

PRÉSENTATION

The interconnection between data and energy is now a central focus in the fields of technology and the environment. At the heart of this convergence lies a major challenge: how to effectively leverage data while minimising the energy footprint of its processing and storage? As data collection, analysis, and management become increasingly essential in our digital society, their manipulation requires a growing amount of energy. This symbiosis between data and energy raises crucial questions about the sustainability and environmental impact of our digital infrastructure. This monitoring explores the duality of the theme of the interconnection between data and energy. Firstly, it highlights, through various elements, the positive aspects of data utilisation, which enable significant advances in reducing energy consumption. Secondly, different articles and podcasts explore how these new technologies, particularly data centers, impact the environment. This Data News thus highlights the challenges and opportunities related to this duality, with the aim of promoting a transition towards a more responsible digital future.





DATA FOR ENERGY

[FR] AI opens up new solar energy horizons in China

Enerzine.com – March 2024

A new method developed by researchers makes it possible to accurately estimate solar radiation components in China, without the need for local verification data. This could improve solar energy research and deployment, leading to more efficient and optimised production. This innovative approach could enable more strategic site selection and system optimisation, particularly in regions with high solar energy potential, marking a major turning point in solar energy research and deployment.



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[FR] How AI will make residential solar power installations cheaper and faster

CNET – January 2024

The article presents the positive impact of Artificial Intelligence (AI) on the residential solar energy sector. AI could help design bespoke solar systems by analysing customer properties and optimising the use of home batteries. It could reduce labour costs by managing initial customer interactions and could minimise errors and reduce construction costs. The improvements brought about by AI will also benefit existing customers at no extra cost.



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Reading time: 4 min

[FR] The data portal, a solution to the challenges facing the energy sector

Le Monde de l'énergie – February 2024

This article presents the benefits of a data portal and how it can transform the energy sector. It highlights how this tool optimises resource management, reduces costs, and improves decisionmaking. Finally, it highlights the importance of transparency and collaboration between the various players in tackling today's energy challenges and shaping the future of the sector.

[FR] AI, the catalyst for a new era of energy control

JDN – January 2024

This article highlights the crucial role of AI in the energy transition, offering personalised solutions for responsible consumption and a better customer experience. With tools like conversational agents, Al enables energy suppliers to respond effectively to changing consumer needs, driving a transformation towards sustainability and customer satisfaction.

[EN] The Power Interview: Engineering the best use of data in the electricity sector

Power – March 2024

This interview discusses the importance of proper data management and data analytics in the electricity sector. Companies and power producers use data to improve operational efficiency, identify potential issues, and educate customers about their energy consumption. Here, the author explores how data could be used to improve the performance of renewable energy plants, support the decarbonisation of the power generation sector, or support the electricity transmission and distribution network.

[FR] Open Data in energy: the other French

CIO – January 2024

exception

The article highlights the French exception in the field of energy open data with the creation of the agence ORE, requiring gas and electricity distributors to share their data. This unique initiative in Europe, initiated by the 2018 French Digital Republic Act, currently offers 218 datasets, although their level of aggregation limits their usefulness for precise analyses. Agence ORE exceeds its legal obligations by acting as a sharing platform for energy distributors, while also considering extending data access to other players in the sector. These advances testify to our commitment to openness and adaptation to the needs of the French energy market.

[EN] How the EU Data Act is accelerating the digital transformation of the energy sector

Bird & Bird – January 2024

This article focuses on the impact of the new EU Data Act on the digitalisation of the energy sector. Adopted in January 2024, this regulation aims to increase transparency and make data more accessible. It guarantees users of connected products the right to access the data generated by their use and also encourages the sharing of data with third parties. These changes have the potential to fundamentally transform the energy sector, enabling greater use of data and more transparent data exchange. However, there are still concerns about the classification of certain products or the protection of business and trade secrets.

[FR] Is AI an adversary or an ally in the energy transition?

RFI – February 2024

The article highlights the growth of generative AI despite its



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intensive energy consumption. Training AI programs requires significant computing power, leading to an increase in energy demand. Despite efforts to increase energy efficiency, electricity consumption in the AI sector is set to rise sharply between now and 2026. AI could, however, contribute to the energy transition by helping to manage complex power grids, although this requires careful management to maintain environmental benefits.

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PODCASTS

[EN] AI to accelerate energy transition

AIM Research – October 2023

This article discusses the importance of digitalisation, specifically AI, in the energy sector and Shell's role in the energy transition. Shell is actively working towards becoming a net zero emissions company by 2050 and using AI to optimise energy usage, reduce emissions, and manage inventory more efficiently. The energy industry's complexity requires significant digitalisation, and AI offers opportunities to reduce CO2 emissions and greenhouse gas emissions. Shell is using AI in various applications, such as EV chargers, and optimising wind turbines, managing personalising customer experiences. The company is also democratising AI usage by enabling employees to use tools like Power BI and Power Apps, resulting in a strong DIY community.

[FR] Energy optimisation: your data is worth its weight in gold

Ausha – November 2023

This podcast highlights the importance of collecting energy data and how it can be exploited. This type of data can help detect problems linked to anomalous overconsumption, create comparisons between comparable households, and optimise energy consumption.

[FR] More data... for less energy!

Capital - 2021

This interview with Engie's Chief Data Officer discusses the paradox between reducing energy consumption thanks to data, and the fact that data consumes a lot of energy. He discusses how data can be used to forecast energy production as close as possible to real-time needs. In addition, he explains how we are working with cloud players to reduce the negative impact of data consumption.



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THE ENERGY CHALLENGES OF DATA

[FR] AI and cryptocurrencies: the major energy waste of data centers

Le Monde informatique – January 2024

The article highlights the increase in energy consumption of data centers due to AI and cryptocurrencies. The International Energy Agency (IEA) calls for technological and regulatory improvements to increase the energy efficiency of these infrastructures. The energy demand of data centers could be equivalent to that of the entire Japan by 2026, with sustained growth in Europe, United States, and China. Technical solutions such as cooling and server task optimisation are being considered to reduce energy consumption.



Reading time: 2 min

[FR] The AI energy challenge for data centers

JDN – February 2024

The article highlights the growing importance of AI and the need for suitable infrastructure to meet the increasing demand. Data centers play a crucial role in supporting AI applications, but efficient cooling and power solutions are necessary due to the intensive computational requirements. Engineers are exploring various approaches such as air cooling, immersion cooling, and 'direct-to-chip' liquid cooling to optimise data center efficiency. The challenges posed by AI require the continuous evolution of the industry to provide dynamic and innovative solutions for cooling and power to support the potential of AI.



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JDN – December 2023

In 2024, data centers will face challenges in AI, energy, local acceptability, and ecology. Acceptability has become a crucial issue, with concerns about energy consumption and the perception of data centers as impenetrable fortresses. The sector needs to demonstrate energy efficiency and engage in partnerships to address these concerns. The growing demand for computing power and data storage, driven by AI, presents a real challenge to deploy data centers that are 'HPC-ready' or 'AI-ready' quickly. Life cycle analysis is increasingly important to assess the environmental impact of data centers and prioritise eco-design considerations.



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[FR] Essonne: a forest of algae will take its place... on a data center

Actu.fr – March 2024

This ecological initiative will soon be launched in Essonne and aims reduce (France) to energy consumption and CO2 emissions by using algae to cool the servers. This project, combining technology and ecology, contributes to the preservation of the environment while optimising the performance of data centers. It is a first in France and it could inspire other data centers.



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Reading time: 3 min



PODCASTS

[EN] Smart ESG: Your data, your sustainability

Silicon – April 2024

In this podcast, it is described that AI has a growing impact on the energy consumption of data centers. The International Energy Agency (IEA) calls for technological and regulatory improvements to increase the energy efficiency of these infrastructures. Companies are also encouraged to consider Environmental, Social, and Governance (ESG) considerations to contribute to sustainability. Additionally, data plays an essential role in informed decision-making and promoting sustainable initiatives. The integration of intelligent data solutions can transform sustainability practices and have a positive impact on the planet and society.



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[FR] Datacenters: energy is not cheap

France Culture – January 2024

Humanity is producing, consuming, and storing an unprecedented amount of digital data, with projections on the rise. However, these data have a significant energy impact. According to the speakers in this podcast, the digital sector could represent an energy demand equivalent to that of the transportation sector by 2025. With the growth of artificial intelligence systems, connected devices, and high-performance mobile networks, we are facing a data explosion that could contribute significantly to worsening climate change.

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