

CAPACITY BUILDING AND WORKFORCE DEVELOPMENT FOR FLOATING NUCLEAR POWER PLANTS IN NORDIC REGION

KINGA OLEŃSKA^{*1}, MARTÍN SIERRA REQUENI², PAU LANA GÓMEZ³, PAULO ADRIAN LE BRUN⁴, GİZEM ÇETİN⁵

^{1,2,3,4,5} *E.T.S.E.I.B., Polytechnic University of Catalonia-Barcelona Tech, Diagonal647, Barcelona, 08028, Catalonia, Spain*

* Corresponding author email: kinga.olenska@estudiantat.upc.edu

Floating Nuclear Power Plants (FNPPs) offer a potential solution to the unreliable energy supply and dependence on fossil fuels faced by local communities in the semi-isolated areas of the Nordic regions. These units provide a reliable, low-emission energy source. With their modular design and mobility, they can be stationed near coastal regions, ensuring a stable power supply while reducing reliance on imported fossil fuels. Developing a FNPP requires a well-planned workforce strategy. Ensuring a highly skilled and stable workforce is critical to the project's success and depends on investments in education, training, international collaboration, among other aspects. A successful workforce strategy must identify key competencies in scientific, technical, management, operation, and regulatory fields. International collaboration allows Nordic countries with less developed or no nuclear energy to leverage proven solutions and expertise, accelerating the adoption of new technologies and safety standards. Particularly significant in this context is the consideration of international cooperation for this project among Finland, Sweden, Norway, and Denmark. Additionally highlighting the benefits of international collaboration: investing, building, regulation and managing. Knowledge exchange and the adaptation of best practices in nuclear energy could accelerate the deployment of FNPPs. In addition, this project considers a Centralized Spent Fuel and Waste Management facility. A strategic approach to workforce development is essential for the safe and effective implementation of nuclear projects in such regions. By investing in skills development, these countries can build the necessary expertise to successfully adopt Floating Nuclear Power Plant technology while ensuring the highest standards of safety, regulatory oversight, and long-term sustainability. This work will focus on the main aspects, best international practices, and state of the art methodologies to highlight a strategy for capacity building focusing on FNPPs.

124_abstract_yg