

Planning for a Clean and Secure Future with Nuclear Energy

Thursday, 18 September 2025

2.30 p.m. to 3.30 p.m.

Conference Room CR4, C Building, seventh floor

This side event will feature the potential role of nuclear power to support clean energy transitions. Under South Africa's G20 Presidency, nuclear power has been highlighted under the Energy Transitions Working Group process. A high-level representative from South Africa's Department of Electricity and Energy will share outcomes and announce upcoming milestones under this year's Presidency. The event will also showcase studies made under the Atoms4NetZero initiative, modelling the role of nuclear power, for electricity generation but also heat supply. Case studies of energy transition scenarios will be presented by two Member States using the IAEA Model for Energy Supply System Alternatives and their General Environmental Impacts (MESSAGE) tool: China (in collaboration with the China Institute of Nuclear Industry Strategy) and Estonia (in collaboration with the University of Tartu). Insights on the contribution of large reactors and small modular reactors to secure and clean energy transitions will also be discussed.

Scientific Secretary:

Mr Henri Paillere, IAEA Department of Nuclear Energy

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Event Programme

Opening Remarks	Mr Mikhail Chudakov, Deputy Director General and Head of the IAEA Department of Nuclear Energy
Speakers	<p>Nuclear Power in Africa – A Perspective from the G20 South Africa Presidency: Mr Zizamele Mbambo, Deputy Director General of the Department of Energy, South Africa</p> <p>Perspectives on Nuclear Energy from Brazil: Mr Francisco Rondinelli Junior, President, National Nuclear Energy Commission (CNEN), Brazil</p> <p>China Power Sector Outlook 2060: Ms Yan An, Mr Ming Zhang, Ms Qiujia Zhang, China Institute of Nuclear Industry Strategy, China</p> <p>Role of SMRs in Estonia's Power System – A Technoeconomic Analysis: Mr Mario Tot, IAEA Department of Nuclear Energy Mr Alan Tkaczyk, Institute of Technology, University of Tartu, Estonia</p>
Moderators	Mr Henri Paillere, Head of Planning and Economic Studies Section, IAEA Department of Nuclear Energy
Closing Remarks	Mr Wei Huang, Director of the Division of Planning, Information and Knowledge Management, IAEA Department of Nuclear Energy