RegNet Development
- Embarking Countries, IRRS, RCF, SMR, Regulatory Competence Management and CANDU Portals -

The Global Nuclear Safety and Security Network (GNSSN) Steering Committee Meeting

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RegNet

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IAEA
Embarking Countries on Nuclear Power Programmes

IAEA mechanisms in establishing an independent and competent Regulatory Body in support of the development of a nuclear safety infrastructure for a nuclear power programme

Many countries without nuclear power plants are expressing interest for nuclear power. Safety is prerequisites for such development. Newcomers should, therefore, timely launch a comprehensive plan to develop a suitable nuclear safety infrastructure and ensure that their nuclear power programme is consistent with international safety standards.

Crucial to the long term success of a nuclear energy programme is the establishment of an independent and competent regulatory body. The confidence of the public and the international community depends to a large extent on effective regulation. The need for a competent and effective regulatory body must, therefore, be understood and given highest priority.

Requests for assistance for strengthening the regulatory capabilities of countries embarking on nuclear power have significantly increased and the means to provide this assistance has become more distributed through a variety of delivery mechanisms:

Safety packages based on SSG-16

https://gnssn.iaea.org/regnet/embarking/Pages/default.aspx
Embarking Countries Portal

Safety Packages of IAEA Assistance for Establishing Safety Infrastructure

The IAEA has developed Safety Packages based on SSG-16 to assist in the establishment of a nuclear safety infrastructure. The Safety Packages are a collection of the information contained in SSG-16 with Safety Standards, Peer Reviews, IAEA Assistance (Education & Training, Advisory Services, Relevant Publications) and Knowledge Networks outlined. The packages are divided into 11 Thematic Modules, following and merging the 20 elements of SSG-16. The packages give guidance as to who is responsible (e.g., Government, Operating Organization, Regulatory Body), what the actions are, when the actions should be taken place according to the 3-phased approach, and how the Agency can assist through appropriate peer review services, advisory services, education and training and networks and tools.

A comprehensive catalogue of workshops, including their scope and syllabus has been developed and has been included as part of the safety package for Module 1 - Governmental, Legal and Regulatory Framework for Safety. The workshops are offered by the IAEA targeting primarily the staff of regulatory bodies but also applicable to other governmental organizations, operating organizations and technical support organizations. The workshops address the following topics:

- W1. Workshop on National Infrastructure including Governmental, Legal and Regulatory Infrastructure for Safe Implementation of Nuclear Power Programme
- W2. Workshop on Regulatory Framework
- W3. Workshop on Safety Regulations
- W4. Workshop on Licensing Process
- W5. Workshop on Safety Review and Assessment by the Regulatory Body
- W6. Workshop on Regulatory Inspection and Enforcement
- W7. Workshop on Establishing the Communication Strategy to Build Public Confidence in the Regulatory Body
- W8 (a). Workshop on Leadership and Management System for the Regulatory Body
- W8 (b). Workshop on Safety Culture for the Regulatory Body
- W9. Workshop on Human Resources Management for the Regulatory Body

To access the restricted collaboration area, please go to Exemplary Workshop Material Development Site.

IAEA mechanisms in establishing an independent and competent Reg. support of the development of a nuclear safety infrastructure for a new programme

Many countries without nuclear power plants are expressing interest in nuclear power. Safety prerequisites for such development. Newcomers should, therefore, timely launch a comprehensive study to develop a suitable nuclear safety infrastructure and ensure that their nuclear power program meets international safety standards.

Crucial to the long term success of a nuclear energy programme is the establishment of an independent, competent regulatory body. The confidence of the public and the international community depend on effective regulation. The need for a competent and effective regulatory body must, therefore, be understood and given highest priority.

Requests for assistance for strengthening the regulatory capabilities of countries embarking on nuclear power have significantly increased and the means to provide this assistance has become more diversified and delivery mechanisms:

https://gnssn.iaea.org/regnet/embarking/Pages/default.aspx
RCF Portal

RCF portal released in 2011
https://gnssn.iaea.org/regnet/embarking/rcf/Pages/default.aspx

Welcome to the Regulatory Cooperation Forum

Objectives:
- To promote collaboration and cooperation among RCF members to improve coordination of support for regulatory infrastructure development.
- To contribute to achieving and sustaining a high level of nuclear safety, consistent with the IAEA Safety Standards and Guidance.
- To optimize resources among RCF members and avoid unnecessary support duplication through improved coordination.

Request Access to Members Only RCF Web Page
- Go to http://nucleus.iaea.org/Home/index.html and click Register on the top of navigation tool bar.
- Complete account information with username and password.
- Send email with username requesting access to: (n.douchev@iaea.org)
- RCF Secretariat approves access (must be RCF member)

How to Join the RCF?
The IAEA Member State most senior regulatory body official requests membership through the RCF Secretariat at email address: Regulatory-Activities.Contact-Point@iaea.org.

To read more on the RCF, please click here

Materials

RCF implementation: Extra-budgetary funding and CFEs from Japan and US
Current RCF Activities

✓ May 2015: RCF Steering Committee Meeting and Support Meeting held in Brussels in cooperation with the European Commission.

Results of the meetings:

☑ Three areas identified as necessary for enhancing support activities:
  - Regulatory control
  - Inspection process
  - Integrated management system (IMS)

☑ Importance of enhancing coordination mechanisms was underlined.

☑ The database and mapping-matrix of all support activities agreed to be developed.

✓ June 2016: RCF Steering Committee Meeting and Support Meeting will be held in Brussels in cooperation with the European Commission.
Welcome to the Small Modular Reactor (SMR) Regulators’ Forum

Purpose
To identify, understand and address key regulatory challenges that may emerge in future SMR regulatory discussions. This will help enhance safety, efficiency in licensing, and enable regulators to inform changes, if necessary, to their requirements and regulatory practices.

Objectives
Share SMR regulatory knowledge and experience among the members and other stakeholders.
- Facilitate robust regulatory reviews
- Encourage enhanced regulatory cooperation

Outcomes
- Positions statements on regulatory issues;
- Suggestions for revisions to or to new IAEA documents;
- Generate and share information that may be used to enhance their regulatory framework;
- Description of the regulatory challenges and discussion on paths forward;
- Suggestions for changes to international codes and standards.

Additional Information
- Download the Terms of Reference
- Download the SMR Regulators’ Forum Project Plan October

Resources
- Regulatory Infrastructure
- Integrated Regulatory Review Services (IRRS)
- Nuclear Installation Safety
- Self-Assessment Tool (IRIS)
- Embarking Countries Platform on ReaNet

IAEA TECDOC-1536, Status of Small Reactor Designs without On-Site Refuelling
IAEA-TECDOC-1485, Status of Innovative small and medium sized reactor designs, 2005
IAEA-TECDOC-1451, Innovative small and medium sized reactors: Design features, safety approaches and R&D trends
IAEA Nuclear Energy Series, No. NP-T-3.7, Approaches for Assessing the Economics

Collaboration Space for SMR Regulators Forum Members

This is the restricted SMR Regulators Forum Members’ Area, developed to enhance collaboration among SMR Forum Members and the Agency through an improved information exchange system. The collaboration space offers a platform for meeting documents and their storage, as well as for the document development process. Colleagues from around the world can work live on one single document. Additionally, it offers a meeting calendar, a chat room and an image repository, as well as other resources.

Announcements

Title
Terms of Reference
Pilot Project Plan
Project Milestones
IAEA Draft Technology Roadmap for SMR Deployment - NE report
CORDEL SMR TF Presentation

SMR Regulators’ Forum

- Small Modular Reactor (SMR) Regulators’ Forum established in March 2015.

- **SMR purpose**
  Identify, understand and address key regulatory challenges that may emerge in future small modular reactor (SMR) regulatory discussions

- **SMR objectives**
  - Share regulatory experience amongst forum members preparing to license SMRs
  - Capture good practices and methods
  - Interact with key stakeholders
  - Propose changes, if necessary to requirements and regulatory practices

- **7 SMR members**
  Canada, China, Finland, France, Korea, Russia, United States
Regulatory Competence Management

GSR Part 1

Safety Requirements on Governmental, Legal and Regulatory Framework for Safety address the issues of competences of the regulatory body by requiring that:

"The regulatory body has to have appropriately qualified and competent staff."

"The human resources plan for the regulatory body shall ensure staff with appropriate competences and skills."

"A process shall be established to develop and maintain the necessary competence and skills of the regulatory body."

Read more »

Management of Competence

Efforts continued to strengthen management systems in the area of competence and knowledge management. A new safety report, based on the safety standards, entitled "Managing the Competence of the Regulatory Body" was finalized and will be published in 2013 (Safety Reports Series No.79). The objective of this safety report is to provide guidance on managing the competence of staff of the regulatory body. This report also gives advice on training and development programmes for regulatory staff. It includes an appendix with considerations for countries embarking on a nuclear power programme.

The new safety report supercedes TECDOC-1264 and offers an updated competence model for the nuclear sector.

https://gnssn.iaea.org/regnet/rcm/Pages/rcm.aspx
Regulatory Competence Management Portal

https://gnssn.iaea.org/regnet/rcm/sc/Pages/Default.aspx
Launched in June 2013

CANDU Regulators' Forum

During the mid-1990s, the International Atomic Energy Agency (IAEA) instituted a programme under the auspices of “CANDU Senior Regulators Group” (CSRSG). This programme is of primary importance to the regulatory bodies of the IAEA Member States currently having CANDU-based nuclear power programmes in place: Argentina, Canada, China, India, Republic of Korea, Pakistan and Romania. Collectively, these countries own and operate the following CANDU-type nuclear power reactors:

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<tbody>
<tr>
<td>Argentina</td>
<td>Embalse: operational</td>
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<tr>
<td>Canada</td>
<td>Bruce A Units 1-4: operational</td>
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<td>Bruce B Units 5-8: operational</td>
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<td>Gentilly 2: operational</td>
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<td>PL Lepreau: operational</td>
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<td>Darlington 1-4 operational</td>
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<td>Pickering A Unit 1 &amp; 4: operational</td>
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<td>Pickering A Units 2 &amp; 3: laid up</td>
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Public information on the CANDU community
Links to relevant resources
Link to the CANDU Senior Regulators restricted area
Link to the CANDU PSA Working Group restricted area

https://gnssn.iaea.org/regnet/Pages/CANDU.aspx
CANDU Forum Background

- The CANDU Senior Regulators Group was created in the mid 90s under the auspices of the International Atomic Energy Agency.

- Primary importance for regulatory bodies of the IAEA Member States that own and operate CANDU reactors.

- Programme was set up in recognition of the fact that, whilst many important aspects of nuclear safety and regulation are common to all reactor types, CANDU reactor designs have unique features that give rise to safety-relevant, operational and regulatory issues which require a specific mechanism and forum for the exchange of relevant information.

- The CANDU Senior Regulators Group: Argentina, Canada, China, India, Republic of Korea, Pakistan, Romania.
Conclusions

• Significant progress made under RegNet for Embarking Countries, IRRS, RCF, SMR, Regulatory Competence Management and CANDU platforms was made using mainly extra-budgetary (EB) contributions.

• Maintenance and sustainability of RegNet portals is at risk due to absence of new EB projects (e.g. with EC, etc.) and lack of dedicated resources from the regular budget.

• Good feedback and suggestions for enhancing RegNet were received from users, programmes are expanding (e.g. SMR), therefore work should continue.

• IAEA budget does not provide resources for these activities.

• Extra-budgetary contributions are sought.
Join the RegNet Portal Community

http://gnssn.iaea.org/regnet/default.aspx