



United Arab Emirates



Capacity Building in Radiation Protection in the United Arab Emirates

International Experts' Meeting on Radiation Protection after the
Fukushima Daiichi Nuclear Power Plant Accident

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FANR Establishment

⊗ Article (2) of the Nuclear Law established the Federal Authority for Nuclear Regulation (“FANR”) as the regulatory body of the UAE Nuclear Sector with independent legal personality, full legal capacity and financial & administrative independence and replace pre-existing sector regulatory bodies.

⊗ **FANR independence:**

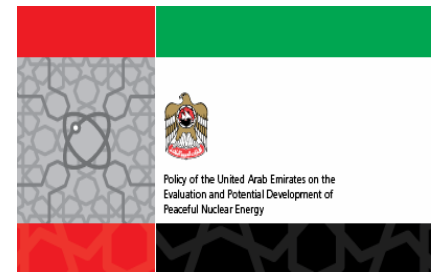
- The sole issuer of Licences and regulations to conduct Regulated Activities (Art. 6)
- Board Members are prohibited from engaging directly or indirectly in a Regulated Activity (Art.10)

⊗ **FANR Aims (Art. 2) to:**

- Control & supervise UAE Nuclear Sector and achieve Nuclear Safety & Security, Radiation Protection & Safeguards.
- Fulfil obligations under international treaties, conventions & agreements entered into by UAE.
- Prevent use of Nuclear Facilities & Regulated Materials for non-peaceful purposes.



UAE Nuclear Policy - Six goals



- ⊗ Complete operational transparency
- ⊗ Highest standards of non-proliferation
- ⊗ Highest standards of safety and security
- ⊗ Close cooperation with the IAEA
- ⊗ Partnership with governments and firms
of responsible nations
- ⊗ Long-term sustainability



Capacity Building Steps

- ⊗ Consistent with the policy of the UAE, FANR has seen its broad regulatory role as encompassing capacity building in radiation protection, as well as other areas relevant to Safety, Security and Safeguards “continued education and training constitutes a cornerstone of the critical infrastructure necessary to sustain a nuclear power programme” UAE White Paper
- ⊗ A separate Education and Training department is included in the FANR organizational structure to lead the capacity building.
- ⊗ Developing UAE nationals and specifically in the technical area is one of the main activities supporting Capacity Building.



Staffing and Competence

Two tracks

- Staffing by senior expatriate staff to deal with short-medium term needs
- HR development to ensure FANR long-term sustainability

Currently strong cadre of experienced professionals in nuclear safety and radiation protection

- 158 employees

Recruitment of younger Emiratis

- Formal education and training
- Mentoring for development

Role of knowledge management



Capacity Building Steps

⊗ Capacity building steps have included:

- ⊗ Formal in-house qualification programme for inspectors;
- ⊗ Scholarships and training at postgraduate level (RP, nuclear engineering and nuclear Safety);
- ⊗ Participation in national and regional training courses offered by IAEA (Emergency, Waste Management,..etc)

⊗ Coordination for the development of infrastructure for Capacity Building for is a national effort involving:

- ⊗ Federal Authority for Nuclear Regulation (FANR)
- ⊗ Khalifa University
- ⊗ Emirates Nuclear Energy Corporation (ENEC)



IAEA TC Projects

- ⊗ IAEA TC Projects play an important role and used as a tool to develop the Capacity Building in the country.
- ⊗ There are five National active TC Projects covering different areas need to be enhanced and developed in the country: establishment of SSDL, Implementing a Radioactive Waste Management Strategy, Early Warning Network for Nuclear Accidents and Radiological Emergencies, Environmental Monitoring Programme and Support for infrastructure development for a Nuclear Power Program in the United Arab Emirates.



Dosimetry Services

⊗ **Dosimetry Services:** In order to improve the monitoring and recording of occupational exposures in planned exposure situations FANR developed criteria to be fulfilled by Dosimetry Services Providers for the individual monitoring of workers subject to occupational exposure – External Radiation.

These criteria required from the Dosimetry Service Provider to operate under adequate quality Management System and are approved by a certifying organization.



Radiation Protection Committee (RPC)

- ❁ The National Radiation Protection Committee formed in 2011, and includes the range of relevant Government stakeholders.
- ❁ The RPC is considering a number of capacity building issues, such as training, accreditation, improve the radiation protection infrastructure and increase awareness of users of radiation sources.



Training Requirements

- ❁ While the medical sector is quite strong in radiation protection capacity, as in many countries, the UAE has a shortage of medical physicists. The industrial sector suffers from a lack of training opportunities
- ❁ To help support the development of the training market, FANR has established a training page on its website. Drawing on the relevant IAEA publications, it describes the content and level of training that is needed for the different job categories in the different applications. It also points to available training providers as they become known to FANR.



Meet Your Regulator

- ❁ FANR also seeks to build capacity in the sector by promoting annual ‘meet your regulator’ workshops, which give the opportunity to promote knowledge of FANR regulations in radiation protection, bring to attention important inspection findings, and provide support for the development of radiation protection programmes.
- ❁ FANR’s website includes sample radiation protection advices for different practices as a means of assisting licenses and applicants to develop effective programs of their own.



Current Status of Licensing

- ⊗ Licence for the Construction of Units One and Two of the Barakah Nuclear Facility and Related Regulated Activities. (Authorises ENEC to construct Barakah Units 1 and 2 , and import equipment and components as necessary to construct the plant).
- ⊗ Application under review (Construction License Application, Barakah Units 3 and 4 Submission date 28 February 2013)
- ⊗ 635 Licenses issued to Conduct Regulated Activities using Regulated Materials since 2010.



Thank You