Global Conference on **Energy & AI**

Annotated Agenda

High-Level Roundtable, 5-Dec 2024

Updated: Wednesday, December 04, 2024

International Energy Agency

Energy for AI, and AI for Energy

Artificial Intelligence (AI) is emerging as one of the most consequential technologies of our time. AI models have grown exponentially in size and capability, benefiting from the availability of massive datasets and improved computational power. The application of AI to technology innovation and invention has the potential to accelerate solutions to hard problems and unlock a new wave of material and chemistry discovery. At the same time, rapid transformation is not a given: incentives and institutions may also need to change to deliver the benefits of AI, particularly for the energy sector.

AI is also energy-intensive. A wave of recent investment in power-hungry data centres is already straining the grid in some locations – and the outlook only seems to be accelerating. Power availability is now being seriously discussed as a possible constraint to the rate of AI growth and is shaping decisions about where companies build data centres and develop this cutting-edge technology. At the same time, energy planners are faced with an unusually wide range of uncertainty. The range of possible outcomes regarding AI uptake is huge. Stakeholders also lack understanding of the data centre value chain, market and technology outlook, making the outlook for electricity demand from the sector too often a "black box".

There is an **urgent need for dialogue** between the energy industry, tech sector and policymakers, and a **structured, comprehensive assessment of the potential implications of AI in the energy sector**.

The IEA's **Global Conference on Energy & AI** provides this space for dialogue. The outcome deliverable will:

- Build **strategic understanding** among global leaders of the implications of AI for energy and energy for AI;
- Develop a shared sense of **priorities** to unlock the potential benefits of AI for the energy transition and manage the risks, including the rise of electricity demand; and
- Establish a lasting **platform** for dialogue between stakeholders.

This Conference will feed into the IEA's forthcoming **Special Report on Energy and AI**. The event will also help to support various **political fora** where the AI and energy nexus is discussed.

The Conference is structured around two days:

- **4 December**: the IEA will host a technical-level **Forum on Energy & AI**, bringing together key experts from across government, industry and academia.

- **5 December**: the IEA will host an invitation-only **High-Level Roundtable on Energy & AI** with global decisionmakers from government, the tech sector and the energy industry.

High-Level Roundtable on Energy & AI

The High-Level Roundtable brings together global leaders from policymaking, the energy industry and the tech sector. Discussions will be in a roundtable format. Part of the discussions will be livestreamed to enable participation from the IEA's large global group of stakeholders. The remaining discussion will be closed-door to enable an open debate. High-level participants will be able to network and book bilateral meeting rooms to conduct side meetings and the Conference organisers will offer opportunities to engage with the journalists present as desired.

Agenda Overview

Date: 5 December 2024
Location: IEA Headquarters, 9 Rue de la Federation, Paris 75015

Time	Session overview
08:30 – 09:30	*Arrival and Registration*

09:30 – 11:30	**Energy for AI, and AI for Energy: Strategic Overview** (Livestreamed)
	Chair: Dr. Fatih Birol, Executive Director, IEA
	
	This session will provide a strategic overview of the energy and AI nexus.
	
	Key questions:
	
	• What challenges and opportunities does AI present for the energy sector? What will be the most significant impact of AI on the energy sector?
	
	• What role does AI play in helping countries meet their energy security and transition goals?
	
	• To ensure that AI has a positive impact on the energy sector, and to ensure that the energy sector delivers for AI:
	  ○ What is needed from governments?
	  ○ What are the roles and expectations of companies?
	
	Session format:
	• Keynote and welcome
	• Opening perspectives
	• Roundtable discussion

11:30 – 12:00	*Networking Coffee*
12:00 – 13:00	**Energy for AI: Delivering on the Demand Challenge** (Closed-door) *Co-Chair: H.E. Michael Vandergrift, Deputy Minister of Natural Resources, Government of Canada* *Co-Chair: Laura Cozzi, Director, Sustainability, Technology and Outlooks, IEA* The AI and digital boom are increasing energy demand, prompting questions on how to meet this demand sustainably, what impact this could have on the grids and how to ensure investment keeps track to deliver

	generation and grid capacity. This session will explore the outlook for energy demand from AI, key challenges and options to meet the rising demand sustainably. **Key questions:** • What is the outlook for electricity demand from AI and data centres and what can be done to mitigate it? • What are key priorities for governments to ensure that this energy demand can be met sustainably? • What strategies are companies pursuing to meet their demand? **Session format:** • Opening perspectives • Roundtable discussion
13:00 – 14:00	*Lunch*
14:00 – 15:00	**AI for Energy: Unlocking the Transformative Potential of AI in the Energy Sector** (Closed-door) *Co-Chair: Anne Bouverot, Special Envoy, AI Action Summit* *Co-Chair: Timur Gül, Chief Energy Technology Officer, IEA* AI's impact on the energy sector could be transformative. This session will explore the blue skies applications of AI in energy innovation and how AI can be applied in the energy sector to boost productivity, safety and sustainability. **Key questions:** • How can AI be applied in the energy sector to improve efficiency, accelerate innovation, and strengthen security? • What is needed from governments and companies to accelerate AI uptake in the energy sector? • How can countries strengthen their innovation ecosystems and partnerships to seize the potential for AI to accelerate energy innovation? **Session format:** • Opening perspectives • Roundtable discussion
15:00 – 15:30	**Conclusions, Outlook, and Next Steps** (Closed-door) Summary reflections on the Conference outcomes and next steps. **Session format:** • Concluding remarks

A limited number of meeting rooms will be available for bilateral meetings during the event and will be allocated on a first come, first served basis. To request a room booking, please email bilaterals@iea.org by Friday, 29 November 2024. Please note that rooms will be allocated for 30 minutes. For any other questions or specific requests, please contact EnergyAI@iea.org.

Format of discussions at the High-Level Roundtable

Discussions in all sessions at the High-Level Roundtable on Energy & AI on 5 December will be held in a roundtable format in Room 1. The Head of Delegation will be seated in at the table in alphabetical order of their country, organisation or company name. One additional delegate from each country, organisation or company may be seated in the second row. If the Head of Delegation has to leave the room, the additional delegate is invited to take their place.

Following a round of opening remarks by the Chair and invited speakers, participants are invited to flag their interest to speak during the sessions, following which the Chairs of the sessions will invite you to speak.

Room 1: