

# Nuclear Energy's Role in the 21<sup>st</sup> Century: Addressing the Challenge of Financing



**CONFERENCE PROGRAMME**

11-12 May 2016  
Paris, France



**IFNEC**

INTERNATIONAL FRAMEWORK FOR NUCLEAR ENERGY COOPERATION



**NEA**

NUCLEAR ENERGY AGENCY



**Nuclear Energy's Role in the 21<sup>st</sup> Century:  
Addressing the Challenge of Financing”**

**Nuclear Finance Conference  
Programme**

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OECD Conference Centre  
Paris, France

# Foreword

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Civil nuclear energy has never played a more consequential role in global environmental security, energy security, security of supply, and economic market opportunity than it is playing today. Consequently, the health and prosperity of the global civil nuclear markets (both supplier and customer markets) have also never been more vital.

From an environmental security perspective, the global community of nations at COP21 made clear their intent to substantially reduce carbon emissions, while the International Energy Agency projected that nuclear energy would need to more than double in the next two decades if the carbon reductions targets are to be achieved. Yet the percentage of electricity generated globally by nuclear power has substantially dropped in the past eight years from a high of approximately 15% to 11%. Even at 11%, nuclear energy represents 36% of the world's clean electricity generation. And from an energy security and economic perspective, 30 countries continue to use nuclear as an important element of their energy security and electricity supply diversification, while as many of 20 additional countries are projected by the IAEA to pursue the development of nuclear power over the next several decades. From an economic benefit and security of supply perspective, nuclear energy is slated to play an increasingly key role as countries seek to reduce their respective carbon portfolio while building in resilience and maintaining sustainable market pricing.

Yet the challenges have also never been more formidable for nuclear reactor customers. Their efforts to secure the necessary equity and debt financing for such a large and long capital outlay project (USD 5-10 billion per unit before financing is factored in for a period of up to six to ten years or more before operation commences and electricity can begin to be sold); the need to ensure that the customer's electricity market structure, regulations and policies allows for nuclear power plants to tap their unique strengths to effectively compete price-wise in the market, such as nuclear energy being available 24/7 over four or more decades at a predictable and steady production cost; the need to effectively manage what is becoming an increasingly globalised supply chain; and the priority of putting into place an effective, independent and transparent safety and security regulator.

The good news is that with such strong fundamental market and strategic drivers, and the clear readiness demonstrated by countries throughout the world to take on these tough challenges for a greater good, such as through the IAEA, OECD/NEA/IEA, IFNEC and COP21, these challenges threatening to prevent nuclear energy from fulfilling such important national and global roles peacefully, safely, and securely can be surmounted. Today's joint IFNEC-NEA Conference on Nuclear Finance represents a clear example of how the 65 countries and 4 international organisations comprising IFNEC, and the NEA can come together and convene a global stakeholder-wide (e.g. government energy planning authorities, industry/utilities/vendors, financial sector, regulatory sector) meeting to collectively better understand the challenges and ways by which to effectively overcome them.

My colleagues and I from IFNEC and the NEA encourage all stakeholders and other participants to take the opportunity to robustly participate and work with us to try and find effective solutions that will allow nuclear energy to be used in a safe, secure, efficient and sustainable manner by those countries and markets that wish to do so.

A handwritten signature in black ink, appearing to read 'Ed McGinnis'.

Ed McGinnis  
IFNEC Steering Group Chair

# Foreword

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Times have changed.

Since the time that most of today's commercial nuclear power plants were built and placed into operation, the way projects are implemented, the supply chain, and particularly the financing environment, have all changed radically.

Old models of financing large power plant projects have begun to fade in the face of deregulation in many countries. At the same time, electricity supplies themselves have also changed, with low-priced and low-cost sources of electricity rushing into the market. In many markets, it is difficult if not impossible to justify the construction of any generation that is not receiving a subsidy or other government support.

Meanwhile, the lists of who is supplying and who is building nuclear plants have changed significantly over the last decade. New vendors are offering a roster of advanced designs and are marketing very aggressively.

Further, with interest growing in small modular reactors and some Generation IV technologies, it appears likely that the nuclear technologies the world uses to make electricity will also change.

Add to all of this, the agreement by 195 countries last year to reduce carbon emissions consistent with the 2 degrees Celsius goal advocated by many scientists, and the result is a global nuclear technology market that is in the middle of a period of change the likes of which have not been seen since nuclear plants were first deployed 50 years ago.

Such change brings with it both great opportunity but also great uncertainty. It is in this context that we hold this Nuclear Finance Conference. In the flux of great change, it can be difficult to finance even modest projects.

Nuclear power plants are not modest projects; with total costs ranging from about 6 billion to 12 billion euros and total project implantation times reaching up to a decade, building a nuclear power plant is one of the most complex of all industrial sector undertakings. Therefore, as one might expect, financing nuclear power plants can often present significant challenges.

This conference will discuss these challenges from a variety of perspectives and will, we hope, help shed light on the best paths to address barriers that might limit nuclear power's ability to serve as a viable option for countries seeking greater energy security, clean and sustainable energy production, and stable, long-term supplies of economic electricity.

We also hope each of the participants will gain a greater understanding of the concerns and interests of their colleagues representing energy planners, the nuclear industry, safety regulators, electricity market regulators, utilities, bankers and export credit agencies. The wide range of experts gathered here from many different countries provide all of us a unique and very special opportunity to learn and reflect on the challenge of nuclear finance in today's complex environment.

Together, we may chart courses that none could discover alone.

A handwritten signature in blue ink, appearing to read 'W. Magwood, IV'.

William D. Magwood, IV  
NEA Director-General

# Wednesday 11 May 2016

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08:00-09:00	<b>Registration</b> (Coffee and pastries will be served)
09:00-09:05	<b>Opening Remarks</b> <i>Mr Edward McGinnis</i> <i>Chair, IFNEC Steering Group</i>
09:05-09:10	<b>Welcome</b> <i>Mr William D. Magwood, IV</i> <i>Director-General, Nuclear Energy Agency (NEA)</i>
09:10-09:25	<b>“The Global Energy Forecast and the Path Forward to Facing the Economic Challenges Ahead”</b> <i>Mr Ángel Gurría</i> <i>Secretary-General, Organisation for Economic Co-operation and Development (OECD)</i>
09:25-09:45	<b>“Vital Role of Nuclear Energy in the Global Climate Agenda”</b> <i>Mr Keisuke Sadamori</i> <i>Director of Energy Markets and Security, International Energy Agency (IEA)</i>
09:45-10:05	<b>“Targeted Government Financial Guarantees for a New Build Project”</b> <i>Mr Dong Kim</i> <i>Chief Operating Officer, US Department of Energy Loan Programs Office</i>
10:05-10:45	<b>Q and A Session with Speakers:</b> <i>Keisuke Sadamori, Dong Kim, William D. Magwood, IV and Edward McGinnis</i> Moderated by: <i>Chris Gadomski, Lead Analyst Nuclear, Bloomberg New Energy Finance</i>
10:45-11:30	<b>Session 1: Alternatives for Effectively Meeting the Challenges of Financing Nuclear Projects</b>  <b>1.1 “Which Financing Alternatives have been Most Effective and Why”</b> <i>Fiona Reilly, Head of Nuclear Capital Projects and Infrastructure, Price Waterhouse Coopers (PwC)</i>  <b>1.2 “Independent, Transparent and Effective Regulator: The Role of the International Atomic Energy Agency’s Integrated Regulatory Review Service”</b> <i>Adriana Nicic, Section Head of the Regulatory Activity Section, IAEA</i>  <b>1.3 Multinational Design Evaluation Programme</b> <i>Ho Nieh, Head of the Division of Nuclear Safety Technology and Regulation, NEA</i>
11:30-12:10	<b>Q and A Session with Speakers:</b> <b>“Alternatives for Effectively Meeting the Challenges of Financing Nuclear Projects”</b> Moderated by: <i>Dr Ron Cameron, Nuclear Specialist Adviser, UK Department of Trade and Investment</i>
12:30-14:00	Lunch (Hosted at the Marshall and Ockrent rooms, OECD Conference Centre)

## Wednesday 11 May 2016 (cont.)

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14:00-15:30	<p><b>Hypothetical Case Study Exercise: Newcomer Country in Regulated Market</b></p> <p>Moderated by: <i>Chris Gadowski, Bloomberg, and Edward McGinnis, IFNEC Steering Group Chair</i></p> <p>Role Players: Energy Planning Authority: <i>Dr. Kamal Araj</i>; Project Consultant: <i>Ed Kee</i>; Electricity Market Regulator: <i>Safak Herdem</i>; National Utility: <i>Tom Samson</i>; Vendor: <i>Jay Surina</i>; Banker: <i>Carl Cho</i>; NPP Financing Expert: <i>Fiona Reilly</i></p>
15:30-15:50	Coffee Break
15:50-16:05	<p><b>“Nuclear Suppliers Group, Facilitating Nuclear Trade and Cooperation Through Confidence”</b></p> <p><i>Rafael M Grossi, Ambassador of Argentina to IAEA and International Organisations in Vienna, Chair Nuclear Suppliers Group</i></p>
16:05-17:00	<p><b>Session 2: Alternatives for Successful Financial Risk Management</b></p> <p><b>2.1 “Financing a New Nuclear Plant and Managing the Risks; Experience Feedback from the Hinkley Point C Project (UK)”</b></p> <p><i>Vakiasai Ramany, Senior VP Development, New Nuclear Projects and Engineering, Électricité de France (EDF)</i></p> <p><b>2.2 “Options for Distributing Risks with Financing Nuclear Projects”</b></p> <p><i>George Borovas, Shearman and Sterling, LLP</i></p> <p><b>2.3 “Does Risk Differ with the Deployment of Small Modular Reactor Technology?”</b></p> <p><i>John Hopkins, CEO, NuScale</i></p> <p><b>2.4 “How to Effectively Address the Financial Risks Associated With Nuclear Projects”</b></p> <p><i>Carl Cho, Citi</i></p>
17:00-17:40	<p><b>Q and A Session with Speakers:</b></p> <p><b>“Alternatives for Successful Financial Risk Management”</b></p> <p>Moderated by: <i>Fabienne Pehuet, NucAdvisor and Ahab Abdel-Aziz, Global Director Nuclear Power Generation, Gowling Lafleur Henderson, LLP</i></p>
17:40-19:00	Cocktail Reception - (Hosted at the OECD Conference Centre)

# Thursday 12 May 2016

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08:30-09:00	<b>Registration</b> (Coffee and pastries will be served)
09:00-09:20	<i>Special Guest Speaker</i> <b>“Global Commercial State of Play and the Current Role of Financing.”</b> <i>Agneta Rising, Director-General, World Nuclear Association</i>
09:20-09:40	<i>Special Guest Speaker</i> <b>“Addressing the Financing Challenge - An Industry Perspective”</b> <i>Jean-Pol Poncelet, Director-General, FORATOM</i>
09:40-10:00	<i>Special Guest Speaker</i> <b>“Addressing the Financing Challenge - A European Commission Perspective”</b> <i>Gerassimos Thomas, Deputy Director-General for Energy, European Commission</i>
10:00-10:20	<b>“Nuclear New Build: Insights into Financing and Project Management”</b> <i>Jan Horst Keppler, Senior Economist, NEA</i>
10:20-10:45	Coffee Break
10:45-12:15	<b>Hypothetical Case Study Exercise: Country with Existing Fleet in Liberalized Electricity Market</b> <i>Moderated by: Chris Gadomski, Bloomberg, and Edward McGinnis, IFNEC Steering Group Chair</i> <i>Role Players: Energy Planning Authority: Dr. Kamal Araj; Project Consultant: Ed Kee; Electricity Market Regulator: George Borovas; Private Utility: Tom Samson; Vendor: Jay Surina; Banker: Carl Cho; NPP Financing Expert: Paul Murphy</i>
12:15-13:30	Lunch (not provided)
13:30-13:50	<b>“OECD Arrangement Financing Rules for Nuclear Power Projects”</b> <i>David Drysdale, Head of Export Credits Division, OECD</i>
13:50-14:10	<b>“Russia’s Approach to Financing”</b> <i>Vyacheslav Ivanov, Deputy Director General for Economics and Finance, Rusatom Energo International</i>
14:10-14:30	<b>“China’s Approach to Financing”</b> <i>Mr Sunjiao Chen, Deputy Director General, China Development Bank</i>
14:30-14:50	<b>“US Approach to Financing”</b> <i>Diane Farrell, Deputy Assistant Secretary for Asia International Trade Administration, US Department of Commerce</i>
14:50-15:20	<b>Session 3: Establishing Confidence in Future Pricing and Return on Investment</b> <b>3.1 “What Approaches Can Be Used in New Builds to Attract Private Capital that Provide Confidence There Will Be An Adequate Return on Investment?”</b> <i>Fabienne Pehuet, NucAdvisor</i> <b>3.2 “The UK Perspective: The Role of Long-Term Electricity Price Guarantees”</b> <i>Jeremy Allen, Head of Procurement and Investor Relations, Department of Energy and Climate Change, United Kingdom</i>

## Thursday 12 May 2016 (cont.)

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15:20-15:40	<b>Q and A Session with Speakers:</b> <b>“Establishing Confidence in Future Pricing and Return on Investment”</b> Moderated by: <i>Paul Murphy, Gowling WLG</i>
15:40-16:00	Coffee Break
16:00-16:30	<b>Session 4: Innovative Finance Solutions for Investment in Clean Energy</b> <b>4.1 “The Impact of Carbon Pricing”</b> <i>Edward Kee, CEO, Nuclear Economics Consulting Group</i> <b>4.2 “Mobilising the Bond Markets for a Low-Carbon Transition”</b> <i>Christopher Kaminker, Economist, OECD</i>
16:30-16:50	<b>Q and A Session with Speakers:</b> <b>“Innovative Finance Solutions”</b> Moderated by <i>Chris Gadomski, Bloomberg</i>
16:50-17:50	<b>Findings from Hypothetical Moderated Scenarios</b>
17:50-18:15	<b>Conference Wrap Up with Organisers</b>



# Speakers

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**Angel GURRIA** is the Secretary-General of the OECD since June 2006. As OECD Secretary-General, he has reinforced the OECD's role as a “hub” for global dialogue and debate on economic policy issues while pursuing internal modernisation and reform. Mr Gurría is a Mexican national and came to the OECD following a distinguished career in public service in his country, including positions as Minister of Foreign Affairs and Minister of Finance and Public Credit in the 1990s. Mr Gurría holds a B.A. degree in Economics from UNAM (Mexico) and a M.A. degree in Economics from Leeds University (United Kingdom). He is married and has three children.



**Keisuke SADAMORI** became the IEA Director for Energy Markets and Security in 2012, leading an administrative structure that includes several core functions of the IEA. Mr Sadamori, a Japanese national, held many senior positions at the Japanese Ministry of Economy, Trade and Industry (METI), including Deputy Director-General at the Minister's Secretariat. Mr Sadamori served as the executive assistant to the Prime Minister in 2011, when the Great East Japan Earthquake and Tsunami hit Japan, causing the Fukushima Daiichi Nuclear Power Plant accident. He worked on international energy affairs and was the representative of the government of Japan.



**Dong Kwun KIM**, prior to holding the Chief Operating Officer position with Energy's Loan Programs Office (LPO), served as Chief Engineer and Director of LPO's Technical and Project Management Division. As Federal Project Director to the Office of Civilian Radioactive Waste Management, he successfully achieved Nuclear Regulatory Commission (NRC) certification of a licensing support network for the Yucca Mountain Project before the Atomic Safety Licensing Board, and led systems simulation and design studies resulting in safety improvements and cost reductions. Mr Kim was a senior policy advisor to numerous Program Secretarial Officers appointed during the Clinton administration.



**Fiona REILLY** is Head of Nuclear Capital Projects and Infrastructure, PricewaterhouseCoopers (PwC) and an international nuclear expert with over 20 years' experience in the market. She has worked on the development, structuring and financing of nuclear new build projects in the United Kingdom, the Middle East, Russia and Central and Eastern Europe. She has served as a designated expert on the financing, development, structuring of nuclear projects and decommissioning and waste management at IAEA special meetings.

# Speakers

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**Adrina NICIC** holds a Masters Degree in Electrical Engineering and she is currently the Head of the Regulatory Activities Section, in the Division of Nuclear Installation Safety at the IAEA. In this role she is involved in the delivery of the IAEA's programme in support of enhancement of effectiveness of national regulatory systems and development of nuclear safety infrastructure in IAEA member states, based on the IAEA safety standards, with emphasis on regulatory peer reviews and self-assessment. Ms Nicic worked for the Canadian Nuclear Safety Commission as the Acting Director General for the Directorate of Safety Management and Standards and contributed to the delivery of its mandate in various areas.



**Ho NIEH** is Head of the Division of Nuclear Safety Technology and Regulation at the OECD Nuclear Energy Agency (NEA). Mr Nieh is responsible for the NEA's programmes in nuclear safety regulatory policy, research and international co-operation. Mr Nieh has also held positions at the United States Nuclear Regulatory Commission and at the International Atomic Energy Agency.



**Rafael Mariano GROSSI** is Ambassador of the Argentine Republic to Austria and Permanent Representative to the International Organisations in Vienna, namely the IAEA, CTBTO, UNOV, UNODC and UNIDO. At present he is the Chairman of the Nuclear Suppliers Group (NSG) for the second consecutive period. He also was elected as President of the Diplomatic Conference of the Convention on Nuclear Safety, which adopted the Vienna Declaration in February 2015. Dr Grossi has extensive experience in disarmament and non-proliferation affairs and diplomacy.



**Vakisasai RAMANY** is Senior Vice President-Development at EDF, New Nuclear Projects & Engineering. Mr Ramany joined the EDF Group in 1999 as an R&D engineer, then joined the French supply division of EDF and contributed to putting in place the required tools and processes to run a customer portfolio management function. In 2008, Mr Ramany joined EDF Group CFO's team to support the company's efforts to expand its international business. In 2011, he moved to EDF Energy in the UK as M&A and Investments Director. He is currently one of the leading contributors to EDF's efforts to secure funding for the 3 200 MW Hinkley Point C nuclear new build project in the UK, including notably the development of co-operation with China in this regard. Since September 2015, Mr Ramany leads the international new nuclear development activities for the EDF Group.

# Speakers

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**George BOROVAS** is the Head of Shearman and Sterling's Global Nuclear Group and specialises in the development and financing of nuclear power projects. He advises lenders, governments and sponsors, and has worked on nuclear projects and transactions in the UK, the US, Russia, Europe, the Middle East, Japan, South Korea, Southeast Asia, China, Australia and South Africa. Before becoming a lawyer, Mr Borovas worked as an engineer in the nuclear industry.



**John L. HOPKINS** is Chairman and Chief Executive Officer NuScale Power. Mr Hopkins has led NuScale Power's rapid development of its small modular reactor (SMR) technology and is currently the Vice Chairman of the Board of Directors of the US Chamber of Commerce, Washington, DC, an organisation representing over three million small to large US businesses. Prior to joining NuScale Power, Mr Hopkins held numerous executive positions in his 24 years of service with Fluor Corporation, a Fortune 150 international engineering and construction company. He also served as the senior executive member of the Board of Directors for both Fluor Netherlands and Fluor United Kingdom.



**Carl CHO** is a senior corporate banker in Citi's North American Power and Alternative Energy group, primarily covering wind and solar developers/yieldcos and independent power producers. He also serves as Industry Specialist on debt financing approval committees in North America, Latin America and Asia, where he is asked to opine on the regulatory, merchant and technical aspects of electric generation, transmission and distribution. Mr Cho has been with Citi for over 20 years. His experience includes Structured Finance and Risk Management prior to joining Power in 2011. He is based in New York.



**Agneta RISING** is the Director-General of the World Nuclear Association. She was Vice President of Environment at Sweden's Vattenfall AB, the fifth largest electricity utility in Europe, where she headed a pan-European department focused on energy, environment and sustainability. Over the past two decades, Agneta Rising has been appointed by the Swedish government, the EU Commission and the IAEA to several significant expert and advisory positions relevant to the safety and future development of nuclear power. Among these, Ms Rising served for four years on the IAEA's International Nuclear Safety Group. She was awarded the Atoms for Peace Prize in 2013, WiN Spain Special Award in 2015 and Swedish Nuclear Society Honorary Prize in 2016.

# Speakers

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**Jean-Pol PONCELET** is the Director-General of FORATOM, the trade organisation of the European Nuclear industry and the Secretary-General of the European Nuclear Society (ENS). He holds a Masters Degree in Nuclear Engineering. He previously was AREVA's SVP Sustainable Development, and Director of Strategy and External Relations of the European Space Agency. He was Deputy Prime Minister, Minister of Defence and Minister of Energy of Belgium from 1995 until 1999.



**Gerassimos THOMAS** is Deputy Director-General in the Directorate-General for Energy at the European Commission and member of the Steering Board of the European Fund for Strategic Investments (EFSI). Prior to his current assignment, Mr Thomas had professional assignments as Director Finance at DG ECFIN; member of the EIB and EIF Board of Directors; Head of cabinet of Joaquin Almunia, Commissioner for Economic and Monetary Affairs; Deputy Spokesman for Commission President Romano Prodi; and Spokesman for economic and monetary affairs under Commissioner Pedro Solbes.



**Jan Horst KEPPLER** is Senior Economic Advisor in the Nuclear Development Division of the OECD Nuclear Energy Agency (NEA). He is also professor of economics at the Université Paris-Dauphine (UPD) where he directs the Masters in Energy, Finance, Carbon. He is also the Scientific Director of the Research Chair on European Electricity Markets (CEEM) at UPD. His research is on investment in low carbon technologies such as nuclear energy. Recent publications include *Nuclear New Build: Insights into Financing and Project Management* (2015) and *Nuclear Energy and Renewables: System Effects in Decarbonising Energy Systems* (2012).



**David DRYSDALE** is the Head of the Export Credits Division of the Trade and Agriculture Directorate of the OECD. He has worked in the field of export credits since 1994 when he joined the Export-Import Bank of the United States, the official American export credit agency. From 2002 until July 2013, he worked at the US Department of the Treasury in the Office of Trade Finance and Investment Negotiations, with his last position as Director. As lead negotiator within the United States government of trade finance and export credit matters, he has a vast and in-depth knowledge of all export credit issues. While Chairman of the OECD Premium Experts Group, he successfully led the negotiations that resulted in the Malzkahn-Drysdale Package which set forth buyer risk pricing disciplines of the Arrangement on Officially Supported Export Credits. Prior to working for the US government, Mr Drysdale practiced law in Washington, DC for seven years, focusing on many of the technical issues (environment, bribery) and sectors (aviation, energy) that are key aspects of the OECD export credit work. He also served as an officer in the United States Navy.

# Speakers

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**Vyacheslav IVANOV** prior to joining Rusatom Energo International held senior positions at Rusatom Overseas, Financial Corporation URALSIB, LUKOIL, Financial Broker Troika Dialog, Gazprom Neft. Mr Ivanov was awarded the title of “best ICEF teacher” 2011, 2012 being a senior lecturer at the International College of Economics and Finance (National Research University – Higher School of Economics). He graduated from Moscow State Institute of Radio-engineering Electronics and Automation and Accounting and Finance at The Faculty of Arts and Science at the University of Toronto and MBA of William E. Simon Graduate School of Business Administration, University of Rochester, New York, USA.



**Sunjiao CHEN** is Deputy Director General of Project Appraisal Department I, China Development Bank, senior engineer of hydroelectric engineering. Mr CHEN has successively worked in the China Ministry of Electric Power National Energy Investment Company and China Development Bank since 1985. He has been engaged in the business of investment and financing of electric power projects for most of his career, specialising in the risk evaluation and credit management of electric power industry. Mr CHEN has taken charge of the loan appraisal of various nuclear power projects.



**Diane FARRELL** is the principal advisor to the Assistant Secretary for Global Markets on all matters concerning international economics, trade, investment and commercial policy programme and agreements with respect to Asia. She also oversees planning and execution of Commerce commercial diplomacy and export promotion strategies at United States Missions in Asia. Ms Farrell worked at the US India Business Council (USIBC). Ms Farrell served on the Board of Directors at the Export Import Bank of the United States (US Exim Bank). She was named a member of the White House Business Council. Before serving at US Exim Bank, Ms Farrell was elected as the First Selectwoman in Westport, Connecticut.



**Fabienne PEHUET**, after a few years in the French Diplomatic Service, began her career in Finance in the pharmaceutical industry with Eli Lilly in the United States. She then worked as a trader on the Financial Markets in Paris. In the Nuclear Energy business dates from the 1990s she joined COGEMA where she held management positions in Finance and Strategy. After AREVA was formed she joined FCI and served as SVP Audit. In 2003, she was appointed SVP Marketing of the AREVA Group. Since 2012, Fabienne Pehuét is helping Companies developing or refocusing their activities in the Energy, Industry and Infrastructure fields as NucAdvisor.

# Speakers

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**Jeremy ALLEN** is the Head of Investor Relations in the UK's Department of Energy and Climate Change and Deputy Director of the Department's Commercial Directorate. The team provides an investor relations service to companies in the energy sector and to the financial markets in order to increase understanding of and engagement with DECC's policies and programmes for key stakeholders. Jeremy has been working mostly on energy markets policy prior to the creation of the Commercial Team. He worked in the Department for Business, on sector support for industries such as automotive and electronics and on workforce development and skills policy.



**Edward KEE** is an expert on nuclear power economics. He is the CEO of Nuclear Economics Consulting Group (NECG) and an Affiliated Expert at NERA Economic Consulting. Mr Kee provides strategic and economic advice to companies and governments on nuclear power and electricity industry issues. He has testified as an expert witness in US and international legal and arbitration cases. A detailed CV is available at <http://www.nuclear-economics.com/biography/>.



**Christopher KAMINKER**, FRGS, is an economist in the Environment Directorate of the OECD in Paris. He manages an empirical policy and research project focused on the role of institutional investors in financing low-carbon and climate-resilient infrastructure investment. An economic geographer, his research interests focus on institutional investors and long-term investment in policy-driven markets, sustainable finance, mobilising the capital markets for infrastructure investment, and energy and climate finance policy. His latest analytical reports "Mapping Channels to Mobilise Institutional Investment in Sustainable Energy" and "Institutional Investors and Green Infrastructure Investments" were written for the G20 Finance Ministers and Central Bank Governors Meetings. His research has been featured in The Economist, Environmental Finance, Institutional Investor, Euromoney, Investment and Pensions Europe, Institutional Real Estate, and other media.

## Moderators

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**CHRIS GADOMSKI** is Lead Analyst, Nuclear, at Bloomberg New Energy Finance, the leading provider of research to investors in clean and carbon-free energy and carbon markets worldwide. Mr Gadomski directs the firm's nuclear energy research team in developing a robust methodology for forecasting global nuclear investment in new build, innovative technologies, operations and management, fuel cycle and decommissioning. Chris spent 25 years working with regional and multinational firms as well as global institutions including the United Nations Development Program, World Bank, US Department of Energy, and UNDP/Global Environment Facility on energy and environment projects.



**Ron CAMERON** is Nuclear Specialist Adviser, UK Department of Trade and Investment. He is a Director of his own company that provides consultancy to the UK government on increasing investment in nuclear new build. In this role, he works closely with the three major developers and China. Previously, Dr Cameron was Head of the Nuclear Development Division at the OECD Nuclear Energy Agency (NEA) and has held senior executive roles in Australia, including as Project Director for building the OPAL Research Reactor.



**Ahab ABDEL-AZIZ** is a partner and Global Director of Nuclear Power Generation at Gowling Lafleur Henderson LLP. A leader in the global nuclear sector for over 25 years, he advises on policy and legislative development, project development and finance, as well as dispute resolution. Mr Abdel-Aziz is the President of CNLO and a member of the Board of INLA. He is recognised as a top energy lawyer by multiple publications, including *Who's Who Legal: The International Who's Who of Energy Lawyers*.



### **Paul MURPHY**

Paul M. Murphy, Managing Director for Gowling WLG, has over twenty years of experience as a transactional attorney. He is a three-time selection to the *Who's Who Legal/Energy* between 2013-2015 and a member of the International Nuclear Law Association. Mr Murphy is recognised as an expert in the development and financing of nuclear power programmes by the International Atomic Energy Agency (IAEA), the OECD's Nuclear Energy Agency (NEA), the International Framework for Nuclear Energy Cooperation (IFNEC) and the US government.

# Notes

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# Notes

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