

Roles and Challenges of University in Supporting Nuclear Education and Training in an Emerging Nuclear Energy Country

Wednesday 29 October 2014 12:30 (30 minutes)

While the existence of nuclear and radiation facilities in Southeast Asia dated back to the 1970s, the usage of nuclear technology has been limited to the non-power applications, and there was never an urgency to develop a large number of human resources in the region. Only a few universities offered formal degrees in nuclear or nuclear-related fields. Most institutions opted to provide courses in nuclear and radiation only as part of other engineering or science programs. Overall, nuclear education was considered as “something to have” but not “something to promote”.

However, Southeast Asia in recent years has changed to become an emerging market for nuclear power technology. Human resource planning is now recognized as one of the crucial issues for the implementation of nuclear power. The first nuclear power plant in the region will start operating in Vietnam in the early 2020s. Several other countries, including Indonesia, Malaysia, and Thailand, have also been considering nuclear for power production, and have tentative plan to use nuclear in their energy mix in the late 2020s. University will have an important role to play in providing sufficient and qualified human resources for these growing demands.

On the educational side, many new formal degree programs are now being created at several universities in Southeast Asia. Existing programs are also being updated to be able to support nuclear power education. Nuclear security courses/programs are also being implemented to reflect the global trend. On the training side, both regulatory body and utilities are now providing professional-development-type training programs for their staff. University is sometimes asked to support these programs by providing background knowledge prior to the practical training.

As a newcomer country, however, the overall number of trainers and training facilities in the country are usually limited. The challenge here is then to create synergy among the university, the regulatory body, and the utilities so that the limited resources can be fully utilized. Sharing of resources will be necessary, while making sure that all three organizations are developing together at the same pace. This paper will present the challenges faced by the university in this growing process, and suggest the way to cope with the challenges from the university point-of-view.

Country or International Organisation

Thailand

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Session Classification: Session 4: Poster Session

Track Classification: Maintaining and Strengthening TSO Capabilities