Ministry of Climate and Environment
Republic of Poland

Polish Nuclear Power Programs

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Republic of Poland

Pillars of

the Energy Policy of Poland until 2040 - EPP2040

I Just Transition

II Zero-emission energy system

III Good air quality

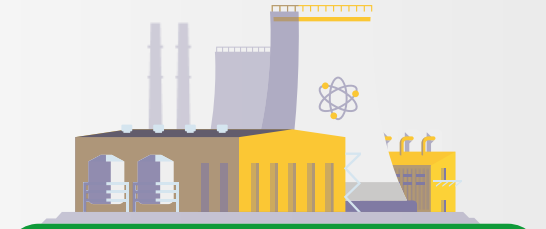
Pillar II

Zero-emmission energy system

Offshore Wind

about **8-11 GW** to 2040

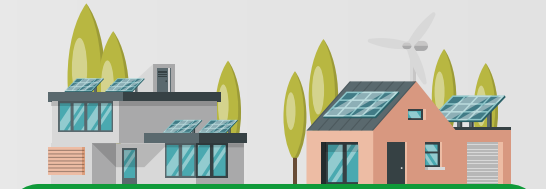
Investment outlays
around **130 bln PLN**



Nuclear Energy

about a **6-9 GW**

Investment outlays
around **150 bln PLN**



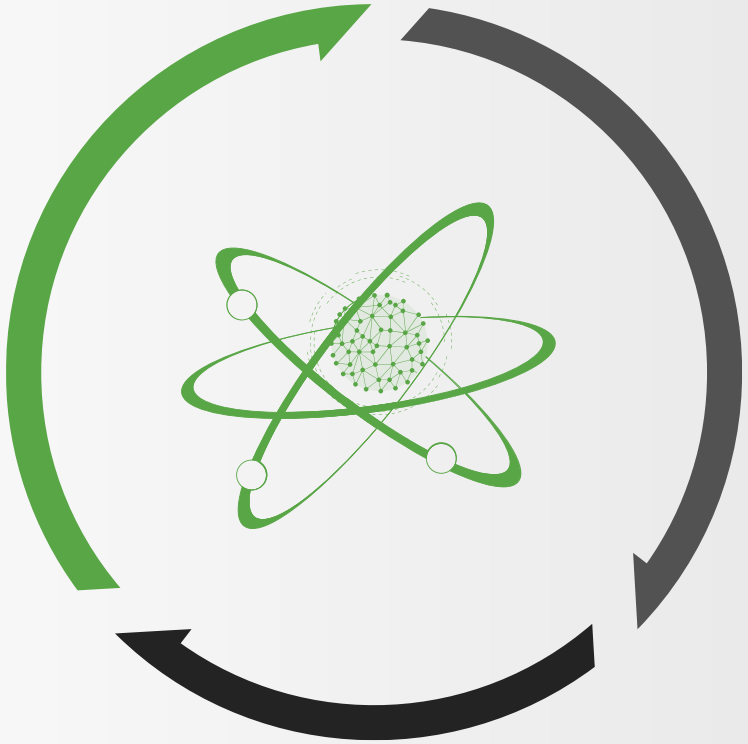
Distributed and Prosumer Energy

Increase of prosumers
actively taking part in the market

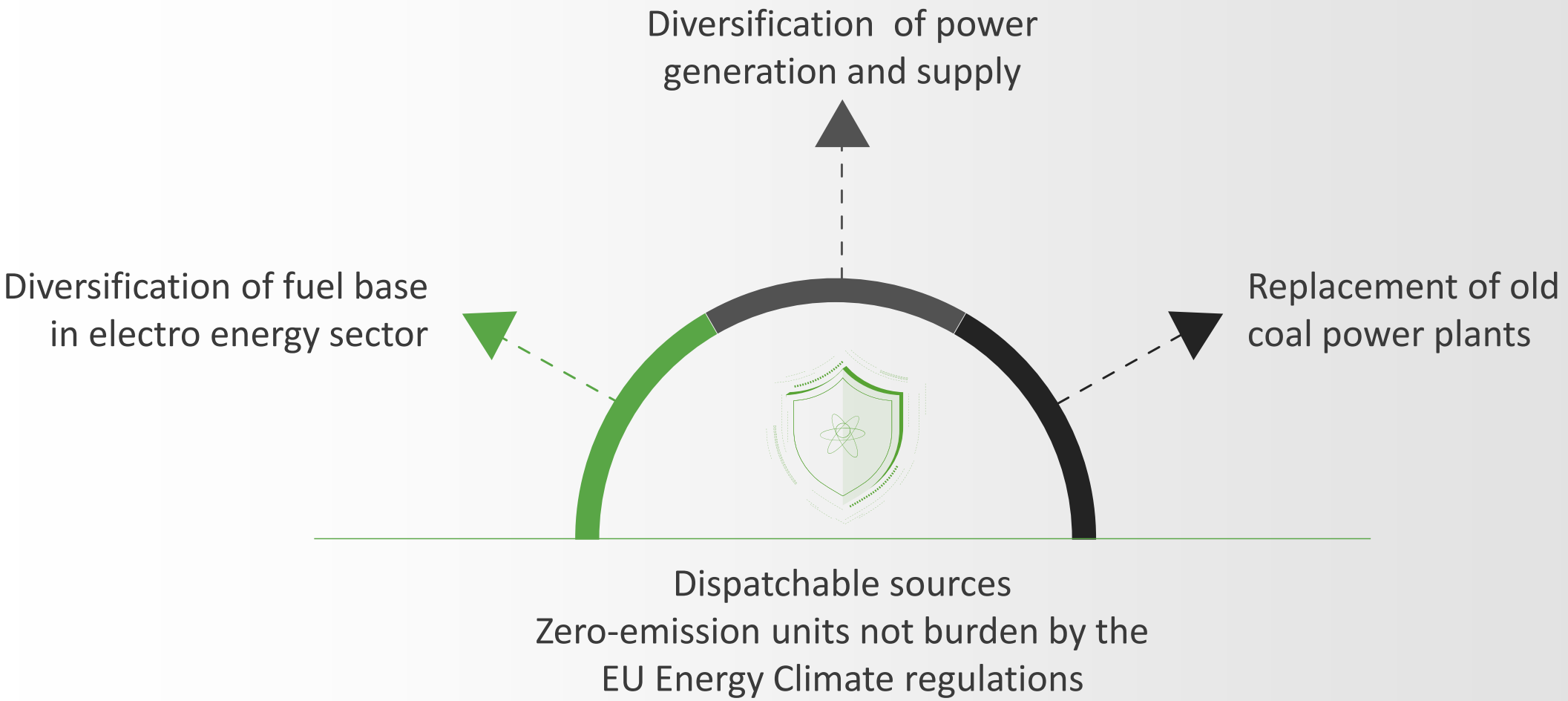
300 self-sustainable areas and
1 mln prosumers till 2030

Rationale for implementing

nuclear power



Energy
security



Plans for nuclear power deployment in Poland

GOVERNMENTAL POLISH NUCLEAR POWER PROGRAMME (PNPP):

- Implementation of the PNPP – Ministry of Climate and Environment **(NEPIO)**
- PNPP approved - January 2014 by the Council od Ministers and updated - October 2020
- Confirmation of key role of nuclear power in Poland's Energy Policy until 2040 – February 2021

LARGE SCALE REACTORS BUSINESS DRIVEN PROJECT

- On October 31, 2022, ZE PAK and PGE signed a letter of intent with KHNP to build a third nuclear power plant based on APR1400 technology in Pątnów (Konin).
- The planned investment is of a business nature. The implementation of the project is supported by the Polish government.

SMALL MODULAR REACTORS (SMR):

- Numerous SMR projects planned by Polish private companies and MoUs signed with technology providers
- Not yet included in the Long Term Energy Strategy and in the PNPP, but will be part of the updated Stategy and PNPP (to be approved in 2023/2024)

Polish Nuclear Power Programme (PNPP)

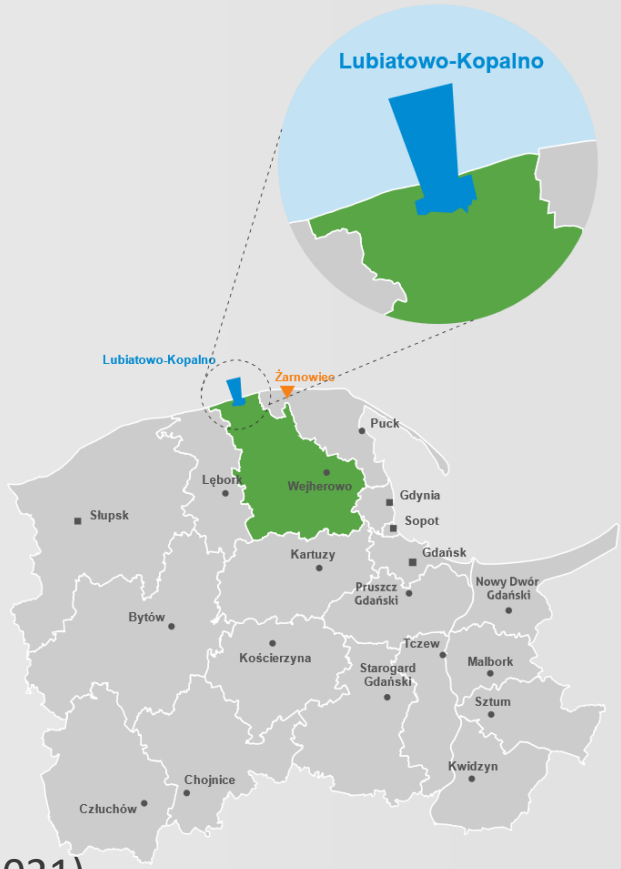
OBJECTIVE:
To build 6-9 GWe of installed nuclear power capacity based on the large, proven reactors technology

TECHNOLOGY:
Pressurized Water Reactor (PWR) with a net capacity of 1000 - 1650 Mwe

INVESTOR:
Polskie Elektrownie Jądrowe Sp. z o.o. (Polish Nuclear Power Plants ltd.) – **PEJ**

VENDOR (for 1st site):
Westinghouse Electric Company

SITE:
The costal site **„Lubiatowo-Kopalino”** in Poland's Choczewo municipality have been pointed by the investor as the preferred location for the country's first NPP (December 2021)



Transboundary consulations
- The lengthy process of transboundary consultation has been succsefully concluded

Second nuclear power plant

Talks on the second nuclear power plant envisaged in the PNPP will continue with three potential technology suppliers from the **US**, **France** and **South Korea**.

In parallel with the talks, an evaluation of the potential location for this project will be carried out.

The potential sites of nuclear power plants

Prepared by: Nuclear Energy Department, Ministry of Climate

Sources: https://www.naturalearthdata.com/, the organisation's own data

SMR technology vs large Nuclear Power Plants in Poland

- In parallel to the implementation of the Polish Nuclear Power Program, the Ministry of Climate and Environment is following the global development of small nuclear reactor technology, especially its use in district heating and industry, due to the interest of Polish industrial and power companies in this technology.
- The PNPP provides for the construction of 1000-1650 MWe nuclear units, with a total capacity of 6000 to 9000 MWe, using the proven and well-developed Generation III LWR technology.
- The aim of implementing PNPP in Poland is therefore production of a large amount of clean electricity and possibly district heat, at low cost.
- SMR technology has a significant development potential. Small Modular Reactors (SMRs) will have a different role to play in the Polish power industry - rather as a supplement, built for specific applications, largely for industrial companies' own needs.
- PNPP and commercial SMR projects are complementary, not mutually exclusive. The decision of private investors to implement SMRs further testifies in favor of nuclear power, which is safe, economically competitive and environmentally friendly.

SMR prelicensing

ORLEN Synthos Green Energy

GE Hitachi Nuclear Energy BWRX-300

KGHM POLSKA MIEDŹ

NuScale

- On July 8th, 2022 the PAA President received requests from **ORLEN Synthos Green Energy** and **KGHM** for a general opinion for the above-mentioned reactor technologies under Article 39b of the Atomic Law as prelicensing instrument. The opinion of the Polish regulator was positive.

Public acceptance or nuclear power in Poland

Respondents that confirmed their support for construction of NPP in Poland:

86% badanych

According to a survey on public opinion on the development of nuclear power in Poland, conducted by Danae Sp. z o.o. on behalf of the Ministry of Climate and Environment, November 2022.

In municipalities where potential sites for the first NPP are located, social support is around:

75%

According to the PBS Survey Report "Attitudes of Poles towards Nuclear Power" conducted on behalf of PEJ Ltd. in October 2021.

Experience of other countries **(Czech Republic, Finland)** shows that support for nuclear power grows with decisive and stable government action to build a nuclear power plant.

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Thank you for your attention