

A view from Germany

Energy of the future instead of technology from the past

Jürgen Trittin, Alliance 90/The Greens, German Minister for the Environment from 1998 to 2005

Particularly in recent years, there has once again been increasing talk of building new nuclear power plants. While nuclear power plants were expected to provide cheap and inexhaustible energy until the 1970s, in the 1980s we were forced to face up to the myriad unsolved problems. The construction of new nuclear power plants ties up high levels of funding over a long period of time. Their operation has – in Germany, too – been characterised by unforeseen incidents and expensive upgrades, resulting in downtime lasting for months at a time. New incidents continue to occur, and have shown that the technology is neither as safe nor as reliable as plant operators have insisted. Numerous upgrades corrected some defects, but the technology's fundamental risks could not be eliminated. In the late 1980s, the reprocessing strategy also failed and there was still no final disposal site for nuclear waste in sight. A final disposal site would have to allow nuclear waste to be stored safely for a million years. To date, no such site exists anywhere in the world.

The Chernobyl catastrophe in 1986 taught the German population that nuclear power plants are fundamentally unsafe and that an accident can have catastrophic effects, which do not stop at national border but are felt even hundreds of kilometres away. A majority of the German population is opposed to nuclear energy.

Serious accidents as the one in Chernobyl or the earlier one from 1979 in Three Mile Island/ USA, public opposition and high capital costs have resulted in a drastic drop in investment in nuclear energy. Since the late 1970s, not a single new nuclear power plant has been commissioned in the United States. In Europe, the number of nuclear power stations is declining. The construction of the only new nuclear power plant in the EU, in Finland, has been dogged by delays and costs have doubled; at the same time, a series of old plants are being decommissioned.

The fundamental risks of nuclear technology, the unresolved question of the final disposal of nuclear waste and growing public opposition to nuclear energy led to a vivid debate in Germany, that contributed to the establishment of the Green party in Germany in 1980 and the first election to Parliament in 1983. From the early 1990s onwards a discussion about ending the use of nuclear energy emerged. When the Social Democrats (SPD) – previously a nuclear-friendly party – passed a resolution in 1990 favouring a phase-out of nuclear energy within ten years, there were calls even within the nuclear industry for a consensus to be reached on the details of a phase-out.

When the SPD and the Greens came to power in 1998, they reached an agreement with the operators of nuclear power stations that nuclear power would be phased out, with plants being decommissioned after an operating lifespan of 32 years. The strategy involved the gradual decommissioning of nuclear power stations, with the last expected to shut down in 2022. In addition, the construction of new nuclear power plants was prohibited. The Federal Government did not stop there, however. The phasing-out of this high-risk technology was coupled with a shift towards modern forms of energy generation. This progressive approach was recently overthrown by the current liberal-conservative government's decision to revoke the phase-out and prolong the use of nuclear energy.

The “Renewable Energy Sources Act” ensures that operators of installations generating renewable electricity are paid a feed-in tariff, whose level is fixed for 20 years. In this way, we have created the secure conditions for investment needed to boost this new market. A new and unexpectedly dynamic industry has since emerged. For years now, new firms have been springing up, old companies have been expanding into new fields, and 300,000 new jobs have been created.

An initial target was set of increasing the proportion of renewable electricity from 4 to 12.5% within ten years. In fact, progress has been far more rapid. Today, in 2010, renewables already account for 17 per cent of electricity generated – more than a four-fold increase, and that at a time when demand for electricity is rising in absolute terms. Germany is a global market leader in renewables and is constantly continuing to develop these technologies. The phase-out of nuclear power and a

switch to electricity produced solely from renewable sources makes sense from an economic perspective, too. A Federal Government study estimates that between 2010 and 2050 Germany could save more than 700 billion euros by using renewables, instead of using nuclear energy and importing coal, gas and oil for energy generation. The technology already exists today to fully meet German and European demand for electricity using only renewable sources. However, the recent decision to revoke this policy puts this progress at risk.

We firmly believe that a switch to renewable energy is urgently needed to curb climate change. Oil, gas, coal and uranium are growing ever scarcer and prices will continue to rise. The use of renewables therefore makes sense not only in terms of climate policy, but also in economic terms.

In addition, only a few major companies profit from large power stations. By contrast, it is above all small local companies which profit from an expansion in the role of renewables. This is another advantage from which Germany, too, has benefited.

For all these reasons, we believe it is a fatal mistake, that the current liberal-conservative government in Germany prolonged the use of nuclear power. We will continue to fight for the phasing out and pursue the renewable energy path – in congruence with a majority of Germans.

A number of countries, including in the Arab world, are currently interested in building new nuclear power plants. The many arguments against this technology are often ignored, however. Only a few companies are capable of building nuclear power plants. They are based in France, the United States, Russia or Korea. Specialists and experts usually also come from these countries, resulting in an immense level of dependence on the states in question. In recent years, the construction of new nuclear power plants has not only involved immense cost overruns and delays, but also malfunctions and construction defects. In addition, nuclear power plants need to be cooled at all times. In the summer, German and French plants regularly have to be shut down due to water shortages or rivers exceeding maximum temperatures. Nuclear power stations also require a well-

developed grid, as vast quantities of electricity are produced at a single location and must then be transmitted long distances. At the same time a great deal of replacement capacity must be available, as nuclear power plants are shut down very quickly if a hazardous incident occurs. Moreover, the question of how to dispose of nuclear waste safely has not been resolved anywhere in the world.

In the case of renewable energy, by contrast, electricity is generated where it will be used. It is particularly suitable for countries whose infrastructure is currently less well-developed. All countries which have made use of renewables have seen many local jobs created and new companies established. In many regions, including the Arab world, there is far greater potential for renewable energy than in Germany. For example, more solar and wind power is available. It is therefore quick and simple to begin generating electricity from renewable sources – there is no need for high levels of investment or for years to be spent on the planning and construction stages. Many renewable energy installations in Germany are operated by individuals or cooperatives. They purchase the installations, arrange for them to be installed, and profit from the feed-in tariffs, whose level is fixed for 20 years.

We should also not lose sight of the security implications. The greatest threat to peace is no longer other states, as it was during the Cold War era, but rather nuclear terrorism. It is therefore important for nuclear security to be placed at the very top of the international agenda. If nuclear disarmament is to be achieved, the spread of the civilian use of nuclear technology must be curbed, as the proliferation of fissile material and of enrichment and reprocessing technology is the gateway to nuclear weapons. The risk of dual-use goods being used for both civilian and military purposes must therefore be reduced. We believe that pressing at national and global level for the phase-out of civilian use of nuclear energy and supporting renewable energy is the order of the day.