

9. Fukushima as seen from the Gulf

Christer Viktorsson
Deputy Director General, Operations,
Federal Authority for Nuclear Regulation, Abu Dhabi, UAE, www.fanr.gov.ae

Like everybody else in the nuclear sector, I was glued to the TV and the internet on that Friday, 11 March 2011. Two natural disasters that took thousands of lives, and multiple system failures which led to the nuclear accident in Fukushima Nuclear Power Plant... My sorrow, as a nuclear safety expert with over three decades of experience, is nothing compared to that of the Japanese people. My sympathy and thoughts are with them.

Learning lessons from past mistakes is important for all aspects of life, but it is the pillar that carries the nuclear sector. The United Arab Emirates (UAE) is taking this fact very seriously. And we, the Federal Authority for Nuclear Regulation (FANR), have already taken concrete steps. Here are some basic points:

The UAE Government decided in 2008 to launch a peaceful nuclear power programme and established FANR in 2009 as the federal regulator for radiation safety, nuclear safety, nuclear security, and nuclear safeguards, the so-called “3S”s. Since its establishment, FANR has issued several regulations in these fields and followed the global nuclear safety regime. On 27 December 2010, Emirates Nuclear Energy Corporation (ENEC) submitted to us an application for a licence to construct two APR1400 type units in the Western Region of the Abu Dhabi Emirate.

The quake and the tsunami hit Japan as we were in the midst of this extensive review. We immediately asked ENEC to look into their own application, especially to see if their calculations for external hazards, design and siting are needed updating in light of the Fukushima accident. ENEC’s review shall be delivered by the end of this year and FANR will include it into its assessment of ENEC’s licence application. According to our initial plan, we expect to finish the review by the summer of 2012. But, as we have been saying since Day 1 of the application, “we will take the time needed.”

Obviously, effective independence of a nuclear safety regulator is a must, but a regulator cannot shoulder the responsibility for safety. It must have the power to ensure that the licensees take that responsibility seriously and devote enough resources to it, human and technical. Ensuring the presence of strong and vigilant safety and security cultures within the licensees is essential to maintain and continuously enhance the safety of the workers and the public.

FANR has already established strong international connections. Our staff made up the biggest portion of the UAE Delegation during the Convention on Nuclear Safety (CNS) Review Meeting held in Vienna only a month after Fukushima. There, FANR Director General, Dr

William D. Travers, expressed our keenness to draw lessons and proposed a central sharing mechanism or clearing house to give all states early and easy access to information on the post-Fukushima efforts of all national programmes. ENEC's CEO, Mr. Mohammed Al Hammadi, highlighted the efforts needed by his organisation to be able to master the safety of the nuclear power plants they plan to build.

We in FANR, and in the UAE nuclear community in general, follow and support not only the safety standards of the IAEA, but also its guidance in all the 3S areas.

In January this year, the UAE hosted the IAEA's Integrated Nuclear Infrastructure Review (INIR) Mission. This fall we are receiving another IAEA team of experts to review our preliminary findings on the siting aspects of ENEC's application. In December, FANR will host one of the IAEA's most thorough safety reviews, the Integrated Regulatory Review Service (IRRS). FANR also has been sending its senior staff to take part in IRRS reviews of other countries. Moreover, the establishment of domestic skills and resources in the nuclear safety, security and safeguards areas is an important mission of FANR. IAEA support is also of outmost importance here. As of today, about half of our 120 staff members are UAE nationals.

The UAE relies heavily on the global safety regime, on the IAEA, on our bi-lateral arrangements, particularly with the Korea Institute of Nuclear Safety (KINS), and on our overarching efforts to utilize decades of world experience in nuclear safety and its regulation. FANR endorses the International Nuclear Safety Group (INSAG) view that the single most important component of the global safety regime is a strong national nuclear infrastructure in each

member state. This is a governmental responsibility and is a long-term obligation. We take this obligation seriously and we are working hard to establish it in the UAE. We look forward to working cooperatively with all members of the nuclear community and to contribute to the continuous improvement of the global nuclear safety regime, especially in the aftermath of Fukushima.

In spite of the Fukushima accident, two basic factors have not changed for the UAE:

- The UAE government continues to view nuclear power as an important component of its future energy mix.
- At the same time, it recognizes the concerns and anxiety of the public about possible accidents and their radiological effects.

As a matter of fact, two of the six pillars of the UAE's nuclear policy are "highest standards of safety and security," and "complete operational transparency". Hence, FANR will continue to keep openness and transparency among its core values.

In short, nobody in the nuclear community will survive if we don't take appropriate lessons from this accident. It is good that we have no fatality from ionising radiation that was released from the crippled reactors in Fukushima. But that is one rare good thing among the many things that went wrong. The studies will take a while, if not years, to tell us what exactly went wrong, and how.

One thing is clear, though: We must follow vigorous, high, and updated safety standards, and take every opportunity to improve safety, as we cannot afford another failure. A strong and independent nuclear safety regulator is necessary

for any nuclear power programme, but it cannot take the prime responsibility for safety, which belongs to a licensee.

September 2011