

Paul M. Murphy
Managing Director
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USA

Education:
Harvard Law School, J.D.
Princeton University, A.B.

Admissions:
New York
District of Columbia

Paul's practice focuses on multiple aspects of the nuclear industry – from commercial and policy matters, including international regulatory and treaty frameworks and issues regarding nuclear liability, to strategies for developing and financing nuclear power programs and the identification and mitigation of associated risks – representing developers/owners, lenders, investors, technology providers, and contractors on nuclear projects internationally. He is recognized as an expert in the development and financing of nuclear power programs by the International Atomic Energy Agency (IAEA), the OECD's Nuclear Energy Agency (NEA), the International Framework for Nuclear Energy Cooperation (IFNEC), and the U.S. Government.

Paul currently serves on the IAEA's Technical Cooperation Program team, which assists member states in developing civilian nuclear power programs. He is Board Member of the United Nuclear Industry Alliance. As of January 1, 2019, Paul will be an Affiliate of Nuclear Economics Consulting Group.

He has served as a designated expert, chairman, and author at several special meetings and for multiple working groups of the IAEA, primarily involving the development, financing, and structuring of nuclear power projects. He continues to work with the IAEA in a number of key areas, including a revision of the IAEA's Handbook on Nuclear Law and as lead author for a the IAEA report, entitled, "*Alternative Contracting and Ownership Practices for Nuclear Power Plants.*"

Paul is a five-time appointee to the U.S. Secretary of Commerce's Civilian Nuclear Trade Advisory Committee (CINTAC), and he previously chaired its Finance subcommittee. CINTAC is a nuclear advisory board for matters relating to the export and competitiveness of U.S. nuclear technology and services. Paul has also worked with the US Departments of Commerce, State, and Energy on matters relating to the development of nuclear power programs and the financing of nuclear power projects, as well as matters concerning nuclear cooperation agreements. He has also been heavily involved with the U.S. Nuclear Energy Institute and the U.S. Nuclear Infrastructure Council on issues relating to the development and financing of nuclear power projects, to include work on issues relating to small modular

reactors and advanced nuclear reactors. Paul has been invited twice by the U.S. Nuclear Regulatory Commission to make presentations before the NRC on issues related to the development and financing of nuclear power projects.

Paul is also a member of ASME's Technology Advisory Panel for Clean Energy. In addition, Paul served as the U.S. Government's sole representative on an NEA working group called "Financing of Nuclear Power Plants," acting as chairman for the working group. Paul also chaired the IAEA working group titled "Issues to Improve the Prospects of Financing Nuclear Power Projects." Paul has also worked with the Nuclear Energy Institute, the U.S. State Department, the US Mission to the OECD, and the Export-Import Bank of the United States on revisions to the OECD's Guidelines for the financing of nuclear power projects by Export Credit Agencies.

For eight years, Paul has served as a faculty member for the "Training Course on Nuclear Power Infrastructure Programs and Related Projects in Emerging Nuclear States," held on behalf of the U.S. State Department and the IAEA at the Argonne National Laboratory and attended by representatives of over 20 foreign governments. Paul has served as the lead instructor for the segments on financing and the bidding / evaluation process for nuclear power projects. In addition, in 2014, 2015, 2017, and 2018, Paul served as the lead organizer and a faculty member for the "Interregional Training Course on Legal and Financial Issues for a Decision in Countries Introducing or Expanding Nuclear Power," held on behalf of the U.S. State Department and the IAEA at the Argonne National Laboratory.

Some of Paul's work includes acting as counsel to the following clients:

- Advised multiple export credit agencies and potential commercial banks in a multi-unit financing for a nuclear power project (Barakah Nuclear Power Project / UAE).
- Advised K.A.CARE in the structuring of its nuclear holding company, which will be responsible for the development of a multi-unit, multi-site nuclear power program; advisory work included entity structuring, nuclear liability, procurement, program economics, financing, local industrial development, and foreign investment into the program. Additional work has included the review of the Kingdom's draft laws for nuclear liability and the establishment of the national nuclear regulatory authority (Saudi Arabian nuclear power program).
- Advising a multi-party, multi-national project company for the development, construction, financing, and operation of a four-unit nuclear power project. The scope of the representation includes advisory work in the following areas: entity structuring and corporate form, nuclear liability, project documentation, program economics, financing, tax structuring, assistance with feasibility study, competition clearances, regulatory advice, and government negotiations (Sinop Nuclear Power Project / Turkey).
- Advised Rosatom on project documentation for the four unit El-Dabaa Nuclear Power Project in Egypt.
- Advising Nucleoelectrica Argentina S.A. on the EPC Contract and Major Vendor Subcontract for the Atucha III nuclear power project in Argentina.

- Advised an export credit agency on the financing for one of the new build nuclear power projects in the United Kingdom.
- Advising multiple developers of small modular reactors and advanced reactors in the United States and Canada.
- Advising Canadian Nuclear Laboratories Ltd. on the operation, decommissioning, and management of spent fuel / nuclear waste for the Chalk River Laboratory (and related facilities under CNL's management) in Canada.
- Advised AECL on nuclear liability matters relating to the CANDU reactor design and licensing in respect thereof.
- Advised Ontario Power Generation on nuclear liability matters.
- Advised Rolls-Royce on nuclear liability matters.
- Advised Korea Hydro and Nuclear Power Co., Ltd. on decommissioning planning for Kori 1 (South Korea's first nuclear reactor to be decommissioned).
- Advised the Legislative Council and House of Assembly of the Parliament of South Australia on South Australia's possible development of an international repository for nuclear waste.
- Advised the U.S. Department of Energy and the International Framework for Nuclear Energy Cooperation on the feasibility of an international spent fuel repository.
- Advised Nuclear Risk Insurers Ltd. on matters relating to the development of insurance pools in a newcomer nuclear country.
- Advised Rosatom Overseas regarding its development, construction, and financing of a nuclear power project in Europe.
- Advised Atomstroyexport JSC regarding its construction of nuclear power projects (both current and future) in India.

In addition to his work in the nuclear sector, Paul's practice has focused on corporate law, with special emphasis on domestic and international transactions in the areas of project finance, project finance restructurings, project/infrastructure investment funds, equipment and facility leasing, leasing workouts, mergers & acquisitions, and private investment. Project finance work, primarily focused in the power industry, has included sponsor, lender, export credit agency, and multilateral representation. Leasing work has included debt, equity, credit support, and equity support representation, concerning transactions in the areas of power plants, aircraft, rail cars, water treatment, real estate, and telecommunications.

Paul's representations have included extensive work in the engineering and construction industry, where he has been heavily involved in the nuclear and fossil power sectors, both domestically and internationally. His project experience, both domestic and international,

includes nuclear (new build, steam generator replacement, nuclear operating plant services), coal (both new build and environmental retrofit), and gas-fired power projects, ranging from EPC contracting structures to technical support agreements and including major equipment purchase agreements and subcontracting. Recent projects have included work on solar power projects (CSP), IGCC and coal liquefaction plants, LNG facilities, pipelines, and PPP projects.

Prior to joining Gowling WLG, he was Special Counsel in the Washington, DC office of Milbank, Tweed, Hadley & McCloy LLP, where he was a member of the Global Project Finance group and led Milbank's nuclear practice. Prior to Milbank, he served as Senior Counsel for Bechtel Power Corporation, supporting both the Nuclear and Fossil business lines as a transactional attorney involved in bid evaluations, business development, proposal submittals, contract negotiations, procurement, and project execution.

Paul is a graduate of Princeton University's Woodrow Wilson School for Public and International Affairs and a graduate of Harvard Law School. Paul is also a member of the International Nuclear Law Association. He has been recognized in 2013, 2014, and 2015 in the publication, *Who's Who Legal: Energy*, and he was selected to author industry commentaries for all three issues. In its 2018 edition, Legal 500 Canada notes that: "*Paul Murphy is 'amply experienced' and 'very knowledgeable about nuclear power generation'.*"

PRIOR WORK HISTORY & EDUCATION

EXPERIENCE **GOWLING WLG**, Washington, DC
March 2016 – December 2018

Managing Director. Practice focused on multiple aspects of the nuclear industry – from legal and policy matters, including international regulatory and treaty frameworks and issues regarding nuclear liability, to strategies for creating viable nuclear power programs and the identification and mitigation of associated risks – representing developers/owners, investors, technology developers, and contractors on nuclear projects internationally.

MILBANK, TWEED, HADLEY & MCCLOY LLP, Washington, DC
February 2010 – February 2016

Special Counsel. Practice focused on multiple aspects of the nuclear industry – from legal and policy matters, including international regulatory and treaty frameworks and issues regarding nuclear liability, to strategies for creating viable nuclear power programs and the identification and mitigation of associated risks – representing developers/owners, investors, and contractors on nuclear projects internationally. Work included project-side support to Milbank's project finance transactions, representing both lenders and sponsors, with a particular emphasis on EPC contracting, involving projects in the thermal power, renewable power, PPP/infrastructure, natural gas, and process technology industries.

BECHTEL POWER CORPORATION, Frederick, MD
November 2004 – February 2010

Senior Counsel. Practice focused on providing all legal support to the Nuclear and Fossil business lines, including bid evaluation, business development, proposal submittal, contract negotiation, procurement, and project execution. Project experience, both domestic and international, included nuclear (new build, steam generator replacement, NOPS), coal, and gas-fired power projects. Work included special responsibility for policy-related nuclear activities and legislative efforts. Responsibilities included working with Bechtel's finance and government contracting business lines, as well as coordination with Bechtel's policy office in Washington, DC.

WHITE & CASE LLP, New York, NY
January 2000 – October 2004

Senior Associate. Practice focused on corporate law, with special emphasis on domestic and international transactions in the areas of project finance, project finance restructurings, project/infrastructure investment funds, equipment and facility leasing, leasing workouts, mergers & acquisitions, and private investment. Project finance work, primarily focused in the power industry, included sponsor, lender, export credit agency, and multilateral representation. Leasing work included debt, equity, credit support, and equity support representation, concerning transactions in the areas of power plants, aircraft, rail cars, water treatment, real estate, and telecommunications.

HEADQUARTERS, U.S. ARMY CORPS OF ENGINEERS, Washington, D.C.
January 1996 - January 2000

Honors Program, Office of the Chief Counsel (*Honors Program Administrator, Nov. 1996 - Jan. 2000*)

Captain, U.S. Army Judge Advocate General's Corps

Assistant Counsel for International and Fiscal Law. Drafted and negotiated international and interagency agreements between the Corps and foreign governments, international organizations, federal agencies, and state and local governments in support of the Corps' Support For Others, Foreign Military Sales, and Civil Works programs. Provided advice to the Corps, other federal agencies, and Congress on matters relating to international trade, public international law, fiscal law, and military construction. Drafted and reviewed legislation in support of the Corps' international, military construction, and civil works programs. Reviewed

programs and policies for compliance with Federal appropriations laws. Served as the chief military representative of the Honors Program.

CREATIVE SPORTS TECHNOLOGIES, INC., Woodbridge, VA

February 1996 – June 2002

Member and Secretary of the Board of Directors (May 1998 – June 2002)

Special Advisor to President (February 1996 – June 2002). Provided legal expertise relating to corporate structure, corporate control, equity and debt financing, product development, and marketing in support of the company's current and future product lines.

MAYER, BROWN & PLATT, New York, NY

August 1995 - January 1996, Summer 1994

Associate. Conducted research, drafted, and negotiated financing and other legal documents in the areas of general corporate law and finance, focusing in the areas of mergers & acquisitions, venture capital financing, and project finance. Work as a summer associate also included securities law and securitization.

EDUCATION HARVARD LAW SCHOOL, J.D., June 1995

Activities: Research Assistant, European Law Research Center (1992-95)
European Law Association, President (1993-95), Vice President (1992-93)

Legal Writing: *Institutional Control in College Football* (Third Year Paper)
Intervention in the Post-Cold War Era and its Impact on US Foreign Policy

PRINCETON UNIVERSITY, A.B. in The Woodrow Wilson School for Public and International Affairs (International Economic Policy) and completion of the Pre-Medical program, June 1992

Honors: *cum laude*

Army ROTC: Distinguished Military Graduate; Four-Year Scholarship
Winner: Best in Platoon (top 10% of national class) at ROTC Advanced Camp

Thesis: *The Rise of the European Community and its Impact on US Foreign Policy*

Activities: Research Assistant - The Andrew W. Mellon Foundation (Fall 1989 - Summer 1992)
Army ROTC
Kappa Alpha Order, Treasurer
Princeton Lightweight Varsity Football

GEORGETOWN UNIVERSITY, ICPEs certificate, July 1989

Completed the Institute on Comparative Political and Economic Systems summer program.

BAR AND COURT ADMISSIONS New York; Washington, DC

References Available Upon Request

NUCLEAR ADVISORY, TEACHING, WRITING, AND SPEAKING

Advisory

CINTAC

2011 - 2018

Five-time appointee to the US Secretary of Commerce's Civilian Nuclear Trade Advisory Committee, including as prior chairperson of the Finance Subcommittee and chairperson on the International Competitiveness & Supply Chain Competitiveness Subcommittee.

UK Parliament

2018

External peer reviewer of UK Parliamentary Office of Science and Technology's report on Small Modular Nuclear Reactors.

International Atomic Energy Agency

2018

Contributor to "Financing and Managing Nuclear Energy Risks: The UK Model," International Atomic Energy Agency.

IFNEC

2012 – 2016

Assisted the International Framework for Nuclear Energy Cooperation with financing, international spent fuel repository, and small modular reactor initiatives. Designated / invited expert participant in London (2012), Abu Dhabi (2013), and Paris (2015) meetings on financing; special presenter in Abu Dhabi (2013), Bucharest (2014), Jordan (2014), Seoul (2014), and Paris (2016).

West African Nuclear Energy Group

2015

Assisted with the planning and development, by the West African Nuclear Energy Group, comprised of seven countries, regarding the possibility of a regional nuclear power project for the region.

Teaching & Seminars

Argonne National Laboratory

2018

"Inter-Regional Training Course on Financing NPPs, held at the Argonne National Laboratory on behalf of the US State Department and the IAEA. Mr. Murphy taught courses on Project Diligence and Reputational Risk, Country Risk Factors,

Intergovernmental and Government-to-Government Financing, and Contracting and Ownership Structures.

“IAEA Interregional Training Course on Integrated Management Systems and Developing of the Safety Culture”, held at the Argonne National Laboratory on behalf of the US State Department and the IAEA. Mr. Murphy taught courses on EPC Contracting Structures & Pricing Models for NPP Development and on Key Terms in EPC Contracts.

“Training Course to Develop Member State Program Competencies Needed for a Nuclear Power Program”, held at the Argonne National Laboratory on behalf of the US State Department and the IAEA. Mr. Murphy taught a course on *Development, Procurement, Contracting, and Ownership Considerations for NPP Development* and on *Key Terms in EPC Contracts*.

2017

“Interregional Training Course on Financing NPPs”, held at the Argonne National Laboratory on behalf of the US State Department and the IAEA. Working with representatives from Argonne, Mr. Murphy organized and designed the course, which was structured as an advanced financing curriculum. Mr. Murphy taught segments on Project Diligence by Financing Entities, Contracting and Ownership Structures, Alternative Contracting and Ownership Models, Country Risk Factors, and Reputational Risk. Attendees were from foreign governments that are interested in developing nuclear power programs, with individuals having responsibilities.

“Interregional Training Course on Management Systems and the Development of Organizational Structure for Safety”, held at Argonne National Laboratory on behalf of the US State Department and the IAEA. Mr. Murphy taught a course on *Development, Procurement, Contracting, and Ownership Considerations for NPP Development*.

2016

“Train the Trainer” Workshop for Embarking Countries in Phase I of the Milestones Approach, held at Argonne National Laboratory on behalf of the US State Department and the IAEA. Mr. Murphy taught two sessions on Financing and on Contracting and Ownership Structures.

“Building Capacity for the Implementation of a Nuclear Power Programme by Developing Human Resources, Institutional Capacity and the Legal and Regulatory Framework”, held at Argonne National Laboratory on behalf of the US State Department and the IAEA, as a special training program for a senior delegation from Kenya. Mr. Murphy taught a segment entitled, “Basic Financing Challenges, Considerations, and Structures for NPPs”.

2009 – 2015

“Training Course on Nuclear Power Infrastructure Programs and Related Projects in Emerging Nuclear States”, held at the Argonne National Laboratory on behalf of the US State Department and the IAEA. For seven years, Mr. Murphy has been the lead instructor for the segments on financing nuclear power projects and the bidding / evaluation process for nuclear power projects. The two week course is attended by representatives of over twenty foreign governments that are interested in developing nuclear power programs.

2014 – 2015

“Interregional Training Course on Financial Issues for a Decision in Countries Introducing or Expanding Nuclear Power”, held at the Argonne National Laboratory on behalf of the US State Department and the IAEA. Working with representatives from Argonne, Mr. Murphy organized and designed the course. Mr. Murphy taught segments on Reputational Risk Analysis, Project Diligence by Financing Entities, Country Risk Factors, and Contracting Structures. Year 2 focused even more on financing matters. Attendees were from foreign governments that are interested in developing nuclear power programs, with individuals having financing and/or planning responsibilities.

2015

“Nuclear Energy Information Workshop”, held at Argonne National Laboratory on behalf of the US State Department and the IAEA. Mr. Murphy taught segments on Reputational Risk Analysis and on Contracting and Ownership Structures for NPP Development.

International Atomic Energy Agency

2018

“IAEA Workshop on Funding, Risk Allocation, and Economic Issues for NPPs”, held in Astana, Kazakhstan for the Government of Kazakhstan. Mr. Murphy delivered five presentations on Contracting Structures, Nuclear Financing Challenges, Financing Structures, Government-to-Government and Intergovernmental Agreements, and Country Case Studies on NPP development.

“IAEA Technical Mission to Turkey: Contracting and Risk Allocation”, held in Ankara, Turkey for the Turkish Government. Mr. Murphy delivered three presentation on Financing Consideration, EPC Contract Key Terms, and EPC Contracting Structures.

2016

“IAEA Technical Meeting on Financial Modeling”, held in Vienna, Austria. Mr. Murphy delivered presentations on Nuclear Financing Challenges, Nuclear Financing Structures, and Key Global Trends in Financing.

2015

“IAEA Expert Mission on Economic and Environmental Aspects of Nuclear Energy: Issues of Relevance in the European Region”, held in Skopje, FYR Macedonia for the FYR Macedonian Government. Mr. Murphy five delivered presentations on Financing Strategies & Models for NPPs, Contracting Structures, Reputational Risk Analysis, Strategic Partnerships, and Project Diligence by Lenders.

“IAEA Expert Mission on Financial Risk Management in Nuclear Power Projects”, held in Cairo, Egypt for the Egyptian Government. Mr. Murphy developed course materials on the topics of Country Risk Factors, Reputational Risk Analysis, Sources of Financing, and Working with Commercial Banks & Export Credit Agencies. A colleague from Milbank presented the materials on Mr. Murphy’s behalf.

2014

“IAEA Workshop on NPP Contract Management”, held in Hanoi, Vietnam for the Vietnamese Government. Mr. Murphy provided a presentation, delivered by IAEA staff, on NPP Financing and EPC Contracting.

“IAEA Technical Meeting on Becoming a Knowledgeable Customer”, held in Obninsk, Russia. Mr. Murphy presented courses that covered Contracting and Ownership Structures and Reputational Risk Analysis.

2010

“IAEA African Regional Training Workshop”, held in Tripoli, Libya. Mr. Murphy presented six courses that covered Financing and Risk Management.

National Defense University / Dwight D. Eisenhower School for National Security and Resource Strategy

2018

“Vacating the Title Belt: The American Failure to Respond to the Emergence of the Russians and the Chinese as the New Global Leaders in the Civilian Nuclear Power Industry” – presentation to the Energy Industry Study Class (Washington, DC).

West African Group on Regional Nuclear Power Development

2015

In July 2015, the President of Niger convened a meeting in Niamey, Niger of eight West African nations to discuss the possibility of developing a regional nuclear power project. Mr. Murphy delivered four presentations on Considerations for Regional NPP Development, Reputational Risk Analysis, Nuclear Liability, and Lessons Learned from Regional Infrastructure Projects.

Texas A&M University / Nuclear Power Institute

2018

Texas A&M / NPI in coordination with the International Atomic Energy Agency) hosted a multi-week training course (*International Nuclear Executive Leadership Seminar*) for senior officials from countries interested in starting nuclear power programs. Mr. Murphy delivered five presentations on Contracting Structures, Nuclear Financing Challenges, Financing Structures, Nuclear Liability, and Reputational Risk.

Texas A&M / NPI hosted a senior delegation from Uganda for a week-long training course on NPP development. Mr. Murphy delivered four presentations on Contracting Structures, Nuclear Financing Challenges, Country Risk Factors, and Reputational Risk.

2017

Texas A&M / NPI (in coordination with the International Atomic Energy Agency) hosted a four week training course (*Interregional Group Fellowship on the Comprehensive Introduction to Nuclear Power*) for representatives from countries interested in starting nuclear power programs. Mr. Murphy delivered five presentations on Financing Challenges and Structures, Reputational Risk Analysis, Nuclear Liability, Country Risk Factors, and Contracting and Ownership Structures.

2016

Texas A&M / NPI (in coordination with the International Atomic Energy Agency) hosted a four week training course (*Interregional Group Fellowship on the Comprehensive Introduction to Nuclear Power*) for representatives from countries interested in starting nuclear power programs. Mr. Murphy delivered five presentations on Financing Challenges and Structures, Reputational Risk Analysis, Nuclear Liability, Country Risk Factors, and Contracting and Ownership Structures.

2015

Texas A&M / NPI (in coordination with the International Atomic Energy Agency) hosted a four week training course (*Interregional Group Fellowship on the Comprehensive Introduction to Nuclear Power*) for representatives from countries interested in starting nuclear power programs. Mr. Murphy delivered five presentations on Financing Challenges and Structures, Reputational Risk Analysis, Nuclear Liability, Country Risk Factors, and Contracting and Ownership Structures.

Gowling WLG

2017

Gowling WLG hosted a seminar at the Schulich Business School / York University for attendees from The Export-Import Bank of China. Mr. Murphy provided an overview of Project Finance.

2016

Internal training for Nuclear Practice Group, presenting on *Financing Structures* as part of a session on the global nuclear industry.

Canadian Nuclear Law Organization (hosted by Gowlings)

2015

“*Financing Structures*” presentation given by Mr. Murphy at the Canadian Nuclear Law Organization’s 2nd Annual Nuclear Law Course.

European Nuclear Power Briefing

2016

“*Gowling WLG Special Finance Session for 4th European Nuclear Power Briefing 2016*” – a special seminar organized by Mr. Murphy (and hosted by Gowling WLG for conference attendees) on NPP financing matters. Mr. Murphy taught segments on SMR and Advance Reactor Projects and Reputational Risk in NPP Financing

Asia Nuclear Business Platform

2015

Milbank organized a workshop (*Considerations on the Development of a Successful Nuclear Power Program*) for attendees of the Asia Nuclear Business Platform (Hong Kong). Mr. Murphy presented on Innovative Financing Structures and Reputational Risk Analysis.

Rosatom

2014

Milbank provided a seminar for Rosatom in Moscow, entitled, “*Considerations on the Development and Financing of Nuclear Power Projects in International Markets*”. Mr. Murphy presented on the topics of Contracting & Ownership Structures, Reputational Risk Analysis, and the UK’s Electricity Market Structure & the Case of the UK’s Contract for Difference Approach.

2012

Milbank provided a seminar for Rosatom in Moscow, entitled, “*International and Regional Considerations for NPP Development*”. Mr. Murphy presented on the topics of Global Trends and Considerations for Developing and Financing Nuclear Power Projects and International Project Structuring Considerations.

Sinosure

2014

Milbank provided a seminar for Sinosure (and its invited clients) in Beijing, entitled, “*Doing Business in the Global Nuclear Marketplace: Key Considerations for Successful Projects*”. Mr. Murphy presented on the topics of Nuclear Liability, Reputational Risk Analysis, and Financing & Contracting Structures.

Indian Nuclear Power Program

2012

Milbank organized a seminar in Mumbai (as part of the USIBC/NEI Nuclear Trade Mission to India) on the financing of prospective US nuclear power projects in India. Mr. Murphy presented on the topic of Global Challenges and Trends for Financing NPPs.

2012

Milbank organized a seminar in Paris for the French banking community on the financing of prospective French nuclear power projects in India. Mr. Murphy presented on International Regulatory Frameworks and Liability Issues for Nuclear Power Projects.

International Contractors Association of Korea

2010

Milbank organized a seminar in Seoul for the International Contractors Association of Korea. Mr. Murphy presented on the topic of Regulatory Frameworks and Prospects for Nuclear Power Projects.

Japan Institute for Overseas Investment

2010

Milbank organized a seminar in Tokyo, hosted by JBIC, for the JOI. Mr. Murphy presented on the topics of International Legal Regimes & Risk Management Considerations for Nuclear Power Projects and on Lessons Learned from the Korean Procurement Victory in the UAE.

Working Groups & Technical Meetings

IAEA

Serving on the working group that is drafting the IAEA Office of Legal Affairs’ Volume 3 of the Handbook on Nuclear Law.

Served as the chairman, and as the lead writer, for “*Alternative Contracting and Ownership Policies for Nuclear Power Plants*” (released 2014).

Served as a key member of the IAEA’s consultancy meetings on “*Issues for Improving Prospects for Financing Nuclear Power Projects*”, which

focused on identifying and analyzing all key elements integral to the success of a nuclear power program. Chaired all three meetings of the 2008 working group, whose final report was issued in 2009, served as a lead report editor, and drafted the appendices to the conference's final report, covering the areas of nuclear liability, nonproliferation, insurance, and finance.

In 2009, served on an IAEA working group, entitled: "*Invitation and Evaluation of Bids for Nuclear Power Plants*".

At the IAEA Technical Meeting/Workshop on "*Milestones for Nuclear Power Infrastructure Development*" (November 2007), a Member State-level workshop that was sponsored by the governments of the United States, Canada, China, France, India, Japan, Republic of Korea, and Russia, chaired the two-day finance segment of the workshop.

In 2007, participated on the panel of international experts who served on the IAEA's working group that focused on "*Innovative Financing for Power Plants in Developing Countries*." The final paper, which was reviewed by Mr. Murphy and other select members of the working group, was presented at the IAEA's 2008 Annual General Conference in September at its headquarters in Vienna, Austria.

NEA

Served, at the invitation of the US Government as its sole representative, on a working group of OECD's Nuclear Energy Agency on "*Financing of Nuclear Power Plants*", and was selected by his colleagues in the group to serve as the chairman (2008-09; report released in 2009).

Writing & Interviews

2018

Conversation on Nuclear Financing and Global Trends – interview by Alan Ahn of Global America Business Institute.

Titans of Nuclear podcast – interview by Bret Kugelmass.

Country risk analysis for investment decisions and corporate strategy – two part interview by Paul Murphy of Michael Samis (EY) and John Seddon (Control Risks).

Future Climate & Energy Strategy – interview by Paul Murphy of Michael Shellenberger of Environmental Progress.

The U.S. BUILD Act: A new chapter in international development finance? (with Mark McAuley) – Gowling WLG article.

The Trump Infrastructure Plan: The Future for U.S. Infrastructure? (with Evan Atwood) – Gowling WLG article.

2017

The Future of the nuclear sector in Canada: Industry and government in unison once again (with Magdalena Hanebach and Joseph McDonald) – Gowling WLG article.

The Swiss Auction Challenge system: An efficient solution for developing and delivering challenging infrastructure projects worldwide (with Alberto Jaramillo / Falja Trading Ltd. and David Isern / Gowling WLG) – Gowling WLG article

Turning the page on Lavo Jato: Brazil's new market-based approach to infrastructure – Gowling WLG article.

2016

Argentina shows strong potential for renewable energy investment opportunities (with France Tenaille and Thomas Timmins) – Gowling WLG article.

2015

Implementation of P5 +1 and Iran Definitive Nuclear Agreement (with Dara Panahy and Bijan Ganji) – Milbank Client Alert.

The Visaginas Nuclear Power Project: Energy Security and the Long-Term View (with Melissa Hersh) – Global Risks Insights.

The Increasing Importance of Energy Security in an Unpredictable World – Who's Who Energy.

Nuclear Power: Finding a Low Carbon Role in Challenging Energy Markets – Milbank's Projects Plus.

Energy Security in an Unpredictable World: Making the Case Against State Aid Limitations in Electricity Generation – chapter as part of a collection on “Delivering Energy Policy in the EU and US: A Multi-Disciplinary Reader” published by Edinburgh University Press in 2015.

The U.S. Energy Sector: Structure, Policy, and Recent Developments (with Edward Kee and Lindsay Hall) – chapter as part of a collection on “Energy Law and Energy Infrastructure Development for a Low-Carbon World 2015-2025” published by Cambridge University Press in late 2015 / early 2016.

2014

Financing Nuclear Power Projects – chapter in *International Project Finance: Law and Practice* (Second Edition – Oxford University Press).

Reputational Risk Considerations in the Cross-Border Financing of Nuclear Power Projects – Who's Who Energy.

2013

Nuclear New Build in the UK: Can They Work It Out? (with Gilly Hutchinson) – Milbank Projects Plus.

The Equator Principles: How Will The Revisions Impact You? (with Matthew Ahrens) – Milbank Client Alert.

Saudi Arabia Seeking 54 Gigawatts of Renewable Power – Milbank Client Alert.

2012

Assessing the Impact of Fukushima on the Nuclear Marketplace – advance paper for 2012 nuclear power conference in Kuala Lumpur.

U.S. Army Corps of Engineers Solicits \$7 Billion of New Renewable Energy – Milbank Client Alert.

2011

Assessing the Impact of Fukushima on the Nuclear Marketplace – Milbank's Projects Plus.

Fracking and the Future of Shale Gas – Milbank's Projects Plus.

2010

The Impact of Constellation's Recent Decision Concerning the Calvert Cliffs 3 Nuclear Power Project – Milbank Client Alert.

Speaking

Developing and Financing NPPs: Thoughts on Reputational Risk (presentation for International Nuclear Law Association Nuclear Inter Jura Congress / Abu Dhabi, UAE – November 2018)

The Benefits of Multi-Flagging Delivery of an International Nuclear Power Project (presentation for panel discussion on multinational nuclear supplier partnerships within the OECD, hosted by The Heritage Foundation, the Global America Business Institute, and the Sasakawa Peace Foundation USA / Washington, DC – October 2018).

Have We Vacated the Title Belt?: Lessons Learned from the UAE and Applications for Current Trends in the Global Nuclear Industry (presentation to United Nuclear Industry Alliance & Export Strategy Team / Washington, DC – September 2018).

Saudi Arabia's Nuclear Power Program: Geopolitical and Commercial Considerations for Industry and Government (U.S.-South Korea Workshop on Nuclear Power, Security and Nonproliferation, hosted by the Hudson Institute, the Partnership for Global Security, and the Global America Business Institute / Washington, DC – September 2018).

Financing Considerations for SMR Development & Deployment (SMR Roadmap: Workshop on Small Modular Reactors for Heavy Industry, hosted by NRCan / Calgary, Canada – June 2018).

High Stakes Nuclear Development in the Middle East: The Role of the U.S. and its Allies and Commercial Competitors and Partners (Presentation for “Nuclear Geopolitics in an Evolving Environment – Global Responsibility, Influence, and Innovation in the 21st Century”, sponsored by the Partnership for Global Security and the Carnegie Endowment for International Peace / Washington, DC – May 2018).

The Evolving Global Nuclear Landscape (ESIL Nuclear Governance Project Conference Series – Evolving Global Nuclear Energy Landscape: Emerging Challenges and Opportunities, hosted by the National University of Singapore / Singapore - March 2018).

Nuclear Power in Canada: Recent Developments and Opportunities (International SMR & Advanced Reactor Summit 2018 / Atlanta, GA – March 2018).

The View from North America: Key Local & Global Trends in the Nuclear Industry (Windsor Energy Group Annual Meeting / Windsor Castle, UK – March 2018).

Why Were the Koreans Successful in the UAE? And What Impact Does This Have on the Global Nuclear Business? (Presentation to US Government Inter-agency Working Group on Civilian Nuclear Power / US Department of Commerce, Washington, DC – February 2018).

Developing and Financing Major Infrastructure Projects (CERBA Eurasia Construction Conference / Toronto, Canada – November 2017).

The Art of the Global Deal (Nuclear Infrastructure Council Special Summit II on Global Nuclear Energy Markets / Washington, DC – June 2017).

Key Global Trends in the Nuclear Industry & the Role of the United States in a Changing Market (Windsor Energy Group Annual Meeting / Windsor Castle, UK – March 2017).

USA Assessment in the Trump Era (Windsor Energy Group Annual Meeting / Windsor Castle, UK – March 2017).

International Considerations for Developing and Financing SMR and Advanced Reactor Projects (Advanced Reactors Technical Summit IV & Technology Trailblazers Showcase / Argonne National Laboratory – February 2017).

International Considerations for Developing and Financing SMR and Advanced Reactor Projects (4th International Technical Meeting on Small Reactors / Ottawa, Canada – November 2016).

Project Diligence by Financing Entities (4th European Nuclear Power Briefing 2016 / London, UK – October 2016).

The Art of the Global Deal – Basic Financing Challenges, Considerations, and Structures for NPPs” (Nuclear Infrastructure Council Special Summit on Global Nuclear Energy Markets / Washington, DC – July 2016).

Basic Financing Challenges, Considerations, and Structures for NPPs (INLA UK Nuclear Law Foundation Course / London, UK – June 2016).

International Considerations for Developing and Financing SMR & Advanced Reactor Projects (CNL Advanced Reactor Deployment Forum / Ottawa, Canada – May 2016).

Basic Financing Challenges, Considerations, and Structures for NPP Financing (Global Nuclear Energy Financing Workshop for the US Government, hosted by the US Department of Commerce / Washington, DC – March 2016).

Observations on Nuclear Energy Policy / Challenges and Nuclear Developments in the Middle East (Windsor Energy Group Annual Meeting / Windsor Castle, UK – March 2016).

Energizing Nuclear Security: A Sensible Summit Proposal (Panelist for the release of the Stimson Center report, *Nuclear Energy: Securing the Future – A Case for Voluntary Consensus Standards*, hosted by The Stimson Center / Washington, DC – January 2016).

Key Global Trends and the Impact on NPP Development and Financing (Gowlings – Organization of Canadian Nuclear Industries Nuclear Supply Chain Symposium: *Succeeding in the Nuclear Supply Chain: Do You Have What It Takes* / Toronto, Canada – November 2015).

Report to the IFNEC Executive Committee on Financing (IFNEC Executive Committee Meeting / Sinaia, Romania – October 2015).

Considerations on Nuclear Liability and Financing for India’s Nuclear Power Program (Johns Hopkins’ School of Advanced International Studies – September 2015).

Innovative Financing Structures for Nuclear Power Projects (Asia Nuclear Business Platform / Hong Kong – April 2015).

Considerations on Energy Security in the Baltic Region (Lithuanian Ministry of Energy – JAIF (Japan) International Cooperation Center Energy Conference on “Energy Security and Economic Effects of Nuclear Energy Development” / Vilnius – March 2015).

Key Considerations for NPP Financing (IAEA Technical Meeting on Topical Issues in the Development of Nuclear Power Infrastructure / Vienna – February 2015).

Perspectives on NPP Financing (U.S. Nuclear Regulatory Commission: Briefing on Foreign Ownership, Control, and Domination / Bethesda, MD – January 2015).

Developing and Financing Nuclear Power Projects (Presentation for the Woodrow Wilson School’s Program on Science and Global Security / Princeton University – November 2014).

Financing Nuclear Power Projects – New and Emerging Models (IFNEC Steering Group and Ministerial Meetings / Seoul – October 2014).

Developing and Financing Nuclear Power Projects (OECD Meeting on Nuclear Power Financing / Paris – June 2014; delivered at request of US and Japanese delegations).

Developing and Financing SMR Projects (IFNEC Small Modular Reactor Workshop: Practical Deployment Issues and Approaches / Dead Sea, Jordan – June 2014).

The Decision-Making Process (IFNEC Steering Group Meeting / Bucharest – May 2014).

Types of Financing Structures (IFNEC Steering Group Meeting / Bucharest – May 2014).

Financing an NPP: Foundation Knowledge (IFNEC Steering Group Meeting / Bucharest – May 2014).

Developing and Financing SMR Projects (ASME Webinar “Small Modular Reactors: Nuclear’s Big Opportunity in a Little Package” / Washington, DC – March 2014).

Developing and Financing SMR Projects (Congressional Briefing / Washington, DC – March 2014).

Developing and Financing NPPs: Current Trends and Considerations (IEA / NEA Technology Roadmap Update – Asia Stakeholder Engagement Workshop at Asia Nuclear Business Platform / Hong Kong – February 2014).

Developing and Financing NPPs: Thoughts on Reputational Risk (Global America Business Institute / Washington, DC – January 2014).

Considerations and Trends in the Development and Financing of Nuclear Power Projects (IAEA Consultancy Meeting on the Financing of Nuclear New Build / Vienna – December 2013; delivered by John Dewar).

The Influence of Nuclear Safety and Electricity Market Regulation on the Financing of an NPP (IFNEC Finance, Regulatory, and Energy Planning Authority Workshop / Abu Dhabi – October 2013).

Financing an NPP: Thoughts on Reputational Risk (Nuclear Energy Agency Workshop on The Role of Electricity Price Stability and Long-Term Financing for Nuclear New Build / Paris – September 2013).

Considerations from a Financing Perspective (U.S. Nuclear Regulatory Commission Meeting on Foreign Ownership Rules / Bethesda, MD – June 2013).

Financing an NPP in Existing and Emerging Markets (Asia Nuclear Business Platform / Hong Kong – February 2013).

Preparing to Support Future International Projects (EUCI 4th Annual Nuclear Export Control Symposium / Washington, DC – February 2013).

Considerations on the Financing of Merchant Nuclear Power Projects in the United States (U.S. Nuclear Regulatory Commission Meeting on Financial Qualifications for Merchant Power Plant Combined License Applicants / Bethesda, MD – October 2012).

Financing Structures for Nuclear Power Projects (Turkey – International Nuclear Technology Transfer Congress / Istanbul – September 2012).

The Challenges of Financing Nuclear Power Projects (Turkey – International Nuclear Technology Transfer Congress / Istanbul – September 2012; together with Charles Dunn from Kinstellar).

Meeting the Challenges of Developing and Financing Nuclear Power Projects (Forum for Nuclear Cooperation in Asia / Bangkok – July 2012).

Global and Regional Considerations in the Structuring and Financing of Nuclear Power Projects (Platts European Nuclear Power Conference / London – June 2012; together with Kamil Blazek from Kinstellar).

Challenges for Financing Nuclear Power Plants (Center for Strategic & International Studies – Forum on “Energy Loan Guarantees: Risk or Rewards?” / Washington, DC – March 2012).

International Considerations for SMRs (NEI / DOE Small Reactor Forum / Washington, DC – February 2012).

The Impact of Fukushima on How We Think About Nuclear Liability: Have the Japanese Government’s Actions Forced us to Rethink Nuclear Liability Models? (Nuclear Power Asia / Kuala Lumpur – January 2012).

Developing Strategies to Address Financing Challenges for Nuclear Power Plant Projects (Presentation to NEI Suppliers Advisory Committee / Washington, DC – January 2012).

Meeting the Challenges for Developing and Financing Nuclear Power Projects (Nuclear Power Europe / Milan – June 2011; presentation delivered by John Dewar).

Legal Considerations for Alternative Contracting and Ownership (IAEA Technical Meeting on Alternative Contracting and Ownership Practices for Nuclear Power Plants / Vienna – March 2011).

Recent Developments on Alternative Contracting and Ownership for Nuclear Power Plants (IAEA Technical Meeting on Alternative Contracting and Ownership Practices for Nuclear Power Plants / Vienna – March 2011).

Developing Strategies to Address Financing Challenges for Nuclear Power Projects (Nuclear Power Asia 2011 / Hanoi – January 2011).

Financing and Investment Options for Developing Nuclear Power Capacity (Nuclear Power Forum Philippines / Manila – December 2010).

Opening Remarks (Nuclear Energy Asia Conference / Hong Kong – December 2010)

International Considerations for SMRs (Nuclear Energy Asia Conference / Hong Kong – December 2010).

EPC Contracting & Nuclear Project Development: Considerations for Completion Risk and the International Supply Chain (Key Bank Capital Markets Nuclear Summit / Washington, DC – August 2010).

Challenges and Opportunities for Nuclear Power Development in the United States (Key Bank Capital Markets Nuclear Summit / Washington, DC – August 2010).

International Considerations for SMRs (EUCI Small & Modular Nuclear Reactor Systems Symposium / Arlington, VA – July 2010).

The International Supply Chain: Managing Risks in a Constrained Resource Environment (6th Annual China Nuclear Energy Congress / Beijing - May 2010).

Identifying and Managing the Risks Associated with Nuclear Power Projects (Nuclear Power Asia / Kuala Lumpur – January 2010).

Meeting the Challenges for Developing and Financing a Nuclear Power Project (Nuclear Construction Summit / Washington, DC – October 2009).

Experiences with International Nuclear Procurements (IAEA Technical Meeting on Invitation and Evaluation of Bids for Nuclear Power Plants / Vienna – June 2009).

Introductory Remarks / Panel on Financing of Nuclear Power Plants (US DOE / DOE Nuclear Energy Summit / Washington, DC – October 2008).

Financing Nuclear Power Development (U.S. Energy Association – presentation to Armenian Delegation / Washington, DC – August 2008).

Financing of Nuclear Power Projects (Presentation to U.S. Government Interagency Working Group / Washington, DC – July 2008).

Financing Nuclear Power Development (U.S. Department of Energy – presentation to US – Kazakhstan Energy Partnership: Working Group on Commercial Nuclear Technologies / Washington, DC – March 2008).

Thoughts on the Financing of Nuclear Power Plants (Nuclear Energy Agency Working Group Meeting on NPP Financing / Paris – January 2008).

Financing of Nuclear Power Projects (Presentation to U.S. Government Interagency Working Group / Washington, DC – December 2007).

Opening Remarks (IAEA Workshop on Milestones for Nuclear Power Infrastructure Development / Vienna – November 2007).

Other Work

Contractors International Group on Nuclear Liability (CIGNL): During Mr. Murphy's time at Bechtel Power Corporation, he served for several years as Bechtel's primary representative to CIGNL, also attending the IAEA's General Conference twice.

Mr. Murphy has also run a number of panels at conferences, to include Nuclear Power Asia, Asia Nuclear Business Platform, the ASME Small Modular Reactor Conference, the Platts Nuclear Power Conference (Washington, DC), the Saudi Sustainable Energy Symposium, and for the Nuclear Energy Agency, the International Atomic Energy Agency, and the International Framework for Nuclear Energy Cooperation.

Paul does *pro bono* work for the Nuclear Alternative Project and for the International Youth Nuclear Congress.