

Nuclear innovation highlighted at CEM12

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Leaders in the nuclear sector yesterday discussed how nuclear energy can contribute to reducing carbon emissions in the fight against climate change during a panel discussion on the side lines of the 12th Clean Energy Ministerial (CEM12) being hosted by Chile. They said technological breakthroughs and innovations can extend nuclear energy's contribution to climate action and accelerate strategies to cleaner energy. The discussion was moderated by Kirsty Gogan, managing partner at Lucid Catalyst and a co-founder of Terra Praxis.



The discussion panelists (Image: IAEA)

The side event - *Net Zero Emissions Pathways with Nuclear Innovation* - was sponsored by the Clean Energy Ministerial's Nuclear Innovation: Clean Energy Future (NICE Future) initiative. The discussion panel comprised World Nuclear Association Director General Sama Bilbao y León, International Atomic Energy Agency (IAEA) Director General Rafael Mariano Grossi, OECD Nuclear Energy Agency Director-General William Magwood and International Energy Agency Executive Director Fatih Birol.

"Maintaining our current nuclear fleet through licence extensions is the easiest thing we can do to have a huge impact in our decarbonisation goals," Bilbao y León said. "We depend on this resource and for us to lose this capacity would take us a big step backwards in the clean energy transition."

Grossi said the long-term operation of nuclear power plants is a growing trend and the public needs to be given assurances that it is not only efficient and climate-friendly but also safe. He said the IAEA is stepping up its support to provide reviews and advice to governments and operators for them to ensure safe, secure and effective long-term operation activities.

He also said developing countries were "showing a tremendous interest and appetite in nuclear energy options as they move into the global climate framework and set zero emission goals". After agreeing to and endorsing goals to address climate change, governments now need "to look in their carbon mitigation toolboxes, in which nuclear energy is an option", he said. Nuclear energy innovations are often misconstrued, he said, as a future energy alternative, when in reality nuclear already contributes around one-third of global low-carbon electricity generation.

Magwood said that there was a narrow window now for the nuclear industry to bring new technologies to market if they are to make a contribution to the energy transition. "Many say nuclear is too far away in the timeframe of the climate crisis. I can tell you that's not the case and there are technologies that could be on the market within the next five years that could help."

With regards to emerging technologies like microreactors and small modular reactors, Magwood said the nuclear industry needs to prove these technologies by bringing them to market and making sure they can be cost-effective and built to schedule.

International perspectives

The event featured the launch of a new NICE Future initiative [publication](#), *Pathways to net zero using nuclear innovation: International perspectives on the role of nuclear energy and innovation in reaching our climate targets*. This features perspectives from ministers and leaders of multi-governmental organisations on the role of nuclear energy and innovation in reaching climate targets.

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The new publication is intended to help policymakers and the Clean Energy Ministerial understand the paths that different participant countries are taking to reach their clean energy goals with the help of nuclear innovation. It also includes the perspectives of various international organisations that highlight where nuclear energy's contributions to emission reductions could grow further.

The NICE Future initiative was launched at the *9th Clean Energy Ministerial* hosted by Copenhagen in 2018. It leads the global conversation on the roles nuclear energy can play in the clean energy systems of the future.

The initiative explores the potential for nuclear energy uses, innovations and greater systems integration to accelerate progress toward clean energy goals. The initiative recognises there is no one-size-fits-all solution to energy and fosters collaboration among clean energy supporters in exploring diverse solutions.

Researched and written by World Nuclear News

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