

**How to Develop Nuclear Energy in
Poland? Recommendations on Legal
Regulations and Industry Support
Mechanisms**

We are grateful to all the experts who devoted their time and shared their insights in the preparation of this publication. Their openness, practical experience, and thoughtful comments significantly enriched the analysis and ensured that the conclusions reflect real-world constraints and opportunities. We would like to extend our particular thanks to representatives of government institutions, regulatory authorities, industry, and the academic community who agreed to participate in the interviews and the Delphi study. Their contribution to the development of this publication was invaluable.

This publication is based on our publication *Unlocking Nuclear Energy in Poland: Policy, Regulatory and Industry Incentives*, developed by PIE experts Adam Juszczyk, Krzysztof Krawiec, and Wojciech Żelisko, together with Nuclear PL experts Przemysław Gorzkowski, Maciej Lipka, Adam Rajewski, and Paweł Żbikowski.

Citation: Juszczyk, A., Krawiec, K., Żelisko, W. (2026), *How to Develop Nuclear Energy in Poland? Recommendations on Legal Regulations and Industry Support Mechanisms*, Policy Paper, No. 1, Polish Economic Institute, Warsaw.

Policy Paper 1/2026

Warsaw, April 2026

Authors: Adam Juszczyk, Krzysztof Krawiec, Wojciech Żelisko

Editorial Work: Jakub Nowak, Małgorzata Wieteska

Substantive Editing: Michał Smoleń

Graphic Design: Anna Olczak

Typesetting and Layout: Tomasz Gałązka

Polish Economic Institute

Al. Jerozolimskie 87

02-001 Warsaw

© Copyright by Polish Economic Institute

Table of contents

Key findings and recommendations	4
Introduction	7
The role of nuclear energy in Poland's future energy mix	9
SMRs and industrial needs, and the associated risks	13
Directions for changes to the legal framework for nuclear energy	17
How can nuclear energy be financed effectively?	19
A global renaissance – but a European one? . . .	21
Bibliography	23

Key findings and recommendations

- **The construction of Poland’s first nuclear power plant at the Lubiatowo–Kopalino site should be treated as a project that generates a lasting “learning-curve” effect for the entire national nuclear power programme. The key priority must remain timely delivery and keeping the project within the adopted budget assumptions.** Efficient achievement of key project milestones will matter not only for sustaining public support for subsequent nuclear investments, establishing effective models for domestic industry participation, and developing the domestic supply chain, but also for ensuring that nuclear energy delivers its planned contribution to Poland’s electricity mix in the late 2030s and early 2040s.
- **The future energy mix scenario should adequately reflect the role of nuclear power.** It is necessary to develop a long-term scenario for the energy mix that takes into account both the benefits and constraints of individual generation technologies. This should translate into a clearer and more consistent treatment of nuclear power in Poland’s strategic documents. Currently, some key policy documents are outdated (e.g., PEP2040), while others do not offer a perspective for the period after 2040. **Further development of a model based on renewables and gas capacity may enable rapid emissions reductions, but it will not be sufficient to achieve climate neutrality. Developing nuclear power as another pillar of the electricity system requires a comprehensive view of electricity market design in order to ensure the economic viability of the target model of the Polish power sector.**
- **It is necessary to establish repeatable financing frameworks for projects beyond the construction of the first large-scale nuclear power plant, particularly for FOAK (first-of-a-kind) SMR projects, i.e., the first commercial deployments of a given technological solution.** Financing conditions shape the economics of nuclear projects, which is especially important in light of stakeholders’ concerns regarding FOAK investments. For SMRs, Poland should define clear and stable public support frameworks – such as co-financing, state guarantees, or other risk-sharing mechanisms – that enable project delivery while remaining consistent with EU state aid rules. In practice, priority should be given to instruments such as credit guarantees, revenue-stabilisation mechanisms (including contracts for difference, CfDs, where justified), and cooperative financing models tailored to industrial offtakers. **Properly designing support schemes for coalitions of companies – such as special economic zones – could ensure that participation in SMR projects is not limited solely to a small number of the largest enterprises.**

Introduction

Poland is heavily dependent on imports of energy carriers. In 2024, imports accounted for 16% of Poland's annual consumption of thermal coal, 18% of coking coal, and 84% of natural gas (GUS, 2025) – fuels used primarily in the industrial sector. **At the same time, between 2015 and 2025 Poland was a net exporter of electricity only twice.** In 2025, the electricity trade balance amounted to -1 TWh (www1). In the future, the negative balance may deepen due to relatively high electricity prices in Poland.

Poland is now entering a decisive phase of its power sector transition. In this context, the country will need to address the following challenges:

- rising electricity demand resulting from the ongoing electrification of transport, heating, and industry;
- the need to replace ageing coal-fired power generation capacity;
- the need to reduce dependence on imports of fossil fuels;
- maximising the benefits of EU climate policy while, where possible, limiting its costs.

The scale of these challenges means that the **debate on nuclear power is no longer about whether nuclear is needed, but primarily about the conditions under which it should be implemented effectively.** In Poland, advanced preparatory work is underway for the construction of a large-scale nuclear power plant, while additional projects for nuclear units in central Poland remain at the conceptual stage. At the same time, interest is growing in small modular reactors (SMRs), viewed as a solution that can provide a stable, low-emission energy source for industry as well as for district heating and cogeneration applications. The success of these projects will depend on the state's ability to create predictable, repeatable, and financeable conditions for long-term investments, as well as on the market's response to those conditions.

We assume that the development of nuclear power should not be treated solely as a large but one-off infrastructure investment. In our view, **it should be a strategic programme requiring institutional, regulatory, and market coherence.** Therefore, our focus is on the elements that in practice most strongly influence investment success: the structure and sequencing of administrative procedures, the ability to shorten the project's critical path, options to reduce investor risk, the availability of appropriate financial instruments, and the place of nuclear energy in Poland's future energy mix. We devote particular attention to SMRs because uncertainty regarding commercialisation, regulation, and support models is currently greatest in this segment.

We analysed the binding regulatory framework, reviewed public policies, and examined projections of electricity demand through 2050. We conducted 24 in-depth interviews with representatives of energy-intensive industries, power sector developers, nuclear sector experts, and public administration. The interviews were complemented by a Delphi survey in which we asked 25 nuclear-sector experts for their views on the future of nuclear energy in Poland, the EU, and globally, as well as their assessment of the feasibility of selected system solutions.

This paper builds on research findings presented in our report *Unlocking Nuclear Energy in Poland: Policy, Regulatory and Industry Incentives* (Juszczak, Krawiec, Żelisko et al., 2026). The report contains a full discussion of the findings and a detailed description of the research methodology. This policy paper summarises the most important conclusions. We encourage to read both texts.

The role of nuclear energy in Poland's future energy mix

Nuclear energy is once again becoming a key instrument for building a secure, low-emission, and competitive power system. Expanding nuclear generation can reduce imports of fossil fuels and electricity. Most EU countries that use nuclear power are net exporters of electricity. For example, France – where nuclear energy covers nearly 70% of electricity demand (www2) – exported between 43 TWh and 87 TWh in the 2020-2024 period (except in 2022) (www3).

As the economy becomes increasingly electrified, electricity demand in Poland will continue to grow. The deployment of new low-emission generation sources (including nuclear power plants) is driven by the expansion of electricity-based technologies such as heat pumps, electric vehicles, water electrolysis, and data centres. Differences in electricity demand forecasts stem from differing assumptions about the pace of the energy transition, including assumptions about the future of Poland's energy-intensive sectors (e.g., steel and chemicals).

Electricity consumption in Poland in 2025 amounted to 167.5 TWh (www1), and it is projected to rise to 345 - 471 TWh by 2050¹. The National Energy and Climate Plan (NECP²) assumes that electricity demand in Poland will increase from 189 TWh (in With Existing Measures scenario - WEM³) to 195 TWh (in With Additional Measures - WAM⁴) in 2030, and from 240 TWh (WEM) to 267 TWh (WAM) in 2040 (ME, 2025). Polish Electricity Transmission System Operator – Polskie Sieci Elektroenergetyczne (PSE) – projects a more conservative growth path. In its resource adequacy assessment (PSE, 2024), it forecasts that net electricity consumption will reach 181 TWh in 2030 and 215 TWh in 2040. Projections for 2050 should be treated with caution. However, full utilisation of nuclear energy in Poland is expected within this timeframe.

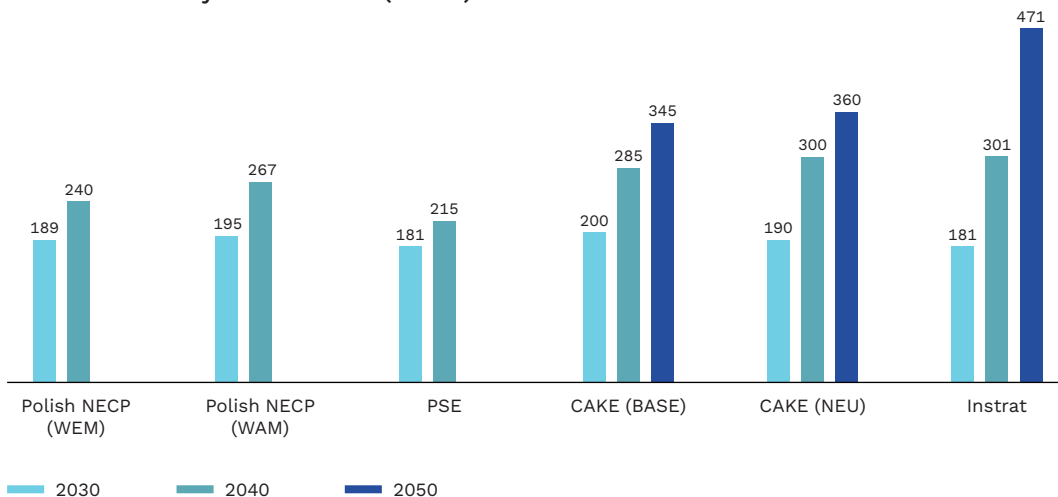
¹ Values based on analyses by the Ministry of Energy (NECP), PSE, KOBIZE-CAKE, Instrat, and Forum Energii.

² December 2025 version.

³ **WEM (with existing measures)** refers to a balanced energy transition scenario under the existing legal and investment framework.

⁴ **WAM (with additional measures)** refers to an accelerated energy transition scenario that may enable achievement of some of the EU "Fit for 55" targets.

Figure 1. Analyses of Poland’s energy system development project a significant increase in electricity demand by 2040 and 2050 (in TWh)



Source: PEI’s own elaboration based on data from the Ministry of Energy (NECP) (ME, 2025), PSE (PSE, 2024), KOBIZE-CAKE (Tatarewicz et al., 2022) and Instrat (Kubiczek, Smoleń, 2024).

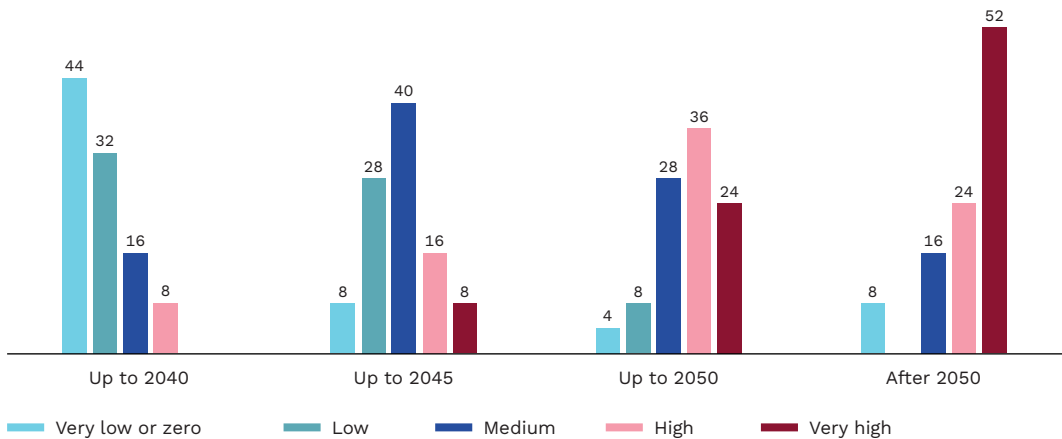
The success of the energy transition will depend, among other factors, on the effective deployment of nuclear energy in Poland. This is illustrated, for example, by Instrat analyses (Kubiczek, Smoleń, Żelisko, 2023), in which a decarbonisation scenario combining nuclear energy and renewables (RES) results in lower system operating costs and a lower cost of electricity generation compared with a scenario based solely on RES. At the same time, according to other Instrat modelling (Kubiczek, Smoleń, 2024), the absence of nuclear development in Poland could require the construction of an additional 40 GW of onshore wind capacity and 50 GW of photovoltaics.

Developing nuclear energy in Poland can bring benefits to the national power system. Today, the backbone of this system is ageing coal-fired power plants, many of which may be phased out by 2040. This is a similar time horizon to when the first nuclear units at the Lubiatowo–Kopalino plant are expected to begin generating electricity. In the transition period, Poland’s power system will increasingly rely on gas-fired plants fuelled by imported natural gas, which is not optimal from an energy security perspective. While RES deployment has been very dynamic in recent years – especially in case of photovoltaics – its further pace is constrained by underinvestment in electricity grids, legislative deadlock around onshore wind, and challenges related to balancing the power system (including the slow rollout of energy storage). In this context, nuclear energy can complement and strengthen the national power system.

Current strategic documents shaping Poland’s energy policy view nuclear power as an important component and assume the construction of two large-scale nuclear power plants. The Polish Nuclear Power Programme (PPEJ) (MP, 2025) allows other projects, including SMRs⁵, although it does not cover them directly. Meanwhile, the latest update of the National Energy and Climate Plan from December 2025 (ME, 2025) assumes nuclear development after 2035 and reaching approximately 5.9 GWe of installed capacity in large-scale units and SMRs. The document expects nuclear power to fill the generation capacity gap after coal phase-out, and also notes its use in district heating – in the WAM scenario for 2040, nuclear accounts for just under 12% of the volume of district heat production. The NECP emphasises that SMRs will be deployed over a longer horizon, after they are successfully commercialised.

According to 60% of experts participating in the PEI survey, nuclear power could cover at least 20% of Poland’s electricity demand before 2050. They expect Poland’s nuclear development to be based primarily on large-scale nuclear power plants (a view consistent with PPEJ and NECP assumptions), while only 16% consider it highly or very highly likely that Poland will exceed 5 GWe in SMRs capacity.

Figure 2. Most nuclear sector experts believe nuclear power plants could cover one-fifth of Poland’s electricity demand before 2050



Note: share of responses in the PEI survey to the question: in what period is it possible for nuclear power to cover 20% of Poland’s electricity demand?

Source: PEI’s own elaboration.

⁵ In the 2025 version of the document, it is noted that the government will develop a separate roadmap for SMRs.

Analyses of further growth in nuclear capacity beyond 2050 should be incorporated into a long-term energy transition strategy. Efforts should be made to avoid a scenario in which technologies crowd each other out in the market due to conservative electricity demand forecasts and faster-than-expected RES⁶ deployment. Such a scenario would risk persistently low utilisation of nuclear energy.

In order to maximize the benefits of nuclear investment for the Polish economy, the proportion of local content in Poland's nuclear projects should be increased. In the view of our survey respondents, **Poland should develop a domestic manufacturing and industrial base for the nuclear sector.** Such a base has the potential to evolve into a network of companies capable of cooperating on nuclear investments in Poland and beyond.

A shortage of qualified specialists may hinder the implementation of Poland's nuclear project. Our respondents highlighted the need to establish appropriate education and training programmes at different levels. This includes both skilled workers with vocational qualifications (e.g., welders) and specialists and experts with university-level education (including postgraduate training). However, retaining qualified staff in the nuclear sector also requires offering competitive working conditions.

A potential bottleneck in the construction of Poland's nuclear power plant may be securing the resources required for delivery – resources for which Poland will have to compete with other nuclear projects outside the country as well as with major infrastructure projects within Poland. Another barrier is the limited number of companies in the nuclear supply chain and the ability of reactor technology vendors (e.g., France, South Korea, the United States) to deliver multiple nuclear projects in parallel. Moreover, vendors may be more interested in rebuilding their domestic nuclear sectors than in supporting the development of foreign ones. According to surveyed experts, a certain degree of central state planning could be beneficial to ensure the availability of qualified workers, components, and materials for the Lubiatowo-Kopalino nuclear power plant.

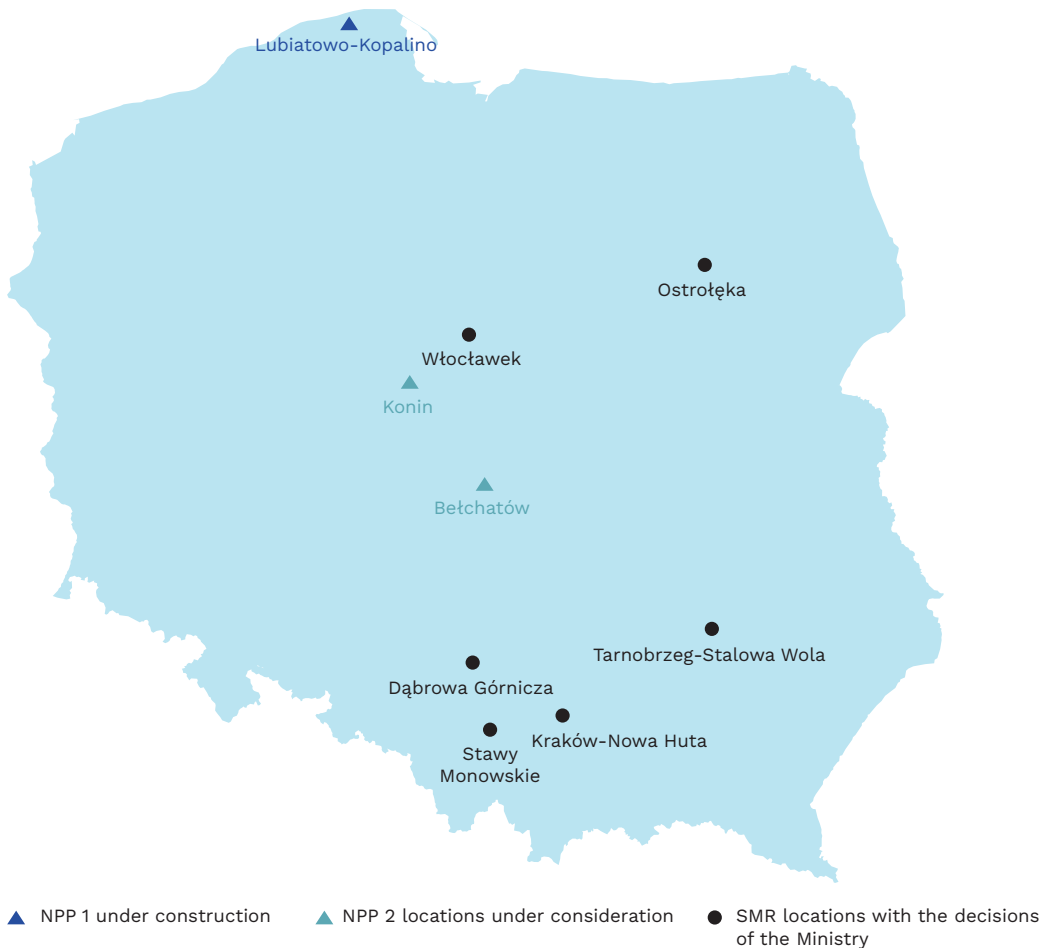
⁶ Such a situation occurred in the past in the case of Poland's Energy Policy to 2040 (PEP2040) and photovoltaics. Current PV capacity already exceeds the levels projected in PEP2040 for 2035.

SMRs and industrial needs, and the associated risks

Small modular reactors (SMRs) may offer an answer to the energy needs of the industrial sector, particularly energy-intensive industries. Unlike Poland's first large-scale nuclear power plant, which will be located in the north of the country, the six BWRX-300 reactors that have received a decision in principle are to be located in central and southern Poland. Their sites are linked to the presence of nearby industrial facilities in the metallurgy sector (Dąbrowa Górnicza), chemicals (Stawy Monowskie near Oświęcim and Włocławek), petrochemicals (Płock), and heavy industry (Tarnobrzeg and Stalowa Wola). Key advantages of this concept include proximity to industrial off-takers, the relatively lower capacity of the BWRX-300 units (300 MWe) – which makes it easier to match output to industrial demand – and lower water consumption compared with large-scale reactors. **Also important is the co-generation potential of SMRs and the use of reactor heat⁷ for both industrial purposes and district heating.**

⁷ Note that this does not apply to all sectors—Generation III+ reactors produce heat at temperatures of up to approximately 300°C.

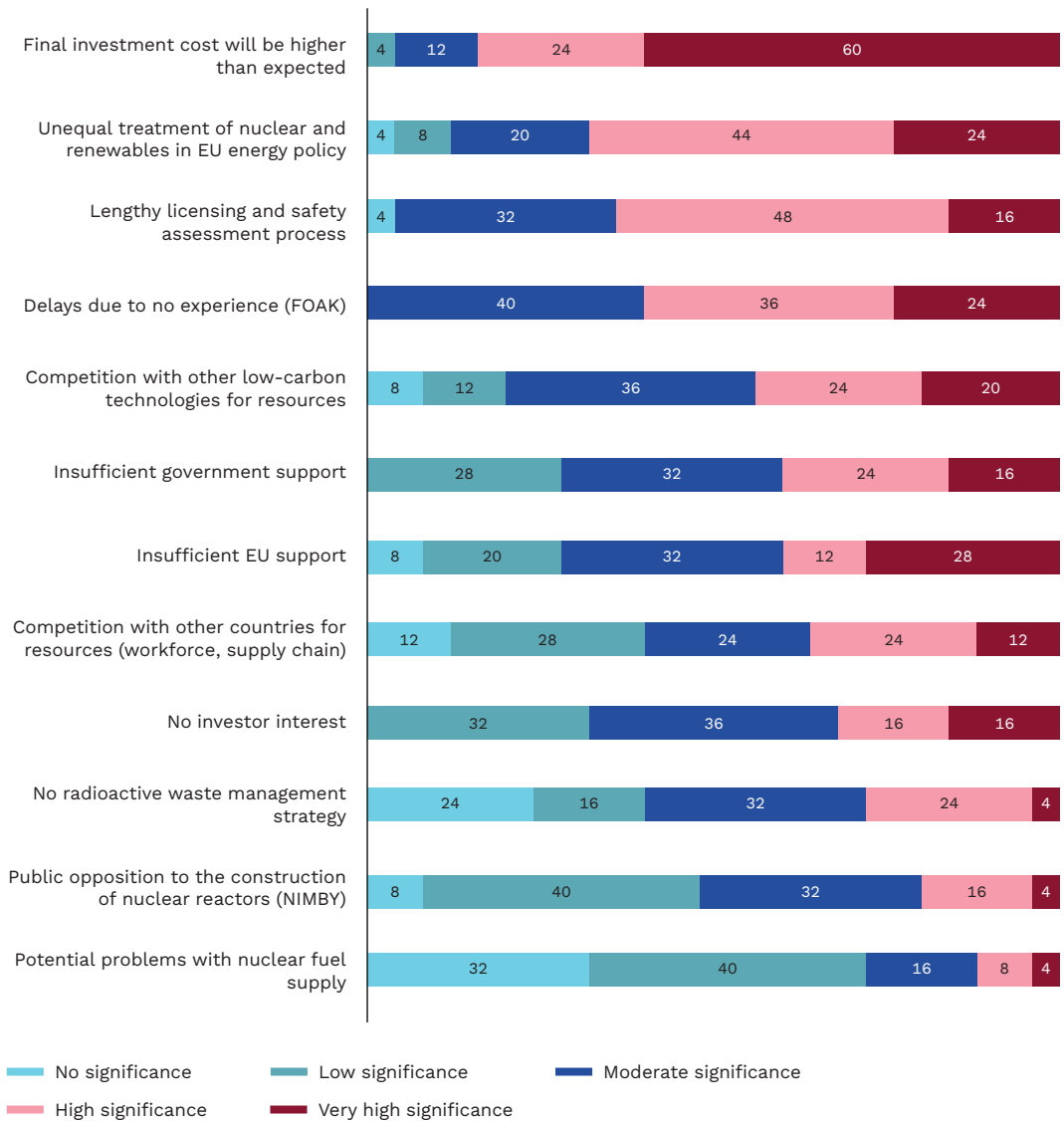
Map 1. Poland's first nuclear power plant is being built in the north; the next large-scale plant and SMRs are planned in the central and southern parts of the country



Source: PEI's own elaboration.

Barriers to SMR development in Poland include the risk that capital costs will rise above current declarations and potential delays resulting from the immaturity of the technology, especially in the case of first-of-a-kind (FOAK) projects. Other significant factors include lack of tangible EU support for nuclear energy and the lengthy licensing process for this technology.

Figure 3. The barriers most frequently cited for SMR development are uncertain investment costs, lengthy licensing processes, and unequal treatment of nuclear energy and renewables



Note: share of responses in the PEI survey to the question: how important are selected barriers for SMR development in Poland?

Source: PEI's own elaboration.

From an industrial perspective, the key risk for SMR projects is the combination of high costs and delivery delays. For energy-intensive companies, nuclear energy is not an end in itself, but a potential source of affordable, stable, low-emission electricity – and, in the case of SMRs, also industrial heat. If cheaper, less risky decarbonisation alternatives emerge in the meantime, market interest could decline significantly.

The competitiveness of Poland's energy-intensive industry (Sobkiewicz, Krawiec, 2025) depends on stable and affordable electricity supplies. Decarbonising this sector may shift energy use away from fossil fuels towards electricity, consumed directly through electric boilers and heat pumps, or indirectly via low-emission energy carriers such as RFNBO hydrogen. **One interview conducted as part of the study also indicated an electricity price considered optimal for industry of around EUR 50–60/MWh.** This expectation differs markedly from current estimates for SMR technology: in 2025, OSGE CEO Rafał Kasprow stated that electricity prices from BWRX-300 reactors should be in the range of **EUR 115–135/MWh** (www4). This is similar to the updated cost estimate published in 2023 for NuScale reactors (around **USD 119/MWh**, www5). **Experts participating in the Delphi survey also see limited chances of achieving costs below EUR 100/MWh** (56% of responses assessed the probability as low, very low, or zero).

Directions for changes to the legal framework for nuclear energy

Poland's regulatory framework for nuclear power plants is generally comprehensive, although it remains largely untested. In particular, no investor (project owner) has yet reached the stage of submitting an application for a construction license to the regulator, and the current licensing process for nuclear power plants has never been used in practice. The same legal framework has, however, been applied repeatedly in the process of issuing operating licenses for MARIA, the only Polish research reactor, most recently in 2025.

At the same time, Polish regulations are technology-neutral and do not recognise SMRs as a separate category⁸. All nuclear reactors other than research reactors are treated in exactly the same way, and the rules for issuing permits and licenses are also identical (although the graded approach is applied⁹). Any controlled-use zones and emergency planning zones around nuclear reactors are designed on the basis of safety assessment results, meaning that the size of these zones increases or decreases depending on the risks associated with a given reactor type. There are no predefined extensive zones, as such an approach would be irrational for smaller reactors.

Moreover, the regulations does not provide for a structured process of generic design certification. This means that for each individual plant ("nuclear facility", in practice, a single power station, potentially with multiple reactors) the licensing process is the same and includes a full safety assessment, including all technical safety solutions, even if they are entirely identical to those used in a previously licensed facility.

⁸ There is also no clear, universally accepted definition of an SMR.

⁹ Tailoring requirements, analyses, and oversight to the level of risk, significance, or complexity of a given process or facility.

Possible directions for change include:

- **enabling broader works (such as excavation and construction of auxiliary buildings) to begin before the final building permit is obtained.** Current regulations allow only early site preparation (levelling, temporary fencing, and power supply, but solely for construction purposes), which may be carried out based on a preparatory site works permit. This gap has already been recognised by the government, and on 24 March 2026 the Council of Ministers adopted a draft bill proposing relevant solutions (www7);
- **structuring the process for a generic assessment of a reference design and linking it to the permitting and licensing timetable.** At present, the same reactor, if built at multiple locations, would have to undergo a full licensing procedure each time, including aspects already assessed in previous proceedings. The possibility of certification is only partly substituted by the option to obtain a “general opinion of the President of the National Atomic Energy Agency (PAA)”; however, the process of obtaining such an opinion is not structured, and the scope of pre-licensing activities depends on the content of the investor’s application;
- **broader acceptance of documentation in English in formal proceedings.** Currently, all documents that form the basis for formal decisions (such as a construction license) must be submitted in Polish. Only part of the supporting documentation may be accepted in a foreign language. Given the shortage of nuclear experts in Poland, it is difficult to secure sufficiently experienced staff to translate English documentation into Polish;
- **extensive cooperation with foreign nuclear safety authorities, similarly to the aviation sector.** Under such a model, the Polish regulator would retain the authority to assess documentation and issue the final decision, but would operate in parallel with a regulator from another country. This would follow a model similar to that of the aviation industry, where the European Union Aviation Safety Agency (EASA) acts as a validating authority in relation to a non-European aviation regulator (e.g., the U.S. Federal Aviation Administration), which conducts the primary assessment process.

How can nuclear energy be financed effectively?

The economic viability of a nuclear power plant is largely determined by the effectiveness of its financing. Poland's first nuclear power plant at Lubiatowo-Kopalino will be financed with state participation, following State aid approval by the European Commission, under a contract-for-difference (CfD) model. The question of financing subsequent investments, especially SMRs, remains unanswered.

At the current stage, SMR projects remain a solution with very limited availability. In practice, they are still largely at the pilot and demonstration phase. As SMRs enters commercial availability, it will be accessible primarily to the largest economic entities. For example, the cost of building four BWRX-300 reactors in Ontario, Canada is estimated at around CAD 21 billion (PLN 56 billion¹⁰, www6). Building even a single such reactor is therefore beyond the reach of companies operating in Poland, except for a few of the largest firms (including in the case of lower-capacity units). A similar pattern is visible in our study in the attitudes of Polish energy-intensive industries towards SMRs. Despite inviting companies of various sizes, only a few of the largest nationwide agreed to participate. For others, SMRs remain too distant and too expensive. Similar conclusions regarding large Polish cities were also drawn in a PEI study from 2023, in which only the largest ones were interested in discussing the role of SMRs in decarbonisation strategies. This indicated that the solution would be too costly within a foreseeable time horizon (Juszczak, 2023).

The high unit costs of SMR reactors, compared with other options, highlight the important role of state support in financing them. Such support could take the form of project co-financing (e.g., within industrial zones) or credit guarantees. Even in such a case, most firms would likely prefer a PPA with an SMR operator rather than making a direct equity investment. A potential obstacle to state involvement in SMR deployment for industry is the risk that poorly designed mechanisms could be deemed incompatible with state aid rules.

¹⁰ According to the exchange rate as of 27 March 2026.

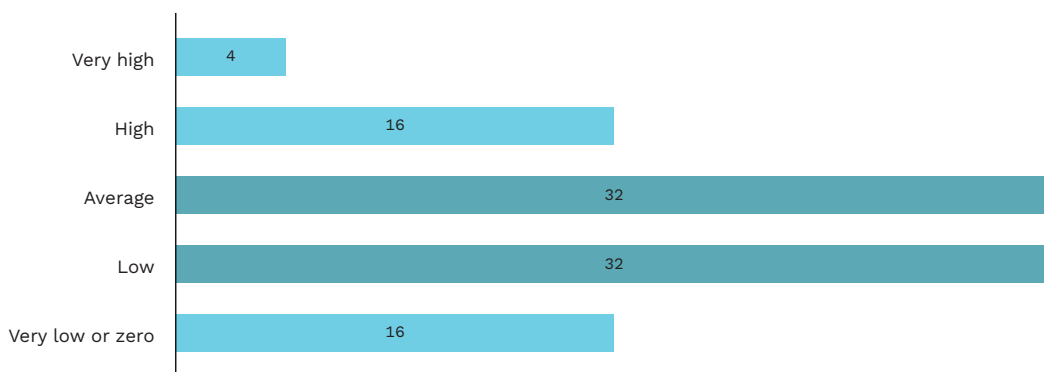
As for financing models, two options appear most likely. The first is a contract for difference, a relatively simple instrument that has been widely used in the power sector to date. However, in the view of a significant share of our interviewees, it can place a heavy burden on public finances. An alternative may be cooperative (mutual) models, which – aside from Finland’s Mankala model – have been less tested in practice for large-scale energy investments.

Orderbooks and buyers’ clubs are among the mechanisms that could help reduce the cost of building nuclear power plants.

Coordination at the EU level could help investors streamline the delivery of nuclear projects and enable component suppliers to plan long-term manufacturing processes more effectively. However, it should be noted that there has been limited coordination in other segments of the energy market and increasing competition among European actors in recent years (e.g., procurement of turbines for CCGT units). Joint procurement may also prove challenging due to the lack of alignment between the schedules of nuclear projects that are already planned or underway.

These obstacles resulted in a rather sceptical stance among the surveyed experts regarding the prospect of joint procurement by several EU countries. Only one in five respondents assessed this option as being highly or very highly likely. At the same time, in-depth interviews pointed to a potentially more feasible path for coordinating procurement portfolios, especially for SMRs, at the national level, through the selection of SMR technologies eligible for public support and by encouraging companies to aggregate orders in order to reduce unit costs.

Figure 4. Experts surveyed by PEI take a pessimistic view of the prospects for joint nuclear procurement at the EU level



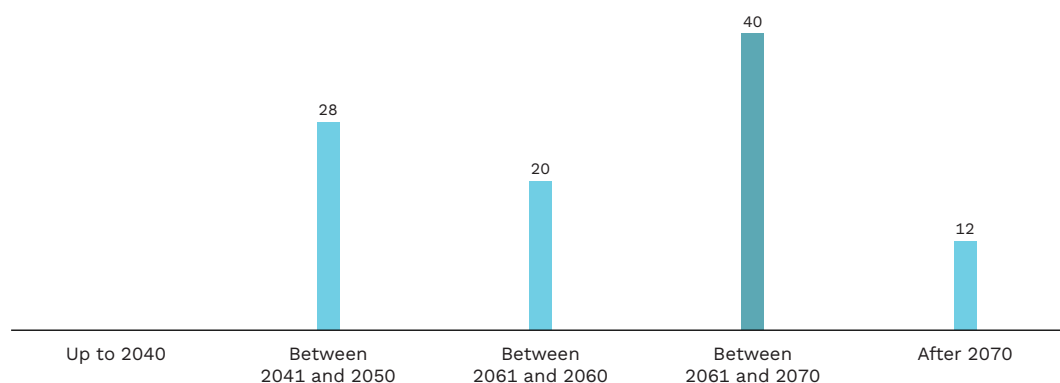
Note: share of responses in the PEI survey to the question: what are the chances that at least several EU countries will organise joint procurement (e.g., in the form of an orderbook) of SMRs or components for large/small nuclear units?

Source: PEI’s own elaboration.

A global renaissance – but a European one?

The intention announced at COP28 by a group of countries to triple global nuclear capacity by 2050¹¹ may prove difficult to deliver (www8). The respondents to the Delphi survey doubted that this could be achieved so quickly – only 28% considered the 2050 date realistic (median of all responses: 2062). Nevertheless, they were broadly optimistic about the future of nuclear power globally: half of respondents assessed the likelihood of tripling nuclear capacity at some point in time as high or very high.

Figure 5. Tripling global nuclear capacity may occur in the 2060s



Note: share of responses in the PEI survey to the question: in what period is it possible to achieve the COP28 target of tripling global nuclear capacity?

Source: PEI's own elaboration.

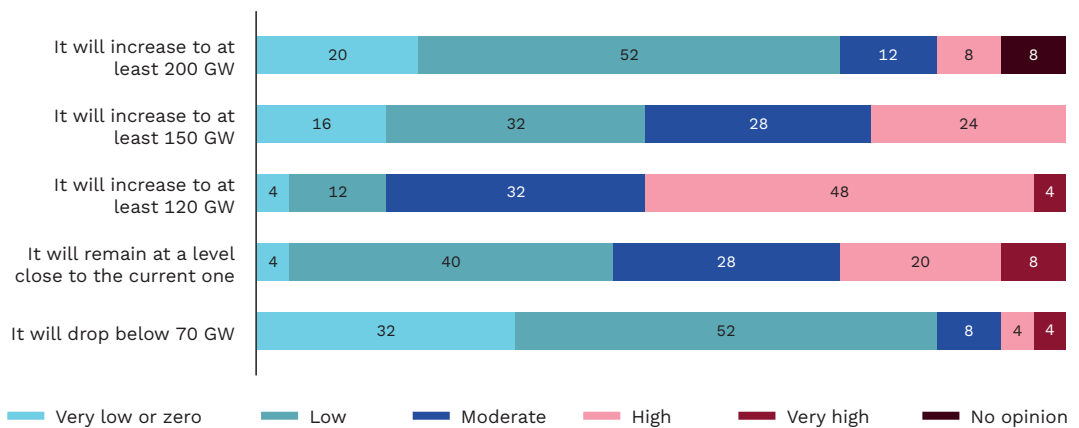
Respondents indicated that **rapid nuclear growth appears more likely in Asian countries (China, India) than in the European Union or the United States**. In Asia, demand for new nuclear units may be driven by intensive electrification of their economies and the resulting strong growth in electricity demand. In contrast, slower growth in nuclear power can be expected in the EU. Among other reasons, the sector would need to overcome the current technological stagnation and rebuild capabilities that have been lost in many Member States. At the same time, despite a visible, at least declarative, shift

¹¹ The target is to increase the global installed nuclear power capacity from 377 GWe in 2025 to 1,200 GWe in 2050.

in perceptions of nuclear power as a decarbonisation tool, nuclear energy is, in practice, still not treated on an equal footing in EU legislation with other low-emission alternatives (e.g., in terms of access to various EU financing programmes). Experts surveyed by PEI assessed the chances of full equal treatment of nuclear energy in EU rules as low to moderate.

Most experts judged that the most plausible scenario is one in which installed nuclear capacity in the EU reaches 120–150 GWe by 2050. This would imply a meaningful, though slower than global, increase from the current **97 GWe**. Even such moderate growth, especially given the need to replace part of the fleet due to the age of many European reactors, could intensify competition among EU countries for key resources, including skilled personnel and critical components.

Figure 6. PEI survey respondents anticipate that installed nuclear capacity in the EU could rise to at least 120 GW by 2050



Note: share of responses in the PEI survey to the question: what are the chances of reaching the indicated ranges of installed nuclear capacity in the EU by 2050?

Source: PEI’s own elaboration.

Another challenge is the lack of coordinated action on nuclear investment across the EU. According to the experts we surveyed, this is partly due to growing national tendencies in Member States, including a stronger emphasis on shaping energy policy independently. **More central planning than today, understood in terms of treating the EU as a single market for the purpose of securing supply chains, could benefit nuclear projects in the EU.** However, closer cooperation would likely be feasible only if Member States decided to converge on a specific nuclear technology, which appears realistic only in the case of SMRs.

Bibliography

- Adamczewski, T., Wójcik, J., Mitraszewski, K., Kwidziński, K. (2025), *Czas inwestycji – wnioski z modelowania systemu energetycznego Polski do 2040 r.*, Forum Energii, <https://www.forum-energii.eu/czas-inwestycji-wnioski-z-modelowania-systemu-energetycznego-polski-do-2040-r> [access: 31.03.2026].
- Główny Urząd Statystyczny (2025), *Gospodarka paliwowo-energetyczna w latach 2023 i 2024*, <https://stat.gov.pl/obszary-tematyczne/srodowisko-energia/energia/gospodarka-paliwowo-energetyczna-w-latach-2023-i-2024,4,20.html> [access: 31.03.2026].
- Juszcak, A. (2023), *Perspektywy wykorzystania reaktorów SMR w polskiej transformacji energetycznej*, Polski Instytut Ekonomiczny, Warszawa, <https://pie.net.pl/wp-content/uploads/2023/06/Reaktory-SMR.pdf> [access: 31.03.2026].
- Kubiczek, P., Smoleń, M. (2024), *Trzy dekady wyzwiań. Scenariusz polskiej transformacji energetycznej do 2050 r.*, Instrat Policy Paper, nr 3, https://instrat.pl/wp-content/uploads/2024/11/Instrat_Modelowanie-2025_web.pdf [access: 31.03.2026].
- Kubiczek, P., Smoleń, M., Żelisko, W. (2023), *Polska prawie bezemisyjna*, Instrat Policy Paper, nr 6, <https://instrat.pl/wp-content/uploads/2023/12/Instrat-Policy-Paper-06-2023-Polska-prawie-bezemisyjna-Cztery-scenariusze-transformacji-energetycznej-do-2040-r.pdf> [access: 31.03.2026].
- Ministerstwo Energii (2025), *Krajowy plan w dziedzinie Energii i Klimatu do 2030 r., Projekt Krajowego Planu w dziedzinie Energii i Klimatu do 2030 r. z perspektywą do 2040 r. - wersja opracowana przez ME do zatwierdzenia rządowego - Ministerstwo Energii - Portal Gov.pl* [access: 31.03.2026].
- Ministerstwo Klimatu i Środowiska (2021), *Polityka energetyczna Polski do 2040 r.*, <https://www.gov.pl/web/klimat/polityka-energetyczna-polski> [access: 31.03.2026].
- Ministerstwo Przemysłu (2025), *Program polskiej energetyki jądrowej*, <https://www.gov.pl/web/energia/projekty-dokumentow-rzadowych3> [access: 31.03.2026].
- Polskie Sieci Elektroenergetyczne (2024), *National Resource Adequacy Assessment 2025-2040*, <https://www.pse.pl/documents/20182/20580197/National+Resource+Adequacy+Assessment+2025+%E2%80%93+2040.pdf/6b5c6d34-a3fe-4893-8cac-51d2b27ecdd9?safeargs=646f776e6c6f61643d74727565> [access: 31.03.2026].

- Sobkiewicz M., Krawiec K. (2025), *Przemysł net-zero. Dekarbonizacja bez utraty konkurencyjności*, Policy Paper, nr 4, Polski Instytut Ekonomiczny, Warszawa, https://pie.net.pl/wp-content/uploads/2025/06/Point-Paper_Przemysl-net-zero.Dekarbonizacja-bez-utracy-konkurencyjnosc-1.pdf [access: 31.03.2026].
- Tatarewicz, I., Lewarski, M., Skwierz, S., Pyrka, M., Boratyński, J., Jeszke, R., Witajewski-Baltvilks, J., Sekuła, M. (2022), *Polska net-zero 2050: Transformacja sektora energetycznego Polski i UE do 2050 r.*, Instytut Ochrony Środowiska - Państwowy Instytut Badawczy / Krajowy Ośrodek Bilansowania i Zarządzania Emisjami (KOBiZE), Warszawa, https://climatecake.ios.edu.pl/wp-content/uploads/2022/06/CAKE_Transformacja-sektora-energetycznego_27.06.2022_final.pdf [access: 31.03.2026].
- (www1) <https://www.pse.pl/dane-systemowe/funkcjonowanie-kse/raporty-roczne-z-funkcjonowania-kse-za-rok/raporty-za-rok-2025> [access: 31.03.2026].
- (www2) <https://ember-energy.org/countries-and-regions/france/> [access: 31.03.2026].
- (www3) <https://www.entsoe.eu/data/power-stats/> [access: 31.03.2026].
- (www4) <https://businessinsider.com.pl/gospodarka/orlen-synthos-green-energy-ceny-energii-z-bwrx-300-w-polsce-ujawnione/ss6q10w> [access: 31.03.2026].
- (www5) <https://ieefa.org/resources/eye-popping-new-cost-estimates-released-nuscale-small-modular-reactor> [access: 31.03.2026].
- (www6) <https://energetyka24.com/atom/wiadomosci/przyklad-z-kanady-budowa-czterech-reaktorow-smr-to-koszt-15-mln-dolarow> [access: 31.03.2026].
- (www7) <https://www.gov.pl/web/energia/nowe-przepisy-dla-energetyki-jadrowej-przyspieszenie-inwestycji-i-wieksza-efektywnosc-realizacji-projektow> [access: 31.03.2026].

Polish Economic Institute

The Polish Economic Institute is a public economic think tank with a history dating back to 1928. The Institute produces reports, analyses and recommendations on key areas of the economy and social life in Poland, taking into account the international situation. Its research areas primarily include macroeconomics, energy, the global economy, the digital economy, behavioural economics and social processes.

