



IFNEC Finance, Regulatory, Energy Planning Authority Workshop October 22, 2013

BREAKOUT SESSION #1 DESCRIPTION

Co-Leads: Kamal Araj **Rapporteur:** Daniel Grosvenor
Zbigniew Kubacki

General Topic: Nuclear power in the context of a country's energy policy

Subtopic: Will nuclear power lead to an increased level of energy security and energy independence?

Summary of Issues:

- Can a nuclear power plant make a higher contribution to a local economy than other forms of generation?
- Can new nuclear power projects (NPPs) be developed in a competitive or deregulated energy market? Are they dependent on substantial government support?
- Does the import of nuclear technology and a foreign operator effect energy security?
- What are the insecurities introduced from enrichment and fuel fabrication?
- Can nuclear power play a part in the stabilization and reduction of electricity prices?
- Is nuclear power considered clean and is its contribution to carbon emission reduction properly valued?
- Can large nuclear units be accommodated in small power systems? Are they appropriate for small developing countries?
- Assuming that nuclear power provides energy security, can the value be quantified and are the rewards for such an investment worth the risk?
- Can NPPs establish a way forward for an energy export strategy?
- Can nuclear power compete with the price of natural gas in some countries?



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BREAKOUT SESSION #2 DESCRIPTION

Co-Leads: Yury Sokolo **Rapporteur:** John Mathieson
Al Burkart

General Topic: International conventions, agreements, etc., and the financing of a nuclear power project (NPP)

Subtopic: What is the link between the presence or absence of treaties, conventions, and international agreements concluded by a newcomer, and the prospects for financing the NPP? In particular, how does demonstrating the ability of an independent regulator to implement/enforce the requirements of these conventions and agreements play into the financial risk assessment?

Introductory Comments:

Agreement on supply of an NPP usually requires an intergovernmental agreement on peaceful uses. The requirements of such an agreement may vary. In the case of Russia, the agreement to supply follows the agreement on peaceful uses and usually reflects that the parties are the members of the IAEA and parties to the NPT as well as of some conventions: the conventions on Early-Notification of a Nuclear Accident and Exchange of Information on Nuclear Facilities, on Nuclear Safety, on the Physical Protection of Nuclear Material; to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management; and to the Vienna (or other) conventions on civil liability for nuclear damage, etc. The agreement also defines the obligations following from the NSG requirements: non explosive use of transferred items, safeguards application, physical protection etc. In case of the USA the agreements for



cooperation tend to focus on the things required by the NSG – full scope safeguards, no explosive use, retransfer consents, adequate physical protection and often, but not always, consent rights on enrichment and reprocessing.

For the emerging countries, all are NPT parties with full scope safeguards, but not all have signed the Additional Protocol. Some are not a party to the various technical conventions such as the Nuclear Safety Convention, the Joint Convention, the Physical Protection Convention nor a member of the liability regime. And even when a country is a party to the relevant conventions it will still be important to demonstrate that an independent regulatory authority is in place that can be counted upon to ensure compliance with the terms of the conventions.

Summary of Issues:

- What are the most important treaties, conventions and international agreements for having a NPP? What are the different approaches for different countries?
- Which are important for the decision to invest? How much do financiers care about the status a country (with respect to agreements\conventions) in their consideration for potential investments?
- How can translation of the requirements of conventions into enforceable regional or national “laws” / requirements, e.g. EU directives which do have sanction, benefit the financibility of a NPP?
- To what extent do the position and ability of a national regulator to implement/enforce the obligations following on from the different conventions can affect the financial risk assessment of the investors?



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BREAKOUT SESSION #3 DESCRIPTION

Co-Leads: Ian Grant **Rapporteur:** Claire Harvey
John Kalish

General Topic: The development of the nuclear power safety, security, and safeguards regulator function in an embarking country

Subtopic: How can stakeholders obtain the needed confidence that the new regulatory body is sufficiently developed and possesses the requisite competence, effectiveness, and independence?

Summary of Issues:

- What role does the national government need to play in establishing the legal and regulatory framework (including international instruments)?
- What key functions and responsibilities does the regulatory body need to establish in the initial phases of the project?
- What challenges related to organization and staffing does the regulatory body need to solve...and how?
- What contributions are needed from the technology vendor, the regulatory body in the country of origin, and international bodies?
- What mechanisms and indicators should stakeholders consider to obtain assurance of regulatory effectiveness?



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BREAKOUT SESSION #4 DESCRIPTION

Co-Leads: Dominic Holt **Rapporteur:** Mark Muldowney
Paul Murphy

General Topic: The role of the electricity market regulator in the financing of a nuclear power project

Subtopic: Is a regulated/guaranteed price for electricity alone sufficient to finance an NPP?

Summary of Issues:

- Should the focus be on electricity price or regulated rate of return?
- What is the appropriate term/tenor for any such structures?
- Should all project costs be passed through in the tariff, or should there be a prudence review?
- Is the UK's "contract for difference" approach the start of a trend?
- Where does host government support fit in? Are government guarantees required?
- How can the project be protected from changes in host government policies?
- Should nuclear power get special/separate tariff treatment?
- If there are limits on the tariff, what other tools (taxes, "subsidies," other incentives, etc.) can the host government consider to support the necessary rate of return for a developer?



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BREAKOUT SESSION #5 DESCRIPTION

Co-Leads: Maelia Dufour Rapporteur: Gareth Price
Charlotte Bruyer

General Topic: Evaluating the financial risk of a nuclear power project

Title of Subtopic to be Discussed: For Export Credit Agencies and Banks, what are the issues associated with the long term financing required for nuclear power projects?

Issues to be Discussed:

- What risks should consider being covered by the host government that is seeking the benefits of a liberalized market
- Should the host government consider accepting a limited amount of capex, opex, and decommissioning cost risk through PPA, CfD, or other price support mechanism?
- Refinancing risk
- Limiting financing needs – what part of a nuclear plant needs to be financed?