



AI and Energy: The New Power Couple

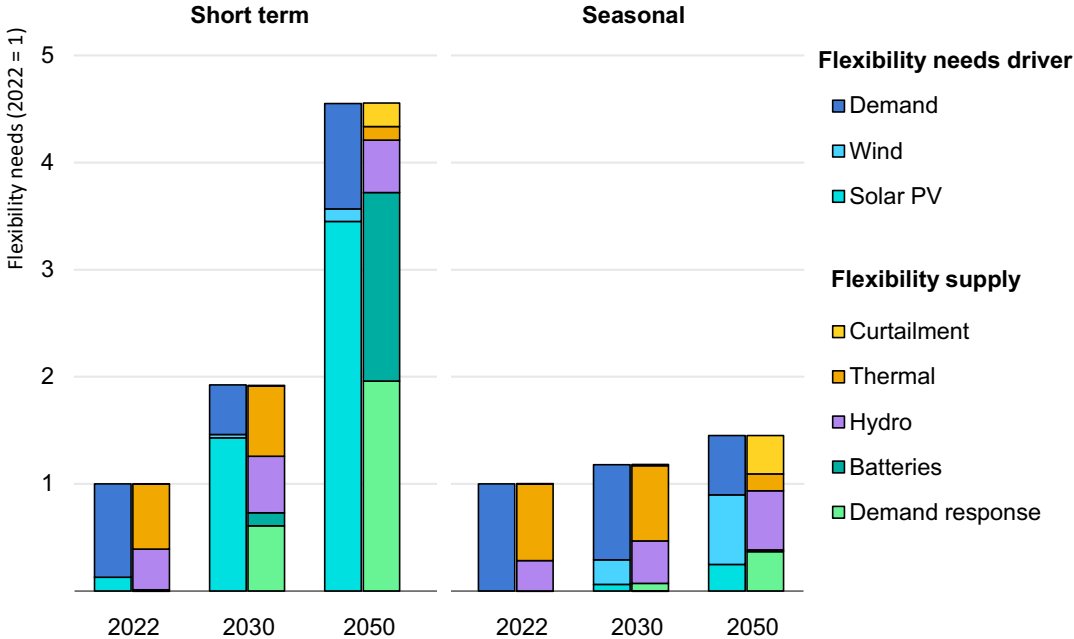
Jack Miller, IEA Policy Analyst

Lisbon Council Roundtable, 20 June 2024

Decarbonisation will not be possible without new flexibility sources



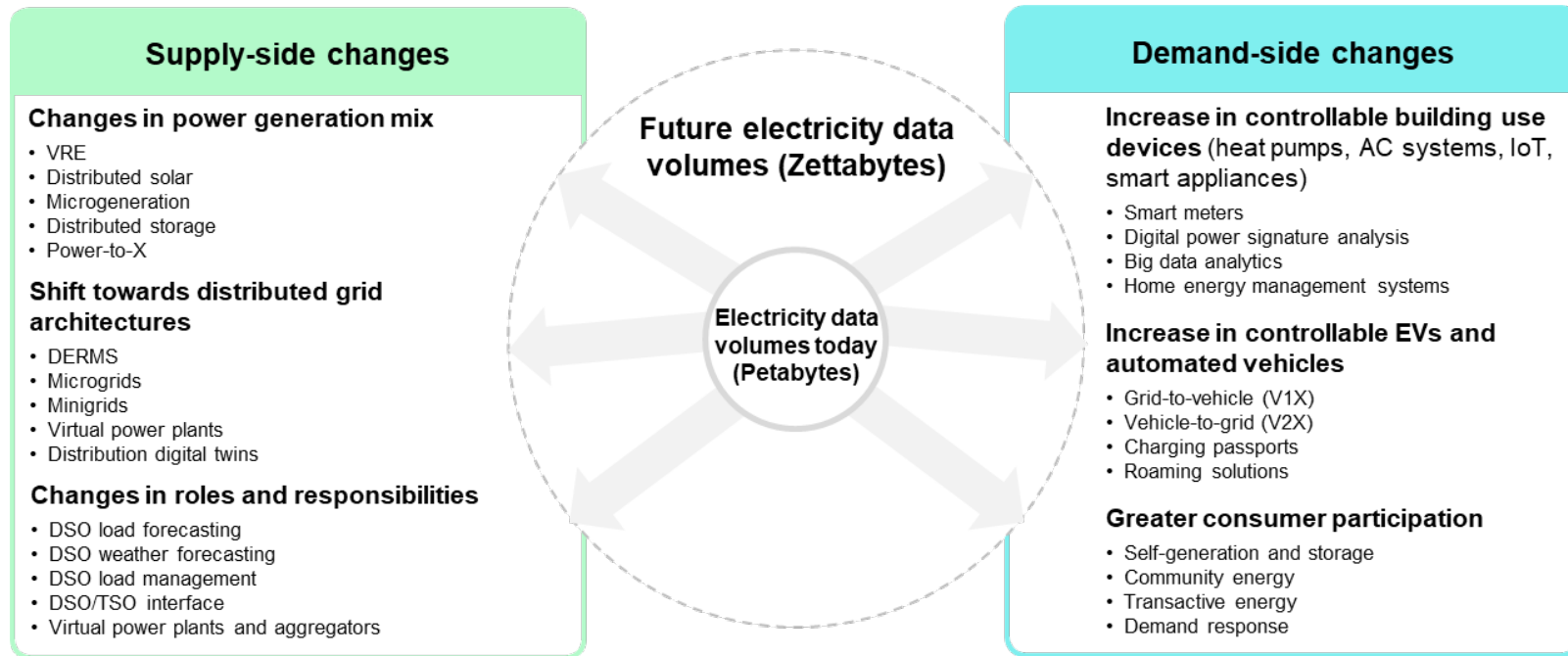
Global power system flexibility needs and supply in the Announced Pledges Scenario



Almost all flexibility today is from thermal and hydro: **leveraging storage and demand response is critical**

Managing increased data complexity and volumes is a priority

Drivers of electricity data volume and increasing complexity



Growth of electricity related data will require new governance structures, changing role of utilities, increased system visibility and controllability, and greater consumer participation

AI applications are growing rapidly across the energy system



Better forecasting of energy supply and demand



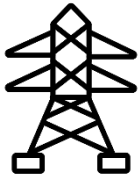
Facilitating demand response and improving equipment performance



Enabling predictive maintenance of physical assets



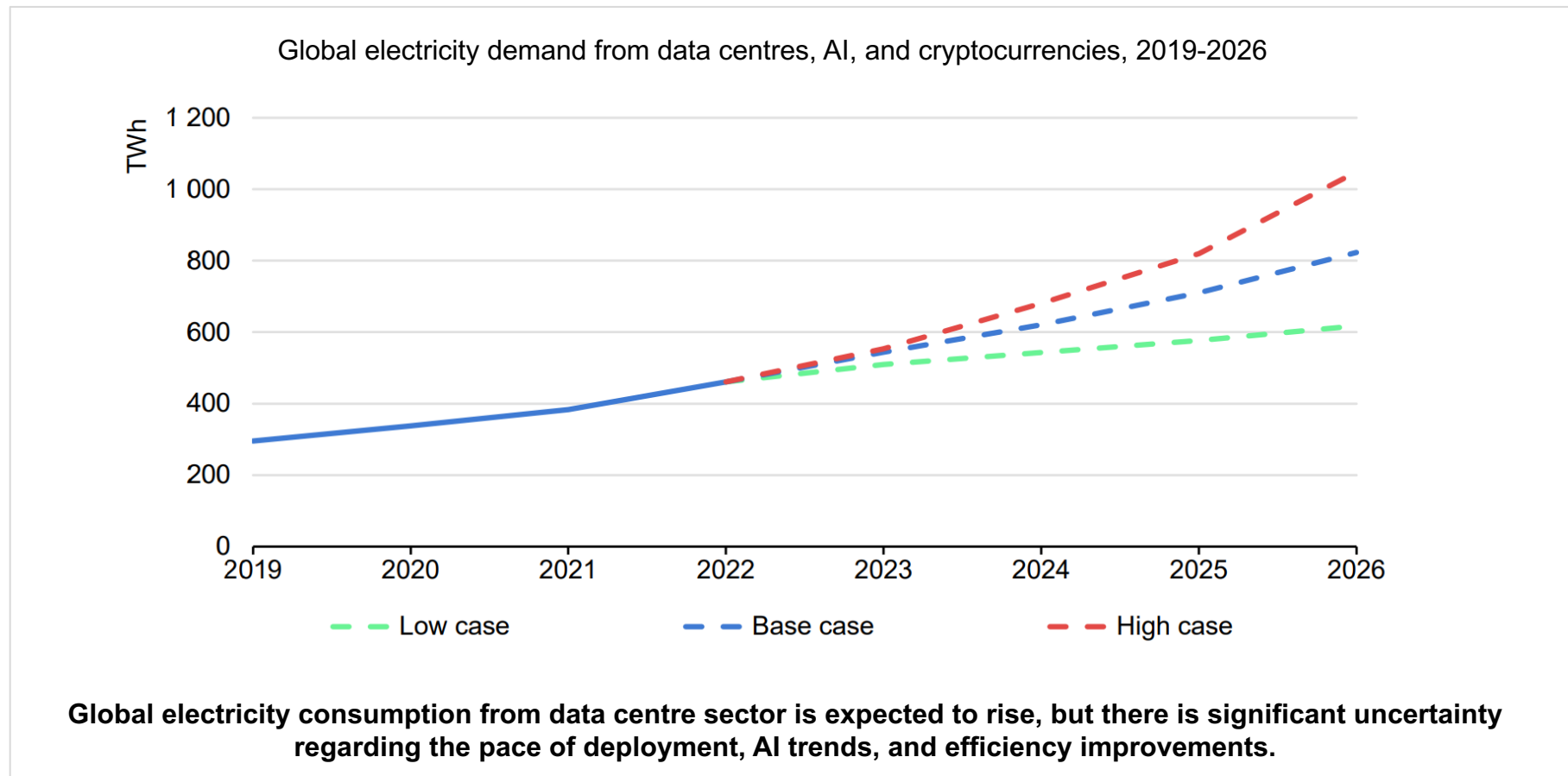
Providing more or improved consumer services



Managing and controlling grids

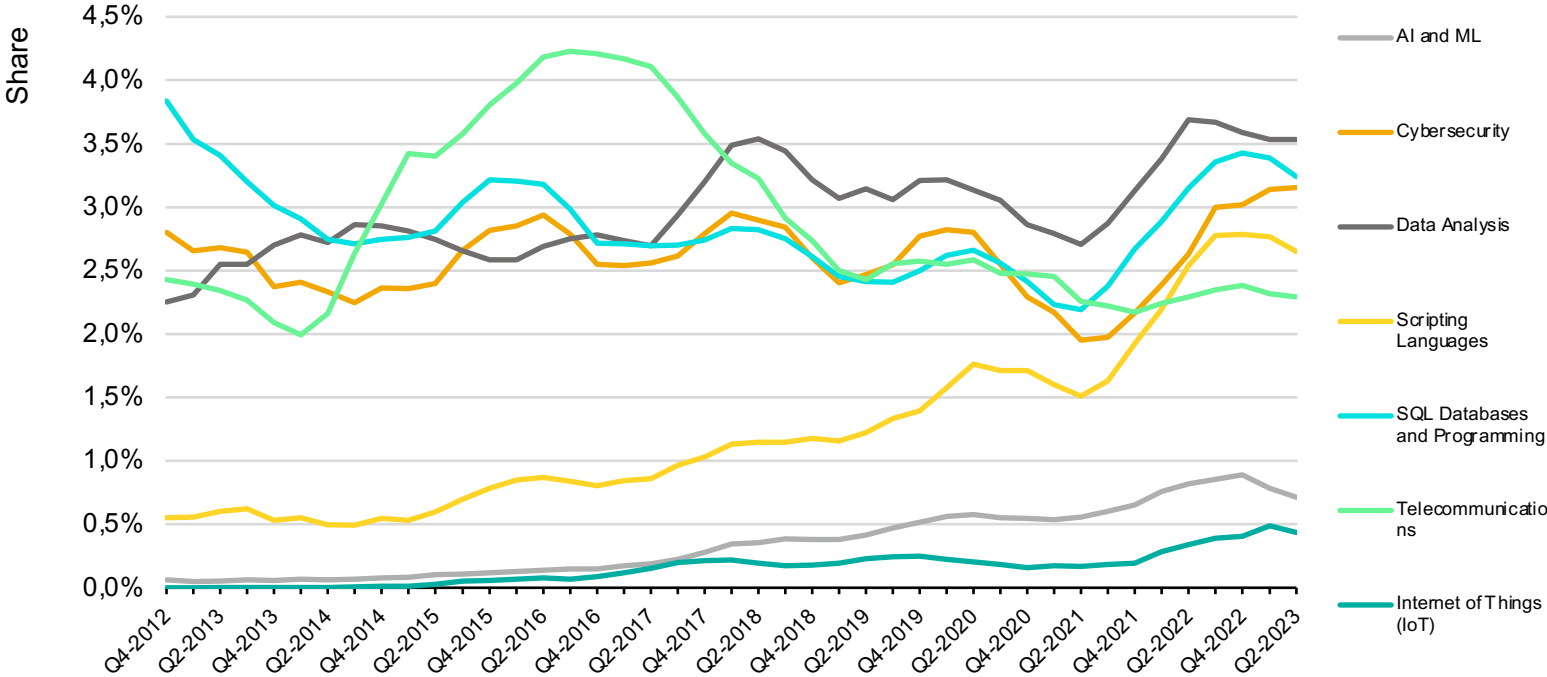
AI enables asset managers, network operators and service providers to make much more efficient use of growing data availability – and unlocks completely new capabilities

Data centres are now main drivers of electricity demand in various regions



Digital skills needs are on the rise

Share of digital skills demand among total job posting by US power utilities, 2012-2023



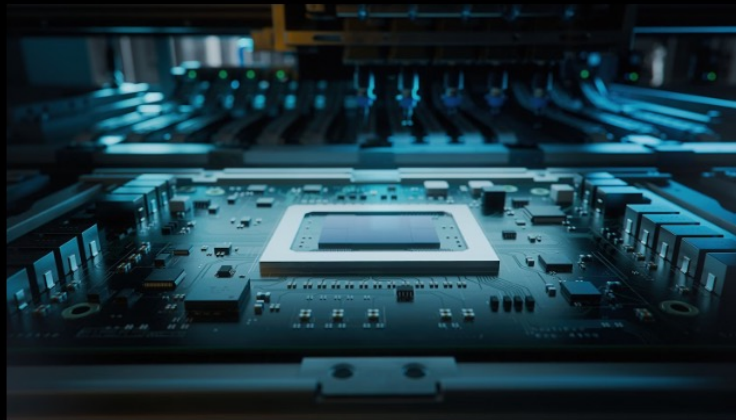
The energy sector is increasingly having to compete for workers with digital skills

05 Dec 2024

Conference — Paris, France

Global Conference on Energy & AI

Add to calendar +📅



Major new IEA initiative: [Energy for AI, AI for Energy](#)

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