

Fellowship Profile

IAEA PROGRAMS
AT ARGONNE NATIONAL LABORATORY

Governmental and regulatory infrastructure
for nuclear installations safety

TRAINING SUMMARY

Benja, Spela and I are from the Slovenian Nuclear Safety Administration (SNSA) and we completed a group training at three different U.S institutions: Westinghouse Electric Company, the U.S Nuclear Regulatory Commission (NRC) and Southern Nuclear Plant Vogtle Unit 3 & 4. The aim of our visit was to acquire knowledge and information on GEN III+ reactors, the Westinghouse AP1000, and the SMRs in the process of development, the Westinghouse AP300.

At the Westinghouse headquarters we visited the AP1000 full scope simulator and reviewed plant response to design bases accident scenarios. At the US NRC, we visited the emergency response centre. The visit to the Vogtle NPP consisted of walkdown of the plant, including the main control room and shutdown safety room, the radiation protection unit, emergency facilities, and more, followed by a presentation and discussion of experience in construction of the new plant. The visit was organized in line with the process for new builds: 1) from the NPP designer to 2) the regulator (that approves the design and oversees the construction) and at last 3) the operating plant that was constructed according to the approved design.

WHATS NEXT?

In 2023 Slovenia started governmental activities for preparation for the project of a new NPP, the JEK2. This shall be a GEN III+ NPP with a single unit, located next to the existing Krsko NPP. The Slovenian regulator, to be capable of licensing the new NPP, needs to significantly upgrade its staffing and the capability, which is oriented to the existing plant with GEN II design which is in operation of 40+ years. For a small nuclear country that is Slovenia, review and licensing of a novel plant design is a task that cannot be accomplished with current level of knowledge and experience. This is especially true for the design of the Westinghouse AP1000 plant, which is one of three candidate NPP designs for the JEK2 project.

All the experience gained during the scientific visit will be valuable in preparation of the regulator to the new built project. The regulator shall build up the organization for the new NPP assessment and licensing and to provide training for newly hired staff to build up their competence on nuclear technology and especially the new NPP of GEN III design.

During this visit we established important contacts with specialists from different fields from the three organizations: Westinghouse, US NRC, Southern Nuclear, the operator of Vogtle NPP. This will be very worthy in the next 15 years when the licensing and construction of new NPP in Slovenia will take place.



“We are grateful to hosts for the hospitality and open discussions. Everything we learned will be of great value not just to the team members of the visit but also to all the other SNSA staff that will be included in the work on new NPP project or the SMR.”

Tomaz, Benja & Spela- Slovenia

July 8th to July 11th 2024

Hosted by: USNRC, Westinghouse, & Southern
Company -Plant Vogtle