based on a common EU methodology.

Whilst we acknowledge the increasing importance of grid flexibility for a stable, resilient electricity grid, any participation in demand-side flexibility must be voluntary and market-driven, not mandated through rigid requirements.

Several flexibility services and initiatives are available across Europe but scaling and adoption is not fast enough. Main barriers for comprehensive and region-wide flexibility solutions are the lack of harmonised data and interoperable interfaces and lack of business models that incentivise data sharing among industries and the energy system. For example, energy trading from aggregators towards different energy markets must become much simpler, where appropriate trading platforms, connecting aggregators with markets, could facilitate. Another barrier to the scaling is the market gap that remains unaddressed for each flexibility service. This would incentivise the cost-effective development of additional flexibility.

To make flexibility work in practice, DIGITALEUROPE proposes principles that could guide the design and implementation of incentives across Member States:

- **Conducting a holistic assessment of flexibility needs at the level of the entire system, as mandated by the recent EMD reform:** Policies should focus on procuring the required flexibility services in a technology neutral and non-discriminatory manner using clear and predefined evidence-based criteria and without singling out or placing undue burdens on specific consumer sectors.
- **Establishing a broad and inclusive EU-wide definition of flexibility:** This is key to ensure a responsive, future-ready grid and energy market. Flexibility services must be clearly defined, market-driven, technically specified, harmonised across the EU and open to all customer classes. Inclusiveness in the definition of flexibility is key for data centre operators and other industries to explore how best to respond to the grid's evolving needs.
- **Encouraging tailored flexibility products to the diverse technical and operational parameters of potential providers:** Innovative products could be piloted and refined through

[18] Regulation (EU) 2024/1747.

regulatory sandboxes. TSOs like Belgium's Elia are already open to this approach. The Netherlands also provides a positive example, offering consumers a choice of flexible access products with different levels of firmness and corresponding tariff discounts, allowing businesses to select the option that best fits their operational profile, ensuring technology-neutrality.

- **Facilitating collaboration across stakeholders:** The development of new flexibility services requires structured collaboration between regulators, system operators and grid users, including digital infrastructure providers. The Commission should facilitate stakeholders' exchanges with TSOs and other stakeholders including data centres to assess the needs for grids flexibility and the market gap that remains unaddressed for each flexibility service.

Use cases: energy digitalisation in action

AI-assisted emission factor mapping and grid optimisation

Member: SAP

Description: As part of SAP Sustainability Footprint Management, a software solution to help companies decarbonise their value chain and calculate their corporate and product carbon footprint at scale, SAP has built out a GenAI-based capability to map emission factors. Through this AI capability, companies can reduce their manual effort and time needed to map emission factors to products by about 80 per cent, allowing them to calculate a more accurate product and carbon footprint faster.

SAP also supports the utilities industry with AI by optimising grid operations, predicting equipment failures and improving energy distribution efficiency. AI-driven insights in SAP S/4HANA Utilities help forecast demand, balance loads and reduce outages. Machine learning enhances meter data management and billing accuracy, whilst intelligent automation streamlines field service and maintenance. These capabilities enable utilities to operate more reliably, lower costs and deliver better service to customers.

AI-powered energy efficiency in buildings

Member: Schneider Electric

Description: From 2020 to 2024, Schneider Electric implemented an AI-powered heating, ventilation and air conditioning (HVAC) optimisation system in 87 public schools in Stockholm, using existing infrastructure and thereby minimising capital expenditure. By optimising the HVAC of educational buildings, Schneider Electric has enabled €1.3 million in annual savings and 250 tonnes of CO_2 reductions across all 87 schools. The system achieved energy savings for heating (597 MWh) and electricity (881.75 MWh), resulting in total energy savings of 1,478.75 MWh/year. The environmental impact was also substantial: the AI optimisation helped avoid 109.87 tCO_2 from district heating and 149.30 tCO_2 from electricity consumption, totalling a 250.65 tCO_2 annual reduction in emissions. The AI-powered HVAC solution is highly scalable and replicable across various building types and sectors. The global potential of these technologies is up to 30 per cent energy savings in commercial buildings.

Digitally enabled grid planning

Member: Siemens

Description: Hardware savings: Through the RomeFlex project, Areti, an Italian local distribution network operator, is projected to optimise its hardware investments by 45 per cent, saving €420 million over the next eight years, thanks to strategic flexibility management. This result highlights the enormous potential of combining flexibility management with traditional grid planning and operations to create a future-ready, resilient energy infrastructure.

Outage prevention: Elvia, Norway's largest power grid operator, uses Siemens' software to develop a digital twin of the low-voltage grid, providing reliable data-driven insights and real-time transparency for multiple departments. This way, Elvia is optimising grid topology and utilising controllable distributed energy resources (DERs) to prevent constraint violations and manage demand during peak hours. Moreover, the Norwegian DSO is enhancing its usable grid capacity and reducing outage times by up to 30 per cent through the automated prediction of outage location and impact.

Digitally enabled integration of wind farms into the grid

Member: Nokia

Description: Connectivity facilitates seamless integration of renewable energy (e.g. solar, wind) into the grid, ensuring a stable and reliable energy supply and reducing energy waste. Our high-performance wireless broadband networks, especially in the context of renewable energy installations like wind farms, 17 have been pivotal for global ESG goals. These networks enhance worker safety, collaboration and productivity, and unlock operational benefits of Industry 4.0 automation and predictive maintenance. The private wireless solutions provided by Nokia for wind farms, for example, ensure mission-critical reliability and low-latency broadband connectivity, essential for connecting workers, sensors, cameras and turbines in challenging environments. In 2024, Nokia further advanced in embracing Industry 4.0 for optimizing wind farm operations. The incorporation of IEC 61850 standards in our mission-critical WAN solutions for power utilities highlights our commitment to sustainable and efficient energy management. This standard facilitates effective communication within electrical substations and across distributed energy resources, enhancing the overall efficiency and reliability of power systems.

Creating a virtualised view of the electricity grid

Member: Google

Description: Tapestry, a part of X, Alphabet's moonshot factory, is creating a single virtualised view of the electricity system through AI-powered tools that can predict and simulate what might happen on the grid from milliseconds to decades into the future. Tapestry worked with Google DeepMind to improve the grid planning process by applying and enhancing GraphCast, an AI model designed for fast and accurate global weather forecasting. Tapestry and GraphCast's collaborative model outperformed the state-of-the-art model, the European Centre for Medium-Range Weather Forecasts' high-resolution forecast, by up to 15 per cent. These highly accurate wind forecast insights have already aided wind prediction in Chile and can give grid operators worldwide higher confidence in relying on variable renewable energy to power their network.

Leveraging AI for carbon-free energy permitting

Member: Microsoft

Description: AI for permitting with customers that have worked to accelerate permitting procedures across different sectors. Microsoft's Generative AI for Permitting capabilities leverage Azure Open AI to enhance the productivity of customers' permitting operations, reducing the cost and time to permit new clean energy projects, turbocharging the rollout of clean energy globally, with a projection of saving between 255 per cent to 75 per cent of time in the application processes for nuclear permitting. Lloyd's Register, the UK-based classification society and professional advisory service, is using generative AI for permitting capabilities to bridge the gap between terrestrial and maritime applications. These capabilities are designed to enhance the regulatory process for nuclear technology and will be used by Lloyd's Register to advance the deployment of nuclear in maritime applications.

Leveraging digital technologies and IT/OT observability in factories

Member: Cisco

Description: Splunk (now a Cisco company) offers a big data platform that helps users with a range of tasks, including cybersecurity, observability and network operations. Splunk provides users with granular, unified and real-time visibility across applications and hardware devices. In the manufacturing sector, this capability empowers companies with a unified view of key technical and business metrics across their operations to optimise at scale. Splunk partnered with Bosch Rexroth to help optimise energy efficiency, energy cost and carbon footprint across their production facilities. Through the partnership, Splunk was able to support Bosch's approach to environmental sustainability reporting whilst also optimising performance with digital solutions.

Edge AI as a strategic enabler for efficient energy systems

Member: Qualcomm Incorporated

Description: Qualcomm is driving the digital transformation of the energy industry by embedding intelligence at the edge. Devices installed in substations and transformers can autonomously correct minor anomalies before they escalate, reducing the need for costly manual interventions and improving grid reliability, especially critical as variable renewables increase grid complexity. Edge AI also enables continuous monitoring of critical infrastructure such as transformers and turbines through vibration and thermal analysis. Local inference supports condition-based maintenance, extending asset lifetimes and minimising unplanned outages.

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DIGITALEUROPE

About DIGITALEUROPE

DIGITALEUROPE is the leading trade association representing digitally transforming industries in Europe. We stand for a regulatory and investment environment that enables European businesses across multiple sectors, as well as citizens, to prosper through digital technologies. We wish Europe to grow, attract and sustain the world's best digital talent, investment and technology companies. Together with our members, we shape industry positions on all relevant policy matters and contribute to their development and implementation. Our membership represents over 45,000 businesses who operate and invest in Europe. It includes corporations and scaleups which are global leaders in their fields, as well as national trade associations from more than 30 European countries.

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