



Contribution ID: 337

Type: Poster

Assessment of the Safety Design Features of Small Modular Reactors with existing demonstration plants using Reactor Technology Assessment (RTA)

Small Modular Reactors (SMRs) represent a promising solution for nuclear power generation, offering compactness and flexibility with capacities ranging from 10 to 300 MWe. This research aims to narrow the existing knowledge gap in the safety of SMRs by conducting a preliminary analysis, focusing on their safety design features, particularly those of operating demonstration plants. Building upon our prior technical analysis, which focuses on SMRs with operational demonstration plants, this study delves into the safety design features of these reactors with the aim of assessing their potential deployment in the Philippines. Through a Reactor Technology Assessment (RTA), the safety design aspects of shortlisted SMR designs are examined, with a focus on their active and passive safety systems as reported in the reactor databases of the International Atomic Energy Agency (IAEA). Thus, this study will provide valuable insights for decision-makers in the Philippines' nuclear power program.

Country OR International Organization

Philippines

Email address

uabautista@pnri.dost.gov.ph

Confirm that the work is original and has not been published anywhere else

YES

Author: BAUTISTA, Unico (Department of Science and Technology - Philippine Nuclear Research Institute)

Co-authors: Dr ASUNCION-ASTRONOMO, Alvie (Philippine Nuclear Research Institute –Department of Science and Technology); Mr ALIPERIO, Mark Gino (Department of Science and Technology); Mr GUILLERMO, Neil Raymund (Philippine Nuclear Research Institute –Department of Science and Technology); Dr CERVERA, Rinlee Butch (Energy Engineering Program, University of the Philippines-Diliman)

Presenter: BAUTISTA, Unico (Department of Science and Technology - Philippine Nuclear Research Institute)

Track Classification: Topical Group C: Safety, Security and Safeguards: Track 8: Demonstrating SMR's Safety Case