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### 1. Germany to shut all nuclear reactors

Move prompted by mass protests against nuclear power following Japan's nuclear disaster

Helen Pidd in Berlin, [guardian.co.uk](http://www.guardian.co.uk), Monday 30 May 2011 19.18 BST

<http://www.guardian.co.uk/world/2011/may/30/germany-to-shut-nuclear-reactors>

Angela Merkel has committed to shutting down all of the country's nuclear reactors by 2022, a task said by one minister to be as mammoth as the project to reunite East and West Germany in 1990.

Monday's announcement, prompted by Japan's nuclear disaster, will make Germany the first major industrialised nation to go nuclear-free in decades. It gives the country just over 10 years to find alternative sources for 23% of its energy.

The move, hammered out at a mammoth 14-hour overnight sitting at the Kanzleramt, came amid mass nationwide protests against nuclear power and at a low point for the chancellor's Christian Democratic party (CDU), support for which has crumbled at the ballot box in five regional elections this year.

Although the proposal was welcomed among the general population, who have long been opposed to nuclear power, it was a move derided by one of Merkel's own MPs as "knee-jerk politics".

The plan is to keep shut eight reactors which were suspended in March in the immediate aftermath of the Fukushima disaster, and to close the rest by 2022.

The phase-out must be ratified in parliament and is likely to face strong opposition from utility companies. On Monday a spokesman for the energy giant RWE said that "all legal options" were on the table.

Last week, grid operators warned the phase-out could result in winter blackouts – a prospect Merkel scoffed at. She insisted the decision would not lead to Germany simply importing nuclear power.

"We will generate our own electricity from other sources," the chancellor told a press conference in Berlin. She said the plans would give Germany a chance to be a "trailblazer" for renewable energy, suggesting it could eventually earn, rather than cost, the country money.

Energy firms warned that the decision – a total policy reversal – would require significant investment in energy infrastructure. Philipp Rösler, new head of the FDP party, which rules in coalition with the CDU, agreed, likening the task ahead to that which faced Germany in 1990 after reunification. A study in 2009 showed that €1.3 trillion (£1.1tn) had been transferred from the West to rebuild the East.

This comparison was also made in an editorial by the left-leaning Tageszeitung newspaper on Monday, which said Merkel's decision was "historic" and "a moment like the fall of the Berlin Wall".

The government's vocabulary seemed to consciously echo the reunification process, with Merkel heralding an "Energie-Wende" – "die Wende" is the word for change which became shorthand for the fall of communism and reunification.

Die Welt, a conservative daily, said the policy U-turn demonstrated a "creeping rejection of the economic model which has transformed Germany into one of the richest countries in the world".

The French poured scorn on Germany's decision. "Germany will be even more dependent on fossil fuels and imports and its electricity will be more expensive and polluting," said the French industry minister, Éric Besson. German households pay twice as much for power than homes in France, where 80% of electricity comes from atomic plants, he said.

Germany last year was a net exporter of power to France, according to data from the French grid operator, RTE. This trend was reversed last month after the accident at Fukushima and Merkel's decision to halt Germany's oldest reactors.

"Germany's energy policy will only work if there are improvements at the same time," the EU energy commissioner, Günther Oettinger, said on Monday.

He said there was a need for better grid infrastructure, storage capacity and forward planning as well as a more pronounced rise in renewable supply.

Germany plans to cut electricity usage by 10% and double the share of renewable energy to 25% by 2020.

Merkel first mooted an accelerated exit from nuclear power within days of the Fukushima meltdown, ordering a three-month "moratorium" during which nuclear power could be debated.

It was a remarkable U-turn. In September 2010, she had committed to extending the lives of Germany's 17 nuclear plants.

Many of her party are unhappy with her handling of the situation.

"Knee-jerk politics like the reaction to Fukushima does not pay dividends," said Mike Mohring, the head of the CDU faction in the Thuringian state parliament, last week.

Among other G8 nations, only Italy has abandoned nuclear power.

- This article was amended on 31 May 2011. The original said that the 14-hour overnight sitting was held at the Bundestag. This has been corrected.

## **2. Merkel: German Nuclear Exit Gradual; 2022 Irreversible End-date**

Bernd Radowitz, Dow Jones Newswires; [bernd.radowitz@dowjones.com](mailto:bernd.radowitz@dowjones.com) JUNE 3, 2011, 11:14 A.M. ET

<http://online.wsj.com/article/BT-CO-20110603-707791.html>

BERLIN (Dow Jones)--Germany's nuclear exit will take place in several steps, with the end of 2022 as an irreversible final date for the switch-off of the last nuclear power station, German Chancellor Angela Merkel said Friday after meeting the premiers of German states.

The cabinet Monday will decide on a series of laws to make the nuclear phase-out possible, among them amendments to legislation regulating nuclear power and a law to boost renewable energy. The government will also bring in a law to boost energy efficiency in buildings, for which it has already earmarked EUR1.5 billion.

Another law seeks to accelerate the construction of more transmission lines in order to bring electricity from onshore and offshore wind parks in Northern Germany to industrial centers in the South.

"It will be completely clear that each nuclear power station will have a final operating date, and with

that, there will be complete clarity and no possibility of any evasion," Merkel said.

Merkel is seeking a broad consensus on the nuclear turnaround, but opposition-led states have said the government's vague plans for the phase-out had left most of the switch-off of nuclear plants for the early 2020's and even said the government may leave a door open for a later reversal of the policy.

But states led by the opposition Social Democrats now have indicated that after the Friday meeting, there is a chance for a consensus.

After the cabinet decision Monday, Germany's lower house of parliament will first debate the nuclear exit laws Wednesday and is slated to vote on them by the end of June. The Bundesrat, Germany's upper house representing the states, is slated to hold a vote July 8.

Merkel, in the wake of Japan's nuclear disaster at Fukushima and amid immense public pressure, has ordered the oldest seven of Germany's 17 nuclear reactors shut. An eighth was already in maintenance. All of those will now remain shut, Merkel said.

The remaining nuclear plants will be shut in 2015, 2017, 2019, 2021 and 2022, she said Friday.

To avoid the risk of blackouts in the coming two winters, the government wants to keep a so-called "cold reserve" of power stations on stand-by. Merkel said she agreed with the state premiers that the reserve should preferably be met by conventional power generation. But she couldn't exclude that the government may keep a nuclear plant as reserve, something the opposition has rejected.

### **3. CSIRO calls for end to uncertain future for electricity in Australia**

Sean Parnell, FOI editor, The Australian May 31, 2011 12:00AM

<http://www.theaustralian.com.au/national-affairs/csiro-calls-for-end-to-uncertain-future-for-electricity-in-australia/story-fn59niix-1226065973877>

**THE CSIRO has called for an examination of the "social, technological and economic drivers" in the electricity market to end confusion over future power needs.**

Amid a highly charged debate over a carbon tax, the commonwealth organisation has called for more work to be done mapping energy options -- whether coal, nuclear, solar or renewables -- given "no single technology can address all of Australia's needs".

Documents prepared for the federal government, and released last night under Freedom of Information laws, show the CSIRO believes there is still "some level of confusion about how various technologies compare" and social acceptability remains an issue.

The CSIRO said coal remained one of the most cost-effective, base-load power sources, but the so-called clean-coal technologies under development would inflate costs if chosen over traditional generation options.

Nuclear power remained highly cost-effective -- the CSIRO used a carbon price of \$28 a tonne in its calculations and despite the obvious waste management issues, it remained

"a source of large-scale, base-load, very low (greenhouse gas) emission electricity". "It is an off-the-shelf technology with prospects of evolutionary and revolutionary future improvements, including in safety, non-proliferation and lower waste production," the documents say.

The CSIRO suggested that, "from a theoretical perspective", Australia would need to develop frameworks if nuclear power was to be part of the future supply mix, and make education and research priorities. Even then, there would be a "10-15 year interval for start up of a first reactor".

The documents were prepared after the Japan nuclear disaster.

#### 4. Coal-seam gas means jobs, money and less emissions

Belinda Robinson, The Australian May 25, 2011 12:00AM

**CHRISTINE Milne this week described coal-seam gas as "a disaster for Australia", which may well tell you everything you need to know about the Australian Greens, the party's fundamental beliefs and some concerning inconsistencies within its policy positions.**

Far from being a disaster, Australia's coal-seam gas industry is an economic and an environmental revelation.

In 2008 CSG was a niche industry supplying most of Queensland's gas, but not much more. Yet as the populations in countries on our northern doorstep grow and as hundreds of millions of people are pulled out of poverty, they have looked to Australia for a cleaner energy supply solution.

Australia has a lot of CSG: as much as 250 trillion cubic feet, according to the CSIRO, which is enough to power a city of one million people for 5000 years.

And it is a relatively clean fuel, too. It produces about half the CO<sub>2</sub> of black coal when used to produce electricity and almost 70 per cent less than brown coal.

Today, we have two liquefied natural gas export facilities under construction in the Queensland port of Gladstone at a cost of more than \$15 billion each. And, remarkably, we have two larger projects for Gladstone at advanced stages of planning and approval, meaning country Queensland has suddenly found itself an \$80bn industry looking to employ 18,000 Queenslanders and expected to pay \$800 million in state taxes every year.

A disaster indeed.

And what of the greenhouse gas implications of this new industry? Yes, it is true extracting and processing this gas is energy intensive, and so is shipping it to the energy-hungry economies of China, India, Malaysia, Japan and South Korea.

But Milne's handlers would do well to provide her with a copy of the summary of a report released last month by WorleyParsons. The report compares the amount of greenhouse gas emissions associated with Chinese power generators using Australian LNG derived from coal-seam gas with those using imported black coal across the entire life cycle.

It found for every tonne of CO<sub>2</sub> emissions associated with the CSG-LNG production and use, up to 4.3 tonnes of emissions are avoided in China when used instead of coal by power generators.

It also found that a project exporting 10 million tonnes of LNG a year to China could avoid more than 37 million tonnes of global CO<sub>2</sub> emissions each year.

This means across a 30-year project life, such a project could avoid nearly 1.1 billion tonnes of CO<sub>2</sub>, which is more than double Australia's total annual greenhouse gas emissions. And each of Gladstone's four projects is expected to export more than 10 million tonnes a year.

As this week's Climate Commission report so clearly demonstrates, the whole world needs to reduce greenhouse emissions, not just Australia.

About 80 per cent of Chinese electricity now comes from coal, so using Australian gas to substitute for just some of that will clearly make a material difference to global emissions. In fact, selling our gas to the world is possibly the most meaningful, practical and significant thing Australia can do to reduce global emissions.

Yet the Greens continue to deny what is so clear to so many people.

This week Milne continued to rail against the gas industry as "just another fossil fuel" and again called for Australia to move to 100 per cent renewable energy "as soon as possible".

An admirable goal. But just how soon is as soon as possible?

Milne can't say, but the following may assist.

If we put the obvious cost implications of such a move to one side for a moment (as some are so willing to do), we come up against an even more interesting challenge.

The Academy of Technological Sciences and Engineering's report, *The Hidden Costs of Electricity*, launched by then finance minister Lindsay Tanner in 2009, explains about 20,000 megawatts of solar thermal power would be needed to replace 10 per cent of Australian electricity supply.

Employing the world-leading solar technology used in Spain (so often lauded by Milne and her colleagues) would require about 870sq km of solar plants to supply 10 per cent of present national electric energy consumption, ATSE says.

That's almost 9000sq km of appropriate Australian grid-connected landscape to run the country on solar power.

And, of course, these plants do not appear without significant dependence on a few of the "big polluters" so frequently demonised by the Greens. On ATSE numbers, delivering just 10 per cent of Australia's present electricity consumption from solar power would require use of about 22 million tonnes of concrete (nearly six months' supply of national production) and 6.4 million tonnes of reinforcing steel (that's eight years' worth of national production).

Outright opposition to viable and sensible energy options is not only a vote of support for the status quo, it impedes the thoughtful and intelligent energy debate that we need to have.

Voltaire remarked that perfect is the enemy of good. We can continue to hold out for perfect - affordable, practical, no emission energy - but, if we do, we will be sacrificing good, cleaner, affordable energy and accepting that future energy policy is simply more of the same.

*Belinda Robinson is chief executive of the Australian Petroleum Production and Exploration Association.*

## 5. U-turn puts Germany ahead of race

Anatole Kaletsky, *The Australian* June 02, 2011 12:00AM

<http://www.theaustralian.com.au/news/world/u-turn-puts-germany-ahead-of-race/story-e6frg6ux-1226067426329>

**GERMANY'S decision to close permanently all its nuclear power plants is economically illiterate, politically cynical, environmentally destructive and emotionally self-indulgent.**

Over a 10- to 20-year period, it will make the German economy stronger, the global environment safer and the German people even more arrogant and self-righteous than they already are. These statements may sound paradoxical, but they are consistent.

Angela Merkel's panic reaction to Japan's Fukushima disaster, officially confirmed on Monday and quickly condemned around the world, had nothing to do with economic efficiency, responsible environmental stewardship or serious science. It was driven by political expediency.

After the drubbing suffered by her liberal coalition partners in the recent local elections, Ms Merkel, once an outspoken advocate of nuclear power, had only one plausible partner who could keep her in office after the 2013 general election: the anti-nuclear Greens. Beyond political opportunism, the decision had nothing to do with economics or science. Eliminating Germany's most efficient power stations, which at present produce 23 per cent of its electricity, will increase the bills paid by business and household consumers over the next decade by an estimated 30 per cent, or 33 billion (\$44.3bn) a year.

Closing nuclear plants will also exacerbate global warming because the share of electricity generated from fossil fuels will rise from 61 to 70 per cent, and because energy-intensive

businesses will move to countries where electricity is cheaper and dirtier.

Yet Germany's nuclear U-turn will probably strengthen its economy in the long term and help to wean the world off fossil fuels. For alongside the destruction of its nuclear industry, Germany also committed itself this week to an enormous program of subsidies and investment in wind, solar and other renewable energy sources.

And the Germans are legislating to support the renewable energy sector with substantial electricity surcharges, subsidies, planning reforms and public research funds designed to double the share of power generated by renewables to 35 per cent by 2020 and much more beyond.

All these interventions may smack of discredited economic concepts such as "picking winners" - even socialist central planning - but this is why they are likely to strengthen the renewable energy sector in Germany at the expense of countries where government interference with market forces remains taboo.

Energy supply is an industry where investment returns take decades to materialise, so private companies and investment institutions, responding purely to the financial markets, are unlikely to make decisions consistent with long-term needs. Nor will governments necessarily do any better.

But it often happens that politicians who take economic decisions for cynical short-term motives end up doing more good than harm. By distorting the market in favour of renewable energy sources that are otherwise hopelessly uncompetitive with fossil fuels, the Germans will waste a lot of money and impose significant costs on taxpayers and electricity consumers.

But they will create businesses and technologies unlikely to be developed in the US and Britain, where governments feel they have to mimic private sector decisions based purely on financial returns.

And, by subsidising investment in renewable technologies, the German government will accelerate the reduction of costs through mass production, allowing renewables to displace fossil fuels more quickly around the world.

It would have been better for the world if Germany had directed its subsidies at replacing the 47 per cent of electricity it produces from coal, the dirtiest fuel of all, while retaining nuclear power.

But in energy economics, the best is the enemy of the good. Germany's abandonment of nuclear power is unfortunate, but it has no significance from a global standpoint, because France, China, South Korea, the US, Britain and Russia will continue to develop nuclear technology.

China, India and the US are investing large sums in new technologies based on thorium, a safer material than uranium or plutonium, which one day could revolutionise global energy supplies. Meanwhile, Germany's push into renewables will open a new front in the war against fossil fuels.

But even if Germany helps the world by subsidising new technologies, surely it will harm its own economy by burdening it with inefficiencies and costs?

It is certainly true that the new German policy will impose extra costs on electricity consumers, leaving companies outside the renewable energy sector with a modest competitive disadvantage.

But, by the end of the decade, German industry will almost certainly lead the world in renewable energy equipment. The main competition will come from China, where enormous investment programs in both nuclear and renewable energy are already in full swing, and from Japan, where renewables could enjoy an even bigger boost than in Germany after Fukushima.

Meanwhile, British and US manufacturers will hardly figure in this global competition if market signals, rather than government targets, determine their investment and research.

US industry, for example, cannot invest seriously in renewables because rising electricity prices have been undercut by discoveries of abundant natural gas. A similar process is under way in Britain. The government believes that carbon capture and storage will be a cheaper way to control emissions than solar, wind, wave or nuclear technologies.

Thus market forces encourage Britain to develop new techniques to burn coal while Germany helps

to wean the world off fossil fuels altogether. In terms of long-term potential, I would place my bet on the German approach.

*The Times*

## **6. Knee-jerk reaction as nuclear hysteria engulfs German society**

Frank Furedi, The Australian June 04, 2011 12:00AM

<http://www.theaustralian.com.au/news/opinion/knee-jerk-reaction-as-nuclear-hysteria-engulfs-german-society/story-e6frg6zo-1226068525549>

**IT did not really matter that the terrible disaster that engulfed Japan after the earthquake in March was thousands of kilometres away, on the other side of the world.**

As far as German opinion leaders were concerned, the only question they could ask was: "What does it mean for us?"

Almost instantaneously the catastrophe that devastated Japan was transformed into an immediate existential threat to the German way of life. Now and again it was possible to hear expressions of sympathy for the Japanese victims of the earthquake, but such manifestations of compassion swiftly gave way to a narrow-minded focus on domestic security.

The self-regarding obsession that incites people's passion towards asking the question "what does it mean for me?" is one of the least attractive features of the culture of fear that dominates Europe. That is why, instead of offering solidarity, German protesters were demanding that action be taken to ensure the safety of their back yard.

By the time of the massive demonstration against nuclear power on March 26, Fukushima was more or less reinvented as a cautionary tale for fanning the anxiety of German folk. The demonstrators did remember to hold a minute's silence for the victims of the Japanese earthquake and tsunami, but what really animated the protesters was something very different. In such circumstances human solidarity becomes emptied of meaning and the concern is all about survival, and, in the case of politicians, about political survival.

As a politician well-known for her pragmatism, German Chancellor Angela Merkel decided to embrace the newly constructed disaster myth of Fukushima.

She promptly announced an official review of energy policy and ordered the immediate shutting down of Germany's oldest nuclear reactors. The haste with which she took these decisions had all the hallmarks of a desperate attempt to stay in touch with public sentiment. This response was all the more remarkable because only a few months earlier she stated that these old reactors could continue to produce nuclear power past their original shutdown dates.

The official announcement this week that Germany will phase out its nuclear power plants by 2022 shows how government policy is made on the hoof, with an eye to the latest swing in the opinion polls.

Merkel's change of position is frequently ascribed to the electoral setbacks suffered by her Christian Democratic Party in recent local elections. In particular, the CDU's loss of the key state of Baden-Wuerttemberg, where Fukushima was a key issue, is seen as responsible for Merkel's loss of nerve over the nuclear issue.

For the CDU, which had run this state since 1953, the election setback exposes its inability to set a distinct political agenda.

The doubling of the Green vote in this traditional conservative state indicates that old political loyalties are now tested by a disoriented electorate, who are constantly subjected to scaremongering and incited to fear.

Many European anti-nuclear power activists believe the German government's decision to phase out this source of energy represents payback for Fukushima. Although the crisis at the Japanese power plant did have a direct influence on the public imagination, aversion to nuclear technology has strong historic roots in Germany.

Since the 1970s, protests against nuclear power have enjoyed considerable support from a heterogeneous coalition of students, youth-activist movements, trade unions, far-left and communist organisations and rural conservative lobbies.

Anti-nuclear power sentiment has become normalised to the point that it is difficult to encounter any German who does not subscribe to the popular slogan Atomkraft? Nein danke! (Nuclear power? No thanks!)

It is important to recall that the powerful modern German environment movement grew out of the 70s anti-nuclear protests.

Unlike any other cause upheld by radical protesters, hostility to nuclear power resonated with the mainstream of German society. Public opinion regarded nuclear power and the NATO nuclear missiles sited on its soil as merely different forms of the same threat.

By the end of the 70s the term nuclear had become the focus for German existential insecurity. Hostility to nuclear technology resonated with the traditional German idealisation of nature and its romantic cultural imagination. The historic valuation of nature as something that is morally good in its own terms drew a significant section of the conservative intelligentsia and political class towards an anti-nuclear standpoint.

At the same time the German Left, particularly its more radical section, regarded this issue as an opportunity to overcome its own isolation and gain public influence. One reason the German Green Party has succeeded in gaining so much prominence is because from the outset it succeeded in bringing together a coalition of otherwise hostile constituents.

In Germany the significance of the Greens should not be seen merely in electoral terms.

During the past two decades their ideas have dominated public life. Their influence in education, the media and cultural life is palpable. Public relations companies rely on green messages to sell their products and companies insist that the environment is their principal concern.

The CDU, similar to its Social Democrat and Liberal counterparts, has internalised the core values of environmentalism: the sacralisation of anything natural, aversion to risk and the celebration of precaution and of safety.

These values validate the fear-mongering that has erupted in the aftermath of the Japanese earthquake.

Merkel has always played the green card. Last year she argued for maintaining nuclear power stations to realise a cleaner and greener future. Her argument was that this technology would help save the planet because nuclear plants did not emit any CO<sub>2</sub>.

Merkel took the view that the fear of global warming would trump anxieties about nuclear power.

For a while, at least, it appeared that a risk-averse environmentalist consensus obsessed with climate change would come around and accept this argument. However, our culture of fear is still surprisingly pragmatic. It tends to privilege nuclear phobia over apocalyptic visions of planetary destruction in the distant future.

The main beneficiary of German nuclear hysteria could be France, whose growing nuclear power industry may well be exporting energy to its very green neighbours. And the Germans will be unlikely to say, "Nein danke."