



U.S. DEPARTMENT OF  
**ENERGY**

**Nuclear Energy**

## **International Framework for Nuclear Energy Cooperation (IFNEC)**

### **Finance Workshop**

*Lancaster House, London, May 9-10, 2012*



**Edward McGinnis**  
**Deputy Assistant Secretary for International Nuclear Energy Policy and Cooperation**  
**U.S. Department of Energy and**  
**Chair, IFNEC Steering Group**

**Waste Management Conference**  
**Phoenix, AZ – February 26, 2013**



## IFNEC Focus on Challenges to Financing Nuclear Energy Projects

- Cost of finance is generally higher than for other types of power projects
  - Large up-front construction costs with long lead times are often perceived to contain greater risk and are thus challenging to finance;
  - HOWEVER, once operational, nuclear plants have very favorable economics
  - Lack of value (e.g., tax) placed on carbon increases competitiveness challenges
- Questions remain on how to cap and allocate liabilities for extraordinary nuclear occurrences
  - Nuclear liability is limited by international conventions and national legislation
  - In most cases, operators are “strictly” and “exclusively” liable, but are required to carry “third-party liability” insurance
- Increased financial regulation has resulted in reduced liquidity and greater financing challenges for investors, particularly for nuclear projects, which are perceived as higher risk



## Addressing the Financing Barrier: IFNEC's Stakeholder-wide Workshop Approach

### Finance Workshop Approach

- To gain a stronger understanding of the challenges and opportunities associated with the financing of nuclear power projects.
- To create a forum in which major stakeholders were able to discuss these matters
- To identify specific actions IFNEC countries could consider, individually or collectively.

### 3 Main Workshop Components

- 1) Scene Setting Session
- 2) Hypothetical Scenario Sessions
- 3) Breakout Discussion Sessions



### 130 Stakeholder Representatives

- Commercial banks
- Rating agencies
- Insurance Agencies
- Utilities
- Reactor vendors/suppliers
- Energy planning authorities
- Et al.





## Addressing the Financing Barrier: IFNEC's Stakeholder-wide Workshop Approach

### Finance Workshop Approach

- To gain a stronger understanding of the challenges and opportunities associated with the financing of nuclear power projects.
- To create a forum in which major stakeholders were able to discuss these matters
- To identify specific actions IFNEC countries could consider, individually or collectively.

### 3 Main Workshop Components

- 1) Scene Setting Session
- 2) Hypothetical Scenario Sessions
- 3) Breakout Discussion Sessions



### 130 Stakeholder Representatives

- Commercial banks
- Rating agencies
- Insurance Agencies
- Utilities
- Reactor vendors/suppliers
- Energy planning authorities
- Et al.



U.S. DEPARTMENT OF  
**ENERGY**

Nuclear Energy

# Industry Engagement at IFNEC Finance Workshop

Allen & Overy LLP  
ALSTOM  
AREVA  
Atkins Global  
AVDA Consult Ltd  
Bank of Tokyo-Mitsubishi UFJ Ltd  
Barclays  
Blenheim Capital  
BNP Paribas  
Bulgarian Energy Holding EAD  
Candu Energy, Inc.  
China Power Investment Company  
Citigroup Global Markets, Inc.  
Coface  
Deloitte  
Delta NV  
EDF  
Emirates Nuclear Energy Corporation  
EnergONuclear (Romania)  
GE Hitachi Nuclear Energy  
Global Vision 2000  
Hitachi-GE Nuclear Energy Ltd.  
HSBC  
Japan Bank for International Cooperation ( )  
Kozloduy NPP Plc.  
KPMG  
Lithuanian Electricity Organization  
Magyar Villamos Muvek Zrt.  
Marsh Limited  
Metsamor EnergoAtom CJSC

Milbank, Tweed, Hadley & McCloy LLP  
Mitsubishi Heavy Industry  
Mizuho Corporate Bank Ltd.  
Moelis & Company  
Moody's Investors Services  
Natixis  
NERA Economic Consulting  
Nippon Export and Investment Insurance  
Norton Rose LLP  
Nuclearelectrica SA  
UK Nuclear Industry Association  
Northcourt  
Nugeneration, Ltd.  
PGE Energia Jadrowa S.A.  
Pillsbury Law  
PricewaterhouseCoopers  
Prospect Law Ltd.  
Royal Bank of Scotland  
Shaw Power Group  
SP Intl  
Société Générale  
Sogin  
Standard & Poors  
Sumitomo Mitsui Banking Corp. - Europe Ltd  
Toshiba Corporation  
TVO  
U.S. Export-Import Bank  
Westinghouse  
World Bank



## IFNEC Finance Workshop Key Findings

### Key Findings from Workshop

#### Importance of an Effective, Independent Regulatory Body

An effective, independent regulatory body that is open and transparent is extremely important to the financial community when determining whether or not to lend, the rate at which the lending would be provided, the readiness of investors to invest and risk premiums.

The regulator increases assurance that the project can be confidently developed in compliance with all safety-based requirements and with effective independent oversight that is directly responsible to the public.

#### Essential Role of Government Commitment and Support

The depth of commitment and host country support is the starting point for project evaluation by the financial community.

Commitment of the host country will be evident in the rationale as to why a nuclear project is being proposed rather than other available energy options.

Without visible and consistent backing of the host government, it is unlikely that the interest and confidence needed in the project from the investor and financial community will develop.

Long-term government support backing its commitment is essential for any project to go forward as planned.

#### Need for a Sound Business/Project Plan

There is a need for a clear overall business plan that underpins and helps bound the project.

The ability to finance a NPP will depend to a large extent on the quality of the project plan that has been developed.

The scope and content of the plan will demonstrate the extent to which critical issues have been identified and are being managed.

Broad stakeholder involvement early in the planning process is crucial to project success.



# Proposed Actions for IFNEC Countries, Individually or Collectively

## Nuclear Energy

	IFNEC Consideration	National Issues	Best Practices
Independent Regulator	<ul style="list-style-type: none"> <li>Follow-On Regulatory Workshop</li> </ul>	<ul style="list-style-type: none"> <li>Share Best Practices – Industry and Government</li> <li>Examine Cooperative Regulation</li> <li>Interaction Among Regulatory Entities</li> <li>Follow-On Regulatory Workshop</li> </ul>	<ul style="list-style-type: none"> <li>Share Best Practices – Industry and Government</li> <li>Examine Cooperative Regulation</li> </ul>
Government Support	<ul style="list-style-type: none"> <li>Promote Awareness and Acceptance of International Treaties – Safety &amp; Liability</li> <li>Support Infrastructure Development</li> </ul>	<ul style="list-style-type: none"> <li>Transparent Framework to Convey Government Policy Support for NPP</li> <li>Promote Awareness and Acceptance of International Treaties – Safety &amp; Liability</li> <li>Develop NPP Financial Lending Environment</li> <li>Support Infrastructure Development</li> </ul>	<ul style="list-style-type: none"> <li>Transparent Framework to Convey Government Policy Support for NPP</li> <li>Promote Awareness and Acceptance of International Treaties – Safety &amp; Liability</li> <li>Develop NPP Financial Lending Environment</li> <li>Support Infrastructure Development</li> </ul>
Sound Business Plan		<ul style="list-style-type: none"> <li>Develop a Business Case that Demonstrates Net Benefit</li> <li>Catalog and Benchmark NPP Finance Options</li> <li>Develop and Implement Stakeholder Participation Process</li> <li>Establish a Forum on New NPP Case Studies</li> <li>Explore Alternative Finance Options</li> <li>Evaluate Issues &amp; Opportunities of Regional Projects/Strategic Partners</li> </ul>	<ul style="list-style-type: none"> <li>Develop and Implement Stakeholder Participation Process</li> </ul>



U.S. DEPARTMENT OF  
**ENERGY**

Nuclear Energy

## Conclusions from IFNEC Finance Workshop

- **Stakeholder-wide approach was critical for IFNEC.**
  - Transparent and complete communication across all stakeholders very early in the planning process is essential for securing the confidence of the financial community.
- **Understanding risk and risk management/mitigation mechanisms is necessary.**
  - Fully understanding the risks before, during and after the operation of a nuclear power project is especially critical.
- **The role of government is important in all aspects of financing.**
  - IFNEC is an excellent forum for leveraging resources/sharing information.

... Markets can manage  
known risks, but not  
uncertainties...







## Next Steps

The IFNEC Executive Committee met on October 10, 2012 in Morocco and agreed:

- To accept the key findings of the 2012 Finance Workshop.
- That a number of proposed actions that arose from Workshop discussions are actions IFNEC Participant countries may consider taking, individually or collectively.
- That private and government stakeholder-wide collaboration provides added value to the discussions.
- Download the Final Summary Report at:  
[www.ifnec.org/docs/Appendicies/IFNEC Finance Workshop Final Summary Report - October 4 2012.pdf](http://www.ifnec.org/docs/Appendicies/IFNEC_Finance_Workshop_Final_Summary_Report_-_October_4_2012.pdf)



IFNEC FINANCE WORKSHOP  
FINAL SUMMARY REPORT



Final Report for the IFNEC Executive Committee  
October 4, 2012

The IFNEC Executive Committee directed its Steering Group to continue discussions of these issues in close cooperation with the IAEA, including discussion between the regulatory community and the financial community.