IAEA’s Regulatory Support for Embarking Countries

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Support for Countries Embarking on a new Nuclear Power Programme

- Common Framework - Safety Packages for Embarking Countries and Education and Training
- Self-assessment of the Integrated Review of Infrastructure for Safety (IRIS)
- Knowledge Networks
Concrete progress for embarking and expanding countries
UAE nuclear regulator grants ENEC license to build reactors in Abu Dhabi
London (Platts) – 18 Jul 2012/724 am EDT/1124 GMT
The UAE's Federal Authority for Nuclear Regulation has granted a construction license to Emirates Nuclear Energy Corporation to build two nuclear reactors at Braka, on the western coast of Abu Dhabi, the regulator said in a statement Wednesday.

Need to establish an appropriate and comprehensive national safety infrastructure in compliance with the IAEA SSs for ensuring safety and gaining public trust at national and international level.
Common framework for the assistance

- Based on SSG16
- Tailored to principal deliverables/milestones for the specific phase of the nuclear power programme;
- Organizing/developing safety packages providing appropriate guidance
- Encouraging Self-Assessment (IRIS)
Common framework for the assistance

- Close collaboration between IAEA departments
  - Core Teams
  - Catalogue of services
  - Design and implementation of activities

- Various means of implementation – technical cooperation, extra-budgetary projects (e.g. EC, US), Networks (ANSN), Forums (RCF), etc.
Establishing the Safety Infrastructure

Safety Guide on establishing the safety infrastructure for a nuclear power programme (SSG-16)

A nuclear power programme is a major undertaking requiring careful planning, preparation and a major investment in time and human resources. While nuclear power is not unique in this respect, it is different because of the safety issues associated with the possession and handling of nuclear material and the long time commitment to ensuring safety after the decision to embark on a nuclear power programme has been made.
Safety Packages for Each Module

✓ **What**: Scope of the Module; list and summary of the relevant actions and underlying IAEA Safety Standards

✓ **How Agency can assist**: Education and Training, Advisory Services, Appropriate Peer review services, and Networks and Tools

✓ **Who**: target organization (e.g., Government, Operating Organization, and Regulatory Body)

✓ **When**: appropriate phase (1, 2, or 3)
Establishing the Safety Infrastructure

Safety Package for Module 1: Governmental, Legal and Regulatory Framework for Safety

This module combines the following elements of SSR-16:

- National policy and strategy for safety (Actions 1 - 10)
- Global nuclear safety regime (Actions 11 - 15)
- Legal framework (Actions 20 - 23)
- Regulatory framework (Actions 24 - 38)
- Transparency and openness (Actions 39 - 47)
- Funding and financing (Actions 48 - 60)

Related SSR-16 Actions: 1 - 60

In Phase 1, the government is building awareness related to the establishment of safety infrastructure and other aspects of infrastructure necessary to support a knowledgeable decision. The safety package for this module addresses these elements with that goal. At the end of Phase 1, the government should be fully aware that a nuclear power programme needs a firm and long term commitment to ensuring safety.

In Phase 2, the government should establish a clear national policy and strategy for meeting safety requirements and ensure the efficient development of the safety infrastructure including funding provisions. Furthermore, the Government should adopt essential elements of the legal framework and establish an independent regulatory body. Following its creation, the regulatory body must prepare its regulatory framework (safety requirements for bidding and licensing process and inspection activities). The Government should become party to International legal instruments and all organizations should establish international cooperation. All organizations should inform the public and interested parties on safety issues.

In Phase 3, the government should continue to ensure the efficient development of the safety infrastructure. The regulatory body will
IAEA Assistance

- Education and Training
- Advisory Services
- Relevant Publications

Education and Training

For building awareness in **phase 1** – as well as advanced phases for general knowledge – the IAEA offers the following basic training courses such as:

- Basic Professional Training Course
- Regulatory Control Course of Nuclear Power Plants

Also in **phase 1**, the IAEA offers overview type workshops/training courses such as:

**W51**: Workshop on Developing National Infrastructure including Governmental, Legal and Regulatory Infrastructure for Safe Implementation of Nuclear Power Programmes

**Office of Legal Affairs – the Nuclear Law Institute** (All Phases)

Additional training courses offered in collaboration with the Department of Nuclear Energy.

For **Phase 2 and Phase 3**, the IAEA has developed a series of workshops that strengthen regulatory bodies’ capabilities to fulfill their core regulatory functions:

- **W52**: Workshop on Regulatory Framework
- **W53**: Workshop on Safety Regulations
- **W54**: Workshop on Licensing Process
- **W55**: Workshop on Safety Review and Assessment by the Regulatory Body
- **W56**: Workshop on Regulatory Inspection and Enforcement
- **W57**: Workshop on Interactions with the Public and Other Interested Parties in Regulatory Activities
- **W58**: Workshop on Management System for the Regulatory Body
- **W59**: Workshop on Staffing the Regulatory Body and Development of the Competencies for the Conduct of Regulatory Functions, including the Use of External Support Organisations
- **W60**: Workshop on Regulatory Activities Section – School of Regulation (under development)

Additional information on Education and Training can be found at: [goto.ieaa.org/ns-training](http://goto.ieaa.org/ns-training)

Advisory Services

- Advisory services in the form of expert missions and documentation reviews may be performed in any of these workshop topics (combined or separate)
- Office of Legal Affairs – Legislative Assistance Programme

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### Relevant Publications

- OLA series Handbook I and II on Nuclear Law
- Handbook on Nuclear Law
- Handbook on Nuclear Law: Implementing Legislation

### Peer Reviews

- In **Phase 1** the Member State may request an Integrated Nuclear Infrastructure Review (INIR) mission.
- In **Phase 2** the Member State may request an INIR mission to provide and an IRRS – Integrated Regulatory Review Service (tailored for embarking countries).
- In **Phase 3** the Member State may request an IRRS mission.

### Knowledge Networks and Tools

- Self-assessment tool for SSG-16 (under development)
- Self-assessment tool for IRRS

For further information please contact Regulatory Activities
Specialized Workshops for Regulatory Infrastructure for Embarking Countries

• Development of “Exemplary Training Material” in support to Specialized Workshops to strengthen organizational and managerial competences of Regulatory Bodies

Topics completed and currently under review:

• Safety Regulations
• Regulatory Review and Assessment
• Regulatory Inspection and Enforcement
• Human Resource Development of the RB and the use of External Support Organizations
IAEA Assistance for Embarking Countries

Workshops format and contents

- Core material - thematic and based on IAEA SS
- Application - examples of practices in MS
- Exercises - tailored to specific needs of MS with outlook on milestones of future activities

Duration: typically 1 week
Target: SSG 16 actions relevant to phases 1-3
Material: presentations with notes and exercises
Budget and other programmatic details

Projects under IAEA Sub-programme - 3.2.1

• Strengthening regulatory effectiveness and regulatory networking;
• Developing safety infrastructure for countries embarking on nuclear power;
• Development of regulatory and safety capacity building for nuclear installations.

EBP: EC-IAEA Cooperation in the field of Nuclear Safety

Component 2: Strengthening the Regulatory Capabilities for Countries Embarking on Nuclear Power

Nuclear Safety Action Plan: Actions 8 (Assistance to embarking countries) and 9 (Capacity Building)
Implemented WSs and EMs

Examples include

- EM to provide guidance and assistance for developing the regulatory requirements and guides regarding the licensing of NPPs, Warsaw, Poland, 25-29 June 2012.
- WS of SSG16, Vienna July 2012 [RAS, SAS, OSS, ISSC, NSWR, IEC, OLA, NE]
- EM to review competence needs for upcoming licensing activities, Ankara, Turkey, 9–11 October 2012. [RAS, SAS, ISSC]
- National workshop on development of legislation and regulations, Misk, Belarus, 16-19 October 2012. [RAS, SAS]
Integrated Vision, Common Strategy

Education and Training complementary approaches

Global Approach
IAEA: Defining policies, frameworks and providing materials and support for E&T activities

Regional Approach
Supporting IAEA Regional Networks, and Centres, providing E&T resources and expertise

National Approach
Member States: Establishment and maintenance of HR and national E&T infrastructure

Global Networking
IAEA Support
to Building Capacity through E&T, Advisory Services, Networking

Courses and Practical Learning
- Post-graduate & Basic Professional Courses
- Specialized Training Curriculums and Courses
- On-the-Job Training Fellowships
- Technical Visits

Sustainability
- Train the Trainers

Distance Learning
- E-Learning

Review Services & Tools
- Appraisals Review Services
- Training/Competence Needs Assessment Tools

Steering Committees & Networks
- Steering Committees of Member States
- Knowledge and technical networks

Extra-budgetary, Projects, regional networks, TC, regular Budget
Steering Committee of Training for Regulators for Nuclear installations

BPTC

New Video lectures, e-learning

SARCON

ANSN/ETTG, ETRES, other
• The Systematic Assessment of Regulatory Competence Needs Guidelines:
  • Describe a methodology and a process to manage the competence and identify the training needs for the regulatory body.
  • Provide examples of a questionnaire for self assessment.
  • Should be used in conjunction with the draft Safety Report Managing Regulatory Competence
IAEA SARCoN Tool experience of use

The EC recommended the use of SARCoN as a condition for regulatory training proposals to be financed by the EC. The questionnaires are a comprehensive compilation of competences as a shopping list but must be adapted to the particular regulator, nuclear programme, cultural/regulatory approach.

Ibero American Foro of Regulators New Project on SARCON and Regulatory Job Profiles
Safety Report
“Managing Regulatory Competence”

Pilot mission in Indonesia 26-29 June

New Appendix for NPP Embarking countries
Interdepartmental Training Page:

Categories:

- Main Training and Information Pages
- Training Materials
- Training Services and Tools
- E-learning and Online Courses
- Links to IAEA Support - Regional Cooperation Networks

http://www.iaea.org/Publications/Training/index.html
Integrated Review of Infrastructure for Safety

- IRIS Methodology and IT tool are available
- The lifecycle of an IRIS self-assessment comprises five steps

1. Preparation
2. Answering
3. Analysis
4. Action Plan
5. Follow Up

- Can be repeated to measure regularly the progresses made to establish the infrastructure for safety
To facilitate the implementation of the methodology, the software “IRIS” is under finalisation.
Integrated Review of Infrastructure for Safety – based on SSG-16

- **IRIS** is a module of Self-Assessment Tool, which also includes SARIS (Self-Assessment of Regulatory Infrastructure for Safety)

Nuclear Safety and Security Regulatory Network

- Information and collaboration platform of the Global Nuclear Safety and Security Network
- RegNet has a dedicated webpage for the countries embarking on Nuclear Power Program
  - [http://gnssn.iaea.org/regnet/default.aspx](http://gnssn.iaea.org/regnet/default.aspx)
The International Regulatory Network (RegNet)

The International Regulatory Network is the Portal for web-based international cooperation among nuclear safety and security regulators. RegNet supports national and international actors in sharing of regulatory knowledge, practices and information and in fostering collaboration on nuclear safety and security matters. (More >>)

Upcoming Events

There are no items to show in this view of the “Announcements” list.
Welcome to the Embarking Countries Area!

The following pages will give an overview of the most significant activities realized by the Regulatory Activities Section regarding countries embarking on or expanding nuclear power programmes.

For more information on the most relevant documents in relation to embarking countries, please click here.

Regulatory Networks

Regulatory Cooperation Forum

CANDU
Support for the Embarking Countries through ANSN

Topical Groups:

• Governmental & Regulatory Infrastructure (GRITG)

• Education and Training (ETTG)

• Communication and Consultation withInterested Parties (CTG)

• Leadership and Management for Safety (LMSTG)
Example of activities

• Regional/ national activities (workshops, expert missions, etc.
  • 9 ETTG, 2 GRITG, 1 CTG, 1 LMSTG.
• Regional Activities
  • Regional Workshop on Systematic Approach to Training (SAT) in Nuclear Safety for the Trainers (Rep. of Korea, 09-12 July 2012)
• National Activities
  • Pilot Peer Review Mission for Self-Assessment on the Education and Training System for Nuclear Safety Manpower Development (Indonesia, June 2012)
• ANSN Activities planned for 2013

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Conclusions

• Support is planned and delivered based on:
  • Common framework
  • Self-assessment of safety infrastructure
  • Extensive use of training and networks
• Specific needs of Member States are assessed and addressed at design and delivery phase
• Partnership with regulatory bodies, technical support organization and EC contributed to achieving practical results
• Progress should be assessed and sustained
Thank you for your attention