



**IAEA**

International Atomic Energy Agency

# IAEA activities in the area of supply chain

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# Current Supply Chain and Procurement Trends & Challenges



**Trust but verify**

- Nuclear industry falters in some traditional nuclear countries
- Globalization trend – long supply chains
- Ambitious localization wishes from newcomers
- Differing nuclear regulatory requirements & standards
- Supply of services (on-site/off-site) is also important and not free from problems
- Technical challenges – e.g. digitalization, CFSIs, ...?
- Challenges with people – nurturing nuclear quality culture
- “How to keep order books full / how to be certain to get quality products and services at reasonable price”

# Why is it so difficult to achieve Quality in supply chain?

- 1) Inadequate understanding of the concepts of quality, quality assurance and quality product/service
- 2) Amount of interfaces
- 3) Sometimes customers and suppliers are not capable to find a win-win solution for their differing expectations
- 4) Humans make it or break it

# Safety Standards Related to Procurement and Supply Chain

- IAEA MS standards provide requirements and guidance related to procurement.
  - GSR Part 2 Req't 11: "Management of the supply chain".
  - GS-G-3.1 5.50 & 51 "Purchasing".
  - GS-G-3.5 5.33 to 5.37 "Purchasing"

## IAEA Safety Standards for protecting people and the environment

Leadership and Management for Safety

General Safety Requirements  
No. GSR Part 2



## IAEA Safety Standards for protecting people and the environment

Application of the Management System for Facilities and Activities

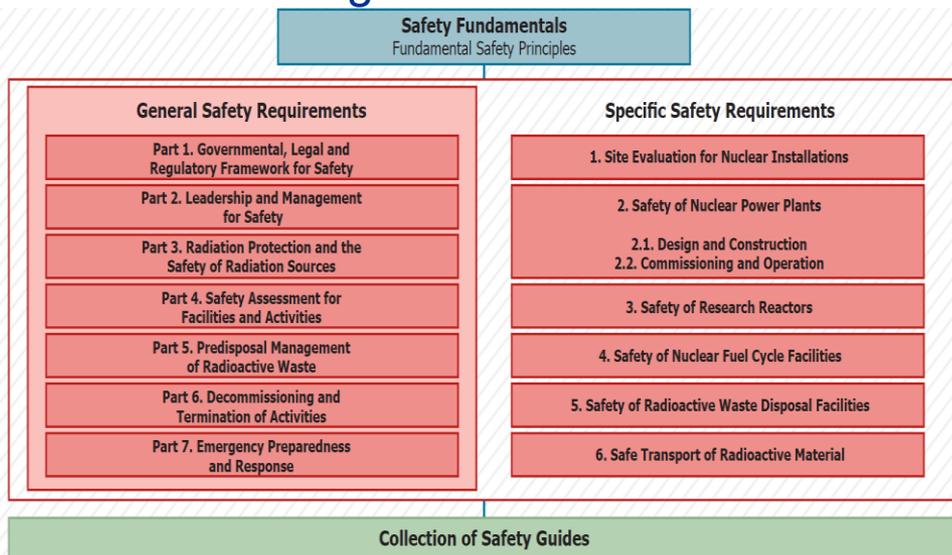
Safety Guide  
No. GS-G-3.1



## IAEA Safety Standards for protecting people and the environment

The Management System for Nuclear Installations

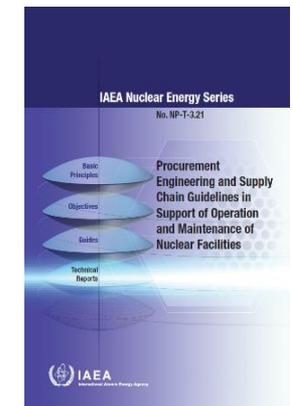
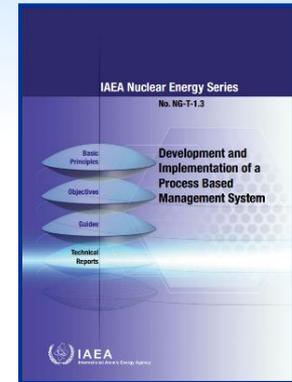
Safety Guide  
No. GS-G-3.5



# Some IAEA NE Series publications



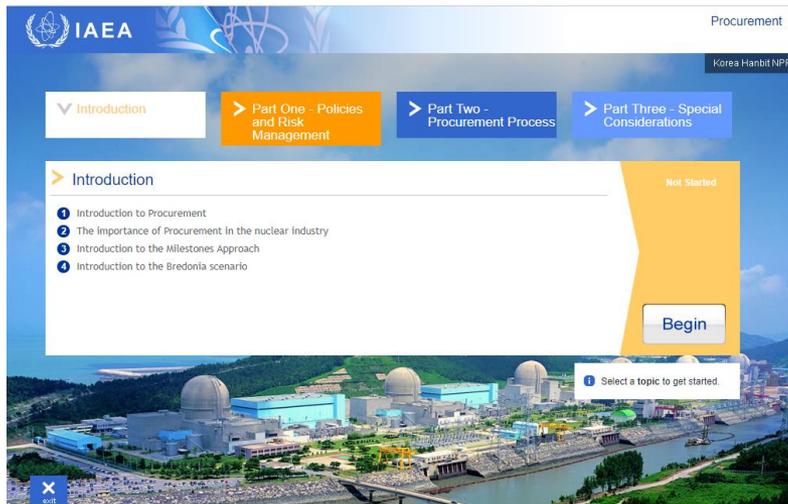
- Development & Implementation of a Process Based Management System (NG-T-1.3, 2015)
- Procurement Engineering and Supply Chain Guidelines in Support of Operation & Maintenance of Nuclear Facilities (NG-T-3.21, 2016; contains procurement guidance, including proactive actions for new NPP contracts)
- Managing Counterfeit and Fraudulent Items in the Nuclear Industry (new version 2018 or 2019)
- Industrial Involvement to Support a National Nuclear Power Programme, NG-T-3.4 (2016)
- Developing a draft IAEA Technical Document on inventory control of spare parts and obsolescence management for operating nuclear power plants
- Developing a publication on asset management



*Managing counterfeit and fraudulent items in the nuclear industry*

# Add-on: Recent Web tools for better supply chain management

## E-learning on procurement for newcomers



Link [here](#) (procurement) and [here](#) (localization & industrial involvement)

## Nuclear Contracting Toolkit



**THE IAEA NUCLEAR CONTRACTING PROCESS**

**1 STRATEGY DEVELOPMENT**  
Formulating & planning for the procurement process

**2 PROCUREMENT PREPARATION**  
Developing technical criteria, and the full technical specifications

**3 BIDDING & EVALUATION**  
Qualifying suppliers, issuing and evaluating bids

**4 NEGOTIATION & CONTRACTING**  
Negotiation with suppliers and awarding the contract

**5 CONTRACT MANAGEMENT**  
Administering and managing the contract

**6 LESSONS LEARNED**  
Documentation of lessons learned and initiation of improvement actions

**The Nuclear Contracting Toolkit.**

This toolkit is intended to support all levels of procurement activities related to a nuclear power plant development project, and to help manage expectations of stakeholders, customers and suppliers alike. It facilitates good practices and consistency, helps ensure purchases are made fairly with a high level of ethics, integrity and transparency, and contributes to long term safe and secure plant operation.

The processes, templates and guides allow procurement professionals to concentrate on the high value and risk areas in which the extra attention is required to achieve optimal results. While offering generic good practices such processes, templates, and guides will invariably need to be adapted and modified to fit a particular procurement scenario and local procurement environment.

This guidance is not a substitute for technical, legal, financial, and other professional advice. Users need to identify and comply with any relevant international, national, and internal organization guidelines, policies, procedures, codes, standards, laws, and regulations as required.

Consideration must be given to planning and risk management throughout the process, and records should be kept for audit purposes.

Ready? Let's get started >

- A web-based **toolkit** to assist in nuclear bidding and contracting processes;

# Quality and Management System Aspects of Nuclear Procurement Engineering and Supply Chains, PUI Project



## Peaceful Uses Initiative Extrabudgetary Support, Project Implementation Plan 2018-2019

**Objective:** Provide information and guidance to Member States regarding good practices for management of procurement and supply chain activities related to the construction, operation and maintenance of nuclear facilities.

**Outcomes:** Improved understanding in the areas of supply chain qualification and management, including oversight and assessment methods.

### Planned Outputs:

- 1) New guidance document on supply chain qualification methods, with supporting web-based tools (the latter first with the regulations and standards landscape) including service supply;
- 2) New training course on supply chain oversight, including identification of technological challenges such as unidentified content and CFSIs; and
- 3) Member State participation at relevant Technical Meetings, workshops or conferences.

# FINALLY...

- **Supply chain is part of your whole system** and thus cannot be totally left on its own
- Informed customer(s) need to anticipate things before they happen (**analyse risks**)

## In an ideal world:

- Agree on a **common** regulation, management system and **quality requirements** for operating organizations and suppliers?
- Have a **vibrant organizational culture** oriented towards quality, sustainability and safety – it begins with individuals
- **Share supplier audit results** among operating organizations within a country, a region, or globally?
- **Share information** on lessons learned (incl. CFSIs and other discovered pathogens) within and outside of the industry?



# GOOD PRACTICES

- There are **different regulations and owners** – this is not going to change in short term – understand and plan early on how to **analyse gaps** in practice ( and ask those who are more experienced)
- **Customer role and oversight responsibility** (pre-qualifying, assessing, auditing, contracting, witnessing, controlling, approving, ...) – no standard, IT system or third party takes that role away **“Trust but verify”**
- **Qualification of suppliers** (meeting face-to-face and in their premises) may always be necessary rather than just relying on a certificate
- **Traceability of in the design and supply chain of products and services** becoming more and more important – suppliers role to pass the requirements on and exercise oversight of sub-suppliers
- The only way to make the amount of oversight work reasonable in supply chain is **use of graded approach**
- It is not just about the management system or quality (management or assurance) standards – also **the engineering standards** may have relevant requirements
- **Industry** initiated accreditation programme and any **cooperation** sound good ideas – it is about the industry to work together!

# FORTHCOMING IAEA MEETINGS



**TM on Quality Assurance and Quality Control  
Activities in Nuclear Power Plants: Lessons  
Learned and Good Practices, Vienna 12-15 Nov**

**Technical Meeting on Supply Chain Management  
and Oversight of Service Suppliers, In  
Paris/France or in VIC/Vienna, 2019**



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*Thank you!*

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