

ESI-CIL Nuclear Governance Project Conference Series

Small Modular Nuclear Reactors: The Outlook for Deployment

ABOUT

Small modular reactors (SMRs) are nuclear reactors with electrical power outputs of less than 300 MW. They are designed to be smaller in size than conventional nuclear reactors and are often constructed using modular techniques. Proponents claim these features make SMRs cheaper, easier and faster to construct, safer, and more resilient to terrorist threats.

SMR technology could greatly expand the market potential for nuclear power to include developing countries with smaller-sized grids, countries with distributed grids (e.g. archipelagic states), as well as more established nuclear power countries experiencing stagnant electricity demand. SMRs could also offer a range of non-electrical applications (e.g. to generate heat or for water desalination).

There are at least 50 SMR designs under development – with three industrial demonstration SMRs in advanced stage of construction in Argentina, China, and the Russian Federation with floating SMRs. They are scheduled to start operation between 2017 and 2020.

The aim of this conference is to discuss and evaluate the outlook for the deployment of SMRs and their likely role in the future of nuclear energy, drawing on insights relating to technology, regulation, and the financing and structuring of new build projects.

Date

Wednesday,
8th November 2017

Time

14:00-17:30

Venue

Jen Tanglin Hotel,
1A Cuscaden Road
Singapore 249716

Enquiries

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Click [here](#) to register
Admission is free but
registration is required.

PROGRAMME

13:45 - 14:00: Registration

14:00 - 14:10: Opening Remarks, *Dr Philip Andrews-Speed*

Session 1

14:10 - 14:40: Advances in SMR Design and Technology Development for Near-term Deployment, *Dr Hadid Subki and Mr Frederik Reitsma*

14:40 - 15:05: Advantages and Drawbacks of SMR Projects, *Mr Robert Armour*

15:05 - 15:20: Q&A

15:20 - 15:50: Coffee Break

Session 2

Session Chair: *Mr Anthony Wetherall*

15:50 - 16:15: SMRs—Financing the Projects, *Mr Peter Bird*

16:15 - 16:40: Legal and Regulatory Requirements for Successful SMR Deployment, *Mr Robert Armour*

16:40 - 17:30: Q&A and Panel Discussion

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SPEAKERS

Mr Frederik Reitsma is the Project Manager for high temperature gas-cooled and molten salt reactor technology development at the IAEA, a role he has played since 2013. He has more than 16 years' experience in HTGR design and safety evaluation, focussed on core neutronics and reactivity transients. He holds an MSc in Reactor Science from the North West University in South Africa.

Dr Hadid Subki is the Project Manager for small modular reactor technology development at the IAEA since May 2010. Prior to this assignment, he worked for 17 years with two advanced reactor designers in the United States and Japan. His expertise is on reactor thermal hydraulics and safety analyses. A native of Indonesia, he initiated his career in 1991 as a nuclear engineer at the TRIGA Research Reactor Centre in Bandung. He earned an MS in Mechanical Engineering from the San Jose State University, California, United States and a PhD in Nuclear Engineering from Tokyo Institute of Technology, Japan.

Mr Robert Armour has 27 years' experience as a lawyer in the nuclear energy industry. He is currently Senior Counsel with Gowling WLG in London, United Kingdom, and chair of the firm's UK nuclear practice. He has extensive experience in the power sector, especially in nuclear energy. Prior to joining the firm, Robert served as General Counsel and Company Secretary of the British Energy Group plc from its formation in 1995 until its sale to EDF in 2009. He is also a Director and Trustee of the Nuclear Liabilities Fund.

Dr Peter Bird has a Cambridge PhD in Economics and is a Senior Adviser to Rothschild Global Advisory with more than 25 years of experience focussed on energy and utilities, and covering M&A, government advisory, private equity and debt advisory. He has worked on infrastructure projects across the world. He has also acted as a Senior Advisor to private equity and was for nine years a Director of Vector Ltd, a listed infrastructure network company in New Zealand. He is a Director of InfraCo Asia Investments and of Green Africa Power, which are aid donor-financed promoters of private infrastructure. He advised on the sale of nuclear energy company British Energy to EDF and on new nuclear projects in Hungary and Lithuania. He is currently advising the sponsors of the Horizon new nuclear project in UK and Fennovoima in Finland.

Dr Philip Andrews-Speed is a Senior Principal Fellow at the Energy Studies Institute, National University of Singapore (NUS). He has 35 years in the field of energy and resources, starting his career as a mineral and oil exploration geologist before moving into the field of energy and resource governance. Recent books include *The Governance of Energy in China: Transition to a Low-Carbon Economy*. Philip is the Principal Investigator for the NUS research project Policy and Law for Nuclear Safety and Security.

Mr Anthony Wetherall is a Senior Research Fellow at the Centre for International Law, National University of Singapore. Mr Wetherall has fifteen years of nuclear law experience, advising the nuclear industry and states worldwide (including those countries embarking on a nuclear power programme for the first time), the Secretariat of the IAEA and its policy-making organs on various legal, regulatory and commercial issues in areas including nuclear safety, nuclear security, safeguards (non-proliferation) and nuclear liability. Mr Wetherall established the IAEA's online calculator on the 1997 Convention on Supplementary Compensation for Nuclear Damage (CSC).