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U.S. Nuclear Regulatory Commission Meeting on Foreign Ownership Rules

Considerations from a Financing Perspective

Paul M. Murphy Milbank, Tweed, Hadley & McCloy LLP Washington, DC

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Overview of Presentation

- Background on Financing NPPs
- Background on the Key Rules
- What are the Challenges under the Current Legal/Regulatory Regime?
- Possible Considerations
- Some Specific Thoughts on Financing

Nuclear Financing Concerns

- Primary Concerns for Financiers
 - Long development / construction periods
 - High capital costs
 - Regulatory uncertainty
 - Reputational risk
 - Human resources
 - First-of-a-kind risk
 - Safety culture
 - Operational success
 - Supply chain
 - Sustainability of government commitment
 - Fuel cycle concerns
 - Environmental responsibility
 - Commitment to international regimes and standards

- The Foreign Ownership Rules implicate two of these critical issues:
 - 1. The challenges associated with financing nuclear power plants
 - 2. Regulatory Oversight

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So what do financiers want to see in an NPP?

Lenders like certainty

- On time, on budget
- Have all the project risks been properly identified and allocated?
- Proven technology
- Sustained government commitment
- Clear and predictable regulatory process
- Dedicated revenue stream (<u>e.g.</u>, long term PPA with a creditworthy entity for the term of debt) <u>OR</u> strong corporate or government credit
- Investors are much like banks, plus
 - Less appetite for development period risk
 - Need stronger financials to support equity rate of return (higher) after debt service

- Challenges for nuclear power projects in the United States
 - Track record does not support on time / on budget considerations
 - Nuclear power is a "price taker", not a "price setter"
 - With natural gas prices at historical lows, it is difficult for a new NPP to compete in a merchant environment
 - Regulatory delays have been a major source of disruption for NPPs



What is the issue?

- As a general rule, a foreign entity may not have a controlling interest in the operation of a US nuclear power plant. Specifically, under the Section 103d of the AEA, no operating license for a nuclear power plant may be issued to any entity under foreign control:
 - No license may be issued to an alien or any corporation or other entity if the Commission knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government. In any event, no license may be issued to any person within the United States if, *in the opinion of the Commission, the issuance of a license to such person would be inimical to the common defense and security or to the health and safety of the public.* [42 USC § 2133 (d); *emphasis added*]



What is the standard of review?

- Specifically, in cases where the ownership interest is less than 100%, the NRC will consider factors such as:
 - (1) the extent of the proposed partial ownership of the reactor;
 - (2) whether the applicant is seeking operating authority;
 - (3) whether the applicant has interlocking directors or officers with foreign entities and details concerning the relevant companies;
 - (4) whether the applicant would have access to restricted data; and
 - (5) details concerning ownership of the foreign parent company.

64 Fed. Reg. at 52,358.



Difficulties and Considerations

Current rules lack certainty

- "All or nothing" is easy
- Presumption: "foreign" = "bad"
- Current rules are subjective and qualitative
- Current rules are very fact-dependent
- Current rules don't reflect the current state of the US nuclear industry or US electricity markets
- Yet, it is understandable why there is uncertainty on this subject

Query:

- Will a financier be willing to navigate this process?
- Does this uncertainty limit our options?
- Do we have a need for external financing?
- Given current market conditions, would a modification of the rules matter?
- But, should we focus on current market conditions to drive rule-making?



Comparative Analysis

- What is going on outside the US ?
 - Some countries don't limit foreign ownership
 - Examples:
 - > UK: sale of Horizon
 - Turkey: Akkuyu as Russian build-own-operate NPP
 - Some countries want domestic control
 - Examples:
 - France: EDF (government owned utility)
 - VAE: Barakah One
 - Saudi Arabia: K.A.CARE as government entity
- Are we missing out ?
 - Is there a line at the door?
 - Is this an outdated approach?



Looking Ahead

- Can things be done differently?
 - 810 list: A precedent for having different approval structures for different countries
 - Should all foreign owners/operators be viewed in the same light? Should experience matter?
 - Commitment re. "local" operators
 - Reserve accounts in US banks, escrowed funds, etc.
 - Advance funding requirements to create financial certainty
 - Should reciprocity be a guiding principle?
- Approach
 - Identify the concern and then create a structure to address that concern
 - Distinguish among national security, plant safety, and operational issues



Some specific considerations on financing NPPs

- No history of project finance for nuclear power Why?
 - Remember, "project finance" is a term of art
 - Limited / Non-Recourse structure
 - Debt / Equity structure
 - Financing Entities look to revenue stream of the asset
 - Repayment is a function of achievement of Commercial Operation
 - Financing Entities can "take" the asset



Financing a Nuclear Power Project

- No history of project finance for nuclear power Why?
 - Classic nuclear risks
 - Regulatory risk
 - Political risk (a "moment of insanity"; the joys of democracy)
 - Schedule issues
 - Budget issues
 - Project Finance remedies don't readily suit a nuclear asset
 - Financing Entities can't "take" the asset
 - Need for a "licensed operator"
 - Strategic asset within many countries
 - Inability to replace the NSSS vendor during construction

Financing: Concluding Thoughts

- So, even though a lender might not take security over the asset (in the sense of taking over the asset if a default were to occur), the lender, through financial covenants, might wish to exercise "control" over accounts and the use of money
- Query: Does a lender really need to exercise "control" over accounts and the use of money?
 - If there is a strong sovereign credit or a strong corporate balance sheet (and the deal is structured as a corporate credit), then the lenders don't need to exercise such levels of control
 - Is there precedent for this outside of the US: YES
- Finally, given the long operating life of an NPP (approx. 60 years for Gen III designs), NPPs become an attractive long-term investment once they are in operation
 - History of the US fleet supports this view
 - Consideration of investors post-completion is part of a reasoned, lifecycle approach to the financing of NPPs



Thank you for your time and attention.

Contact Information:

Paul M. Murphy Milbank, Tweed, Hadley & McCloy LLP www.milbank.com +1-202-835-7536 pmurphy@milbank.com



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PAUL M. MURPHY



Paul M. Murphy Special Counsel Washington, D.C. +1-202-835-7536 pmurphy@milbank.com www.milbank.com Paul Murphy's practice focuses 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. Mr. Murphy 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), and the US government.

Mr. Murphy currently serves on the IAEA's Technical Cooperation Program team, which assists member states in developing civilian nuclear power programs. Mr. Murphy 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 current revision of the IAEA's *Handbook on Nuclear Law* and as lead author for a new report to be released in the next few months, entitled, *"Alternative Contracting and Ownership Practices for Nuclear Power Plants"*.

Mr. Murphy currently serves as a two-time appointee to the US Secretary of Commerce's Civilian Nuclear Trade Advisory Committee, and he chaired its Finance subcommittee for the last two years. In addition, Mr. Murphy recently served as the US Government's sole representative on an NEA working group on *"Financing of Nuclear Power Plants"*, acting as chairman for the working group. Mr. Murphy also chaired the IAEA working group that issued, *"Issues to Improve the Prospects of Financing Nuclear Power Projects."* Mr. Murphy has also worked with the Nuclear Energy Institute, the US 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 the last four years, Mr. Murphy 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 US State Department and the IAEA at the Argonne National Laboratory and attended by representatives of over 20 foreign governments. Mr. Murphy was the lead instructor for the segments on financing and the bidding / evaluation process for nuclear power projects.

Prior to joining 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.

Mr. Murphy is a graduate of Princeton University's Woodrow Wilson School for Public and International Affairs and a graduate of Harvard Law School. Mr. Murphy is also a member of the International Nuclear Law Association.



Our Worldwide Offices

London

England

New York

10 Gresham Street

London EC2V 7JD

+44-20-7615-3000

New York, NY 10005

+1-212-530-5000



Tokyo 21F Midtown Tower 9-7-1 Akasaka, Minato-ku Tokyo 107-6221, Japan +813-5410-2801



Beijing Units 05-06, 15th Floor, Tower 2 **China Central Place** 79 Jianguo Road, Chaoyang Dist. Beijing 100025, China +8610-5969-2700

Hong Kong 3007 Alexandra House 18 Chater Road Central, Hong Kong +852-2971-4888



Singapore 12 Marina Boulevard Marina Bay Financial Centre #36-03 Tower 3 Singapore 018982







Los Angeles 601 South Figueroa Street 30th Floor Los Angeles, CA 90017 +1-213.892-4000

One Chase Manhattan Plaza

Washington, DC International Square Building 1850 K Street, NW, Suite 1100 Washington, DC 20006 +1-202-835-7500



Munich

Maximilianstrasse 15 (Maximilianhoefe) 80539 Munich Germany +49-89-25559-3600





São Paulo Rua Colombia 325 - CEP 01438-000 São Paulo +55-11-3927-7700





