

nuward SMR

European Energy Forum

The role of SMRs in EU's strategic autonomy and decarbonisation: a value chain approach

Strasbourg – 21/11/2023

NUWARD reserves all rights in this document and in the information contained therein. Reproduction, use or disclosure to third party without express authorization is strictly prohibited.



Quick overview of SMR/AMR being developed

All kinds of nuclear fission technologies



Ambitious targets but more likely to be ready between 2040 and 2050





All scales for several uses and markets

5 to 15 MWe for electricity needs disconnected from the grid such as remote communities or military bases.

15 to 200 MWe for heat or electricity generation for large industrial sites such as mines or gas extraction or Hydrogen production.

~ 200 to 400 MWe for electricity generation connected to the grid

Any use, reproduction or disclosure by NUWARD must strictly benefit the NUWARD SMR Project. Any further use, reproduction or disclosure is prohibited without the express prior approval of NUWARD

The objectives of NUWARD SMR

Decarbonize economies

Three main market segments:

• Replacing coal-fired power plants in the 300-400 MWe range,

• Energy-intensive industrial sites,

 Powering grids with limited capacity or demanding small incremental power build-up

NUWARD SMR: a PWR 340MWe power plant



2 integrated reactors of 170 MWe each, standard UO2 fuel <5% enrichment



>90% availability; compatible with ENTSO-E grid requirements; 60 years of operation; load-following capability



Safety objectives that meet the best international standards



Modular approach and **simple competitive design** targeting **40-month** construction duration for a NOAK



Improved landscape integration



Designed for export, allowing adaptation to multiple markets without significant re-design



First Nuclear Concrete in France in 2030



Multipurpose by design: H2, district heating, desalination, heat & electricity cogeneration, CO2 capture



Any use, reproduction or disclosure by NUWARD must strictly benefit the NUWARD[™] SMR Project. Any further use, reproduction or disclosure is prohibited without the express prior approval of NUWARD

NUWARD SMR is designed to support various energy intensive applications













Industrial capacity and capability relying in majority on the European Nuclear Industry & Supply Chain



Already benefiting from technical exchanges with several European regulators



Adapted to EU market needs



Key success factors for SMR to contribute to the fight against climate change and energy security



Support the development of a robust supply chain, develop training in key nuclear skills



Thank you! To learn more: <u>www.nuward.com</u> LinkedIn : Follow the NUWARD account



