



PAŃSTWOWA
AGENCJA ATOMISTYKI

Independent but not alone - use of foreign experience to increase regulatory effectiveness in Poland

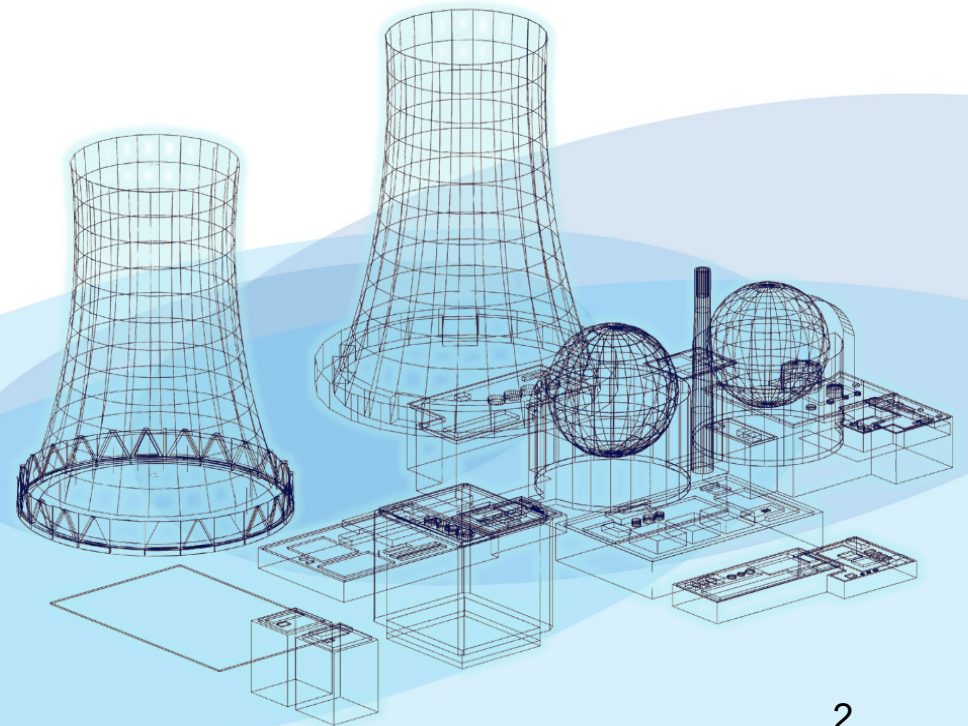
Andrzej Głowacki

President of the National Atomic Energy Agency (PAA)

U.S. Nuclear Regulatory Commission's 36th Annual Regulatory Information Conference, March 12-14, 2024

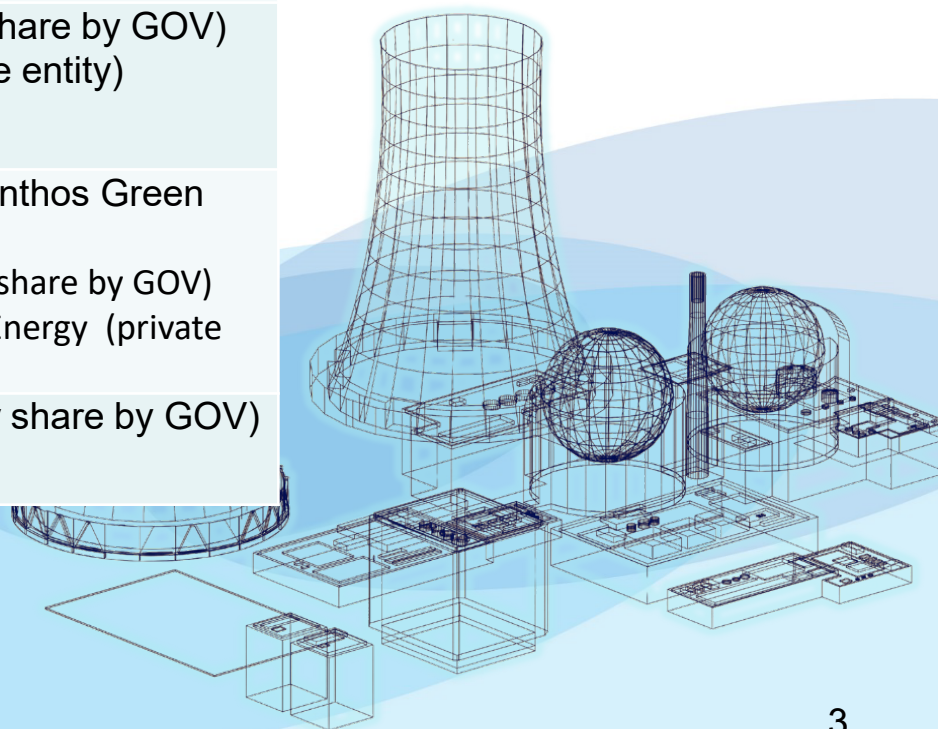
Content of presentation

1. Current status of deployment of nuclear energy in Poland
2. How to leverage cooperation with foreign partners
3. What more can be done



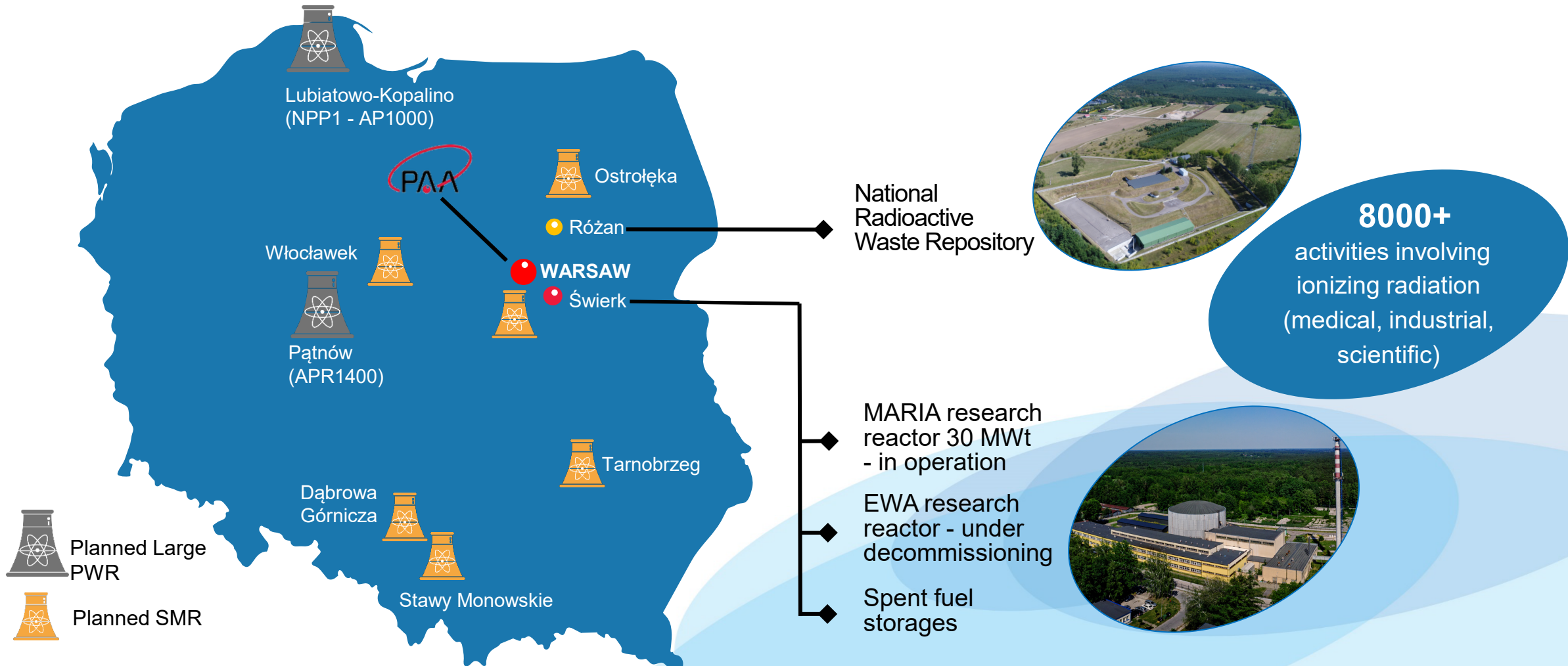
Major projects for nuclear power new builds in Poland

	New NPP Programs	Technology selection	Investor/Prospective Applicant
1	GOV Program NPP1	AP1000 – selected in Nov 2022	PEJ (100% share by GOV)
2	GOV Program NPP2	Technology selection to be made	PEJ (100% share by GOV)
3	PGE/ZEPAK Program NPP3	APR1400 – selected in Nov 2022	PGE (majority share by GOV) +ZEPAK (private entity)
4	SMR Program BWRX-300	BWRX-300	OSGE Orlen Synthos Green Energy - Orlen (majority share by GOV) - Synthos Green Energy (private entity)
5	SMR Program NuScale	-	KGHM (majority share by GOV)



Facilities under supervision of PAA.

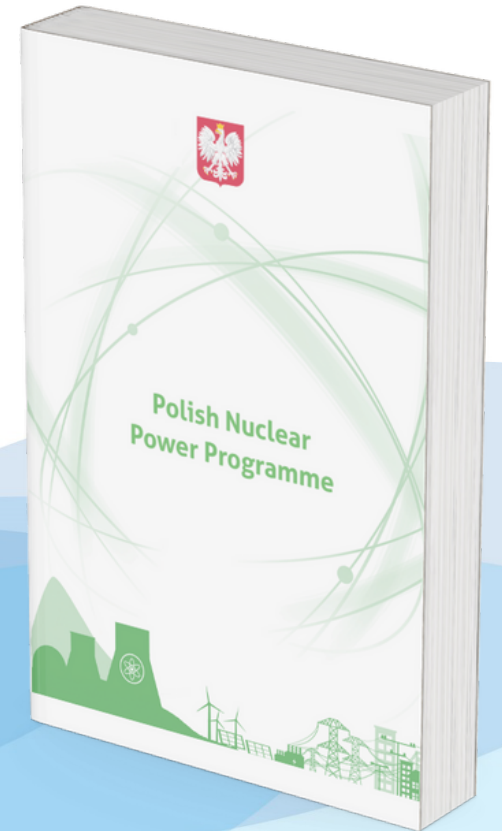
Plans for nuclear energy deployment in Poland



Current status and last activities of the PNP Programme

The current status of the **PNP Programme** is defined by the very last and present activities:

1. **General opinion of the PAA President**– The President of PAA issued a general opinion on the scope of verification of safety analyzes; June 2023
2. **Decision-in-principle** (submitted by PEJ on April 2023) – Ministry of Climate and Environment issued the decision-in-principle for the NPP1; July 2023
3. **Environmental decision** – the General Director for Environmental Protection issued a decision on environmental conditions for the NPP1; September 2023
4. **Engineering Services Contract** - PEJ and the Westinghouse-Bechtel consortium signed an Engineering Services Contract for the NPP1; September 2023
5. **Location decision** – the Head of the Pomorskie Province informed about issuance of the Location Decision for the NPP1; October 2023



How to leverage cooperation with foreign partners

PAA develops **cooperation** with regulatory authorities with the vendor countries – recent activities:

US NRC

- new MOU in 2022 and Agreement in 2023
- on-the-job trainings
- national workshops with NRC experts
- bilateral exchange of regulatory experience in specific technical areas
- cooperation in safety assessment (joint PAA-NRC licensing simulation)

Republic of Korea KINS and NSSC

- new MOU in 2023
- development of nuclear safety training for PAA
- PAA study visit to Republic of Korea

Canadian CNSC

- MOU and TOR in 2023
- on-the-job trainings
- regulatory exchange in specific technical areas



Fot. US NRC

PAA On-the-Job-Training Programme



- OJT Project launched in 2015, in cooperation with Regulatory Cooperation Forum, IAEA and bilateral partners
- For years 2015-23 there have been over 40 OJTs implemented – over 100 months of practical training in oversight of NPPs – providing hands-on experience for PAA regulatory specialists, safety analysts and nuclear inspectors
- Implemented in 8 countries: Canada, Czech Republic, France, Republic of Korea, Slovakia, South Africa, UK, USA.
- In 2023 introduced tailored OJTs for review of SMRs in Canada and US

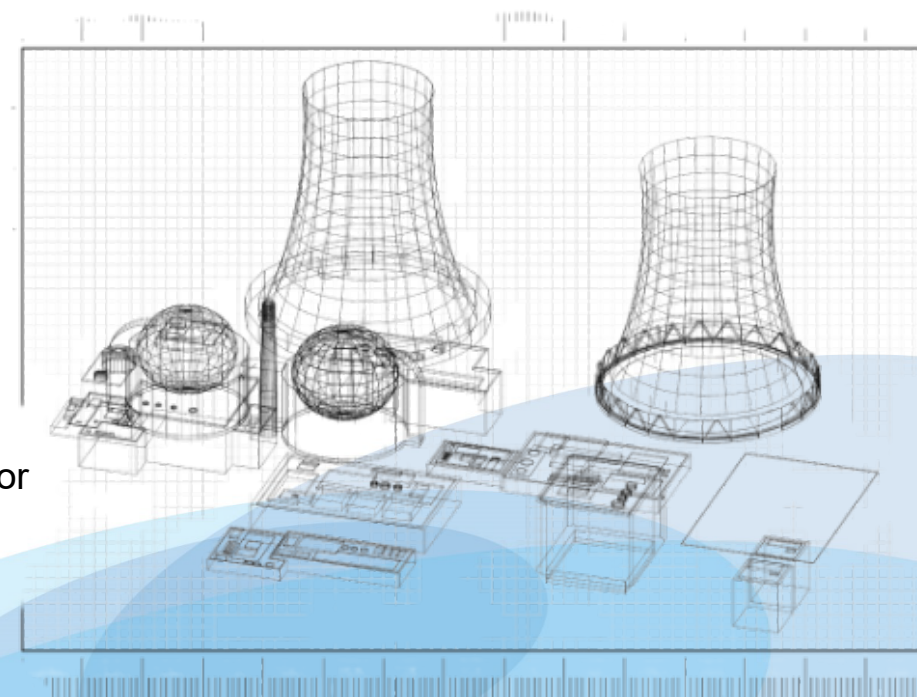
Participation in the joint reviews

The Joint Early Review Phase 2

- **EDF's** initiative for joint technical assessment of the **Nuward SMR**
- At the end of 2023, **PAA**, together with Dutch (ANVS) and Swedish (SSM) nuclear regulator **joined the second phase of the JER project**

Observation of Step 2 of the Generic Design Assessment (GDA) process

- **Rolls Royce SMR** initiative to observe the GDA process conducted by the Office for Nuclear Regulation (ONR), the Environment Agency (EA) and Natural Resources Wales (NRW).
- Polish (PAA), Dutch (ANVS), Swedish (SSM), Czech (SUJB) and Finnish (STUK) nuclear regulatory authorities take part in the observation of the Step 2 of GDA process



Conclusions - next steps and challenges

Next steps for the PAA licensing preparation (with foreign partners)

Further prepare the PAA for simultaneous licensing of several designs considered for construction in Poland, including SMRs:

- Leverage the NRC's experience with safety verification of the AP1000 reactor and the CNSC's experience with safety verification of the BWRX300 reactor
- Obtain good knowledge of design technologies before applications are submitted
- Review of regulatory framework and development of guidance before the licensing (including international review)

Challenges at national level

Staffing

- Adjust regulatory capabilities to deal with increasing number of licensees in industry, research, and medical applications
- Introduce new staff to regulatory safety culture

Authorization of expert organizations and laboratories – TSO

Plan public communication activities for licensing process

Verification of our regulatory requirements and comparison with other countries

Conclusions – what more can be done

Intensify current cooperation and leveraging the experience of other countries i.e. NRC in evaluating AP-1000 technology

Transfer of PAA's knowledge and experience to other regulatory bodies and fora e.g. RCF

Continue joint verification with other nuclear regulators of the safety of selected technical solutions in the framework of pre-licensing or licensing

Harmonization of nuclear regulatory requirements – to what extent possible?



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Thank you for your attention!
