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BULLETIN

Discrepancies between Poland and Germany on Nuclear Energy

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Poland and Germany have different views about nuclear energy. In Poland, it is meant to be the key to decarbonisation. Germany, though, has been phasing out nuclear energy and transitioning to other sources. German politicians also encourage other countries to abandon nuclear, reflecting German society's anti-nuclear sentiments and the country's economic interests. The Bundestag elections will not change this view, but the growing power of the Greens might intensify this course.

Nuclear energy generates around 25% of electricity in the EU. This energy source is important from the perspective of climate policy because it is clean, stable, and not dependent on weather, therefore supports renewable energy sources (RES). Nuclear also can be used to produce hydrogen, which is seen as useful in decarbonising some industries. Such benefits of nuclear energy are emphasised in the UN Intergovernmental Panel on Climate Change, which reports on the status of climate change.

At the same time, the development of nuclear energy includes many challenges and much controversy. Investments in large-scale nuclear power plants (NPPs) are extremely time- and money-consuming. Even countries with considerable experience in the industry are often beset by delays and rising costs of such investments. In some cases, public protests are a major obstacle, stemming from concerns about the safety of NPPs, as well as nuclear waste and repositories (the development of deep geological sites for long-term waste storage is also expensive and technically difficult). Ecological groups argue that just preparing a site for an NPP and building it are associated with huge environmental costs. This could be partly addressed by the use of Small Modular Reactors (SMR), which offer lower generating capacity but are cheaper and quicker to build. SMRs, though, will only be commercially available most likely after 2030.

Nuclear Energy in Poland and Germany's Plans. Poland currently has no NPP, although it operates a nuclear research reactor, which is used, among others, to produce medical isotopes, and has considerable know-how. According to public opinion polling from 2020, 57% of Poles favour constructing an NPP. The Polish government plans to invest in two facilities with three reactors each. Their joint capacity will be 6-9 GW.

The Polish nuclear energy programme was adopted in 2014 and updated in October 2020. It envisages commissioning the first reactor in 2033 and the last one in 2043. Possible construction sites are located in Pomerania and Lodzkie provinces. The specific technology for these NPPs will be selected in 2022 (III/III+ generation reactors, the most modern available). Potential partners are companies from France, South Korea, and the U.S. Apart from the government, Polish companies—both private and state-owned—are interested in participating in the development of nuclear energy, including Orlen, KGHM, Synthos, and ZE PAK. However, they are betting on SMRs instead of a large-scale, costly NPP. Nuclear power is expected to help decarbonise the Polish energy sector and support the development of renewables.

Germany is among the most vocal opponents of nuclear energy in the EU. The federal government decided to phase-out nuclear power and is averse to new NPP investments in Europe. A good illustration of the German concerns is the around 30,000 comments from German citizens and organisations in the consultations on the Polish nuclear energy programme (some of which were taken into account).

German society's fears were escalated by the Chernobyl (1986) and Fukushima (2011) disasters. Such fears were not new, as opposition to nuclear energy is part of the political identity of German environmental movements, particularly the Green Party, which was formed partly due to mass protests against nuclear energy in the 1970s. The Green-SPD governing coalition formed in 1998 banned the construction of new NPPs and set a 2022 deadline to gradually close existing facilities. In 2009, the CDU government extended the deadline, but after the Fukushima disaster, chancellor Merkel reversed the decision. Some reactors have been shut down and the last of them will go offline in 2022. An energy transition model without nuclear energy supports German economic interests, which seeks to export RES technologies and distribute Russian gas (replacing nuclear energy and coal) delivered via the Nord Stream 1 and 2 gas pipelines. At the same time, abandoning NPPs affects the pace of Germany's decarbonisation.

Anti-nuclear sentiments also influence Germany's foreign policy. This year, the German minister of the environment, together with her counterparts from Austria and Belgium, announced efforts for a nuclear phase-out in other European countries. The German initiatives also take the form of cooperation for radiological safety. Germany helped co-finance shield over the destroyed Chernobyl reactor and supports efforts to secure nuclear fuel from Soviet submarines that was dumped in Russian waters. Germany also has signed 59 bilateral agreements on monitoring and preventing radiological threats, including with Poland (signed in 2009).

Discussion within the EU. There is an ongoing dispute within the Union on the future role of nuclear energy as a sustainable energy source under taxonomy regulation (the EU's classification system that aims to identify whether a certain economic activity can be considered sustainable), which would open the way to financially support nuclear power similar to RES. The European Commission requested the EC's Joint Research Centre (JRC, tasked with science-based advising) to prepare a report, which then indicated that nuclear power does not do significant harm compared to other energy sources. The JRC report was reviewed by an expert group on radiation protection and waste management and the Scientific Committee on Health, Environmental and Emerging Risks (SCHEER), the scientific advisory committee of the EC. The reports of both bodies were published this June. SCHEER, however, pointed out, among other things, that while the operation of NPPs could be regarded as safe, strict standards must be met for the whole nuclear supply chain, including outside the EU, such as uranium mining and milling. Given these expert reports, it is unlikely that the EC will take a negative stance on nuclear energy, and it is possible that it will be recognised as sustainable, albeit with conditions (such as those noted by SCHEER).

Apart from these expert reports, in the EU there is also ongoing lobbying of Member States and other stakeholders. Germany, along with Austria, Denmark, Luxembourg, and Spain, has called on the EC to exclude nuclear from the green taxonomy and criticised the JRC report. A group of 87 MEPs oppose that demand, and nuclear energy was supported also by unions of the sector. Earlier, in March 2021, the leaders of Czechia, France, Hungary, Poland, Romania, Slovakia, and Slovenia called for including nuclear energy in the EU's climate-energy policy. Regardless of the EC's decision, these divides will not disappear and might even widen.

Perspectives and Recommendations. The differences between Poland and German on nuclear energy will remain. Regardless of the outcome of the current elections in Germany, the country's anti-nuclear course will not change, and the German authorities will seek assurances that an NPP in Poland meets the highest safety standards. Under pressure from the Greens, the German authorities will seek further consultations, beyond those carried out between 2011 and 2012. At the same time, the German government has no instrument to block a specific nuclear investment and emphasises that it will respect Poland's decision on the matter. Therefore, the most important political dispute will take place around the role of nuclear energy in EU energy policy (e.g., taxonomy), because this will impact the profitability, among other things, of such future investments.

It is possible that some German politicians will point to alleged risks related to NPPs and that public support in Poland for the investment will decrease. An example of this is a report from January 2021 prepared for the Greens that describes threats to German citizens of a major nuclear disaster in Poland, however the report exaggerates those risks as it did not consider the modern safety systems of III/III+ generation reactors. Poland and any future partner(s) of an NPP investment must be prepared to campaign for their goal with effective and honest information, addressed also to the German public. On the European level, countering lobbying against nuclear energy could be easier if France or the U.S. are the investment partners. Both countries promote nuclear energy as part of climate policy and have significant know-how about the safe use of the technology.

At the same time, it is in Poland's interest to emphasise the need for transparency of operation and safety of all NPPs, including modern reactors. Poland might consider cooperating with Germany to improve the transparency, among others, of the NPP being constructed by Rosatom in Astravyets, Belarus, which has raised concerns by both Poland and Lithuania in terms of safety standards and transparency.