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## IAEA Conference to Highlight Advances in Nuclear Power Plant Life Management

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([https://www.iaea.org/sites/default/files/styles/original\\_image\\_size/public/220728-nuclear-power-plant-life-management-webstory.jpg?itok=uqQbx\\_Pr](https://www.iaea.org/sites/default/files/styles/original_image_size/public/220728-nuclear-power-plant-life-management-webstory.jpg?itok=uqQbx_Pr))

The IAEA International Conference on Nuclear Power Plant Life Management (PLiM-5) (/events/plim-5) opens next week in Vienna, providing a global forum for experts to share information and experience on the long-term operation of reactors.

“This conference comes as more and more countries are acknowledging that clean and reliable nuclear power is part of the solution to our climate challenge,” said IAEA Director General Rafael Mariano Grossi. “While we urgently need to build new reactors, the continued safe and reliable operation of the existing fleet is an equally essential part of that solution.” Mr Grossi will address the conference at its opening on Monday.

During 2021, nuclear power plants generated almost 390 gigawatts of electricity in 32 countries, or about 10 per cent of the world’s electricity, thereby avoiding the emission of more than 1.2 billion tonnes of carbon dioxide. Independent sustainability studies developed by the United Nations’ International Panel on Climate Change (IPCC), the International Energy Agency (IEA) and the Nuclear Energy Agency of the Organisation for Economic Co-operation and Development (OECD) to examine viable pathways to Net Zero, include significant roles for nuclear power, with some calling for nuclear power generation to double by 2050.

Over the past 20 years, global nuclear power output has remained more or less flat, with newly built reactors only offsetting the retirement of older ones. Two-thirds of the world’s operating nuclear power capacity comprises reactors that are more than 30 years old, with most of them originally licensed to operate for 40 years in total. The

operators of many older reactors have received permits from national regulators to continue operations or are planning to apply for such permits, following refurbishments and corresponding safety reviews by authorities.

The PLiM-5 will bring together about 400 participants in Vienna and online from nuclear operators, regulators and support organizations, most with decades of experience in the safe and reliable operation and maintenance of nuclear power plants. The participants will exchange data, know-how and engineering solutions, while examining power plant life management from many different aspects. Also attending are representatives of several countries building their first nuclear power plants, such as Egypt and Türkiye. Their attendance responds to a recommendation made at the first PLiM conference in 2002 that a life management programme be introduced at the very beginning of a nuclear power plant's existence.

"According to the IAEA PRIS database (<https://pris.iaea.org/pris/home.aspx>), older nuclear power plants ran at maximum power for longer than their younger peers did in 2021," said Ed Bradley, IAEA Team Leader for Nuclear Power Plant Operation and Engineering Support. "This conference provides an excellent forum to share experiences that led to this result, and will allow these high levels of performance to continue."

The sessions will delve into the details of long-term operation, including safety and economic aspects; technical updates on ageing management issues for mechanical and electrical instrumentation and control components and civil structures; safety enhancement, design modernization, refurbishment and replacement programmes for ageing systems, structure and components, obsolescence and additional safety requirements; experiences of effective policy making, public engagement, innovative business models, human resource development, workforce planning, and management; and the distribution of roles and responsibilities for addressing regulatory policy considerations.

The conference is being held from 28 November to 2 December at the IAEA headquarters in Vienna. It has been jointly developed by the IAEA's Nuclear Power Engineering Section in the Department of Nuclear Energy and the Operational Safety Section in the Department of Nuclear Safety and Security. It follows earlier PLiM conferences in 2002 (Hungary), 2007 (China), 2012 (USA) and 2017 (France).

## Related resources

- 🔗 Fifth International Conference on Nuclear Power Plant Life Management (<https://www.iaea.org/events/plim-5>)
- 🔗 Nuclear power plant life cycle (<https://www.iaea.org/topics/nuclear-power-plant-life-cycle>)
- 🔗 Safety Aspects of Long Term Operation (SALTO) (<https://www.iaea.org/services/review-missions/safety-aspects-of-long-term-operation-salto>)
- 🔗 Ageing Management for Nuclear Power Plants: International Generic Ageing Lessons Learned (IGALL) (<https://www.iaea.org/publications/10665/ageing-management-for-nuclear-power-plants-international-generic-ageing-lessons-learned-igall>)
- 🔗 International Network on Life Management (<https://nucleus.iaea.org/sites/connect/LMNPPpublic/SitePages/Home.aspx>)
- 🔗 Nuclear energy (<https://www.iaea.org/topics/energy>)
- 🔗 IAEA PRIS database (<https://pris.iaea.org/pris/home.aspx>)

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