



4th International Conference on Generation IV and Small Reactors



Canadian Nuclear Laboratories
Laboratoires Nucléaires Canadiens

G4SR-4 Conference Program (subject to change)

Version 2022-09-12-1

Rising to the challenge: effective SMR fleet deployment as a critical tool to fight climate change

| Date/Time (ET) | Title/Description |
|--|--|
| Day 1 - Monday, 3 October 2022 | |
| Workshops – Optional Registration | |
| 08:30 – 16:30 | <p>Workshop Sessions</p> <ol style="list-style-type: none"> 1. Advanced Manufacturing [Full day] 2. Nuclear Material Challenges for SMRs and Advanced Reactors [Full day] 3. Integrated Safety Assessment Methodology (ISAM) [Full day] 4. Basic-Principle Simulator for Passive Boiling Water Reactor [Full day] 5. Non-Electric Applications of Nuclear Heat (Full day) 6. NEST/SMART SMR Fellows Workshop – [Full day for NEST Fellows] <p>Lunch 12:00 – 13:00</p> <p>PM Workshop Sessions 13:00 - 16:30 See above</p> |
| G4SR-4 Registration | |
| 18:00 – 20:00 | <p>Conference Opening Reception</p> <p>Food and Drinks</p> <p>Featuring Jazz Band: A-Zone</p> |



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| Date/Time (ET) | Title/Description |
|--|--|
| Day 2 – Tuesday, 4 October 2022 | |
| 07:00 – 08:00 | Continental Breakfast; Speaker’s Breakfast |
| 08:00 – 08:30 | Conference Kickoff |
| 08:00 – 08:05 | Introductory remarks, Dave Hummel- General Chair |
| 08:05 – 08:15 | Welcome address or opening prayer - <i>TBC</i> |
| 08:15 – 08:20 | Opening remarks; introduction of host sponsor - CNS President Guy Hotte |
| 08:20 – 08:30 | Host sponsor speech, Joe McBrearty – President & CEO, Canadian Nuclear Laboratory |
| 08:30 – 09:00 | Government Keynotes – SMR Action Plan; Provincial Strategic Plan |
| Speaker #1 | Government of Canada -TBC |
| Speaker #2 | The Honourable Todd Smith, Minister of Energy, Government of Ontario |
| Speaker #3 | The Honourable Mike Holland, Minister of Natural Resources and Energy Development, Government of New Brunswick |
| Speaker #4 | Generation IV Industry Forum Speaker, Sylvestre Pivet, Director, Deputy head of Energy division, French Alternative Energies and Atomic Energy Commission (CEA) |



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| 09:00 – 10:10 | Keynote Panel: Paradigm Shift Required to Save the Planet - Call for a paradigm shift of doing things very differently if we are to avoid irreversible climate impacts |
| Chair / Moderator | Milt Caplan, President, MZC Consulting |
| Panellist #1 | Dr. Paul Spekkens, Consultant, co-author of Atoms for Humanity Project |
| Panellist #2 | Bill Magwood – Director General, Nuclear Energy Agency (NEA) |
| Panellist #3 | Fred Dermarkar, President & CEO, Atomic Energy of Canada Ltd |
| Panellist #4 | Alastair Perry, VP Renewables, SNC Lavalin |
| Panellist #5 | Chapman Scarborough, CPA, Youth Representative |
| 10:10 – 10:30 | Coffee Break |
| 10:30 - 10:50 | Regulatory Keynote Address - Vision for a paradigm shift in regulatory framework for international cooperation to enable SMR Deployment in fighting climate change |
| Speaker | Rumina Velshi, CEO President, Canadian Nuclear Safety Commission (CNSC) |



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| 10:50 – 12:00 | Special Session on BWRX-300 Deployment Details to follow |
| 12:00 – 13:00 | Lunch |
| 13:00 – 14:00 | Plenary 1: SMR Deployment in Canada – Perspective from representatives of the 4 Utilities plus a representative from Alberta |
| Moderator | John Gorman, President and CEO, Canadian Nuclear Association |
| Speaker/ panellist #1 | Gary Rose, VP SMR Growth, Ontario Power Generation |
| Speaker/ panellist #2 | Iain Harry , Senior Business Advisor – Nuclear Energy, Generation Asset Management & Planning, and Sustainability, SaskPower |
| Speaker/ panellist #3 | Andy Hayward , Director, Advanced Reactor Development, NB Power |
| Speaker/ panellist #4 | Raj Verma , Lead, Next Generation Initiative, Bruce Powe |
| Speaker/ panellist #5 | Bronwyn Hyland, Program Lead, Clean Energy and Hydrogen at Suncor Energy, and member of Pathways Alliance, Suncor and Pathways Alliance |
| 14:00 – 15:00 | Plenary 2: US Advanced Reactor Deployment |
| Chair/ moderator | Chris Lohse, Innovation and Technology Manager, Gateway for Accelerated Innovation in Nuclear, Idaho National Laboratory |
| Speaker #1 | Jason Herbert - Sr. Director for External Strategy, New Nuclear, Energy Northwest |
| Speaker #2 | Marcio Paes Barreto, Director of Industrial Development, Wyoming Energy Authority |



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|--------------------------|---|
| Speaker #3 | Chris Nolan, Vice President of New Nuclear Generation Strategy and Planning, Duke Energy |
| Speaker #4 | Marilyn Kray, Vice President Nuclear Business Development, Constellation Nuclear, |
| 15:00 – 15:30 | Coffee Break |
| 15:30 – 16:30 | Plenary 3: SMR Deployment in UK and EU |
| Chair/ moderator | Rob Whittleston, Director for International Affairs, Security and Non-Proliferation, UK National Nuclear Laboratory |
| Speaker/ panellist #1 | Thomas Papworth, Head of Delivery – Advanced Nuclear Technologies , Department for Business, Energy and Industrial Strategy (BEIS), UK. |
| Speaker/ panellist #2 | Alan Woods, Director Strategy and Business Development, Rolls Royce |
| Speaker/ panellist #3 | Renaud Crassous , SMR Project Director for Nuward SMR , EDF |
| Speaker/ panellist #4 | Michael Futterer, Senior Expert, European Commission Joint Research Centre, |
| 16:30 – 17:30 | Plenary 4: Generation IV International Forum Collaborations: Technology Deployment through Innovation |
| Chair/ moderator | Sylvestre Pivet, Director, Deputy head of Energy division, French Alternative Energies and Atomic Energy Commission(CEA) |



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| Speaker/ panellist #1 | Alice Caponiti (GIF Chair), Deputy Assistant Secretary for Reactor Fleet and Advanced Reactor Deployment, Office of Nuclear Energy, U.S. Department of Energy |
| Speaker/ panellist #2 | Diane Cameron , Head of Division Nuclear Technology Development and Economics, Nuclear Energy Agency |
| Speaker/ panellist #3 | Bob Hill, GIF Technical Director, ANL |
| Speaker/ panellist #4 | Fiona Rayment, Chief Science and Technology Officer , UK National Nuclear Laboratory |
| 17:30 – 18:00 | Break |
| 18:00-21:00 | Innovation Night - NEST student teams and the industry leaders (Canada, UK, US) making pitches and discussing on nuclear innovations, paradigm changes , enabling S & T policies to help next generation overcome SMR deployment challenges yo fight climate change. |
| Introductory remarks | William Magwood, Director General, Nuclear Energy Agency |
| Chair / Moderator | Diane Cameron, Head of Division Nuclear Technology Development and Economic, Nuclear Energy Agency |
| Panelist | Fiona Rayment, Chief Science and Technology Officer , UK National Nuclear Laboratory |
| Panelist | Amy Gottschling, Vice President Science, Technology & Commercial Oversight, Atomic Energy of Canada Limited |



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| Panelist | Chris Lohse, Innovation and Technology Manager, Gateway for Accelerated Innovation in Nuclear, Idaho National Laboratory |
| Panelist | Kellie Foster, Manager, Advanced Reactor Integration and Analysis, Kinetrics |
| NEST Students | To be selected during the NEST and SMART Workshop on Oct3 |
| Day 3 – Wednesday, 5 October 2022 | |
| 07:00 – 08:00 | Continental Breakfast; Speaker’s Breakfast |
| 08:00 – 08:30 | Day 3 Keynote Address |
| Keynote Speaker | Kathryn Huff, Assistant Secretary for Nuclear Energy at the US Department of Energy |
| 08:30 – 10:00 | Plenary 5: What is Necessary to Achieve Net Zero |
| Chair/ moderator | Robin Manley, President, Paradymshyft Nuclear Advisory Ltd. |
| Speaker/ panellist #1 | Scott Milne , Integrated Energy Systems Lead, UK National Nuclear Laboratory |
| Speaker/ panellist #3 | Ryan Norman, Policy Advisor, Climate and Energy Program ,Third Way (US NGO) |



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| Speaker/ panellist #4 | Richard Carlson , Director, Energy Policy, Pollution Probe |
| 10:00 – 10:30 | Coffee Break |
| 10:30 – 12:00 | Plenary 6: Public Understanding & Acceptance of New and Advanced Nuclear |
| Chair/ moderator | Matthew Dalzell, Senior Business Officer, Prairies Economic Development Canada; Professional Affiliate, Johnson-Shoyama Graduate School of Public Policy, University of Saskatchewan |
| Speaker/ panellist #1 | Margot Hurlbert, Canada Research Chair Climate Change, Energy, and Sustainability Policy, University of Regina |
| Speaker/ panellist #2 | Chief Emily Whetung, Former Chief of Curve Lake First Nation, Senior Indigenous Adviser Consultant, OCNI |
| Speaker/ panellist #3 | Vanessa White, Director, Renewable and Alternative Energy , Alberta Innovates |
| 12:00 – 13:00 | Lunch |
| 13:00 – 14:45 | Breakout Technical Sessions A |
| | A1 - Safety Assessment, Regulation and Standards Initiatives A2 - Research & Development on Molten Salt Reactors A3 - Advanced Reactor and SMR Deployment A4 - SMR Manufacturing and Supply Chain |



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| | |
| 14:45 – 15:15 | Coffee Break |
| 15:15 – 17:00 | Breakout Technical Sessions B |
| | <p>B1 - The Application of Safety, Security and Safeguards in SMRs</p> <p>B2 - Research & Development Initiatives on High Temperature Gas Cooled Reactors</p> <p>B3 - Advanced Reactor and SMR Deployment</p> <p>B4 - SMR Economics, Financing, and Business Models</p> |
| 18:00 – 21:00 | Conference Banquet |
| | <p>Pre Banquet Drinks</p> <p>Four course Banquet Dinner</p> <p>Speeches & Entertainment</p> <p>Featuring Jazz Band: Nightbird</p> |
| Day 4 – Thursday, 6 October 2022 | |
| 07:00 – 08:00 | Continental Breakfast; Speaker's Breakfast |
| 08:00 – 09:45 | Breakout Technical Sessions C |
| | C1 - Research & Development Initiatives on SMR Fuel Qualification, Source Term Prediction, and Flux Detectors |



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| | C2 - Nuclear Hybrid Energy Systems and Co-generation Part I C3 - Public Policy, Engagement and Education C4 - Standards, Innovation, and Knowledge Management for Advanced Reactors and SMR |
| 09:45 – 10:15 | Coffee Break |
| 10:15 – 12:00 | Breakout Technical Sessions D |
| | D1 - Research & Development on Water Cooled SMRs D2 - Nuclear Hybrid Energy Systems and Co-generation Part II D3 - Modelling, System Analysis, Critical Parameters Simulation for Advanced Reactor and SMR D4 - Innovative SMR designs, SMR/Advanced Reactor Spent Fuel Evaluation and Management |
| 12:00 – 13:00 | Lunch |
| 13:00 – 13:30 | Day 4 Keynote Address |
| Keynote Speaker | John Kotek, Senior Vice President, Policy Development and Public Affairs, Nuclear Energy Institute |
| 13:30 – 15:00 | Plenary 7: Licensing & Regulatory Cooperation |
| Introductory remarks on GIF | Daniel Brady, Deputy Director, Nuclear S & T, Natural Resources Canada; GIF, Vice-Chair Regulatory Affairs. |
| Co-chair | Ramzi Jammal, Executive Vice-President and Chief Regulatory Operations Officer, Canadian Nuclear Safety Commission |
| Co-chair | Dan Dorman, Executive Director for Operations, United States Nuclear Regulatory Commission |



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|-------------------------|--|
| Speaker/Panellist #1 | Glenn Archinoff, Executive Consultant, Kinectrics (representing X-energy) |
| Speaker/Panellist #2 | Michelle Catts, Senior Vice President, Nuclear Programs, GE-Hitachi |
| Speaker/Panellist #3 | Dave Tyndall, Director, New Build Engineering, Ontario Power Generation |
| SpeakerPanellist #4 | Andy Hayward, Director of Advanced Reactor Development, NB Power |
| 15:00 – 15:30 | Coffee Break |
| 15:30 – 17:00 | Plenary 8: Viable Fuel cycle options for Net-Zero, Energy Security and Sustainability |
| Chair / Moderator | Everett Redmond, Senior Technical Advisor, Nuclear Energy Institute |
| Speaker / Panellist # 1 | James Dobchuk, President and Chief Commercial Officer, Global Laser Enrichment LLC (GLE) |
| Speaker / Panellist # 2 | Hideki Kamide, Vice Chair, Generation IV International Forum (GIF) Policy Group; JAEA Fellow Sector of Fast Reactor and Advanced Reactor Research and Development at the Japan Atomic Energy Agency (JAEA) |
| Speaker / Panellist # 3 | Paul Thompson, Senior Strategic Advisor NB Power |
| Speaker/Panelist #4 | Monica Regalbuto, ANS Fellow and the Director of Nuclear Fuel Cycle Strategy, Idaho National Laboratory |



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| 17:00 – 17:30 | Conference Closing |
| | Details to follow |
| Day 5 – Friday, 7 October 2022 | |
| Optional Technical Tour - Ontario Power Generation (OPG) Darlington Nuclear Refurbishment Project and Darlington New Nuclear Small Modular Reactor (SMR) Project (Registration required) | |