International Framework for Nuclear Energy Cooperation (IFNEC)

IFNEC activities related to Global Supply Chain and Localization, Issues and Opportunities

Nuclear Supplier and Customer Countries Engagement Group (NSCCEG)

Hideo Shindo, Japan, and Amb. Rafael Grossi, Argentina, NSCCEG Co-Chairs

INPRO Dialogue Forum on Sustainable Supply Chains for Advanced Nuclear Power Systems, IAEA Vienna, 2-4 July 2018
International Framework for Nuclear Energy Cooperation (IFNEC)  
www.ifnec.org

IFNEC Members

<table>
<thead>
<tr>
<th>34 Participant countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
</tr>
<tr>
<td>Armenia</td>
</tr>
<tr>
<td>Australia</td>
</tr>
<tr>
<td>Bahrain</td>
</tr>
<tr>
<td>Bulgaria</td>
</tr>
<tr>
<td>Canada</td>
</tr>
<tr>
<td>China</td>
</tr>
<tr>
<td>Estonia</td>
</tr>
<tr>
<td>France</td>
</tr>
<tr>
<td>Germany</td>
</tr>
<tr>
<td>Ghana</td>
</tr>
<tr>
<td>Hungary</td>
</tr>
<tr>
<td>Italy</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>31 Observer countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algeria</td>
</tr>
<tr>
<td>Benin</td>
</tr>
<tr>
<td>Brazil</td>
</tr>
<tr>
<td>Chile</td>
</tr>
<tr>
<td>Saudi Arabia</td>
</tr>
<tr>
<td>Qatar</td>
</tr>
<tr>
<td>Sweden</td>
</tr>
<tr>
<td>Turkey</td>
</tr>
<tr>
<td>United States</td>
</tr>
</tbody>
</table>

4 Observer organisations

- NEA (Nuclear Energy Agency)
- GENIV (International Forum)
- IAEA (International Atomic Energy Agency)
IFNEC Statement of Mission

“The International Framework for Nuclear Energy Cooperation provides a forum for cooperation among participating states to explore mutually beneficial approaches to ensure the use of nuclear energy for peaceful purposes proceeds in a manner that is efficient and meets the highest standards of safety, security and non-proliferation. Participating states would not give up any rights and voluntarily engage to share the effort and gain the benefits of economical, peaceful nuclear energy.”

- Adopted June 16, 2010 in Accra, Ghana
IFNEC Approach

• All IFNEC Participant countries are co-equal
• All decisions are made based on consensus
• Strong focus on emerging markets
• All participation is voluntary
• Avoid duplication (with IAEA, OECD/NEA, …)
• Seek to be value-added and complementary
• Focus on common challenges and opportunities
Organisational Structure
IFNEC Output (available on www.ifnec.org)

- **2014**: Financing Nuclear Power Projects, New and Emerging Models
  - Finance and Project Structuring Approaches Based on IFNEC Finance Workshops and Panel Session

- **2016**: Nuclear Energy’s Role in the 21st Century: Addressing the Challenge of Financing
  - Conference Proceedings

- **2018**: Practical Considerations to Begin Resolving the Final Spent Fuel Disposal Pathway for Countries with Small Nuclear Programs
  - October 2016

  - Summary Conference Report
  - 7-8 November 2017, Paris, France
IFNEC set up an ad hoc group entitled “Nuclear Supplier and Customer Countries Engagement Group” (NSCCEG) in October 2016. Argentina (Amb. Rafael Grossi) and Japan (Hideo Shindo) were approved as co-chairs. The ToR of NSCCEG were approved at the IFNEC Steering Group meeting in June 2017. 4 areas of work are identified: (i) safety; (ii) project development; (iii) financing and (iv) public acceptance and accountability. Area of work (ii) (project development) includes: *the development of skilled human resources and infrastructure, including the global and local supply chain supporting projects* ...

- On 7-8 November 2017, NSCCEG organised the following event: “Global Supply Chain and Localization, Issues and Opportunities, A Conference on the Customer Dialogue Conference”.
On 7-8 November 2017, NSCCEG organised the following event: “Global Supply Chain and Localization, Issues and Opportunities, A Conference on the Customer Dialogue Conference”.


– Conference report to be published summer 2018


– Presentations only available in the password-protected part of IFNEC website (members only)
Customer views on localization:

- Localization represents expectations: create jobs / boost the economy / improve public support for nuclear projects.
- Communications are needed to assure that Customer expectations align with Supplier commitments.
- A significant part of localization involved Customer investment in preparations to support local content: training, local business development assistance, understanding requirements.
Supplier views on the supply chain and localization:

- Localization can increase costs & risks but can make sense if the Customer is willing to invest to increase local content.
- Suppliers vary widely in approach from “we buy where we build” (localization), to global sourcing strategies that can include local content.
- Supplier favor a diverse supply chain that promotes competition and supports efficiency.
- Quality Assurance is a critical issue in selecting sources.
- Customers can increase local content by investing and assuming some of the risk.
Regulators views on supply chain and localization:

• The regulators operate with a variety of relationships with other regulatory bodies and are directly involved in inspections to monitor the quality programs of vendors and the many sources of supply

• There remains an important role for industry bodies to promote qualification / self assessment [see other industrial sectors, eg aeronautics]
Nuclear Supplier and Customer Countries
Engagement Group

IFNEC Sponsored Session: V. Int. Nuclear Power Plants Summit

• Session entitled “Incorporating new market entrants into the supply chain: challenges and opportunities” (6 March 2018)

• Short presentations by panel:
  o Ms Chernyakhovskaya, Rusatom Service
  o Ms Ivy Wong, Westinghouse
  o Mr Aikel Ben Aoun, GIIN French Nuclear Suppliers Association
  o Dr Yavuz Cabbar, general secretary of Ankara Chamber of Industry

• Panel discussion, moderator Ms Elina Teplinsky, Pillsbury Winthrop Shaw Pittman LLP

• Strong focus on the need for **education & training** for localising supply chains
• Suppliers have robust procurement and qualification programs with multi-step processes that involve pre-selection, pre-qualification and qualification. Vendors invest their own resources both during the qualification process as well as in maintaining the supply chain. Because of this investment, suppliers are looking for long-term relationships.

• Best practices for suppliers
  ➢ long-term relationships;
  ➢ well-tested process for qualification;
  ➢ appropriate level of oversight;
  ➢ establishing and growing local presence;
IFNEC NSCCEG conclusions on supply chain issues

• What can customer countries do to help?
  ➢ assist vendors with their early investment in the customer country – consultancy contracts;
  ➢ invest in local supplier education and qualification;
  ➢ invest in overall nuclear infrastructure development, including regulatory infrastructure;
  ➢ understand vendor qualification requirements, communication with vendors on areas where localization can be of benefit to the project
Nuclear Supplier and Customer Countries Engagement Group

Observations for Dialogue Forum Consideration

• The development of advanced and innovative nuclear power systems will present increased challenges for the global supply chains.
• Supplier production capabilities will be tested by low volume, newly designed components with complex and strict requirements.
• There will be many instances where vendors will have a critical need for suppliers to “get it right the first time.”
• Our work suggests that for projects to help avoid detrimental supply chain issues:
  ➢ procurement decisions should focus on the adequacy of the quality assurance programs of potential suppliers, and
  ➢ vendors will need to maintain their verification capabilities, effectively overseeing critical supplier production processes
Thank you for your attention!

Questions in IFNEC can be addressed to the Secretariat: secretariat@ifnc.org
www.ifnec.org