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Q&A: What Progress Has Germany Made Half Way Down The Nuclear Phaseout Path?

Policies & Politics

19 Jun (NucNet): The past year saw a number of anticipated developments related to Germany's policy of phasing out nuclear power by 2022. Ralf Gldner, president of the German Atomic Forum (DAfF), spoke to NucNet about what has been accomplished and what remains to be done in Germany half way down the phaseout path.

NucNet: Can you give us an update on where the German Energy Transition – the 'Energiewende' – stands today?

RG: The 2011 decision was a political reaction and was not based on a clear analytical examination of the risks. We could have waited for results of stress tests on nuclear plants and carried out reinforcements of some systems if needed. It was only later that the results of these stress tests showed that German nuclear plants needed only limited upgrades. German nuclear plants were – and still are – among the safest in Europe. The decision to phase out nuclear was politically driven.

But we know we are going to shut down our last nuclear power stations in 2022 and have accepted that decision. The question that remains is how we can fill the energy gap that is looming. A lot of wind and solar capacity has been added in the last decade and we have times when these renewable sources deliver more than what we can consume, causing problems for grid operators in Germany and in some of its neighbouring countries.

But we also have situations when these renewables do not generate enough electricity for the grid – when it is dark or cloudy, or when there is no wind. Typically, such periods are also periods of cold weather, so demand rises further. Germany's neighbours often have similar weather conditions at the same time. This leads to high consumption and low generation from renewable sources, not just in Germany, but in neighbouring countries too. Imports will be needed to fill the generation gap, but imports will depend on the capacity of interconnections with neighbouring countries.

Construction of the north-south axes of the high voltage transmission grids is taking longer than expected because of discussions about the proposed routes. Many issues remain unsolved. Bavaria, in the south of Germany, could experience problems if the transmission highway is not finished on time. Imports will be needed to fill the generation gap, but they will depend on the capacity of grid interconnections with neighbouring countries.

NucNet: In December 2016, the Federal Constitutional Court upheld nuclear operators' claims to compensation for the phaseout. Can you give us an update on this issue? How much money is involved and what is the timetable for settling the claims?

RG: The case at the Federal Constitutional Court was about the constitutionality of the legislation on nuclear phaseout including the issue of compensation. The Constitutional Court though does not decide on concrete compensations. But it ruled that utilities have the right to be compensated for parts of their claims where the legislation was deemed unconstitutional. Now it is up to the legislator to amend the Atomic Act or pass another law as to assure the compliance with the court decision including financial or economic compensation as due. The legislator has time to do so till 30 June 2018.

NucNet: The government approved an agreement on how to cover the cost of handling and storing nuclear waste generated by Germany's four largest utilities. Under the agreement, the government will assume responsibility for the practicalities of storing nuclear waste in return for the utilities transferring €24bn to a state-run fund. Is this a fair deal and will it finally put the matter to rest?

RG: Under the agreement between utilities and the Federal Government based on the recommendations of the governmental "Commission for the Review of the Financing of the Nuclear Phase-out" (KfK) and according to the legislation passed on the issue, utilities will transfer the responsibility for long-term intermediate storage and final disposal of radioactive waste to the German state. With about €24bn paid up by the utilities and including a risk premium, the government creates a public fund to be used to finance these activities. The agreement brings together the financial and the operational responsibilities for long-term intermediate storage and final disposal of waste. A similar sort of system exists in other countries, like Sweden for example. Operators pay a certain amount of money into a fund and having done this they transfer their obligations to the state, which recalculates every year the amount to be paid.

There is always a risk that things may become more expensive, perhaps because there are further requirements for research or other final disposal locations need to be found, but there are opportunities for cost reductions too. We claimed that both, risks and opportunities should be considered when calculating the bill but at the end only risks were factored in

resulting in the high risk premium.

NucNet: What happens if the government finds ways to lower the cost?

RG: I am pretty sure they will try to do so. The money will remain with the government. Nothing will come back to the industry. There are risks and opportunities in the arrangement from the government's perspective. Equally, if the government needs additional money to handle waste disposal, they will have to find it on their own.

The government will also have to find out how to best manage a large public fund worth €24bn. Most of this money will be needed beyond 20 years from now. In today's capital markets it will be a real challenge to manage the fund in a way which will allow covering some costs by using interest revenues received from investing the fund's capital. They will need to appoint financial experts as custodians of the fund. Imagine a purely hypothetical 2% return on investment from a €24bn fund. This would mean revenues of €500m.

The deterioration of energy market prices in recent years led to a decrease in the financial capabilities of German utilities. The government decided to secure the money and utilities agreed to do it in order to de-risk themselves. I think it is a balanced solution in the end.

NucNet: What's the latest on the proposed Gorleben facility for the final disposal of radioactive waste in northern Germany?

RG: Gorleben is still in the game, but there are some politicians who are opposed to it. The nuclear industry believes there are no technical issues which would have precluded the further exploration of the Gorleben site. The site had been explored since the 1980s. Why not continue then?

Actually Gorleben is in a state of conservation. Work on analysing other possible sites has already begun. Initially, the new operator for final disposal has the duty to analyse all geological data available in Germany and to shortlist a number of sites. A narrowed down list will – after examination by the new regulator – be chosen by the legislator for surface exploration in phase two and after similar proceedings and narrowed down further for subsurface exploration and final site selection by parliament. There will not be any extra work done at Gorleben until a final decision is taken on whether it will be chosen or discarded. In any event, groundwork on any alternative site will only begin in the 2020s, not earlier.

As I said, there are no technical hurdles known thus far to developing Gorleben. The difficulties arise from social and political discussions about the issue. However, from now on any decision on Gorleben concerns only the state.

NucNet: Neckarwestheim-1 and Philippsburg-1 recently became the latest in a series of reactors which received permissions for the start of decommissioning activities. Reports have predicted the European decommissioning market will be worth billions in the years to come. Will decommissioning become the new core market for the German nuclear industry?

RG: Decommissioning does present a lucrative market. We are talking about per unit estimations worth millions of euros in the high three-digit range. A significant portion of this money will go to external service providers. Utilities can handle some of the decommissioning internally, but will need the support of large and small service suppliers.

Germany is among the front-runners when it comes to dismantling a big fleet. The German nuclear industry already has experience with the decommissioning of Russian-made VVER pressurised water reactors inherited from the former East Germany. We have decommissioned western BWRs and PWRs, and some smaller Generation I units, as well as a MOX fuel factory and a uranium reprocessing plant.

German companies now have the opportunity to develop this experience further and later transfer it to lucrative projects overseas.

NucNet: Media reports have said Germans could face higher electricity bills because of the nuclear phaseout. Is there any hard evidence that the phaseout will cause prices to rise?

RG: Price increases to consumers and small business have been significant but are the result of strong support for renewables rather than the phaseout of nuclear. The link is indirect rather than direct. It was the subsidising of renewables that paved the way for the possibility of phasing out nuclear, but people mostly do not draw a direct correlation between rising power prices and the phaseout. The impact on the budgets of many households is just not that striking and incremental over years.

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