

Cyber Security Regulatory Program at the United Arab Emirates Nuclear Power Plant

Fatima Al Muhairi, Noora Al Shehhi, Fatima Al Hammadi, Sara Al Saadi and Denis Winter

Nuclear Security Department – Federal Authority for Nuclear Regulation - P.O Box 112021, Abu Dhabi, UAE

Fatima.almuhairi@fanr.gov.ae

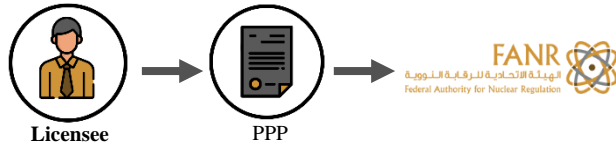
UAE Nuclear Security Regulatory Framework

FANR, the nuclear regulator of the UAE in accordance with the Federal Law by Decree No. 6 of 2009 on Peaceful Uses of Nuclear Energy, has developed and maintained:

Regulation for Physical Protection of Nuclear Material and Nuclear Facilities - FANR-REG-08, Version 1

The licensee is required to submit to FANR a Physical Protection Plan (PPP) for Operation, which addresses the protection of nuclear materials and the nuclear facility against unauthorized removal of nuclear material and radiological sabotage up to and including the Design Basis Threat (DBT).

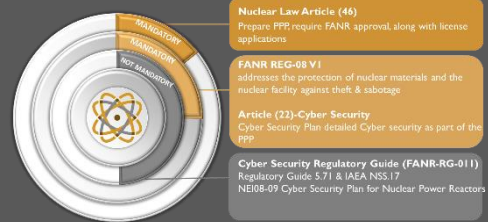
•Cyber Security Plan is a part of the Physical Protection Plan [Article (22) – Cyber Security].



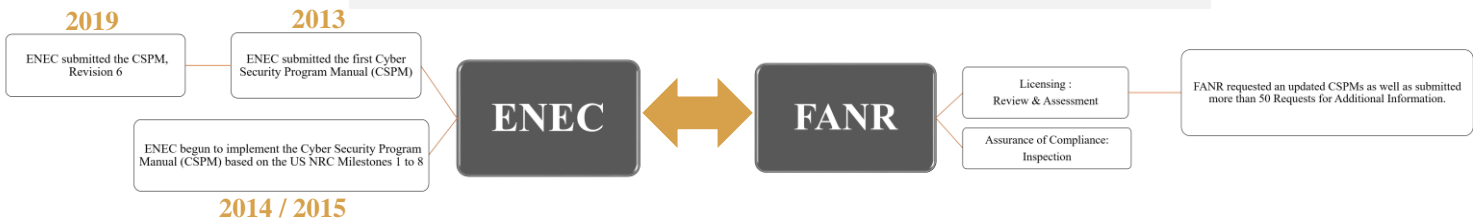
Regulatory Guide for Cyber Security at Nuclear Facility – FANR-RG-011

•FANR-RG-011 is based on U.S. NRC Regulatory Guide 5.71, “Cyber Security Programs for Nuclear Facilities” and IAEA Nuclear Security Series No. 17, “Computer Security at Nuclear Facilities”.

•FANR has recommended to use Nuclear Energy Institute (NEI) 08-09, “Cyber Security Plan for Nuclear Power Reactors”, Revision 6.



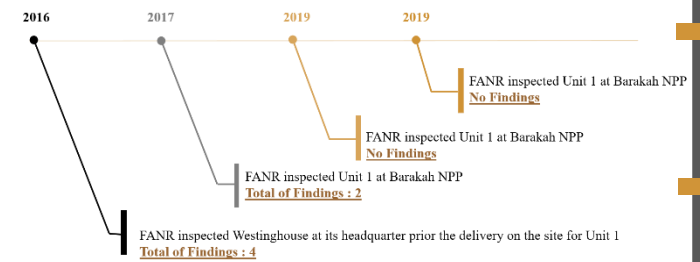
Cyber Security Implementation at Barakah NPP



Progress of Cyber Security Program Implementation at UAE NPPP

- 6** CSPM Revisions Reviewed by FANR.
- 2** IAEA National Workshops on Cyber Security.
- +20** Meetings with National Stakeholders on Cyber Security Program.
- Technical Support Organization (TSO) Engagement to review and inspect the Cyber Security Program at UAE NPP.**
- 2016** The actual implementation of the cyber security program.
- 4** Cyber Security Inspections.

FANR Cyber Security Inspections



Conclusions

- FANR has established a strong and holistic legislative and regulatory framework on nuclear energy and, based on these Law and regulations and its management system, FANR reviewed and assessed the application of a licence for Barakah Nuclear Power Plant.
- FANR has completed the review of application for operation of Unit 1 of Barakah Nuclear Power Plant.
- The cyber security has been taken into account at the beginning of the UAE nuclear power programme and has been reviewed as well as the other components of the Physical Protection Plan.

FANR has reasonable assurance that the Unit 1 of Barakah NPP is in compliance with the nuclear security regulatory framework.