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**Chernobyl Plus Twenty:
Green Energy Policy in the German Bundestag**

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Introduction

The creation of a safe, economical and non-polluting energy supply is at the heart of Green politics. That fact is at the roots of the very foundation of the Green Party: The struggle against nuclear power sparked the movement of “citizens initiatives” in West Germany at the end of the '70s, and led to the foundation of the party Die Grünen – the Greens.

The nuclear reactor catastrophe at Chernobyl is therefore a crucial date, too, for us Greens as a party: Previously, many people in Germany had seen the opponents of nuclear power as nutcases who wanted to deny everyone in society their creature comforts. “Without nuclear power, the lights will go out in Germany” – that was a slogan of the “opponents of the opponents”. That changed on 26 April 1986. The melt-down sensitized a broad majority in the societies of western Europe to the uncontrollable risks of nuclear power: in Austria, the construction of the single nuclear power station was terminated, in Italy, the nuclear power plants were permanently switched off. In Germany, it was to take another fourteen years for the Greens parties to enter government and implement the phase-out of nuclear power. In the summer of 2000, the government and the nuclear-power industry signed an agreement to that effect.

Even after the phase-out compromise, Chernobyl remains an issue for us in the Green Party. The special issue of the magazine of our Bundestag Group on Chernobyl, which we published on 20 March 2006 on the occasion of the anniversary of the catastrophe, underscores that fact. Three texts from this issue, by our leading Bundestag members Renate Künast, Reinhard Loske and Hans-Josef Fell, are printed in this volume.

However, the nuclear phase-out in Germany is only one aspect of the energy policy turn-around. During the seven years in which the Greens were in government, from 1998 to 2005, we made sure that alternative energy production based on renewable sources had a chance on the market. Our first energy policy laws sparked a downright boom.

And that was also an economic success for Germany. For more and more other countries are gradually coming to see the opportunities that the development of renewable energy presents: it provides independence from raw material imports and reduces damaging climate emissions. Our goal in Germany is to have approximately a quarter of our energy needs met from renewable sources by 2020. Having achieved successes in wind power, our next goal is to realise the great potentials of biomass energy, even if our possibilities in this area are far from being as great in Germany as they are, for example, in Ukraine, where even greater potentials of this renewable source lie in wait. The second big “construction site” for our energy structure is energy efficiency. Enormous quantities of energy can be saved – be it through better insulation of buildings, more efficient electrical appliances, more efficient energy management, or more modern power plant technology: In Germany, the savings potential is around one quarter.

The energy turn-around is thus still a central issue in Green politics. The present collection of materials includes, in addition to the articles named above, an insight into the energy-policy work of the Bundestag Group, with motions and bills presented by the Green Parliamentary Group justifying the nuclear phase-out, or opposing concrete public funding support for nuclear power projects abroad. It also contains examples of our energy-policy ideas and goals.

For more information – unfortunately largely in German – please see our web page, www.gruene-bundestag.de. If you have further questions, please write us at: info@gruene-bundestag.de.

The Ongoing Catastrophe

The Duty of Fear

By Renate Künast

On 28 April 1986, the residual risk of nuclear technology exploded. The melt-down not only destroyed the health and environment of the people of Ukraine and Belarus. It was also a melt-down for that obsessive “can-do” faith which has continually belittled and denied the risks of nuclear energy – until the cloud of radiation blanketed Europe in the days after Chernobyl. In the first thirteen years after Chernobyl, the number of children with thyroid cancer in the area around the nuclear power station increased fifty-eight fold. According to independent experts, up to 100,000 people died in that period from the after-effects of the disaster.

Twenty years is a long time in politics, but a short time for radioactivity. The Chernobyl accident released a particularly high quantity of caesium 137, which has a half-life of thirty years. Yet the current radiation level is far in excess of half of that which pertained in 1986. The catastrophe is continuing, although once again there are politicians and lobbyists who have long since ceased to listen.

In the Ministry of the Environment, there are civil servants who are racking their brains about how to formulate appropriate warnings for places where radioactive waste is stored so that they will be understood by our descendants tens of thousands of years’ from now – when our language may well be long-since forgotten. This may sound absurd, but it illustrates dramatically how the catastrophe is continuing to accompany us – whether or not we still care about it.

Today, the Chernobyl disaster no longer means anything to many people here. And younger people have only read about the fears of that day. They have not anguished over whether the air they breathe or the food they eat may cancer. Is it safe for the children to go to the playground or to play in the fields? What is the rain carrying with it? Can we still drink milk and when can we buy whey to feed the baby again? These were the questions preoccupying people in the days, weeks and months after Chernobyl. But today the supporters of nuclear power in the CDU and CSU seem to be taking advantage of the apparently short half life of memory. According to the agreement on phasing out nuclear power, the Grand Coalition is to decommission four nuclear power stations during the current legislative period. We will have to jog the SPD’s memory to ensure that this really happens. And we will use the occasion of the anniversary of the Chernobyl disaster to keep that memory alive. This is also the purpose of the international conference “Tschernobyl + 20: Erinnern für die Zukunft” (Chernobyl + 20: Remembering for the Future), which is to be held in Kiev in April by Ukrainian environmental organizations in conjunction with the Heinrich Böll Foundation, with us and with the Greens from the European Parliament, and which I, together with others, will be opening. In light of the ongoing catastrophe of Chernobyl, we have a duty to sharpen public awareness regarding the fallout. This is why in Kiev we will be debating, among other things, the health-related, ecological and socioeconomic repercussions of Chernobyl.

We Greens were among the first in this country to make a fundamental break with the myth of blind progress, which is what drives the supporters of nuclear power, too. After Chernobyl we were joined on the streets by people who would never previously have dreamed of taking part in a demonstration. The myth that atomic energy was the way forward had been terrifyingly shattered. Countries such as Germany, Sweden and Belgium took the decision to phase out nuclear power. Other countries, such as Italy, Poland and Austria, decided never even to build a nuclear industry.

Today interested parties are once again propagating new myths: the myth of a renaissance of nuclear power and the myth of a safe third and fourth generation of nuclear power stations. Such myths are dangerous; they distort reality. It is true that at present, far fewer new nuclear power stations are under construction worldwide than will be decommissioned over the coming years. Even the nuclear-friendly International Energy Agency expects the share of nuclear energy in the energy mix to decline over the coming decades. At present, nuclear energy already accounts for far less than five per cent of global final energy consumption.

On a world scale therefore, nuclear energy's contribution to the energy supply is negligible. As a potential source of danger, on the other hand, its role is immense, and its risks have grown considerably as terrorism has intensified. Every single nuclear power station poses a permanent threat to many millions of people: even the most advanced safety technology is powerless to prevent aircraft from being flown into nuclear power plants. The companies building these nuclear power stations are nevertheless trying to sell them in as many countries as possible – even at the risk that they may be used as camouflage for nuclear weapons programmes. The danger of proliferation would be far less without the spread of nuclear power stations. In this respect, even the Nuclear Non-Proliferation Treaty falls short, since it expressly sanctions the civil use of nuclear power.

There are alternatives: In 1986 renewable energies were just a matter for hobbyists and elite researchers, but since then hundreds of thousands of jobs have been created in the sector worldwide. Germany is one of the front-runners in this field. This success story would have been unthinkable without the Greens, and we want to continue to drive it forward from the opposition benches.

Globally, renewable energies make many times the contribution to energy supply than does nuclear power. In Germany, renewable energies expanded over the seven years of the red-green government at such a breakneck pace that they can on their own replace all the nuclear power stations scheduled for decommissioning. And all the fierce resistance from the power companies and their friends in the CDU and CSU, the FDP and parts of the SPD has been unable to change this.

Yet we should not underestimate those opposed to this development. As we see every day, there are still powerful forces in Germany, Europe and globally who are continuing to champion nuclear energy. They will keep trying to block renewable energies, and arguing for a renaissance of nuclear power. But they have reckoned without us, and without the general public, the majority of whom are in favour of renewable energies and against nuclear power. Even the claim that nuclear power is indispensable must be exposed as a myth. Energy security can indeed be guaranteed worldwide without nuclear power and without oil – provided, that is, that we invest far more imagination and money than we have in the past in energy-saving measures and in alternatives. The political situation in the petroleum producing countries should also spur us on to becoming less reliant on oil.

In his book *The Imperative of Responsibility*, Hans Jonas removes the taboo against fear. Until then, fear had been seen as something for cowards. But Jonas makes it clear that fear is a duty if we want to reconcile freedom and responsibility and ensure the survival of the human race. Fear and awe, he says, are what compel humans, “in the ambiguity of their freedom, which no change of circumstances can ever remove, to preserve their world and their essence against the excesses of the power they wield.” Where mistakes can no longer be corrected, and have incalculable consequences, we have no right to mistakes. We need a world without nuclear power and must therefore devote all our know-how and creativity to developing energy efficiency and energy-saving strategies and alternative sources of energy. The endless catastrophe of Chernobyl must drive us on to allow the possible to become reality. Nuclear power – no thanks! No more Chernobyls!

Renate Künast, Member of the German Bundestag,
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Nuclear power without perspectives

By Reinhard Loske

Twenty years after Chernobyl, special interest groups are once again attempting to present nuclear power as the energy source of the future. How sound are their arguments?

On 26 April 1986, a chain reaction in Block 4 of the Chernobyl nuclear power plant which had spiralled out of control caused a massive explosion. Several tens of thousands of people were immediately evacuated from the surrounding area. Within a few days, the radiation had spread to western Europe. It contaminated towns and cities, villages, farmland, fields and forests. Playgrounds and sports fields were closed. Many foodstuffs were not suitable for consumption for a long time due to the high level of radiation present in them. The overall toll of this terrible event was as follows: 400,000 people had to be resettled because the area they lived in had been contaminated with radiation, more than 200 communities ceased to exist, many people died, others suffered severe illness.

Today, twenty years on from the nuclear accident in Chernobyl, the dangers posed by nuclear energy have grown rather than diminished. The "old" problems have remained: the possibility of large-scale accidents, the unresolved issue of final disposal of nuclear waste, which remains radioactive for thousands of years, and the potential of misuse of nuclear material for military means. At the same time, over the last few years, an additional threat has become more likely: terrorists could select nuclear power stations as targets for attacks or plan attacks with "dirty bombs" produced from stray nuclear material. The reaction plans developed to date by nuclear power plant operators for the contingency of a terrorist attack have verged on the comical. Aside from such ideas as throwing up a shield of fog around a plant if a hijacked plane were to be approaching, they haven't come up with very much.

A phase-out of nuclear power and a switch to a sustainable energy supply...

In Germany, the SPD-Green government believed that the use of nuclear power could not be justified in the long term. The Bundestag passed a law phasing out nuclear energy. In line with this law, all nuclear reactors are to be decommissioned by around 2020, beginning with the older plants particularly susceptible to accidents. According to the plan, these latter accident-prone plants – Biblis A, Neckarwestheim 1, Biblis B and Brunsbüttel – are to be taken off line by 2009.

For us as Greens it is clear that the necessary phasing-out of nuclear energy requires a shift to sustainable energy supply. There are three vital factors on the path to sustainable energy. We must considerably intensify our efforts to save energy, augment the use of renewables and enhance energy efficiency in electricity production. Suitable instruments to achieve this include, in particular, combined heat and power generation and decentralised energy supply. Large sections of the SPD prefer the idea of using coal as a replacement for nuclear power. This is not compatible with the climate protection goals which have been set and we do not therefore see it as an alternative. Our continued aim is to both successfully phase out nuclear energy and successfully protect

the climate. This can be done, as shown by a large number of energy scenarios. If the will exists and the energy policy framework is shaped correctly.

... or a return to nuclear power after all?

Since the new government came to power, politicians from the CDU/CSU, together with the large energy companies, have once again been calling the nuclear power phase-out into question – as if there had never been any Chernobyl. At the moment, it is the high oil prices and the gas crisis between Russia and Ukraine which are providing nuclear power supporters with an opportunity to call for a “phase-out of the nuclear phase-out”. The state premiers Edmund Stoiber of Bavaria, Günther Oettinger of Baden-Württemberg, Roland Koch of Hesse and Christian Wulff of Lower Saxony are in the forefront of this movement. Some of them are calling for longer operating life-spans, whilst others are even calling for the construction of new nuclear plants. The energy corporations E.on, RWE, Vattenfall and EnBW are particularly keen to ensure that their old plants, which have been written off, continue to operating longer. They want to continue to profit from their monopoly privilege, and to reinforce their dominant market positions. In tandem with this, the works councils of these four energy corporations, together with the trade union leaders Hubertus Schmoldt of Mining, Chemical and Energy Union and Frank Bsirske of ver.di, the service-workers’ union, have written a letter to the CDU/CSU and the SPD, in which they argue in favour of nuclear power and coal and against renewable energies and effective climate protection. Major editors of influential newspapers based in Hamburg are tending once again to view nuclear energy as a technology with great promise for the future and renewables as of little importance.

Arguments used by the friends of nuclear power – weighed ...

What has happened? Has the situation changed or has the wind just changed direction? How sound are the arguments used by the friends of nuclear power? Let us examine them one by one:

- ***Nuclear power is cheap and thus promotes economic competitiveness.***

This argument is incorrect. Nuclear energy in Germany was highly subsidised for many years and still is to some extent: by means of support for research, almost complete exemption from liability risks, and tax exemptions for the reserve funds of nuclear power companies and for nuclear fuels. Yet, despite these subsidies, nuclear power is not competitive today. It cannot compete with other energies on functioning energy markets. Only old amortised plants can compete, with negative macroeconomic consequences.

And longer operating life-spans for outdated nuclear plants have one major result: they prevent innovation and structural change. However, our industrial competitiveness is far more dependent on the capacity for innovation than on low energy costs. Economically, we cannot afford a lack of investment in innovative energy technologies – in energy savings, use of renewables and energy efficiency.

- ***In pursuing a policy of phasing out nuclear energy, Germany is going it alone, whilst nuclear power is experiencing a renaissance in other parts of the world.***

Here too, this argument has more to do with wishful thinking by the nuclear power lobby than with reality. There are currently around 440 nuclear power plants operating worldwide. Whilst one or two new plants are being built, numerous older plants are being decommissioned. Just to maintain the status quo, eighty new reactors would have to be built over the next ten years – one every six weeks. And in the following decade, 200 such new plants would have to be brought on line, one every eighteen

days. It is true that, according to official figures, thirty nuclear power plants are currently under construction, many of them in Asia. Yet more than half of these are empty shells which have been being “under construction” for about twenty years. The few “real” new projects for nuclear power plants are to be found in China, Japan, Taiwan, South Korea and Finland. In the USA, no new nuclear reactor has been ordered for thirty years, whilst in Germany and the UK none has been ordered for over 20 years. Can this really be described as a “renaissance”? Hardly! In actual fact, the International Energy Agency predicts that the share of electric power generated by nuclear plants will drop significantly by 2030.

- ***Nuclear energy is a home-grown form of energy which makes a major contribution to security of supply.***

There is no other source of energy for which Germany is as dependent on imports as it is for uranium – i.e. one hundred percent. And the reserves of no other fuel are as limited as those of uranium. The amount of uranium worldwide which can be economically extracted is estimated at between 1.25 and 4 million tonnes. In view of current plans for use, this means that it would last for the next 30 to 40 years. In other words: nuclear energy is neither a home-grown source of energy, nor can it offer long-term security of supply.

- ***Nuclear energy does not produce carbon dioxide and therefore makes a contribution to climate protection.***

Firstly, the contribution currently made by nuclear energy to worldwide energy supply is less than five percent. If the intention were for nuclear energy to meet a significantly higher proportion of the worldwide need for energy, thousands of new nuclear power plants would have to be built. This would fail simply due to the low amount of uranium reserves. Thus nuclear energy as an element in climate protection is thus a pipe-dream. Nuclear power plants are centralised and inflexible large-scale structures; this means that they require constant high levels of energy consumption, encouraging massive waste of energy. This often leads to misguided overall strategies for effective climate protection policy, which must, after all, go beyond the energy sector. And, empirically speaking, countries with a high proportion of nuclear energy are by no means in a better position in terms of carbon dioxide emissions than comparable industrial nations. Indeed, the position of some of them is significantly worse. The USA, France and South Korea are good examples of this.

... and found wanting

So there is little substance to the arguments of the nuclear lobby. They are manifestly specious – or else they demonstrate a refusal to see reality. And – this brings us back to our starting point – they ignore the intrinsic dangers of the use of nuclear power. The three pillars of our solution for the future of energy remain: renewable energy, energy efficiency and, especially, energy savings. The security risks involved in this approach are limited. It is also ecologically responsible, socially acceptable and economically promising, in other words: sustainable.

By Hans-Josef Fell

The opportunities afforded by renewable energies are still underestimated – just as the importance of nuclear energy is exaggerated. In Germany, nuclear power only accounts for around 6 percent of final energy consumption; internationally, it is less than 2,6 percent. That's not much, considering that for the past fifty years, around 80 per cent of energy research funding worldwide has been spent on nuclear power.

In Germany, renewables account for roughly the same percentage as nuclear energy – and the trend is rising. Yet despite their dynamism, only a fraction of their potential is being used. Renewables could meet the world's current energy needs many times over – ad infinitum. The sun radiates 15,000 times more energy to earth annually than humankind currently requires. By contrast, nuclear energy will never make a major contribution to meeting energy needs, for the simple reason that the world's uranium reserves are very low. If we were to meet all the world's energy needs using nuclear power, the uranium would be exhausted within one, two – or, at the most – three years: yet another reason for Germany to continue phasing out nuclear power.

This phase-out is due to be completed in 2020. That was the legal deadline set by the Red-Green Government, and the Grand Coalition has confirmed that it will abide by this target. But can renewables fill the resulting energy gap quickly enough? Yes, they can. A feasibility study by EUROSOLAR shows that by 2020, renewables could completely replace all the nuclear power plants and, indeed, the older coal-fired power stations which are coming off-stream. The more electricity that is saved, of course, the easier it will be to achieve this goal.

We need to adopt a two-pronged approach: by reducing energy consumption, and by using renewables in an intelligent mix of solar, wind and hydropower, geothermal energy, biomass and tidal power. In this way, a secure round-the-clock energy supply can be guaranteed within a few years.

Just wishful thinking and theory?

Not at all. The years in which the Greens were a partner in Germany's coalition government have shown that renewables can expand very quickly – far more quickly than anyone thought possible, even at the end of the 1990s. Between 1999 and 2005, the Priority for Renewable Energy Sources Law (Renewable Energy Law) and the Red-Green Government's subsidy programmes played a key role in achieving rapid growth. The number of jobs in renewables has quadrupled to more than 150,000. Today, more people work in this growth market than in the nuclear and coal industries put together.

The renewables industry is already achieving an annual turnover of more than €10 billion – three times the 1998 figure. Last year alone, the capacity achieved through newly installed biogas plants was four times higher than in 1998. Capacity in the wind power segment has increased five-fold since 1998, while photovoltaics actually increased twenty-fold through 2004.

Thanks to the success of the Renewable Energy Law, the renewables' share of electricity consumption has more than doubled in record time, and now stands at 11 per cent. The targets set by the Red-Green Government are now within reach: the target of an expansion of renewables to 12.5 percent by 2010 is likely to be met as early as 2007. We want to achieve at least 25 percent by 2020. The new government has also committed itself to this target. Full conversion to renewables seems feasible within a few decades.

In the fuel sector, we had already set a new course by eliminating the petroleum tax on all bio-fuels as of 2004. Bio-fuels reduce our dependency on the crisis regions in the Middle East and Central Asia. They open up new opportunities to generate income in agriculture. The Grand Coalition is obstructing these opportunities. It wants to abolish these tax concessions for bio-fuels.

Nuclear Energy: A Bridge to the Solar Age?

Nuclear power plants are incompatible with wind and solar power, but they are highly compatible with fossil fuel-fired power plants. To support nuclear power, even if only as a "transition", means entrenching the climate killers, especially coal. Nuclear power therefore impedes renewables expansion and energy-savings. As nuclear plants are very expensive to build and only begin to pay for themselves after several decades of operation at full capacity, they have to run day and night, and the power they produce has to be drawn off. It ends up being used for such ends as electric pavement heating or motorway lighting. As a result, the main energy wasters in the EU are the countries which operate nuclear plants.

And yet there are many opportunities to curb energy use. Every kilowatt hour saved reduces the need for power generation. The best power plant is a "negawatt power plant" – in other words, no power at all. The opportunities to save energy are simply endless. If low-power standby modes and intelligent power electronics were introduced across the board, they could even put a nuclear power plant out of business.

Then there is the rigorous use of waste heat for heating purposes, through combined heat and power cogeneration. Like home insulation or hybrid cars, this cuts oil and gas bills. Solar panels and bio-fuels can then cover the remaining gap more easily. Innovation is the great strength of the renewables.

Just twenty years ago, wind energy was mocked; just ten years ago, solar energy use was said to be a long way off; just five years ago, the same was said about geothermal energy. Today, the people with the widest smiles in Germany are those who invested in these future-oriented technologies early on. The small-scale wind turbines which eco-pioneers cobbled together in their backyards twenty years ago have evolved into sophisticated and profitable technologies. Global corporations such as General Electric and Siemens are moving into renewables. Solar and bio-energies, too, have developed as rapidly as wind power.

The secret of their success is a positive and stable economic framework – created by far-sighted policies. This has never been a given in the renewables field. They are competing with established and often highly subsidised standard technologies. They have to gain a firm foothold in an energy industry dominated by monopolistic or oligopolistic structures, in which very good money is already being made with the old technologies. New providers with new technologies are generally unwelcome competitors, at least initially.

That is why the innovative force of renewables and energy-saving still needs pro-active political backing, especially on the research side. It will pay off, not only on the environmental balance sheet, but also in jobs. A latter-day industrial revolution is now beginning in this sector.

What Now?

The Grand Coalition has announced that it will push forward the expansion of renewables and energy-saving. But its initial actions do not bode well. The Finance Ministry, for example, has already presented a draft law to abolish the tax concessions for bio-fuels. By contrast, the coal subsidies, zero tax on aviation fuel and tax privileges for nuclear power will remain in place.

The new Government plans to retain the Renewable Energy Law – but only its basic structure, although it has proved to be not just the most effective but also the cheapest funding instrument available. We should be upgrading it and speeding up renewables expansion to an even greater extent.

On transportation: In the fuel sector, it is essential to maintain zero tax on bio-fuels. At the same time, we must ensure that the mineral oil industry actually use these new fuels. In particular, such fuels as vegetable oils, biogas or bioethanol can be generated decentrally, and offer a high level of security of supply and attractive opportunities for farmers.

On heating: The existing subsidies for renewables should be improved through the adoption of a Heating Law, and the installation of energy-saving features in older buildings should be actively encouraged. Outdated building regulations, and also mental blocks on the part of politicians, academics, craftspeople, architects and building owners are the main obstacles here. They can be dismantled – if there is the will to do so.

And finally, the good news: Everyone can now opt out of nuclear power and into renewables on an individual basis. Simply invest in solar panels or a wind turbine! You can also opt out by changing your supplier. Your electricity bill will reveal whether any of your electricity comes from nuclear power. And switching suppliers is easier than you think. Simply register with a new power company – but make sure it is not owned by the nuclear industry.

Baltic Sea Pipeline: Unnecessary, Expensive and Potentially Explosive

By Rainer Steenblock

Gas is one of the central elements of energy supply across Europe. The amount of gas which needs to be imported will double or triple over the next few years. This is due to an increase in demand coupled with a drop in Europe's own gas production: the United Kingdom's production of natural gas is sinking significantly, so that the UK has now actually become an importer of gas; the Netherlands have already passed the peak of their capacity for extraction, whilst Norway can only continue to produce gas to a limited extent. Nonetheless: It will not be possible to safeguard energy supply in Europe through the planned construction of a 1200 kilometre gas pipeline through the Baltic Sea.

There is no Extra Gas Available for the Baltic Sea Pipeline

The Baltic Sea pipeline is to run from Vyborg near St. Petersburg to Greifswald on the German coast, and link the Russian gas pipeline network with the German gas grid by 2010. Branches running to the United Kingdom, Finland, Kaliningrad and Sweden are planned. The construction project is expected to cost €4 billion, though cheaper and more environmentally-friendly alternative routes exist, e.g. via Ukraine, the "Yamal Europe" gas pipeline running through Belarus and Poland, or the "Amber pipeline" through Latvia, Lithuania and Poland. European security of supply is by no means improved by this expensive new transportation route, since the new Baltic Sea pipeline simply allows a different pattern of distribution; it taps no new supplies. In addition, a clear drop in the amount of gas extracted in Russia is expected by 2015 at the latest, since the three "giant fields" in Urengoi, Yamburg and Vedvezhye, which produced 85 per cent of Russian natural gas in 2000, are 50 per cent, 26 per cent and 68 per cent exhausted, respectively. Yet exploration of the major reserves on the Yamal peninsula and in the Barents Sea (Shtokman) is not expected before 2015. In the next ten years therefore, it will only be possible to raise Russian gas production slightly above the level of 2005, 640 bn cu.m. In addition, domestic consumption will rise, so that Russia will face a considerable struggle to fully use the capacities of existing pipelines after 2010.

No New Trouble Spots in Central and Eastern Europe!

In the construction of the Baltic Sea pipeline, it seems that corporate strategy considerations are far more important than the project's economic viability. After all, the Baltic Sea pipeline is twice as expensive as an overland pipeline of the same length would be. What it does accomplish is that it provides greater room for manoeuvre for the Russian company Gazprom to reduce its use of existing overland pipelines. It will thus create a deep political rift across the Baltic Sea which may lead to tensions in Europe within a few years, since the new pipeline will diminish the economic clout of such gas-transit countries as Ukraine, Slovakia, the Czech Republic, Belarus and Poland. These countries will become even more dependent on Russia in the energy field, and their leeway for political action, including potentially acting against Russia's wishes, will be reduced. Russia has a long tradition of resorting to the gas tap in disputes with other countries. In the past, it was more difficult to use this "argument," because Germany

relied on the same pipeline, though it was nevertheless used to dramatic effect in the gas dispute between Ukraine and Russia in early 2006. The suspicion with which the countries of Central and Eastern Europe view Gazprom's attempts to acquire stakes in Eastern European Eon sales subsidiaries is also understandable. After all, this means the risk of again becoming more dependent on Russian gas monopolies, as in Soviet times.

Standard Investigation Concept Needed for Pipeline Construction

For the Baltic Sea, the pipeline means 2 million tonnes of steel and concrete. Pipes around 120cm thick are to be laid three metres below the seabed; a 15-metre-wide trench is to be dug through the sand, and drilled with brute force through rock. The critical points here are the destruction of rock habitats, the threat posed to shipping safety (anchors) and the several hundred thousand tonnes of chemical agents, bombs and grenades left over on the Baltic seabed from the First and Second World Wars. The planned route also runs through the Greifswald Lagoon, an EU protected area. Where such major environmental impacts are involved, we urgently need a binding assessment process, entailing comprehensive evaluations before, during and after the work takes place, and including a duty to compensate for damage caused by intervention in the environment, and stipulating standard technical methods. To date, such a standard assessment concept applies in Germany only for offshore wind farms. It is urgently needed for the construction of marine pipelines.

Such a procedure would also make lack of transparency of the kind with which the consortium is carrying out its planning of the pipeline impossible. For although a feasibility study on the Baltic Sea pipeline is available, for example, it is not accessible to the public. In addition, neither a regional impact analysis nor a planning approval procedure is provided. At the same time, such delaying tactics, as well as the start of construction of the overland section in December 2005, which was celebrated in the media, are causing considerable time pressure. Nevertheless, it seems unrealistic to expect the pipeline to go into operation as planned by 2010 if all European planning requirements are adhered to, including an environmental impact assessment at the European level.

More Competition on the German Electric Power Market?

This project, which is not particularly lucrative in economic terms, is very important to the companies concerned, Gazprom and E.on-Ruhrgas/BASF, since they are hoping to establish themselves on the German-Russian market. It would be desirable if this were to trigger the urgently needed boost in competition in the electric power sector, with falling energy prices for consumers. After all, the main cause of rising electricity prices in Germany is the lack of competition, the manner in which electricity is sold, and the fact that 90% of the electric power production market is controlled by four market leaders. Yet it is more likely that, instead of dropping prices, customers will face significantly higher rates, as the costs of the construction of this pipeline are reflected in their electricity bills.

The Elements of Secure Energy Supply

Today, Germany already receives over 30% of its gas imports from Russia. The Baltic Sea pipeline would increase its dependence on Russia to over 40%. Yet a sharp decline in gas imports from Russia to Europe as a whole is predicted: from 70% in 2000 to 40-50% in 2020. The remaining 50-60% will have to be made up by a large number of other countries. Therefore, further regional diversification of gas imports – especially from

Africa and the Middle East, including Iran – will be an important element for a secure energy supply. However, in view of the fact that fossil fuels will be exhausted in the foreseeable future, energy conservation, energy efficiency and the switch to renewable energy sources are equally important for a secure energy supply. The challenge of the 21st Century will be to replace expensive fossil fuels through better-insulated buildings, more efficient electrical appliances and renewables.

Biogas and liquid gas could also be possible elements of a new energy strategy. Biogas in particular could be produced on a large scale in central and eastern Europe over the long term. The use of existing land pipelines for regional feeding-in of biogas is conceivable, in contrast to the planned Baltic Sea pipeline on the seabed. Liquid natural gas is also continually gaining ground worldwide. The market for it has already been growing at the rate of eight per cent per year; in future, ten to fifteen per cent is likely. The advantage of liquid gas is its flexibility; it can be transported by tanker over long distances, independent of pipelines. It would permit gas reserves to be made available to German and European consumers regardless of pipelines.

Rainer Steenblock, Member of the Bundestag, Spokesman on European Policy

Atomic energy? – No thanks!

The origins of the Greens and the anti-nuclear-power movement are closely related. Having developed out of anti-nuclear protests and other social movements, the Greens continued to fight together with anti-atomic-power activists, as their parliamentary wing for an exit from atomic power – a target which they achieved with some concessions in 2000, in the form of legislation to phase out the nuclear industry.

The peaceful use of nuclear energy in Germany began in the mid-1950s. In those days, parties, trade unions and, after some initial hesitation, industry were united in their euphoria about the enormous potential of atomic energy. As soon as it became apparent that the construction of nuclear power plants would not be profitable for energy supply companies in the medium term, and that not even the economic risks involved were manageable, the state took on a key role in subsidising and further developing atomic energy. Politicians were firmly convinced that this approach would enable them to solve all energy supply problems in the long term. In the following twenty years, no changes were made to this energy policy direction. Various nuclear power plant prototypes were developed during this period. The majority of Germany's currently operating nuclear power plants were commissioned at this time.

As plans for a massive expansion of nuclear power took shape at the beginning of the 1970s, societies in Western Europe increasingly started to discuss the security aspects around the use of atomic energy. In West Germany, these discussions developed into an ever more widespread resistance to atomic power. The occupation of the building site for the planned nuclear power plant near Wyhl, on the upper Rhine, in 1975, involving, at the peak of the movement, some 30,000 people, became seminal event in the history of the infant anti-nuclear-power movement. The protests were successful: after years of dispute, the project was finally stopped. The beginning of construction work for the nuclear power plant in Brokdorf on the north coast in 1976 represented the second seminal event in the conflict. This building site formed the backdrop for massive and militant skirmishes which shook West Germany with permanent effect. In spite of the protests, the political parties did not renounce their belief in the expansion of atomic energy. The Social Democrats, who were then in power, nevertheless found themselves obliged, not least as a result of disputes within their own party, to adopt more restrictive guidelines for approving the construction of nuclear power plants. In spite of this move, increasing numbers of people did not feel that their interests were being represented by the existing political parties. From 1977 onwards, citizens of various political shades who were active in the environmental, peace and women's movements therefore joined forces to establish green and "rainbow" lists of candidates, in order to provide a political alternative at the polls. Ever more local and state-level environmentalist parties were founded all over West Germany.

In 1979, the first nuclear accident to be revealed to the public took place at Three-Mile Island, near Harrisburg, Pa., in the USA. The failure of machine parts and operating errors on the part of the personnel resulted in a massive loss of coolant, which led to a partial meltdown of the core and the release of radioactive gases. That same year, some around 500 delegates of various green parties and organisations in West Germany founded "The Greens" as a non-party political alliance to run candidates for the first directly elected European Parliament. This was followed in early 1980 by the founding of the The Greens as a party at the national level in West Germany. As an outgrowth of the

extra-parliamentary protest movement, the Greens saw themselves as a movement rather than as a party, and later as combined party/ movement. As a result of its ongoing protests, the anti-nuclear-power movement succeeded in placing the issue on the political agenda and forcing a public debate on it. With the Greens as their parliamentary arm, the movement then attempted to break down the consensus in favour of nuclear power that existed among the political elite.

During the 1980s, the protests against nuclear energy spread even further. In 1981, more than 100,000 people demonstrated in Brokdorf, Schleswig-Holstein, against the nuclear policy of the then federal government. Resistance was maintained in the following years. In 1985, demonstrators occupied the building site of the planned reprocessing plant at Wackersdorf, Bavaria. The reactor catastrophe in Chernobyl in 1986 permanently shook German society, triggering vigorous discussion on the safety of nuclear power plants in broader circles of society. The "Mothers against Atomic Power" initiative was one of the symbols for the politicisation of society following the accident. The Social Democratic Party and the trade unions now also committed themselves in their respective manifestos to phasing out nuclear power. At its Party Congress in 1986, the SPD decided that its goal would be to bring about the exit from nuclear power within ten years.

The fall of the Berlin Wall changed the political landscape in Germany. Alliance 90, an alliance of dissident groups in East Germany, joined forces with the West German Greens after reunification. They soon merged, and re-entered the Bundestag in 1994.

At the next election in 1998, Alliance 90/The Greens and the SPD were victorious and formed a government; the way was now clear for an exit from atomic power. Within the coalition, the Greens succeeded in pushing through their long-sought exit from atomic power in 2000. In an agreement concluded with energy supply companies, the government stipulated a gradual phase-out of atomic power over the course of thirty-two years, with no compensation to be paid. Although the anti-nuclear-power movement and the Greens would have preferred to see a more rapid exit, the consensus to phase out atomic energy represents a major success, and points the way forward to a change in energy policy away from nuclear power.

The creative and determined protests of the anti-nuclear-power movement and the Greens carried out under their symbol of the red sun have paid off, and should give ground for hope to activists in other countries.

Motion

tabled by the Parliamentary Groups of the SPD and ALLIANCE 90/THE GREENS

No further Support for the Khmelnytsky 2 and Rivne 4 Nuclear Power Plants in Ukraine.

Be it resolved by the German Bundestag:

The Federal Government is requested to make representations to the European Bank for Reconstruction and Development (EBRD) to the effect that

- no loans be provided to continue construction of the Khmelnytsky 2 (K 2) and Rivne 4 (R 4) nuclear power plants;
- Ukraine receives support to build an efficient and safe energy supply without the use of atomic energy.

The Federal Government is asked to cast its votes in the framework of the deliberations of the European Bank for Reconstruction and Development accordingly.

Bonn, 20 April 1999

Dr Peter Struck and the Parliamentary Group

Kerstin Müller, Rezzo Schlauch and the Parliamentary Group

Explanatory Memorandum

The K 2 and R 4 nuclear power plants would not be licensed in any western country due to their safety deficits. It is not acceptable for this type of safety hazard to be underpinned by means of western financial assistance.

Financing would also violate the Memorandum of Understanding agreed to between Ukraine and the G 7 states in 1995, whereby only projects which are economically viable are to receive support. This is not the case for K 2/R 4, as has already been concluded in 1997 by an independent panel of experts commissioned by the European Bank for Reconstruction and Development (EBRD). This view has now been confirmed in a new study produced by experts at the European Investment Bank (EIB). Since this point, the project costs have risen further, from \$1.2 billion to \$1.87 billion. In addition, Ukraine has considerable excess capacities in the electricity sector.

Moreover, neither reactor is expected to go on line before 2004. This removes the basis for the link established by the government of Ukraine between the K 2/R 4 reactors going on line and the closure of the Chernobyl reactors in 2000.

Much cheaper alternatives exist. Gas-powered plants with the same output would cost just under \$1 billion. They are also much quicker to build. A clear majority of the Ukraine's population is also against the construction of K 2/R 4.

Motion for a Resolution

tabled by the SPD and ALLIANCE 90/THE GREENS Parliamentary Groups

regarding the third reading of the bill of the SPD and ALLIANCE 90/THE GREENS
parliamentary groups and the Federal Government

– Printed papers 14/6890, 14/7261, 14/7825 –

Draft of a Law on the Orderly Termination of the Use of Nuclear Energy for the Commercial Production of Electricity

Be it resolved by the German Bundestag:

I.

The first commercial nuclear power station in the Federal Republic of Germany, Gundremmingen A, went online in 1966. This amendment to the Atomic Energy Law (Atomgesetz – AtG) marks the start of the orderly phase-out of nuclear power generation in the Federal Republic of Germany. The goal is to arrive at safe and environmentally compatible energy supplies without nuclear power. The Parliament has re-assessed the risks of nuclear power in this context.

With the amendment of the Atomic Energy Law, the German Bundestag is fulfilling its constitutional task of reaching a new decision concerning the general risks associated with the use of nuclear energy for electric power generation. The protection of life and the environment for both present and future generations is a precept of constitutional law. This goal fundamentally justifies the orderly termination of the use of nuclear energy.

The risks of nuclear energy are unjustifiable in the long term. Despite improvements in safety levels, the possibility of a serious incident, and thus the release of a substantial portion of the radioactive stock, cannot be ruled out. In the densely inhabited Federal Republic of Germany, this would make entire regions uninhabitable. An incident of this kind would shake societal, economic and political life to the roots.

Not only the production of electricity, but also the mining, transport and disposal of the radioactive materials involves substantial risks. Nowhere in the world has a satisfactory solution yet been found for disposal. Even fifty years after the splitting of the first atom for electric-power generation, there is still no final repository for the highly radioactive

nuclear wastes anywhere on the planet. Future generations will be burdened with this legacy for a very long time to come.

Human error has been encountered time and again in highly developed technical systems and cannot be ruled out, even by controls or technical automation. Even the greatest efforts to achieve safety are limited by the bounds of human knowledge. However, the spatially and temporally almost unlimited risks it involves make nuclear engineering a system in which there are distinct limits to the principle of trial-and-error.

Finally, the recent terrorist attacks provide additional grounds for re-assessing the utilisation of nuclear energy from the point of view of averting threats. Attacks on nuclear power stations cannot be ruled out. The phase-out of nuclear power is thus also a contribution towards improved protection of the Federal Republic of Germany against terrorist attacks.

These considerations are leading to a reassessment of nuclear power. The Federal Government has found a political framework for its phase-out that permits a realistic balance between public and private interests. Taking all aspects into account, the German Bundestag resolves to terminate the use of nuclear energy in an orderly manner, which will also provide adequate consideration for the rights of ownership of the operators.

The German Bundestag sees limitation of the previously unlimited operating licences, in a flexible manner and on the basis of the amount of electricity generated, as being a suitable instrument. It will enable operators to react in safety and security-oriented manner to general risks – such as terrorist threats or aging phenomena – that do not yet constitute acute hazard situations by taking older facilities, in particular, out of service before the end of their remaining operating life and transferring their remaining operating lives to other facilities.

II.

An orderly phase-out of nuclear power will constitute an important contribution towards safe and environmentally compatible energy supplies. It will clear the way for sustainable energy supplies based on efficient and solar technologies. The energy system of the future will be consumption-oriented and flexible. Embarking on intelligent energy services and the solar economy will provide our country with great opportunities for more competition, innovation, employment and new markets.

The networking of various technologies and the utilisation of information and communications technologies will make this energy turnabout possible. A growing share of the remaining base load requirement is being covered with the aid of highly efficient fossil energy sources and, increasingly, by renewable energy sources.

The German Bundestag thus sees the Nuclear Power Phase-Out Law as being an important milestone on the way to reorganising energy supplies. The safe, economical and environmentally compatible energy supply will rest on three pillars:

1. The largest and most important “energy source” in our country is energy savings. Using efficient and innovative technology, electricity and heat can be saved without sacrificing comfort or convenience. A moderate increase in the price of electricity due to the eco-tax, and targeted consumer information, will promote energy-saving and support the expansion of an innovative branch of the economy with a substantial market potential that is also meeting a growing demand on global markets.

2. Much the same applies to power stations and the efficient use of energy in trade and industry. Old power stations convert only approximately one-third of their fuel into electricity; the rest is discharged into the environment unused in the form of heat. Cogeneration plants are particularly economical, since they generate electric power efficiently and at the same time use the waste heat they produce.
3. In addition to the most economical possible use of energy, the utilisation of renewable energy sources, such as sunlight, wind and biomass, is being comprehensively promoted, with the goal of doubling its share by 2010.

The German Bundestag welcomes the fact that the reorientation of energy supplies is a pillar of climate protection policy. The ambitious goals for the reduction of carbon dioxide emissions can only be achieved using efficient and solar energy technologies. Consequently, the German Bundestag welcomes the facts that:

- The share of renewable energy sources relative to total energy consumption is to double by 2010. By 2050, half the energy and electricity used is to come from renewable energy sources;
- Energy productivity has been substantially increased in recent years;
- The share of cogeneration is being expanded on a large scale.

This reorganisation is already a success. Wind power capacities have been doubled in the space of just two years. One third of worldwide production is generated in Germany. While photovoltaics emigrated from Germany under the previous government, the result of the active promotion policy of the current Federal Government is that the fourth solar factory will be opening soon. Between 70,000 and 80,000 people already work in this future-oriented industry today.

III.

On 11 June 2001, in preparation for the amendment of the Atomic Energy Law, the Federal Government reached an agreement with the utility companies, which are the majority shareholders of these facilities. The German Bundestag takes note of this agreement. It thanks everyone involved for their work, which ultimately led to success, despite different interests and a complex legal basis.

The German Bundestag has arrived at the conclusion that the amendment remains within the bounds of constitutionality, particularly as regards the issues concerning encroachment upon rights of ownership without compensation. As a further measure for guaranteeing high safety levels during the remaining operating lives, an obligation to perform periodical safety reviews was included in the Atomic Energy Law. The German Bundestag affirms that the amendment of the law in no way relaxes the obligations of the operators to guarantee safety.

The obligation of the operators to keep their facilities at the level of the state of the art in science and engineering is stipulated in Section 7 (2), Clause 1, No. 3 of the Atomic Energy Law. The best possible damage and risk prevention continues to be the basis for all decisions of the nuclear energy authorities. In particular, the competent supervisory authorities decide on the basis of this assessment standard. Subsequently imposed requirements likewise enforce the damage prevention requirement according to the state of the art in science and engineering; in these cases, amending licences are required in practice, for which compliance with the state of the art in science and technology is expressly regulated in Section 7 (2), Clause 1, No. 3. In this respect, the deletion of the

second Clause of the regulation, which could have been interpreted as a restriction of the obligation to prevent damage, is of importance for clarification.

The introduction of a regulation governing the burden of proof, under which the nuclear power station operators would have to demonstrate compliance with the safety requirements in the event of a suspected hazard, can be dispensed with. The currently valid Section 19 (3) of the Atomic Energy Law already provides for temporary discontinuation of operation in the event of uncertainty regarding the safety status. The facility cannot be brought back into operation until this situation has been remedied. The owner of the facility is obliged to furnish complete information within the framework of this procedure. Section 19 (2) of the Atomic Energy Law also contains a basis for authorisation, under which facility operators can be required to provide comprehensive information and furnish proof in the event of a corresponding official request.

The German Bundestag has carefully examined the bill. On the occasion of the hearing on 5 November 2001, the experts submitted proposals for changes to the draft amendment tabled, with the aim of ensuring a safe, and hence orderly, phase-out.

Following careful deliberation, the German Bundestag has reached the conclusion that the draft amendment should be adopted as submitted. It creates the prerequisites for no compromise on safety, either for the remaining operating lives of the nuclear power stations, or for the materials temporarily stored on-site. The amendment contains adequate stipulations for this purpose.

Nevertheless, the German Bundestag feels it is appropriate, in connection with the 10th Amendment of the Atomic Energy Law, to emphasise a number of points which it considers to be of essential importance for successful implementation of the phase-out of nuclear power now initiated.

IV.

Owing to the changed threat situation, and particularly since the possibility of terrorist attacks on nuclear facilities or transports of nuclear material cannot be ruled out, the German Bundestag is of the opinion that it may become necessary to take measures in the framework of the options for action offered by the Constitution that could not be given sufficient consideration in the framework of this amendment of the Atomic Energy Act. As shown by the results of the hearing of the German Bundestag, the corresponding measures cannot yet be sufficiently identified today, since the review being carried out by the authorities commissioned with the safe operation of such facilities and the institutions acting in an advisory capacity in this context in the changed situation existing since 11 September 2001 is still in progress. The undisputed principle of "safety first" requires, on the one hand, the reduction of the threat of terrorist attacks on nuclear facilities and, on the other hand, the minimisation of the impact of possible acts of third parties.

The German Bundestag therefore calls upon the Federal Government to submit a corresponding report to the German Bundestag as soon as possible after completion of these reviews. If appropriate, the report should indicate the need for action – resulting from these reviews and the state of the art in science and engineering prevailing at this time – for improving the safe operation of nuclear power stations, facilities for storing or transporting nuclear fuels, and more extensive measures, if necessary.

The German Bundestag supports the Bundesrat in its statement of 19 October 2001 on the Federal Government's draft for a Law on the Orderly Termination of the Use of Nuclear

Energy for the Commercial Production of Electricity – Bundesrat printed paper 705/01 (Resolution) – which demands precautions for ensuring an adequate supply of iodine tablets for the population, and their financing according to the causation principle via contributions from the operators of nuclear power stations. It shares the opinion of the Federal Government – Bundestag printed paper 14/7261 – according to which corresponding measures could be coordinated by the Federal Office for Radiation Protection.

The German Bundestag also shares the other concerns of the Bundesrat, particularly as regards the inclusion of plan approval procedures in the regulations of Section 20 of the Atomic Energy Law, and of the associated cost regulations. It supports the Federal Government in its intention to establish corresponding regulations in a further amendment of the Atomic Energy Law, focusing on legislation concerning costs and procedural issues, and calls upon it to elaborate the draft of such an amendment swiftly in view of the limited operating life of the nuclear power stations.

The outcome of the expert hearing on the present bill was that appeals against a decision in a planning approval procedure relating to repositories have a suspensory effect, and that actions should be filed directly with the Federal Administrative Court, thereby accelerating the legal process. In view of the fundamental importance of a repository for permanently safe storage of radioactive waste, such acceleration of the legal process is justifiable. The German Bundestag subscribes to this opinion and calls upon the Federal Government to introduce suitable regulations.

A final repository for radioactive waste is a necessary element of nuclear waste disposal, particularly in regard to the orderly termination of the use of nuclear energy for the commercial production of electricity. Only when a suitable final repository for highly radioactive waste is available in Germany can the exposed fuel elements in temporary storage be permanently disposed of safely. The German Bundestag stresses the need for all parties involved to work emphatically, swiftly, and in awareness of their common responsibility for the establishment of a permanently safe repository for highly radioactive wastes in Germany.

A wide variety of questions must be answered before a facility for permanent storage of highly radioactive waste can be established. The responsibility for permanent storage lies with the Federal Government. Since the political decisions have major implications, the Parliament considers itself obliged to constantly monitor the working and decision-making processes.

It therefore commissions the Federal Minister for the Environment, Nature Conservation and Nuclear Safety to present it in the 15th electoral term with a national disposal plan describing the situation, proposing further action, and presenting a schedule for disposal and permanent storage. This disposal plan is to be updated and submitted to the German Bundestag one year after the start of each electoral term. In particular, information is to be provided regarding the progress made in connection with the search for, and the examination and development of potential sites, as well as any problems that arise.

By 2010, there should be clarity regarding the underground site or sites to be examined for suitability as a final repository. Such a final repository for highly radioactive wastes should be in service by 2030 at the latest. These two dates emphasise the importance attached by the Parliament to the establishment of a repository in Germany. They specify the time frame for all the work, planning and decisions required to establish a final repository for highly radioactive wastes.

The German Bundestag sees the ban on the shipment of spent fuel from nuclear power stations for reprocessing after 1 July 2005 as a step forwards in the disposal issue. It emphasises that this will also contribute to reducing the worldwide proliferation risk. Following the terrorist attacks of 11 September 2001, even greater attention must be paid to ensuring that weapons-grade plutonium is not abused. Against this backdrop, the German Bundestag confirms its opinion that exposed nuclear fuels may only be reprocessed within the European Union or in Switzerland, and that only in these countries may MOX fuel elements be produced using the resultant plutonium.

In the debate on the amendment of the Atomic Energy Law, the environmental associations in particular have expressed concern that the safety of nuclear power stations could decline during their remaining operating life, and that the residual risk might thus increase. The German Bundestag therefore once again emphasises the “safety first” maxim. There may be no compromises on safety until the last nuclear power station is closed down. On the contrary, the objective is to maintain high safety standards, particularly since the safety culture in the companies operating nuclear power stations has not always met up to requirements in recent times.

The German Bundestag therefore calls upon those concerned in the utility companies, the competent administrative organisations and the political sphere to be conscious of the great responsibility they bear through the conclusion of phase-out.

V.

The amendment of the Atomic Energy Law marks the start of the phase-out of nuclear power in Germany. The dispute about the justifiability of nuclear power has created a deep divide in our society over the past three decades. The German Bundestag hopes that the amendment of the Atomic Energy Law will, by turning the phase-out of nuclear power into reality, overcome this divide and lead to constructive cooperation.

Shaping the future of sustainable energy supplies – in our country, in Europe and throughout the world – is a major challenge that we can only master with a great deal of acceptance and public spirit.

Berlin, 12 December 2001

Dr Peter Struck and Parliamentary Group

Kerstin Müller, Rezzo Schlauch and Parliamentary Group

Motion

tabled by the Members of the German Bundestag Dr Angelica Schwall-Düren, Michael Müller (Düsseldorf), Horst Kubatschka, Dr Axel Berg, Günter Gloser, Dieter Grasedieck, Monika Griefahn, Rolf Hempelmann, Ulrich Kasparick, Ulrike Mehl, Michael Roth (Heringen), Dr Hermann Scheer, Wilhelm Schmidt (Salzgitter), Franz Müntefering and the Parliamentary Group of the SPD

and Michael Hustedt, Rainer Steenblock, Christine Scheel, Volker Beck (Cologne), Cornelia Behm, Franziska Eichstädt-Bohlig, Hans-Josef Fell, Winfried Hermann, Peter Hettlich, Ulrike Höfken, Undine Kurth (Quedlinburg), Dr Reinhard Loske, Friedrich Ostendorff, Albert Schmidt (Ingolstadt), Ursula Sowa, Dr Antje Vogel-Sperl, Katrin Dagmar Göring-Eckardt, Krista Sager and the Parliamentary Group of ALLIANCE 90/THE GREENS

Rejection of an Increase in the Euratom Line of Credit

Be it resolved by the German Bundestag:

The German Bundestag calls upon the Federal Government

to employ its best efforts to ensure that the proposals made by the Commission of the European Communities to amend the legal basis empowering the Commission to issue Euratom loans for the purpose of contributing to the financing of nuclear power stations be rejected by the Council of Economics and Finance Ministers.

Berlin, 12 March 2003

Franz Müntefering and the Parliamentary Group of the SPD

Katrin Dagmar Göring-Eckardt, Krista Sager and the Parliamentary Group of ALLIANCE 90/THE GREENS

Explanatory Statement

The European Atomic Energy Community (Euratom) was created in 1957 for the purpose of promoting the development of nuclear energy in Europe by means of a common approach. In 1977, by virtue of Decision 77/270/Euratom, the Council authorised the Commission to issue loans to contribute to the financing of nuclear power stations.

As a result of a series of decisions, the original borrowing ceiling of 500 million European units of account established under Decision 77/270/Euratom has been gradually increased to the present level of four billion euros. Council Decision 94/179/Euratom extended the scope of Euratom loans, which had hitherto been authorised only for the construction of new nuclear facilities, to cover the financing of projects designed to improve the security and efficiency of nuclear facilities in Eastern European countries. Under certain circumstances, these loans could also be used to finance the construction of new nuclear facilities in those countries (Decision 92/179/Euratom).

On 6 November 2002, the Commission adopted proposals for the amendment of Decisions 77/270/Euratom and 77/271/Euratom. These proposals, which still require the approval of the Council, provide for:

- an increase in the borrowing ceiling from four to six billion euros, and
- an expansion of the scope of admissible uses of Euratom loans.

The German Bundestag opposes both of these proposals for the following reasons:

- On 11 June 2001, the Federal Government reached an agreement with the energy companies on a structured abandonment of the use of nuclear power in Germany. On 14 December 2001, the German Bundestag adopted the Nuclear Energy Phase-Out Law (Gesetz zur geordneten Beendigung der Kernenergienutzung), which entered into force on 27 April 2002. The Federal Government and the German Bundestag believe that the risks involved in the use of nuclear energy can no longer be accepted for more than a limited period of time. The aims of the European Atomic Energy Community and the granting of Euratom loans are incompatible with the German goal of the abandonment of nuclear energy.
- All Euratom loans approved or applied for since 1994 relate to nuclear power stations in Eastern Europe. However, the safety-related impact of these nuclear projects, is questionable:
 1. In December 2000, the Commission approved funding for the construction of two new nuclear power stations in Ukraine (K2R4). These funds, amounting to €688m, have not yet been released, since Ukraine has not satisfied the stipulated safety and viability requirements. The German Bundestag had previously decided, in resolution 14/795, not to support this project because of safety concerns.
 2. At the present time, only one loan application is pending at Euratom. The application is for an amount of €250m for the construction of the new Cernavoda 2 nuclear power station in Romania. Granting this loan will do nothing to improve nuclear safety in Eastern Europe, since the construction will not coincide with the decommissioning of any older nuclear reactor.
 3. The construction of six nuclear power stations in Russia has been held up for want of financial resources. Consideration is being given to the use of Euratom loans to allow work to resume on the construction of the nuclear facilities in Kalinin, Balokov, Kursk and Rostov. The construction of the Kursk power station poses particular problems, because the reactor

involved is of the Chernobyl type, which the Commission has classed as “non-upgradeable” (COM(2000)493 final).

These projects promote the development of nuclear energy in Europe. By so doing, they lead to an increase in nuclear risk, rather than to an improvement in the overall safety level.

- One of the foundations of the European unification and enlargement process is the creation of fair competition within a European market. In the realm of power generation, distribution and utilisation, this function is performed by Directive 96/92/EC of 19 December 1996 on common rules for the internal market in electricity. Supporting investment in nuclear energy generation through Euratom loans runs counter to the principle of sustainability, to the Community energy policy focus on greater energy efficiency and energy production from renewables, as well as the goals of the internal market in electricity. Reserves have been built up in Germany for the decommissioning of nuclear facilities, and indeed the Commission’s proposals rule out access to Euratom loans for the decommissioning of German nuclear power stations. The entire cost of nuclear-energy use in Germany has been met by electricity users and taxpayers. Competition in the European electricity market would be distorted to the detriment of power consumers in Germany if investments in nuclear technology in other countries were to be subsidised by means of cheap Euratom loans.
- It is good in principle to help Eastern European countries dismantle their nuclear reactors. However, the Euratom loan facility is not the right instrument for this purpose. The rules governing these loans specify that they must be repaid from the operating profits of the relevant nuclear project. But the decommissioning of nuclear reactors cannot generate profits. The Decommissioning Fund, which is administered by the European Bank for Reconstruction and Development (EBRD), is an adequate instrument to assist the countries of Eastern Europe with this task. The Federal Government should encourage the EU to develop this instrument further.

The Convention on the Future of Europe is working on a European constitution. The German Bundestag wholeheartedly supports this European unification and enlargement process.

In this context, it recalls its resolutions of 15 May 2002 entitled *Reform durch Verfassung: Für eine demokratische, solidarische und handlungsfähige Europäische Union* (‘Reform by constitution: for a democratic, mutually supportive and effective European Union’) – Bundestag printed paper 14/9047 – which included the following statements:

- The Euratom Treaty is outdated; its use to promote nuclear power should stop.
- The funds allocated to the Euratom budget must be subject to scrutiny by the European Parliament.

Neither of the Commission’s proposals is consistent with this resolution. Accordingly, the Bundestag rejects them.

Motion

tabled by the Members of the German Bundestag Dr Reinhard Loske, Hans Josef Fell, Sylvia Kotting-Uhl, Undine Kurth, Kerstin Andreae, Cornelia Behm, Birgitt Bender, Matthias Berninger, Alexander Bonde, Dr Thea Dückert, Anja Hajduk, Winfried Hermann, Peter Hettlich, Ulrike Höfken, Bärbel Höhn, Dr Anton Hofreiter, Markus Kurth, Anna Lührmann, Brigitte Pothmer, Elisabeth Scharfenberg, Christine Scheel, Dr Gerhard Schick, Dr Harald Terpe, Margareta Wolf and the ALLIANCE 90/THE GREENS parliamentary group

For a secure energy supply in the 21st century – energy conservation and renewable energy instead of oil, nuclear power and coal

Be it resolved by the German Bundestag:

I. Whereas:

The gas dispute between Russia and Ukraine has made Germany and Europe aware of their high dependency on energy imports. The Russian-Ukrainian dispute was merely a prelude to the major energy conflicts that will shape the coming decades. The finite nature of fossil fuels and uranium will lead to an increase in political tensions. An intelligent political strategy must focus on energy conservation, energy efficiency and a shift to renewable energy sources. The challenge of the 21st century will be to replace expensive fossil fuels with a combination of better-insulated houses, provide more efficient electrical and electronic appliances, and increase the use of renewable energy sources.

Nuclear energy is unsafe, expensive and guarantees Germany and Europe neither security of supply nor climate protection. An extension of the operating life spans of nuclear reactors implies not only additional risks, but also additional costs in the form of upgrades for older nuclear power stations, necessary investments in security to counter the risks of terrorism, and the final storage of additional nuclear waste. After all, an operating life extension would prevent the billions of euros already pledged by the energy industry from being invested in renewable energy and climate-friendly technology. Nuclear energy also cannot make a significant contribution to ensuring security of supply. Germany imports all of its uranium, which is just as finite as oil and natural gas; available resources are expected to last approximately another thirty to forty years. The problem of nuclear waste disposal remains unsolved, and the related costs are all but impossible to predict.

The German Bundestag emphasises that nuclear energy is declining in significance worldwide. The International Energy Agency (IEA) expects the share of nuclear energy in global final energy consumption to decline markedly from the current 2.5 per cent to as low as 1.7 per cent by 2030. The construction of several new nuclear facilities in a few countries such as Finland and China, or planned construction in such other countries as France, are outweighed by the large number of reactors throughout the world being closed down at the end of their operating lives. The fact that the 442 nuclear power plants currently operated globally are very old will trigger considerable debate in many countries over the safety of nuclear energy.

Nor are lignite and hard coal the energy sources of the future. The continuing subsidies for domestic hard coal has immense economic and ecological costs, and is unaffordable, given its highly climate-damaging effects. Lignite is particularly climate-damaging, in addition to causing immense damage at the local level. CO₂ capture technology is still in its infancy, and a long way from being marketable. The same applies to CO₂ storage. Energy providers are free to invest their profits in the research and development of this technology. However, the German Bundestag rejects any further subsidisation of coal via state funding of so-called "clean coal" technologies. The energy industry should instead commit itself to building only coal-fired power stations which release no greenhouse gases. Unless such a voluntary commitment is made and credibly implemented, calls for clean coal technologies must be dismissed as no more than a PR strategy for climate-damaging coal.

The German Bundestag emphasises that, in the 21st century, it is important to make intelligent use of scarce resources, protect the earth's atmosphere and promote future-oriented technologies such as renewable energy. Wasteful, highly subsidised and risky large-scale technologies offer no prospects for the future. At every opportune and inopportune moment, representatives of the CDU and CSU call for the operating lives of nuclear power plants to be extended. But those who demand that nuclear energy play a more important role in ensuring our security of energy supply must also say how many new nuclear power stations should be built.

The German Bundestag regrets that energy policy in Germany has been deadlocked since the Bundestag elections due to the dispute between the CDU/CSU and SPD parliamentary groups on the phase-out of nuclear power. Important energy-policy decisions are being put off. In view of the challenges of climate change and the forthcoming modernisation of the power generation network and the associated investment in new energy technologies, the Federal Government's failure to act is negligent and irresponsible.

The German Bundestag emphasises the importance of a consistent policy of energy conservation. Germany must submit a national action plan on energy efficiency to the EU by mid-2007 at the latest. It would be wrong to wait so long. Around 40 per cent of the energy we consume today could be saved, most of it even profitably. Energy conservation, not nuclear power, is the bridge to the era of renewable energy. If energy conservation were pursued consistently, the need to construct new power plants would be reduced. This would be a major contribution to greater security of supply. The efficient use of energy, an increasing shift to heat-power cogeneration, energy conservation and a clear strategy to expand renewable energy represent significantly better alternatives to nuclear energy and coal.

The renewables share of electric power and heat supply, as well as of fuels and raw materials for the chemical industry, can be increased to over 25 per cent by 2020. At the

same time, it would be possible to reduce total energy consumption by at least 20 per cent via energy-saving measures and the use of state-of-the-art technology. Within a few decades, Germany's entire energy supply could be provided using renewable sources. The policy of the former Federal Government formed by the SPD and ALLIANCE 90/THE GREENS parliamentary groups paved the way for the transition to a secure, environmentally friendly and future-oriented energy supply. The guidelines of this policy must still be followed.

II. Therefore be it resolved that the German Bundestag calls upon the Federal Government to:

1. Resolve the energy-policy deadlock that has existed within the Federal Government since the Bundestag elections, end the dispute about extending the operating lives of nuclear power plants, and uphold the commitment to phasing out nuclear power;
2. Clarify whether the Government's energy policy is based on the statements signalling the end of the consensus on nuclear issues made by the Federal Minister of Economics and Technology, Michael Glos, or on the coalition agreement arrived at by the CDU, CSU and SPD;
3. Pursue a consistent policy of energy conservation, improved energy efficiency, and expansion of renewable energy, set more ambitious targets in this context, and introduce additional policy frameworks;
4. Introduce a needs-based, consumer-friendly energy passport for buildings, which would enable people wishing to rent or buy residential property to compare the energy efficiency of different buildings;
5. Table a bill on renewable heat; renewable energy must play a greater role in heating, as in the electricity sector;
6. Significantly boost the Market Incentive Programme for Renewable Energies (MAP) until a new support framework is adopted, and immediately make MAP funding available to manufacturers of wood pellet and solar heating systems, to prevent disruption of these market segments;
7. Introduce a law on feeding biogas, a significant supplement/replacement for natural gas, into the grid, as a forward-looking contribution to ensuring energy security and protecting the climate; improved legal conditions for biogas, e.g., for processing, feed-in and profitable rates, must be swiftly developed;
8. Expand the grid infrastructure for the electricity, gas and district heating sectors to promote decentralised power generation with a high renewables share, including the introduction and expansion of virtual power plants with decentralised heat-power cogeneration and new storage technologies;
9. Support the construction of new biomass, geothermal and hydroelectric power plants and the optimisation of existing ones, as replacements for the output of nuclear power plants that are to be shut down;
10. Swiftly implement the expansion of the grid for the use of offshore wind energy, and advance the development of storage technologies, with greater emphasis on underground cables, which are less vulnerable to disruption;
11. Make the funds for the CO₂ Building Modernisation Programme available at an early stage, while taking into account the provisions of budgetary law; the delay in

introducing the federal budget for 2006 means that the Federal Government is guilty of causing an investment gridlock that will last into the summer of 2006;

12. Swiftly develop a national energy-efficiency action plan, as under the EU Directive on Energy End-Use Efficiency Germany must submit such an action plan, with specific goals and measures, by mid-2007;
13. Improve support for heat-power cogeneration, including submission of the monitoring report stipulated under the Heat-Power Cogeneration Law, by the Federal Government; this law must be reviewed and amended quickly to permit achievement of the goal of doubling the share of heat-power cogeneration by 2010;
14. Optimise emissions trading to create greater incentives for efficient use of fossil fuels and greater use of renewable energy, including in existing power plants, and to create substantial incentives for fuel switching in the allocation plan for 2008 through 2012, and to auction 10 per cent of the allowances;
15. Establish a climate protection fund for measures to promote energy efficiency, to foster energy conservation in schools, hospitals, local authorities and private households, which fund should receive the funding currently paid as subsidies for hard coal;
16. Seek to ensure at the level of the eu Commission that the energy consumption labelling of electronic appliances be improved, since better labelling of the electricity consumption of refrigerators, computers and other appliances makes it easier to identify and reject "energy hogs";
17. Seek to ensure at the level of the eu Commission that the measures for the implementation of the Eco-Design Directive set ambitious targets to reduce energy consumption, and that the "top runner" approach be applied to as many products as possible;
18. Develop a national "top runner" programme, modelled on the Japanese system, in order to foster competition for the best developments, thus making it unnecessary in many instances to set detailed threshold values for the amount of electricity consumed by appliances, as the most energy-efficient model currently on the market can set the standard for the future;
19. Foster competition in energy markets by consistently implementing and rolling out the regulations introduced by the 2005 amendment to the Energy Industry Law as fair competition in the energy markets of Germany and Europe is a prerequisite for more efficiency, innovation, renewable energy, environmental protection and fair prices;
20. Intensify energy research and shift priorities, so that the government's planned innovation programme place financial priority on renewable energy and energy conservation, not research into nuclear power and fusion, and work to accomplish the same effect in the Seventh Framework Programme of the EU;
21. Introduce measures to drastically reduce energy consumption in the field of transportation, with ambitious and binding Europe-wide ceilings on consumption and a greater shift towards short-distance public transportation and rail freight services, including in rural areas;
22. Promote alternative propulsion systems and fuels by preserving tax incentives, in particular the tax exemption for pure bio-fuels, introducing compulsory bio-fuel

blending, and supporting increased research development, in particular in of technology for developing, optimising and marketing zero-emissions vehicles.

Berlin, 7 February 2006

Renate Künast, Fritz Kuhn and Parliamentary Group

Motion

tabled by the Members of the German Bundestag Hans Josef Fell, Cornelia Behm, Dr. Reinhard Loske, Sylvia Kotting-Uhl, Matthias Berninger, Winfried Hermann, Peter Hettlich, Ulrike Höfken, Bärbel Höhn, Dr. Anton Hofreiter, Undine Kurth, Renate Künast, Fritz Kuhn and the ALLIANCE 90/GREENS parliamentary group

Developing a Biogas Feed-In Strategy and Introducing a Biogas Feed Bill

Be it resolved by the German Bundestag:

I. Whereas:

The dispute between Russia and Ukraine over gas supplies is not the least of a number of occasions which have once again reminded Germany and Western Europe of their extensive dependence on imported energy. It is foreseeable that the finite nature of fossil fuel resources and uranium will lead to increasing political tensions and conflicts. Therefore, the goal of a viable energy policy for the future must be a substantial reduction of the economic dependence of our society on petroleum, coal, gas and uranium – for greater security of supplies, and also for the reasons of ecology and climate protection.

Natural gas supplies within Europe are dependent on just a small number of supplier countries. Moreover, dependence on countries outside the EU will increase, since the United Kingdom and the Netherlands will, in the medium term, no longer be available as natural gas exporters, and will themselves become importers, and because German natural gas production is also on the decline. Consequently, the security of both supplies and of gas prices is at risk in Germany and in Europe.

There are effective approaches for reducing dependence on natural gas imports that have been insufficiently pursued to date – particularly in the form of energy savings, increased efficiency of energy generation and consumption, and a switch to renewable energy sources. In the heat sector for example, large quantities of natural gas could be saved without affecting costs by modernising old buildings. Moreover, solar collectors and modern bioenergy heating installations, such as wood pellet or geothermal systems, permit a switch to renewable energies that is already economical for users today.

One particularly promising possibility for substituting natural gas is the production of biogas, which can largely be used with the existing infrastructure. Biogas could be produced in large quantities throughout Europe, and thus make a relevant contribution to reducing dependence on natural gas. A recent study by the gas and biogas associations indicates a biogas potential of ten billion cubic metres per year for Germany alone, which is equivalent to more than 10 per cent of today's natural gas consumption.

The potentials in Europe have yet to be determined. They are probably substantially higher than Germany's domestic potential, primarily because of the large areas of agricultural land in Eastern Europe.

The fact that the German Federal Government has made a major contribution to the progress made in biogas technology since 1999 is welcome. The installed capacity of biogas facilities has increased more than tenfold. Roughly 2500 installations are now in operation, generating electricity locally and also in some cases heat. To exploit the existing potentials more effectively, a possibility must be created for feeding biogas into the natural gas networks. The SPD-Green government laid the first foundations for this with the Renewable Energy Sources Act and the Energy Management Act.

However, further-reaching steps are necessary in order to help biogas feed-in achieve a breakthrough: a Biogas Feed Act is needed, based on the model of the Renewable Energy Sources Act in the electricity sector.

A biogas strategy would make an important contribution to ensuring the security of gas supplies in Germany and Europe. In contrast to natural gas, biogas is available for an unlimited period of time. Its costs are calculable on a long-term basis. A steady drop in production costs can even be expected as a result of technical development in the production sector, e.g. in lignin digestion, and also the progress made in crop production.

A Europe-wide biogas strategy would additionally constitute an important contribution to climate protection. Biogas is climate neutral, due to the fact that the amount of carbon dioxide released is no greater than that previously bound in the biomass processed. This means that the substitution of climate-damaging fossil raw materials reduces the emission of climate-relevant gases into the atmosphere.

Through the provision of the raw materials, and the construction and operation of the requisite facilities, the implementation of a European biogas strategy would create additional added value, and thus also jobs in agriculture, industry and trade. In this way, feeding biogas into the gas network would ultimately lead to economic prosperity and thus make an important contribution to fighting unemployment and developing rural regions in all European countries.

II. The German Bundestag calls upon the Federal Government

- To submit a Feed-In Bill for biogas to provide effective incentives for feeding biogas into the gas network; the priority feed-in and transmission of biogas must additionally be stipulated; the Renewable Energy Sources Act for the electricity sector should serve as a model;
- To expand the compulsory admixture of biofuels to include natural gas, so that increased use may also be made of biogas in the transportation sector;
- To launch and promote a European biogas feed-in strategy involving in particular cooperation with the countries of Central and Eastern Europe through which natural gas pipelines from Russia pass; international efforts by the Federal Government at the EU level and elsewhere for an expansion of the biogas feed-in strategy beyond the borders of the EU; and invitation to countries scheduled to accede to the EU in future, as well as to Russia, Ukraine and Belarus, to take part in this initiative;

- To intensify research and development efforts in relation to the production of biogas and the feed-in of biogas, and also to support demonstration projects;
- To gear activities within the biogas strategy to sustainable agricultural methods for energy-producing crops, and to avoid the large-area cultivation of monocultures and the use of genetically modified organisms.

Berlin, 7 February 2006

Renate Künast, Fritz Kuhn and Parliamentary Group

