



**International Framework for Nuclear Energy  
Cooperation (IFNEC)**  
[www.ifnec.org](http://www.ifnec.org)

***IFNEC activities related to  
Supplier and Customer Countries***

Presented by Dr. Henri Paillère, OECD Nuclear Energy Agency  
Head of IFNEC Technical Secretariat, on behalf of

Fumikazu Sato, Japan, and Amb. Rafael Grossi, Argentina,  
Co-chairs of the Nuclear Supplier & Customer Countries Engagement Group

**IFNEC-sponsored session “Challenges for a Robust and Secure Nuclear  
Supply Chain: Globalisation, Localisation, Oversight and Safety Culture”**



# IFNEC Membership

## 34 Participant countries

- |           |             |                      |
|-----------|-------------|----------------------|
| Argentina | Hungary     | Niger                |
| Armenia   | Italy       | Oman                 |
| Australia | Japan       | Poland               |
| Bahrain   | Jordan      | Romania              |
| Bulgaria  | Kazakhstan  | Russia               |
| Canada    | Kenya       | Senegal              |
| China     | Korea       | Sierra Leone         |
| Estonia   | Kuwait      | Slovenia             |
| France    | Lithuania   | Ukraine              |
| Germany   | Morocco     | United Arab Emirates |
| Ghana     | Netherlands | United Kingdom       |
|           |             | United States        |

## 31 Observer countries

- |                |                 |              |
|----------------|-----------------|--------------|
| Algeria        | Latvia          | South Africa |
| Bangladesh     | Malaysia        | Spain        |
| Belgium        | Mexico          | Sweden       |
| Brazil         | Moldova         | Switzerland  |
| Chile          | Mongolia        | Tanzania     |
| Czech Republic | Nigeria         | Tunisia      |
| Egypt          | Philippines     | Turkey       |
| Finland        | Qatar           | Uganda       |
| Georgia        | Saudi Arabia    | Viet Nam     |
| Greece         | Singapore       |              |
| Indonesia      | Slovak Republic |              |





## 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 Organisational Structure

**EXECUTIVE COMMITTEE**  
Ministerial-level Officials or Designees  
Chair 2019: United States

**STEERING GROUP**

*Chair*  
**Julián GADANO**  
(Argentina)

*Vice-Chair*  
**Gou FENG**  
(China)

*Vice-Chair*  
**Fumikazu SATO**  
(Japan)

*Vice-Chair*  
**Collins JUMA**  
(Kenya)

*Vice-Chair*  
**Vladimir ARTISIUK**  
(Russian Federation)

*Vice-Chair*  
**Suzie JAWOROWSKI**  
(United States)

**INFRASTRUCTURE DEVELOPMENT  
WORKING GROUP**

*Co-Chair*  
**Alex BURKART**  
(United States)

*Co-Chair*  
**Zbigniew KUBACKI**  
(Poland)

**RELIABLE NUCLEAR FUEL SERVICES  
WORKING GROUP**

*Co-Chair*  
**Tomaž ŽAGAR**  
(Slovenia)

*Co-Chair*  
**Sean TYSON**  
(United States)

**NUCLEAR SUPPLIER and CUSTOMER  
COUNTRIES ENGAGEMENT GROUP**

*Co-Chair*  
**Rafael GROSSI**  
(Argentina)

*Co-Chair*  
**Fumikazu SATO**  
(Japan)

**NEA TECHNICAL SECRETARIAT (funded by IFNEC members)**



# IFNEC Output (available on [www.ifnec.org](http://www.ifnec.org))

INTERNATIONAL FRAMEWORK FOR NUCLEAR ENERGY COOPERATION  
FINANCE WORKSHOPS AND PANEL SESSION

Mar 9-20, 2012 - London, United Kingdom    October 22, 2013 - Abu Dhabi, UAE    Mar 8, 2014 - Bucharest, Romania

## Financing Nuclear Power Projects

New and Emerging Models

Finance and Project Structuring Approaches Based on IFNEC Finance Workshops and Panel Session

**2014**

INTERNATIONAL FRAMEWORK FOR NUCLEAR ENERGY COOPERATION  
SMALL MODULAR REACTOR WORKSHOP

June 11-12, 2014 - Dead Sea, Jordan

## Report of the Small Modular Reactor Workshop: Practical Deployment Issues and Approaches

Including several potential deployment models based on workshop scenario discussions



INTERNATIONAL FRAMEWORK FOR NUCLEAR ENERGY COOPERATION  
NUCLEAR ENERGY'S ROLE IN THE 21<sup>st</sup> CENTURY - FINANCE CONFERENCE

11-12 May 2016 - Paris, France

## Nuclear Energy's Role in the 21<sup>st</sup> Century: Addressing the Challenge of Financing

**2016**

Conference Proceedings  
11-12 May 2016  
Paris, France

INTERNATIONAL FRAMEWORK FOR NUCLEAR ENERGY COOPERATION  
RELIABLE NUCLEAR FUEL SERVICES WORKING GROUP

## Practical Considerations to Begin Resolving the Final Spent Fuel Disposal Pathway for Countries with Small Nuclear Programs

October 2016

INTERNATIONAL FRAMEWORK FOR NUCLEAR ENERGY COOPERATION  
GLOBAL SUPPLY CHAIN AND LOCALIZATION, ISSUES AND OPPORTUNITIES

7-8 November 2017 - Paris, France

## Global Supply Chain and Localization, Issues and Opportunities: A Conference on the Customer Dialogue

**2018**

Summary Conference Report  
7-8 November 2017  
Paris, France


Nuclear Supplier and Customer Countries Engagement Group (NSCEG)




# IFNEC Upcoming Publications (will be available on [www.ifnec.org](http://www.ifnec.org) in 2019)

**New Challenges Facing Nuclear Regulators**


*An Infrastructure Development Working Group Workshop*



Summary report  
28-29 May 2018  
Boulogne-Billancourt, France




International Framework for Nuclear Energy Cooperation




NICE Future  
Nuclear Innovation: Clean Energy Future

CHALLENGES AND OPPORTUNITIES FACING NUCLEAR ENERGY IN AN ENERGY TRANSITIONS CONTEXT:  
*INNOVATION AND ACTIONS TO ADVANCE CLEAN NUCLEAR ENERGY*

Co-Sponsored Conference Summary Report  
13 – 14 November 2018  
Tokyo – Japan




Cabinet Office



METI  
Ministry of Economy, Trade and Industry

**Approaches to Financing a Multinational Repository**

*A Reliable Nuclear Fuel Services Working Group Workshop*



Summary report  
11 December 2018  
Paris, France



# Nuclear Supplier and Customer Countries Engagement Group (NSCCEG)

## Objectives:

Analyze the current situation and relationships between Supplier and Customer countries, and identify areas of mutual cooperation that can be beneficial to the overall IFNEC mission (... *highest standards of safety, security and non-proliferation*)

## Scope:

- Customer and Supplier countries' responsibility towards **safety**, human resource development (**safety culture**) and infrastructures. **2**
- Project Development, including **supply chain and localization**. **1**
- Innovative approaches to financing and refinancing, including private sector and multilateral development banks
- Public Acceptance and Accountability.



## NSSCEG Supply Chain Conference (Nov. 2017) (Paris)

### 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





## NSSCEG Supply Chain Conference (Nov. 2017) (Paris)

### 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



# NSSCEG Supply Chain Conference (Nov. 2017) (Paris)

## 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]

For more in-depth discussion on oversight issues, also see NEA/CNRA - MDEP Workshop (Nov 2018)

<https://www.oecd-nea.org/nsd/workshops/nscm2018/>

**2018 Nuclear Supply Chain Management Workshop**

The OECD Nuclear Energy Agency (NEA) Committee on Nuclear Regulatory Activities (CNRA) and the Multinational Design Evaluation Programme (MDEP) Vendor Inspection Co-operation Working Group (VICWG) will hold an international workshop on 5-6 November 2018 on nuclear supply chain management.

The workshop will bring together regulators and stakeholders, including industry representatives, standard development organisations (SDOs) and other international organisations to discuss oversight challenges in the nuclear industry extended enterprise. The workshop will highlight emerging risks and recommendations to further improve supply chain management oversight arrangements, and the need for additional regulatory tools or international guidance.

The two-day workshop will include sessions on:

- global supply chain oversight challenges;
- counterfeit, fraudulent and suspect items (CFSI) lessons learnt;
- advancing early integration of safety culture in the supply chain;
- regulatory approaches for commercial grade dedication and equipment qualification;
- enhancing international co-operation to prepare for new technologies and emerging challenges.

The workshop will culminate with a panel discussion to examine challenges to effective supply chain oversight arrangements.

The registration deadline is 30 September 2018.

For more information and to register, please visit:  
[www.oecd-nea.org/nsd/workshops/nscm2018/](http://www.oecd-nea.org/nsd/workshops/nscm2018/)

**5-6 November 2018**  
NEA Auditorium  
Paris, France



## NSSCEG Supply Chain Conference (Nov. 2017) (Paris)

### Conclusions: (1/2)

- 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;



# NSSCEG Supply Chain Conference (Nov. 2017) (Paris)

## Conclusions: (2/2)

- 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





## NSCCEG - Nov. 2018, Tokyo (Japan)

On 12 Nov. 2018, the NSSCEG and the IDWG held a joint meeting on “Safety and safety culture and the importance of training” in Tokyo, Japan.



- The IDWG session focused on the role of international organisations (NEA, IAEA, WANO) in promoting safety and safety culture
- The NSCCEG session focussed on the role of bilateral (ie: government/government; industry/industry) frameworks to promote safety and safety culture. Speakers from FR, JP, CN, KR, RF
  - Importance of long-term relationships / partnerships to ensure success
  - Importance of training - and training the trainers
  - Importance of “hands-on” experience vs generic training
  - Feedback from the customer to the supplier (sometimes, the customer may become the supplier in the future)



## Today's session

- **Global Supply Chain Oversight Challenges**
  - China: Mr Zhang, China NEA
  - Czech Republic: Mr Hruby, Czech Power Industry Alliance
- **Advancing Early Integration of Safety Culture in the Supply Chain**
  - Turkey: Mr Ceylan, TAEK
- **International cooperation**
  - WNA: Mr Greg Kaser
- **Developing Supply Chain Services**
  - France: Mr Ben Aoun, GIFEN
  - Turkey/France: Ms Ercengiz Ata Freight/ Mr Boudoux GEODIS
- **Q&A**

- Quality
- Certification
- Efficiency
- Training
- Safety culture
- Importance of relationships between suppliers/ customers