Why Europe must follow Germany's nuclear veto

Nuclear power is dangerous, costly and a hazardous legacy for future generations, argues Jürgen Trittin, a former German environment minister. He says the rest of Europe must follow Germany's lead and make a rapid transition to green energy production

The Fukushima disaster taught the world once again that nuclear energy is anything but clean, secure and affordable. It is tragic that 25 years after Chernobyl another nuclear catastrophe had to occur to prove the supporters of this technology wrong and to trigger a fresh debate in Europe on the use of nuclear power.

Germany's decision to phase out nuclear power by 2022, which was passed by the German Bundestag in June this year, has provoked irritation among its pro-nuclear neighbour states. Was Chancellor Merkel's decision over-hasty? What are the implications of her decision for other EU member states? Will Germany be left to stand alone or will other European countries follow suit?

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For nuclear's proponents, a world independent from nuclear energy is hard to imagine. Luckily for our common economic and ecological future prospects, opposition to this high-risk technology is rising across Europe, witness Italy's recent referendum which saw a large majority against nuclear energy.

In Germany, the idea of a nuclear phase-out has been gaining strong support ever since the 1986 Chernobyl catastrophe. Over the past few decades anti-nuclear activists – together with their political representatives in the Green Party – have succeeded in mobilising hundreds of thousands of protesters. In 2000, growing political pressure finally led to a consensus between the government and energy companies, and they agreed to cut the life-spans of nuclear power plants by limiting their lifetime to 32 years.

The present coalition CDU, CSU and FDP government withdrew from this consensus in 2010, but the aftermath of Fukushima morally forced the government to review that decision, and to end irreversibly the use of nuclear energy. Future German energy policy now depends once more on the deployment of renewable energy sources, based on prospects the Greens had introduced years before. The Renewable Energy Sources Act, introduced in 2000 by the Social-Democrat and Green coalition government, is a political instrument that has enabled the country to exceed all growth expectations in the alternative energy sector, which now accounts for 20% of Germany's total electricity consumption.

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But national approaches towards energy supply won't achieve the aim of creating a globally enduring and secure energy supply system. Instead, we need to think and act as Europeans. I strongly believe that there will and must be a general shift in both European and global energy policies for the simple reason that nuclear energy already doesn't meet our energy demands, and brings with it great security risks and economic disadvantages.

Harrisburg, Chernobyl and Fukushima undeniably showed that a meltdown is a high risk, even for western power plants, despite the nuclear power lobby's insistence that security is not a matter of concern. These nuclear disasters demonstrated that nuclear power plants are impossible to control when it comes to an 'unforeseeable incident'. The recent Europe-wide stress tests of nuclear power plants should have been a first step, but its current objectives and methodology don't meet security concerns. As long as the test is voluntary in nature and remains in the hands of the operators, it is nothing more than political window dressing. Of 143 nuclear power plants currently running in the EU, none will be tested for core safety risks such as the threat of a terrorist attack or a plane crash.

With or without a stress test, though, the result is obvious: this technology simply cannot be controlled. Germany is now heading in the right direction, but the security risks of nuclear power plants in Germany's direct neighbours like France or the Czech Republic remain. We in the EU need genuinely common safety standards.

The as yet unresolved problem of nuclear waste disposal poses another serious risk. It is irresponsible to leave tonnes of highly

radioactive waste as our legacy for future generations, and dumping highly radioactive waste on third countries cannot be the answer. So it is shocking that the majority of MEPs in the European Parliament recently rejected an export ban on nuclear waste.

> **“There will be a general shift in global energy policies for the simple reason that nuclear energy already doesn’t meet our energy demands, and brings with it great security risks and economic disadvantages”**

A switch to electricity produced solely from renewable sources makes sense from an economic perspective too. Nuclear power isn’t competitive. It’s an antiquated technology that has to be subsidised with billions of euros; so far, German taxpayers have contributed €196bn for this purpose. A federal government study has estimated that between 2010 and 2050 Germany could save more than €700bn by using renewable energies instead of nuclear or imported fossil fuels like coal, gas and oil. The technology to meet fully German and European demands for green power based on renewable sources already exists.

The expansion of renewable energy production has great potential for triggering economic growth. Over the past decade, many new businesses have been founded and old companies expanded into new fields, with 370,000 new jobs created. And the exports of renewable technology are rapidly increasing. From 2006 to 2008, values of around €30bn have been recorded. Whereas in the field of nuclear power only a few major companies profit from large nuclear power stations, it is small local companies in particular that profit from an expansion of renewables. The decentralised facilities that have been established as partly common property led to a value creation of €6.8bn through income and industrial taxes on a municipal level in 2009, and this is predicted to amount to almost €14bn a year by 2020.

Nuclear power plants are unable to provide flexible production and supply schemes, so right now Japan is having to deal with a serious energy shortage, not in spite of its dependence on nuclear energy but because of it. After this summer’s decision on the German nuclear phase-out, critics – especially the nuclear energy companies – argued that Germany will now be dependent on nuclear power imports, mainly from France, or run the risk of an energy blackout.

But the reality is very different. France imports power from Germany during the most energy-intensive summer months because France's nuclear power plants have to be shut down because of low water levels of cooling rivers. Germany's annual electricity export surplus ranges between 20 and 30bn kilowatt hours, which is the annual capacity of seven large power plants. Fears about Germany's supply gaps, and its dependency on French nuclear power, are a myth. Thanks to its high share of renewably produced electricity, Germany is able to be a net electricity exporter.

The assumption that fossil, and especially coal-based, energy is a profitable and sustainable energy source is also short-sighted. First, fossil energy runs contrary to Kyoto's environmental protection targets defined in 1997, and the climate objectives of the EU. The continually increasing world market price means charges on fossil fuels fluctuate wildly. In any case, Germany already has to import two-thirds of its coal. And the centralised nature of nuclear and coal-fired power stations means they are hard to embed into a Europe-wide structure of electric power distribution.

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The last decade has clearly shown that increases in renewable energy production actually reduce the costs of this technology. Wind energy plants are nowadays competitive with fossil power plants, while rising gas and coal prices and the steady decline in renewable energy costs means that in just a few years power will be more cheaply generated from renewable sources than by conventional power plants. Revenues from 'home-grown' energy remain almost entirely where it is generated, so imports of raw material costing billions of euros will no longer be necessary.

Phasing out nuclear energy will also ensure that we never have to bear the immense costs of a nuclear catastrophe. The full price Japan will have to pay for resettling people, decontaminating the environment and for Fukushima's long-term impact will, no one doubts, be cripplingly expensive.

So the idea of any 'nuclear renaissance' is also a myth. Nuclear accidents, public opposition and high capital costs have already

seen a drastic drop in nuclear energy investment, and in the United States there hasn't been a single new nuclear power plant commissioned since the late 1970s. In Europe, the number of nuclear power stations is declining, and the construction of only two new nuclear power plants in the EU has been dogged by delays so costs have doubled. Old plants are also being decommissioned, and even traditionally pro nuclear countries like France are showing a shift in public opinion: almost two-thirds of the population now believes that nuclear energy stands in the way of an increase in renewable energy. In Italy, over 90% of voters rejected Silvio Berlusconi's plans for a return to nuclear power generation, and recently the Japanese government announced that it plans to phase out nuclear energy in stages.

The EU could make a difference by stopping expenditure on nuclear fusion. With more money from the EU budget going towards nuclear research than towards non-nuclear R&D, and more infrastructure funding going on carbon capture and storage (CCS) and conventional energy than on renewable energies, the EU needs to re-think its priorities. The forthcoming negotiations on the EU's 2014-2020 European budget are a window of opportunity for changing direction and cutting the funding of unpromising mega projects such as the ITER nuclear fusion effort.

A Europe-wide turnaround is vital of we are to move to reliable energy supplies and front-running technologies. It will require an enormous effort and major infrastructural investments. High voltage transmission lines across the EU, where expansion is necessary, and storage facilities to overcome problems of meeting basic energy demands with renewable sources will be crucial for efficient Europe-wide renewable energy. We also need decentralised, smart distribution grids and more investment in energy saving, especially thermal insulation, and other efficiency measures.

Germany made the first step, but the transition into a fully renewable economy needs to be seen as a common European effort. The expansion of renewable energy therefore has to be in a European context. Public concerns about nuclear or fossil energy systems are rising all the time, and the immense effort needed for a long-term energy transition has to start now. ■

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