



Train carrying nuclear waste to Gorleben. Photo: Jean-Christophe Verhaegen/AFP

# Nuclear revival divides Germany

Germany agreed eight years ago to phase out nuclear energy by 2021. More and more politicians argue that the phase-out should be reversed, but they are faced with strong anti-nuclear sentiment. The issue could make or break a government in next year's elections.

| by *Stefan Nicola*

The horror of Germany's anti-nuclear activists is a rectangular grey giant that sits on the banks of the Elbe, a few miles before the river seeps into the North Sea. Owned 67% by Vattenfall and 33% by Eon, the nuclear power plant in Brunsbüttel, near Hamburg, is considered one of

Germany's most incident-prone reactors. Since a turbine fire last summer sparked protests from politicians and anti-nuclear activists, production at the plant has been halted. Juergen Trittin, head of the Green Party, recently told news magazine *Der Spiegel* that units like Brunsbüttel 'should

be shut down sooner rather than later.' Trittin won't have to worry much longer: Brunsbüttel will be closed in 2009 as part of the nuclear phase-out plan Germany drafted in 2000. This plan calls for all 17 currently operating atomic plants to be shut down by the end of 2021.

Yet the need to reduce greenhouse gases, in combination with rising oil and gas prices and security of supply worries are leading many to rethink the role of nuclear power. Britain, Finland, Sweden and Switzerland are considering or commissioning new plants or extending running times of existing ones. Even in Germany, the ground has started to shift – mainly because of the climate problem. ‘I believe that it will be difficult to reach our climate protection targets if we go ahead with the nuclear phase-out as planned,’ says Jens Hobohm, energy expert at the German Institute for International and Security Affairs in Berlin. ‘Extending the lifetime of nuclear plants would help the transition to CO<sub>2</sub>-free power generation.’

### Coalition at odds |

A September survey by census group Emnid found that 52% of Germans support longer running times for nuclear power plants, up from 49% in March. The most prominent supporter is Chancellor Angela Merkel. She favours keeping nuclear in the mix beyond 2021, and wants the more modern reactors to continue another 15 years. But she and her Christian Democratic Union (CDU) are at loggerheads with the Social Democrats (SPD), who drafted the phase-out with the Greens and the energy industry – at a time when the oil price was \$20 a barrel.

Today, CDU and SPD govern the country in a grand coalition, and the nuclear issue is probably the one they disagree most fiercely over. The SPD enjoys a popularity head start. The anti-nuclear lobby in Germany is stronger and better rooted than anywhere else in the world. Several SPD officials in important positions started their careers campaigning against the construction of atomic reactors. The SPD has resisted calls from Merkel and Economy Minister Michael Glos to rethink the phase-out, and even threatened to call off the coalition if the CDU continues to question the agreement.

‘Nuclear energy has always been a hot issue in Germany,’ Hobohm says. Next year Germans head to the polls and, for the first time, energy might be a key factor. Germans are angry about electricity price

hikes, worried about importing oil and gas from Russia and aware that Europe’s own fossil resources are depleting – a great backdrop for a populist campaign on nuclear energy.

Germany’s 17 nuclear power plants were responsible for 26% of the electricity production in 2006. The main other sources were lignite and hard coal (45%), renewables (12%) and gas. In March, the governmental energy agency Dena warned that the lights may go out as early as 2012 if nuclear is indeed phased out. Dena said that, also partly because of delays in the construction of coal-fired power plants, Germany could lack power generation capacity of up to 12,000 MW by 2020.

### German supply gap |

The Environment Ministry called these results ‘hysterical’. The Federal Environment Agency (UBA) presented its own study, claiming that ‘power supply

nuclear will add €4.5 billion to the costs of reducing CO<sub>2</sub>-emissions, which is grist to the mill of Germany’s energy industry. ‘Nuclear power is the cheapest form of climate protection,’ Wulf Bernotat, ceo of energy giant Eon has said. ‘In Germany alone, nuclear energy avoids roughly 150 million tons of CO<sub>2</sub> per year, as much as the entire transportation sector emits.’

Of course Eon and colleagues are also unhappy that their biggest cash cows are being slaughtered. While the companies argue they have invested in making older plants safer, the current costs are minimal, and profits high. Anti-nuclear activists fear that the energy companies don’t care as much about the climate as their net profits. To ward off these concerns, Merkel’s conservatives have proposed that the majority of the extra cash from longer running times (an additional 15 years will rake in €50 billion, the government said) should flow into a fund aimed at lowering

## *The likes of Eon are unhappy that their biggest cash cows are being slaughtered*

security is not in jeopardy in Germany.’ UAB claims there won’t be a gap if Germany succeeds in reducing power consumption by 11% by 2020 compared to 2005, doubling the share of combined heat and power (CHP) generation and boosting renewables as planned to 30% of the power mix.

Which leads back to the climate protection issue, the CDU’s strongest argument. Germany aims to cut its CO<sub>2</sub> emissions by 20% until 2020 compared to 1990. The conservatives are convinced that Germany needs nuclear to guarantee a CO<sub>2</sub>-low electricity generation.

‘If we keep nuclear in the mix and reach our renewable energy targets, we could be 60% or 65% CO<sub>2</sub>-free by 2020,’ Joachim Pfeiffer, the spokesman on energy policy of Merkel’s CDU, tells EER in an interview. ‘And this would also increase energy security.’

McKinsey has calculated that phasing out

energy prices. The head of the CDU’s parliamentary faction, Volker Kauder, estimates the fund could be filled with €40 billion. Kauder said Germany’s four energy giants have agreed to back the plan.

### Between death and pestilence |

If nuclear disappears, capacity will have to be replaced – and here, the parties are at odds. The CDU claims power production from fossil fuels will rise, while the SPD argues energy efficiency measures and CHP plants together with renewables will keep the German mix CO<sub>2</sub>-low. SPD officials claim that, with nuclear in the mix, the transition to a mostly renewable energy-based economy would be slowed down.

‘If Eon isn’t allowed to continue nuclear generation, those capacities will have to be replaced, and that means using coal-fired power plants,’ Karin Brinkmann, an



Angela Merkel at a press conference in Berlin, October 2008. Photo: John Macdougall/AFP

analyst at UniCredit Markets & Investment Banking in Munich, told Bloomberg. 'Germans may think they have to choose between death and pestilence, but they still have to choose.'

In 2007, several nuclear power plants lowered their production capacities or were

calculated that it would only save Germans 50 cents per month; less than the 60 to 90 cents they could save by exchanging a single 60-Watt light bulb with an 11-Watt energy savings lamp.

The SPD also points out that the real costs

consequences, and the possibility of a second Chernobyl.

The Greens remain steadfast opponents of nuclear, but within the SPD some are now rethinking their positions. Former SPD minister Erhard Eppler broke a taboo in July by saying his party could agree to extend the running times of individual reactors if the CDU in return agrees to change the country's constitution to forbid the construction of new plants. Pfeiffer, Merkel's energy expert, believes Eppler isn't the only one in the SPD to back longer running times. 'One third of the SPD believes the nuclear phase-out is wrong, another third could be convinced – if you tell them about supply security, economic feasibility and climate protection – and for another third, the phase-out is constitutive.' Hobohm also believes the final word hasn't been spoken yet. 'No one will campaign for the construction of new nuclear plants. There will never be a majority for that,' he says. 'But an extension of the running times seems possible.' So far, the SPD has not wavered, but if the CDU can form a coalition with the pro-nuclear liberal Free Democrats after next year's elections, the nuclear revival will reach Germany, too. ■

## Germany still has not identified a site to store highly radioactive waste

shut down because of incidents. This led to a drop in the share of nuclear in the power mix to 21%. The extra capacity came from coal (+2 points to 47%) and renewables – which may be a sign that the German grid can absorb shortages in nuclear energy production. It could also mean that more dirty coal is being burned.

Another issue is costs. Experts estimate that 1 kWh produced by a nuclear power plant costs between 2 and 3 cents – a quarter of what wind energy costs, and less than coal- or gas-produced electricity. Yet most experts say reversing the nuclear phase-out won't lower electricity prices much. The German Association of Consumers

of nuclear are 'huge when you consider the problems we have with nuclear waste storage,' as Axel Berg, deputy spokesman on energy policy for the SPD said recently on TV. 'If we promote renewables, we could have a 100% clean energy production in 40 years.' The waste storage problem is indeed the anti-nuclear lobby's strongest argument. Despite significant research, Germany still has not identified a site to store highly radioactive waste, and repeated scandals over waste handling have undermined trust in an efficient solution (see article on page 36). SPD and the Greens also point to the danger of nuclear, the threat of a terrorist attack on a reactor with potentially catastrophic