**ERA Conference breakout session**

**Artificial Intelligence and Data in Energy**

The breakout session touched on a number of areas in which AI has been used within the Energy sector. These included predictive maintenance, the development of surrogate models, process optimisation, energy system optimisation, financial model optimisation, and decision support systems supported by digital twins. Participants also discussed issues relating to data quality and the critical importance of establishing the trust necessary to enable data sharing. A distinction was also drawn between predictive AI and generative AI, in which models generate novel outputs in response to appropriate prompts. Although much work has been done on the former, it was felt that there were also untapped opportunities in the latter. For example, generative AI could help develop personalised experiences for energy actors to influence changes in behaviour towards more energy efficient actions and processes.

Facilitator: Rob Shipman, University of Nottingham  
rob.shipman@nottingham.ac.uk