

NUCLEAR MONITOR

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DELAYS COULD PROVE FATAL TO PBMR

A feasibility study into the Pebble Bed Modular Reactor (PBMR), released by South Africa's PBMR Company on 30 July, found that the success of the project depends "critically" on no delays. Virtually all projects to build new types of reactors experience delays, so this is bad news for the PBMR.

(572.5428) WISE Amsterdam – Anti-nuclear activists have opposed the PBMR project right since it was first announced. They have pointed out that constructing a nuclear reactor without a containment building, as PBMR Company proposes, makes it virtually a sitting target for terrorist attacks.

They have pointed out that both the 1986 Chernobyl catastrophe and the 1957 Windscale accident involved graphite catching fire – yet the PBMR uses graphite to enclose its nuclear fuel "pebbles".

And they have exposed the staggering hypocrisy of proposing nuclear technology for developing countries when many developed countries have already rejected nuclear in favor of cheaper, safer alternatives.

However, this time the "critical"

comment comes not from anti-nuclear activists but from the nuclear industry's own press agency NucNet. When NucNet runs a feature entitled "PBMR Success Depends 'Critically' On No Delays, Says Study", then it is clear that the PBMR faces a difficult time.

Virtually all "new" nuclear technologies have experienced problems and delays in implementation, but the PBMR Company is taking a particularly big gamble.

While virtually all other new reactor designs were first tested on small-scale prototypes, the PBMR Company say this is not necessary because reactors of similar design have already been built and operated successfully. However, all four of the reactors quoted in their feasibility study have long since been shut down.

For example, the Thorium High-Temperature Reactor (THTR) in Hamm, Germany was a full-size prototype reactor. Just like the full-size prototype PBMR being proposed for Koeberg in South Africa, the THTR was intended to demonstrate the safety and commercial viability of pebble-bed technology. However, it was shut down permanently following a release of radiation so large that it was initially blamed on the Chernobyl accident.

The PBMR design is critically dependent on high-quality fuel, as the feasibility study admits. Indeed, imperfections in fuel pellet manufacture could lead to higher radiation releases during normal operation than for conventional nuclear reactors.

Shaky economics

In order to make the PBMR cost-competitive, the PBMR Company needs to sell large numbers of reactors to benefit from economies of scale. The PBMR business plan proposes building 258 reactors over 25 years – over 7 times the number of power reactors currently under construction in the entire world.

Yet the feasibility study claims there is a market to build a staggering 1175 reactors – over 2½ times the total number of power reactors in the world today!

The PBMR plans therefore have the potential to mark the start of a new

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nuclear nightmare. Fortunately, recent events indicate that they may well turn out instead to be no more than a pipe dream.

Exelon, the biggest US nuclear utility, has already pulled out of the PBMR development project (see *WISE/NIRS Nuclear Monitor* 567.5398, "Exelon pulls out of pebble-bed project").

The financial risks involved in the nuclear industry were recently underscored by the collapse of the share price of British Energy. The problems underlying this collapse – the difficulty for nuclear to compete in liberalized electricity markets, plus technical problems with a couple of nuclear power stations – are problems than the PBMR project stands little chance of avoiding.

Instead of developing a new generation of nuclear reactors with all their risks and uncertainties involved, South Africa could better meet its energy demand by using tried and tested renewable energy technologies and energy conservation measures.

Sources: NucNet feature, 31 July 2002; PBMR Detailed Feasibility

JOHANNESBURG ACTIONS

On 24 August, Greenpeace activists from nine different countries mounted an action at the Koeberg nuclear power station, about 20 miles (30 km) north of Cape Town. The activists scaled the walls of a cooling-water pump-station on the site and hung up a banner with the words "Nukes Out Of Africa".

Koeberg is Africa's only nuclear power station. It has also been chosen as the site for the prototype Pebble Bed Modular Reactor (PBMR), which PBMR Company hopes will be the first of hundreds of PBMR modules. Greenpeace wanted to draw attention to this, and calls on politicians to stop wasting money by subsidizing nuclear and coal-fired power stations, but instead to invest in sustainable energy projects.

Activists from Taiwan are in Johannesburg to protest against the deplorable conditions at the nuclear waste dump on Orchid Island off the coast of Taiwan, and also against the construction of the Fourth Nuclear Power Plant (also known as Lungmen).

Anti-nuclear activists from other countries include a group from South Korea, one of the major countries where new nuclear power stations are still being built. And from France, Europe's largest producer and exporter of nuclear electricity, an activist covered the exhibition stand of state-owned utility Electricité de France with "certified pro-nuclear" stickers.

Reuters, 26 August 2002; WISE Amsterdam

Report (public version), September 2001 (published 30 July 2002); NIRS Factsheet on the PBMR (www.nirs.org/factsheets/PBMRFactSheet.htm); *WISE News Communique* 481.4774, "New generations: The high temperature reactor"

Contact: Muna Lakhani at Earthlife Africa, P.O. Box 11383, Johannesburg 2000, South Africa
Tel: +27 11 837 0343
Email: muna@iafrica.com
Web: www.earthlife.org.za

TROOPS SEIZE URANIUM IN FIRST OF 25 OPERATIONS

In a pre-dawn operation on 22 August, enough high-enriched uranium to make at least two atom bombs was moved from Belgrade, Serbia to Russia. The US government plans a further 24 operations of this type to prevent terrorists from gaining access to the material needed to make nuclear weapons.

(572.5429) WISE Amsterdam – The operation, involving 1,200 troops, was kept secret, and only became public when residents of Belgrade telephoned radio stations at 2 a.m. to report that they had seen special police with gas masks and helicopters flying overhead. It involved moving over 5,000 unused fuel rods containing a total of about 50 kg (110 lbs) of 80% enriched uranium from the Vinca nuclear research institute to the Ulyanovsk Nuclear Processing Plant in Russia. The fuel had been in storage since

1984, when a reactor at the institute was closed (see *WISE News Communique* 468.4655, "Proliferation and explosion dangers in Belgrade").

The operation was a unique joint initiative of the governments of Russia, Serbia (Yugoslavia) and the US, together with the International Atomic Energy Agency (IAEA) and the Nuclear Threat Initiative (NTI).

Securing the unused fuel is only one phase of the operation; a second

phase involves dealing with the irradiated fuel and decommissioning the reactor. In the second phase, the involvement of the NTI is essential, since US law forbids spending government money on this. The NTI – a private foundation co-founded by former US Senator Sam Nunn and media mogul Ted Turner – has committed up to US\$5 million for the project.

A senior US State Department official, speaking on condition of anonymity, said that there are a

further 24 sites around the world which have been targeted for similar operations. The official refused to name any sites but said, "We want to get at all of them. And some of them are going to be a lot more pernicious than others".

The Federation of American Scientists (FAS) report *Closing the Gaps: Securing Highly Enriched Uranium* identifies Vinca as a high priority site, and mentions a further reactor in Tashkent, Uzbekistan. This reactor, like several former Soviet reactors, has now been converted to run on uranium of 36% enrichment. At this enrichment level, 150 kg of uranium is needed to make a nuclear bomb, so the proliferation threat is still present, but lower. Fully eliminating the proliferation risk

requires the use of low-enriched uranium (containing less than 20% U-235). However, for the Tashkent reactor this is not the only problem, since it reportedly has some old stocks of high-enriched uranium, which urgently need to be removed to a more secure area.

Some research reactors have still not converted to use uranium of lower enrichment, and the FAS report highlights the need to either convert them or close them down. Reactors of Soviet design that still use 80% enriched uranium include reactors in the Czech Republic and Libya.

While the report focuses on reactors of Soviet design, it is important to remember that many Western research reactors also still use high-

enriched uranium, for example in the Netherlands (see *WISE/NIRS Nuclear Monitor* 562.5366, "Pettern reactor to 'convert' to High Enriched Uranium?"). The only new research reactor to use this fuel is the FRM-2 reactor near Munich, Germany (see *WISE/NIRS Nuclear Monitor* 566, "In Brief"), which continues to be a target of protest.

Sources: Reuters, 26 August 2002; *WNA News Briefing*, 21-27 August 2002; *Boston Globe Online*, 24 August 2002; www.fas.org

Contact: Nuclear Control Institute, 1000 Connecticut Avenue NW, Suite 410, Washington DC, 20036, US
Tel: +1 202 822 8444
Fax: +1 202 452 0892
Email: nci@nci.org Web: www.nci.org

SPAIN: ZORITA RE-FUELS IN ANTICIPATION OF LICENSE RENEWAL

The license for Spain's oldest nuclear power station, José Cabrera (also known as Zorita) is due to expire in October. Despite its troubled history, the reactor is being refueled in anticipation that the license will be renewed.

(572.5430) WISE Amsterdam – For years, environmental groups such as Greenpeace Spain and Ecologistas en Acción have protested and demanded the closure of the reactor. Yet with every crisis this old reactor keeps struggling on, and the red-painted dome of its reactor building continues to dominate the local countryside.

Zorita came on-line back in 1968, making it the oldest of Spain's nuclear power plants. As well as the oldest, it is also by far the smallest of Spain's 9 reactors, with a power of 160 MW (the others range from 460 to 1066 MW). Its meagre contribution of only 0.5% of the electricity in the Iberian peninsular (Spain and Portugal) is, says Greenpeace Spain's Carlos Bravo, no reason for keeping this dangerous, out-dated reactor in operation.

Even Spain's nuclear safety authority CSN treats Zorita as a special case. CSN has been known to grant long

license extensions to other plants – for example, in 1991 it granted Garoña a license extension until 2031, thereby extending the plant's authorized lifetime from 40 to 60 years. However, the extension period under consideration for Zorita is a mere 3 years. What is more, Zorita's previous license extension in October 1999 was also for just 3 years.

This "short-license" regime for Zorita follows the discovery of hundreds of cracks in the reactor vessel in 1994 (see *WISE News Communique* 408.4043, "New cracks found at Zorita NPP"). Instead of closing the plant, as many had expected (and hoped), these cracks were then repaired, and the plant was started up again.

Most of the cracks were around the reactor vessel head penetrations, similar to those found at Davis-Besse in the US (see *WISE/NIRS Nuclear Monitor* 565.5385, "Millimeters from

disaster"). This means that like Davis-Besse it could be at risk of boric acid corrosion. What is more, it would take less time for boric acid to eat through Zorita's smaller, thinner reactor vessel. In March 2002, WISE Amsterdam faxed details of the Davis-Besse incident to Zorita, but did not receive a response.

Cracking is just one of Zorita's problems. For example, on 9 August

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Editorial team: Stuart Field, Robert Jan van den Berg (WISE Amsterdam), Michael Mariotte (NIRS). With **contributions** from Jochen Stay and WISE Japan.

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2002, Greenpeace pointed out that all 26 of the reactor's containment isolation valves failed to meet safety specifications. These valves are essential to preventing the escape of radioactivity into the environment if a major accident occurs.

Journalists attacked

When Greenpeace protested on 19 August 2002, 8 workers at the plant attacked two of the protestors plus two journalists who were covering the action. All Greenpeace had done was to project a number of slogans onto the reactor's dome at night.

Perhaps the workers wanted to make up for their failure to stop a previous protest on 25 April 2002, when activists from 9 countries gained

access to the site, some of them climbing the reactor's dome and hanging a banner demanding the station's closure.

The action in August was to highlight the fact that the reactor is being refueled even though its license will expire on 15 October. By doing this, the reactor's operator Union Fenosa "clearly wants to pressurize the CSN and the Government to renew its license" according to Carlos Bravo of Greenpeace Spain.

As if to underline the plant's problems, the start of the refueling itself had to be delayed. Union Fenosa claimed that this was caused by delays in obtaining supplies, but Greenpeace said that refueling was

actually delayed because of difficulties with the cooling system, which were caused by faulty cooling towers.

Sources: Greenpeace Spain press releases, 9, 19 and 22 August 2002; Ecologistas en Acción press release, 15 October 1999; *Jahrbuch der Atomwirtschaft*, 1991; Greenpeace Spain press release, 25 April 2002

Contact: Carlos Bravo at Greenpeace Spain, San Bernardo 107, 28015 Madrid, Spain
Tel: +34 91 444 14 00; fax +34 91 447 15 98
Email
greenpeace.spain@diala.greenpeace.org
Web: www.greenpeace.es

JAPAN: TOKAIMURA HIBAKUSHA GROUP FILES A LAWSUIT

Japan's nuclear hazards are not just past history or potential future menace, but are the reality under which residents are suffering in Tokaimura, Ibaraki Prefecture in Japan.

(572.5431) WISE Japan - On 30 September 1999, more than 600 people were exposed to neutron rays emitted from the criticality accident of a uranium solution at the JCO plant in Tokaimura (see *WISE News Communiqué* 519.5091, "Criticality accident at Tokai nuclear fuel plant").

Two workers on the site were severely injured and later died, Mr. Ohuchi in December 1999, and Mr. Shinohara in April 2000.

Those who were exposed to the radiation include residents in the vicinity, workers at neighboring companies, and firefighters and policemen onsite.

The government has continually rejected the health complaints of these people, and the company JCO has never paid compensation for the serious health effects.

In February 2000, the workers (except those from JCO itself) and local residents organized an association for

mutual support, and continued their negotiations with JCO. In July 2002 as the company rejected all their demands, three of them decided to file a lawsuit seeking compensation from JCO.

On 5 August 2002, Mr. Mitsunari Ohizumi, Secretary of the association, came to Hiroshima and told the above story to an audience of 30 at a session of the World Conference against A and H bombs convened by the Gensuikin in Japan.

Mr. Mitsunari Ohizumi was not in Tokaimura that day, when the criticality accident took place, but his parents were working with another worker at their company "Ohizumi Kogyo", a car component factory located next to JCO.

The accident occurred at 10:35 a.m., but as there was no official announcement from any agency about the accident, his parents and another worker ate lunch in the factory with the window open.

Around 1:10 p.m. they saw firemen walking around, and asked what had happened. So, they at last found out about the accident at an adjacent building, although they didn't know what specific factory was involved. No announcements or order for evacuation had been given to Ohizumi Kogyo by the local municipality or agency.

It wasn't until 4:30 p.m., when a village clerk walking by told them that the residents were evacuating, that Mr. Ohizumi's parents decided to leave for their home outside Tokaimura.

Mr. and Ms. Ohizumi, who were at 120-130 meters away from the criticality accident's center, have been suffering from serious health problems ever since.

The next day, Keiko Ohizumi, mother of Mitsunari, had severe diarrhea, and fell into a coma for four days. She was diagnosed with severe stomach damage. After recovering

from coma and stomach problems, she suffered ongoing depression, which prevented her from participating in daily life. Her doctor diagnosed that it was trauma caused by the JCO accident.

Shoichi Ohizumi, father of Mitsunari, who is now president of the Hibakusha's association, had diabetes before the accident, but it was not so serious. After the accident it became worse, and he suffered from skin disease also. He experienced dehydration, vomiting, diarrhea, and fever on 9 October 1999, while he was mowing the yard.

Last year he had to stay in the hospital for six months, and again for two months this year, for diabetes and pneumonia. Additionally, after the accident, he suffered the loss of three healthy teeth, and also had cataracts on both eyes, and will undergo an operation soon.

The family had to close their company after the JCO accident, and has not been paid any compensation for their loss, except for the income estimated for a half day (!) on the date of the accident.

Among the local people, other complaints have been reported such as heart disease becoming worse, or catching cold more often than before.

The government insists that any health effects would be very limited, so low as to be undetectable. However, over the last two years, about 200 people have had physical checkups conducted by the prefecture.

It was found that not only do they have actual health problems, but also are emotionally traumatized about potential radioactive hazards, including its effects on future generations.

JCO has refused to pay any compensation for these health problems, including Post Traumatic Stress Syndrome, which was clearly diagnosed, by denying that those

problems were caused by radiation. Yet, at the same time, JCO has paid 4.5 billion yen (US\$38 million) compensation for agricultural losses.

Although the association of the radiation hazard victims has about 200 members, only three of them have come forward to become plaintiffs in the lawsuit. They face serious social discrimination, similar to what happened after the atomic bombing of Hiroshima and Nagasaki, when many survivors suffered such discrimination in various forms, especially in not being allowed to marry. In Tokaimura, the same thing is happening. Although angry at JCO and the government, most of the victims, fearing that their children will become socially disadvantaged, remain silent.

At the conference, Mr. Mitsunari Ohizumi asked the audience for their public support and expertise for the struggle in court. He stated that the plaintiffs are not experts, just ordinary citizens without knowledge about radiation.

Mr. Shoichi Ohizumi also worries about the children in the accident's vicinity, as the kindergarten and school were located just 500 meters from the epicenter. The mayor was only allowed to evacuate people within 350 meters radius, when the government authorities and the prefecture didn't take any emergency measures after the accident.

On 19 August 2002, the *Mainichi* newspaper reported that the Tokaimura Hibakusha have decided to file a lawsuit, the first one ever by Japanese residents in the history of Japan's nuclear development. The article was written by Ms. Emiko Osanai, a staff writer of the *Mainichi* in Hiroshima.

Satomi Oba from WISE Japan/Plutonium Action Hiroshima said: "As far as I know, this is the first account in the major media about the Tokaimura situation. All the reports relating to the health effects and the

residents' struggle have come not from major media, but from small citizens' groups."

"We have 52 nuclear reactors in operation as well as other nuclear facilities in Japan. Now we know, if a nuclear accident should occur, that claims by those exposed to the radiation would be ignored. We have to resist any cover-up attempts by both the authorities and industry."

One of the plaintiffs withdrew because of strong pressure from around on 19 August, but the other two, Mr. and Ms. Ohizumi maintain their determination for the court struggle. The lawsuit will be filed early in September.

Please send messages of solidarity to the Ohizumi family, and the members of the citizens' association. You can do this via WISE Japan (see "NIRS/WISE offices and relays" on page 11).

Source and contact: WISE Japan, 19 August 2002

CRACKS AND MOX

Just under 20 cracks have been found at the Japanese BWR Kashiwazaki-Kariwa-3. The cracks are in the core shroud, a cylinder that surrounds the reactor core which is made of a stainless steel alloy – 316L – normally considered to be highly resistant to stress corrosion cracking. The longest crack is about 6 cm long.

The reactor was one of those targeted for loading of MOX fuel, and the problems have added to local residents' opposition to MOX. In an "inquiry" handed out to all eligible voters in Kariwa village, just over 80% said they agreed that the village's mayor must honor the results of a previous referendum rejecting MOX (see *WISE News Communiqué* 549.5277, "Japan: Referendum says 'No' to MOX use").

Nucleonics Week, 29 August 2002

WILL THE UK GOVERNMENT BAIL OUT BRITISH ENERGY?

The share price of nuclear utility British Energy has plummeted following problems with one of its reactors. This has led to speculation that the UK government might bail it out or pay it to take over BNFL's aging Magnox reactors. The question also remains as to what will happen to its Canadian subsidiary Bruce Power, and to Amergen, its US joint venture with Exelon.

(572.5432) WISE Amsterdam – British Energy (BE) was hit by two major share price falls in just two weeks. The biggest fall came after BE made two announcements to the London stock exchange on 13 August. One announcement concerned an unplanned outage at Torness-1, an advanced gas-cooled reactor (AGR) in Scotland. The other was to revise its predicted UK nuclear generation for the year from 67.5 TWh down to 63 TWh.

The shares fell again on 21 August, reaching an all-time low of 54p (88 US cents), compared to a high of 700p (US\$10.47) in early 1999. This came as bankers said that there was little chance of a foreign takeover for the group. One commented, "There is no immediate cash crisis but it is also clear that the group doesn't have any access to capital. Without that it will hit liquidity problems sooner or later unless market conditions improve."

How soon this could be was made clear in an article in the *Independent on Sunday* on 25 August. According to bankers Schroder Salomon Smith Barney, BE will have a net outflow of cash totaling £342 million in 2002, and has a £110 million bond needing repayment in March 2003. BE simply does not have this much cash at present.

The *Independent on Sunday* reported that government officials had drawn up a secret plan, "Project Blue", that would take BE back into public ownership. Energy Minister Brian Wilson denied the existence of "Project Blue" but confirmed that the UK government was looking at ways in which it could help the company.

When asked for his preferred option

for BE, he said: "I think by far the most sensible option is that they should be able to get the price for their product that allows them to operate in a profitable way."

BE's underlying problem is that nuclear generation is simply too expensive to compete in the UK's liberalized wholesale electricity market. BE needs £21 (about US\$31.50) per MWh to break even but has only been getting £16 per MWh, whereas when BE was privatized six years ago it expected to get £27 per MWh.

"...it will hit liquidity problems sooner or later unless market conditions improve."

Who has gained while BE has lost out from falling prices? Not the UK consumers, since retail prices have yet to fall – instead, it is the electricity retailers who have made extra profits. And unlike some of its rivals, BE no longer has a UK retail operation to make up for its wholesale losses.

And while Brian Wilson appears to want to introduce changes to the market to allow BE to get a higher price, Philip Hollobone, analyst at SG Securities, said that any changes were likely to take time to be agreed and implemented.

BE itself argues that its nuclear stations should be exempt from the climate change levy – something which the UK Energy Review recently rejected (see *WISE/NIRS Nuclear Monitor* 564.5384, "UK energy review keeps nuclear option open"). It also

wants its nuclear stations to pay the same business rates (local government taxes) as conventional power stations of the same size (currently it pays more, essentially because they cost more to build).

However, while both of these options together would save over £100 million, last year's losses were a staggering £493 million before tax.

So, with BE's "level playing field" likely to offer too little, and Brian Wilson's "higher prices" likely to come too late, what options are left, short of full renationalization?

BNFL deal?

One way in which the UK government might help British Energy is to allow BE to take over six aging Magnox reactors from state-owned British Nuclear Fuels (BNFL) under favorable terms. This could mean the UK taxpayer picking up the tab for the decommissioning liabilities of the Magnox power stations, while BE takes the profits.

When BE confirmed that it was still in talks with BNFL over this, BE's share price surged back to around 75 pence, making up part of the recent losses. However, this price is still tiny compared to the peak share price of 700p reached in early 1999.

The idea of BE taking on the remaining Magnox reactors seems strange. When the UK electricity industry was privatized, the idea was that the "profitable" reactors went to BE and the "loss-making" Magnox reactors to BNFL. If BE cannot turn a profit from the "profitable" reactors, how could the situation possibly be remedied by giving BE the "loss-making" reactors too?

It is worth remembering just how huge the UK's nuclear subsidies were before privatization.

At that time, the UK's loss-making nuclear industry was propped up by a levy on fossil fuels, of which 99% went to nuclear power stations and only 1% to renewable energy. In 1990/91, this levy amounted to a staggering £1.175 billion – now US\$1.76 billion (see *WISE News Communique* 379/80.3722, “£1 Billion plus in yearly subsidies to nuclear energy in UK”).

Canada deregulation

The group has in the past used profits made from Bruce Power in Canada to partly compensate for its UK losses. However, the Ontario energy market was also deregulated in May 2002.

BE says it has forward contracts lasting up to five years that will protect it in the short term if the wholesale electricity price in Canada falls as it has done in the UK. After this, BE hopes to buy a retail business – but its coming cash crunch could well threaten this.

BE owns around 80% of Bruce Power, with 15% owned by uranium mining company Cameco and the rest by two unions on the Bruce site. It leases

and operates the Bruce site, which has 8 CANDU reactors. Four of them (Bruce B) are in operation, and BE hopes to re-start the four Bruce A reactors (see *WISE News Communique* 546.5264, “Canada's oldest reactors poised for restart”).

Amergen

BE's US joint venture with Exelon owns three reactors: Three Mile Island-1, Clinton and Oyster Creek. All three were bought for knockdown prices from utilities that wanted to get rid of their reactors. Indeed, since each reactor came with a decommissioning fund worth far more than the sale price of the reactor, Amergen was more or less paid to take the reactors off the utilities' hands.

While the deals earned Amergen the *Financial Times* Global Energy Award for “Boldest Successful Investment Decision in 1999”, they led to concerns that workers would be fired to save costs (see *WISE News Communique* 522.5117, “Amergen: 10% of worldwide nuclear capacity?”). British Energy had already cut so many jobs in the UK that even the Nuclear Installations Inspectorate was worried that nuclear safety might be compromised (see NIRS factsheet *British Energy, Amergen and U.S. Nuclear Safety*, available

online at www.nirs.org/factsheets/BRITISHENERGYfactsheet.htm).

More reactors?

Despite these deep cuts in the workforce, BE clearly can't make its UK nuclear plants pay. Yet, it was this same British Energy that earlier in the year was busy assessing designs for new nuclear reactors in the UK (see box “British Energy assesses ‘Lego’ reactor” in *WISE/NIRS Nuclear Monitor* 564.5384, “UK energy review keeps nuclear option open”).

Of course, without access to capital, BE's plans are no more than a pipe-dream at the moment. Yet as pro-nuclear UK Energy Minister Brian Wilson continues to be prepared to help the nuclear industry at every turn, no-one should be surprised if he announces that the “solution” is to build more reactors. After all, if the near-bankruptcy of both of the industry's leading players – BNFL and British Energy – fails to dent his enthusiasm, what will?

Sources: *Guardian*, 14 and 26 August 2002; *Financial Times*, 21 August 2002; *Independent* on Sunday, 25 August 2002; Reuters, 27 August 2002; www.british-energy.com; www.nei.org/documents/Nuclear_Plant_Sales.pdf

Contact: WISE Amsterdam

LOOKING BACK ON 4 YEARS OF GERMAN RED-GREEN NUCLEAR POLITICS

In the run-up to the German elections on 22 September, Jochen Stay looks at how 4 years of Red-Green coalition government have helped as well as hindered the nuclear industry, and examines the prospect of change after the election.

(572. 5433) Jochen Stay – Looking back now at the promises of the Green Party and Social-Democrat party SPD in the parliament elections of 1998, it is clear that the reality of the present policy on nuclear energy differs from those promises made in 1998. It also differs from the consensus talks with the nuclear electricity utilities (see *WISE News Communique* 542.5241, “German Consensus Agreement: an update”)

and the 1998 Red-Green coalition agreement, which the anti-nuclear movement criticized for good reasons at the time.

The Greens for instance changed their demands on the closure of the last nuclear power station from “immediate closure” (before 1998) to “8 years” (just before the elections in 1998), then “15 years” (during the consensus talks) and agreed

eventually with the 25 years (minimum) of the outcome of the consensus agreement.

The development in the SPD appears to be less drastic as their precondition was a phaseout of 10 years. Besides, the SPD was never considered to be a party for which the nuclear phaseout would be an essential political goal. The climbdown for the Social-Democrats

was therefore simply smaller than for the Green Party.

The Greens often argue that they are only a small party (less than 7 percent of the votes in the elections) and that the chancellor (who is in the SPD) is not particularly true to his principles on nuclear issues. So, the Greens could not achieve everything that was included in the party's manifesto in 1998. But even when one considers this argument, the outcome after 4 years has been devastating and raises the insistent question of what has been achieved at all.

In the discussions on the consensus talks at the Greens' party conference it was often said, "a bird in the hand is worth two in the bush" (i.e. better an agreed phaseout plan than no agreement). The question remains: what kind of bird is the agreement?

-The 19 operating reactors are still all in operation. Exactly ZERO have been closed since then. In the last years

the production of nuclear electricity has reached new record levels. The amount of nuclear electricity produced in the country during the Red-Green coalition was higher than ever before.

-In the next 4 years only 1 reactor (Stade) is expected to close, and not because of the consensus agreement but due to its relative small capacity and uneconomic prospects in the liberalized electricity market. The operators of Stade, E.ON and HEW (Hamburg Electricity Works), have clearly explained that the decision to close the reactor has not been based on political grounds but purely on economic grounds. It will be shut regardless of who wins the September elections. According to the consensus agreement, the next reactor to close would be Obrigheim. But in this case, a secret agreement between operator EnBW (Energy Baden-Württemberg) and the chancellor has been made, which allows its operation until 2007 (at least).

-In the consensus agreement, the electricity utilities obtained a government guarantee of unhindered operation for their nuclear power stations and a solution for the waste they produce. And that will continue for the technical lifetime of about 35 years of each reactor. This allows as much nuclear electricity and nuclear waste to be produced as in the past 35 years, since the first NPP was opened in the 1960s.

-The temporary closure of Philippsburg and Brunsbüttel due to serious incidents will not result in shorter operating lifetimes. The lifetime of the reactors is not laid down as a certain amount of years but in terms of the amount of electricity to be produced. Thus, temporary closure following problems with a reactor will eventually result in a later closure date. If a reactor is closed indefinitely due to technical shortcomings, its "credits" can be transferred to other reactors, which can then operate for a longer period.

-In the 15 years from the completion of the Gorleben interim waste storage (1983) until the 1998 Red-Green government, a total of 8 Castors with high-level waste were transported to Gorleben. During the 4 years of Red-Green government, a further 12 Castors went to Gorleben. This resulted in even more restrictions on democratic rights in the Wendland region than during the previous government.

-When the Red-Green government started its work, the closure of several reactors was feared because of a ban on transports since May 1998 and a lack of on-site storage capacity for spent fuel (see *WISE News Communiqué* 492.4882, "Spent fuel transports cancelled after contamination found"). Presently, licenses are being prepared for on-site interim storage facilities at all nuclear power station sites. When these facilities have been completed, the storage capacity will be sufficient for decades of spent fuel production. Until the facilities have been

WENDLAND FLOODS

The recent floods in Germany affected both nuclear power stations and anti-nuclear activists. Although no damage was reported to nuclear installations, one of them, Krümmel, had a close escape. Although the reactor was shut down for maintenance, the danger of water making its way into the reactor or affecting electrical systems could not be ruled out. The site was reported to be a hive of activity as a special flood defense plan was prepared in case water levels exceeded the 8.50-meter level for which the station was designed. In the event, the water did not reach this level.

Sandbags were also laid around the Gorleben interim waste storage site. Though there were concerns when a river dike 3km from the site broke, the water did not reach the nuclear waste dump.

However, many villages in the surrounding Wendland were flooded, causing considerable damage. Fortunately, the groups involved in actions against nuclear waste transports sprang into action to rescue and protect people and livestock. Thousands of sandbags previously used in actions, still carrying the slogan "Stop the Flood of Nuclear Waste", were distributed by tractor and used to protect houses. Over 100 boats which anti-nuclear activists had stockpiled were put into action.

The local Farmers Aid group issued a call for help, both practical and financial. Donations are welcome: Bäuerliche Notgemeinschaft, account no. 8904, Kreissparkasse Lüchow, bank code (BLZ) 258 51 335.

Indymedia Germany; Schleswig-Holstein government press releases, 21 and 24 August 2002; Platts, 21 August 2002; AP, 21 August 2002; www.baeuerliche-notgemeinschaft.de

completed, many NPP operators are allowed to store loaded Castors in on-site "parking lots". Those temporary "solutions" are being called "interim storage". Under a Christian-Democrat government this would have resulted in a public outcry and massive protest from the Social-Democrats and Greens.

-The transports of spent fuel to the reprocessing plants abroad have been resumed during the Red-Green government. This year an amount of 150 casks are to travel across Europe, which is another disappointing record.

-The dirty reprocessing of German spent fuel in La Hague and Sellafield has not been halted. In 2005 the transports themselves will be forbidden but the consensus agreement allows the reprocessing of the waste already delivered. That will continue over many years.

-The procedures for a license of the Schacht Konrad underground waste repository were delayed for many years during the previous Christian Democrat-Liberal government. As a kind of "final touch" of the present government Schacht Konrad received its license last summer. This was despite Chancellor Gerhard Schröder's promise in 1998 to the people in the region that a license would be out of the question if he became chancellor of Germany.

RESEARCH MORATORIUM

On 26 August 2002, the environment ministry of the German State of Lower Saxony announced a 2-year extension of the moratorium on research into disposing nuclear waste in the Gorleben salt dome. The consensus agreement two years ago specified a moratorium of between 3 and 10 years; this decision means that the moratorium will last for at least 4 years.

Lower Saxony environment ministry press release, 26 August 2002

-The setting-up of the AK End (working group on final disposal) gives the public the impression that a solution for the waste problem could be found and that finding a disposal site would be no problem. AK End has the mission to develop a concept for finding a suitable final disposal site. AK End also considers in detail how to achieve acceptance of the public at a future disposal site. The proposals for this remind us of the dark days when big amounts of federal government "Gorleben money" were pumped into Lüchow-Dannenberg to increase public acceptance.

-Before the 1998 elections, the Social-Democrats and Greens declared unanimously that the salt dome of Gorleben will not be suitable for final disposal of high-level waste. In the consensus agreement it is suddenly called a suitable location. The moratorium on research (see box) keeps still open all options in the future. It seems obvious that the large amounts of money spent on Gorleben research will play a significant role in the AK End site selection process.

-The completion and operation of the Pilot Conditioning Facility PKA (packing of spent fuel for final disposal) in Gorleben, planned by the previous government, was opposed by the Social-Democrats and Greens when they were opposition parties. The Citizen's Initiative Lüchow-Dannenberg called the PKA the litmus test for the Red-Green coalition. In the mean time, the facility has received its operating license.

-The Red-Green government has renewed the radiation protection laws, which now allow radioactively contaminated waste to be disposed of as normal household waste under certain conditions. Or it could be recycled into conventional items: cooking pans made of contaminated stainless steel perhaps?

The Stoiber "horror scenario": could it get worse?

In the present election campaign nuclear energy is not a prominent theme. SPD and Greens state their opinions that the issue of nuclear energy has been dealt with and that the goal of an acceptable energy policy has been realized with the completion of the consensus agreement.

And when the issue of nuclear energy arises they emphasize the "horrors" of Edmund Stoiber's (Christian-Democrats) possible victory. Especially the Green environment minister Jürgen Trittin warns strongly of a horrible "nuclear age" if Stoiber becomes chancellor of Germany.

Much of the Red and Green arguments are based on statements by Stoiber shortly after his candidacy for chancellor for the Christian-Democrats. He then announced that he would get rid of the consensus agreement as soon as he became chancellor. But just two weeks later he changed his mind clearly and started saying that he would examine the agreement in detail. Presently it is clear that the new Atomic Law will remain largely unchanged if he becomes chancellor. The chief of the Christian Democrat faction Friedrich Merz confirmed this.

The electricity utility bosses have made it clear to Stoiber that they want to stick to the consensus agreement. As written in the *Berliner Zeitung*, they thank their "environmental friends" for an agreement that guarantees lifetimes of about 35 years for their reactors. The newspaper continues: "The industry leaders are convinced that without the agreement the terror attacks of 11 September would have resulted in a heated debate about a quicker closure of Germany's nuclear power stations".

Therefore the utilities will do anything to prevent Stoiber reconsidering the "nuclear truce". Only some smaller "cosmetic changes" would be negotiable, such as lifting the ban on building new

nuclear power reactors. Notably, the Christian-Democrats have written in their manifesto that there are no current plans for building new reactors.

Why do Trittin and his cronies present such absurd horror scenarios? The answer is easy if one looks at the results of 4 years of Red-Green nuclear energy policy. A zero-outcome can only be sold as a success story if people are led to think that it could be much worse. It is hard to believe that the media keeps on writing about the phaseout of nuclear energy because in reality the result of 4 years of Red-Green government is catastrophic, as described above.

But Trittin never tires of selling this all as a success story, according too the motto: "we must do more than just complain if we are to be re-elected." The environment ministry in the mean time has started a campaign claiming that Germany is the world champion of nuclear phaseout. Neglected in this campaign is the fact that most countries do not operate NPPs, including half of the European Union countries. For example, after the Chernobyl

catastrophe, Italy closed down all of its reactors within a few months.

What will happen to the anti-nuclear vote?

Of course this article is not intended to suggest that people should vote Stoiber on 22 September. But it is clear that concerning nuclear energy Red-Green is not the lesser of two evils. It is no surprise that many former SPD and Green voters in Lüchow-Dannenberg did not vote in the 2001 municipality elections. This was not a rejection of politics but rather an investment of more time and energy in extra-parliamentary resistance.

At present the anti-nuclear movement has no parliamentary spokesperson. Even the PDS's commitment cannot be taken seriously, because of their change of policy in the states in which they form part of the government.

Not all opponents of nuclear power will be amongst the non-voters; indeed, many will participate in the next elections in one way or other. After all, the anti-nuclear movement has always had a broad spectrum of opinions, varying from activists

within parties to those who oppose the parliamentary system in principle. But it is remarkable that this time very many opponents of nuclear energy have serious doubts as to whether voting for any of the parties will contribute to a rapid phaseout.

More important than the question "who will vote for whom" is to make clear that there is not just a parliamentary level to politics. And that there are other ways in which people can have far more influence on their fate than by voting, regardless of whether they take part in the elections.

We have to ensure by our commitment that Trittin's "whitewash" does not lead to most people in the country believing that the fight against nuclear energy is over and that the phaseout is a fact.

There's still much to do!

Source: anti atom aktuell, August 2002 [Article translated from German by WISE Amsterdam]

Contact: Jochen Stay at j.stay@jpberlin.de

IN BRIEF

US: Unicoi victory! The Louisiana Energy Services (LES) consortium have dropped Unicoi, Tennessee from their shortlist of sites for building a uranium enrichment plant (see *WISE/NIRS Nuclear Monitor* 571.5426, "Louisiana Energy Services tries again in Tennessee"). The two remaining sites on the shortlist are in Hartsville, Tennessee and Bellefonte, Alabama. LES expects to complete the site selection process by 15 September.

WNA News Briefing 21-27 August 2002

US: Radioactive racism at Savannah River. Westinghouse Savannah River Company, operators of the Savannah River Site in South Carolina, is facing

allegations of perpetrating a racist environment at the site. According to the allegations, not only were black workers overlooked for promotion, they were also sent to work in areas with the highest radiation levels. This was corroborated by a study which showed that the average radiation doses for blacks were higher than for whites in all dose categories.

***The Independent*, 13 August 2002**

Radioactive iodine-131 source crushed at French airport. On 17 August, a package containing a radioactive iodine-131 source was completely destroyed at the Roissy Charles de Gaulle airport near Paris when it fell off a "dolly" and was

subsequently crushed by a truck. The crushed package was found in a transit area used only by workers of the airport and an area along a length of 30 to 40 meters was cordoned off until it was decontaminated. Although the source contained 5 GigaBecquerels (5×10^9 Bq) of iodine-131 only a limited radiation dose could be expected for people being exposed as the material was dispersed over a large area.

Nevertheless the accident highlights the problems of shipping small and medium-sized sources, which until recently have been essentially uncontrolled in France. Only after its recent reorganization was the French nuclear safety authority DGSNR given jurisdiction over radioactive

sources. One French expert commented on the accident that it “shows that radioactive packages are handled like noodles or potatoes”.

A recent report by the Dutch Inspection for the Environment has shown that transport and storage rules were often violated by companies. An inspection at transport 13 companies showed that in 9 companies a total of 28 violations had been found. In all cases of four companies for handling in smoke detectors, violations were found. It mainly concerned the import of radioactive smoke detectors without a license.

AP, 21 August 2002; Nucleonics Week, 22 August 2002; NVS Nieuws, 2/2002.

EU: irradiation from oil production.

The MARINA II project has produced its draft final reports on the radiological exposure in the European Community from radioactivity in North European marine waters. The study was made as part of the European Commission's input into the OSPAR Commission (see *WISE News Communique* 530.5169, “OSPAR 2000: End to reprocessing at Sellafield and La Hague?”).

It concludes that, while the main contribution to discharges of beta-emitters into the OSPAR region continues to be from the reprocessing plants at Sellafield (UK) and La Hague (France), the main alpha-emitter contribution is now

from oil production in the North Sea. Indeed, according to the study, oil production is now the major contributor to the collective dose to the population of the European Union from all industrial activity.

During oil production, large quantities of water contaminated with natural radium and radioactive lead are discharged. Nevertheless, nuclear industry discharges are still significant and still dominated by the reprocessing of nuclear fuel.

MARINA II report, August 2002

NIRS/WISE offices and relays

WISE Amsterdam

P.O. Box 59636
1040 LC Amsterdam
The Netherlands
Tel: +31 20 612 6368
Fax: +31 20 689 2179
Email: wiseamster@antenna.nl
Web: www.antenna.nl/wise

NIRS

1424 16th Street NW, #404
Washington, DC 20036
USA
Tel: +1 202 328 0002
Fax: +1 202 462 2183
Email: nirsnet@nirs.org
Web: www.nirs.org

NIRSEast

P.O. Box 7586
Asheville, NC 28802
USA
Tel: +1 828 251 2060
Fax: +1 828 236 3489
Email: nirs.se@mindspring.com

WISE Argentina

c/o Taller Ecologista
CC 441
2000 Rosario
Argentina
Email: wiseros@cyberia.net.ar
Web: www.taller.org.ar

WISE Czech Republic

c/o Hnutí Duha
Bratislavská 31
602 00 Brno
Czech Republic

Tel: +420 5 4521 4431
Fax: +420 5 4521 4429
Email: jan.beranek@ecn.cz
Web: www.hnutiduha.cz

WISE Japan

P.O. Box 1
Konan Post Office
Hiroshima City 739-1491
Japan
Tel/Fax: +81 82 828 2603
Email: dogwood@muc.biglobe.ne.jp

WISE Russia

P.O. Box 1477
236000 Kaliningrad
Russia
Tel/fax: +7 0112 448443
Email: ecodefense@online.ru
Web: www.ecodefense.ru

WISE Slovakia

c/o SZOPK Sirius
Katarina Bartovicova
Godrova 3/b
811 06 Bratislava
Slovak Republic
Tel: +421 905 935353
Fax: 421 2 5542 4255
Email: wise@wise.sk
Web: www.wise.sk

WISE South Korea

c/o Eco-center
121-0204F
GongDeok Building 385-64
GongDeok-dong Mapo-go
Seoul
South Korea

Tel: +82 2 718 0371
Fax: +82 2 718 0374
Email: ecenter@eco-center.org
Web: www.eco-center.org

WISE Spain

Apartado de Correos 741
43080 Tarragona
Spain
Email: jaume.morron@retemail.es
Web: www.ecologistasenaccion.org/otros/wise.htm

WISE Sweden

c/o FMKK
Barnängsgatan 23
116 41 Stockholm
Sweden
Tel: +46 8 84 1490
Fax: +46 8 84 5181
Email: info@folkkampanjen.se
Web: www.folkkampanjen.se

WISE Ukraine

c/o Ecoclub
P.B. #73
Rivne-33023
Ukraine
Tel/fax: +380 362 284 166
Email: ecoclub@ukrwest.net

WISE Uranium

Peter Diehl
Am Schwedenteich 4
01477 Arnsdorf
Germany
Tel: +49 35200 20737
Email: uranium@t-online.de
Web: www.antenna.nl/wise/uranium

WISE/NIRS NUCLEAR MONITOR

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c/o WISE Amsterdam
PO Box 59636
1040 LC Amsterdam
Netherlands

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