Hundreds of people from around the country joined the Lizards Revenge music and arts festival and protest camp that took place at the gates of BHP Billiton's Olympic Dam copper and uranium mine in South Australia from 14-18 July 2012. The protest at Olympic Dam was staged to stop the planned expansion of the copper and uranium mine, which received a go ahead in October 2011. But economics raised uncertainties about the expansion project.

On July 17, about 350 anti-uranium activists have broken through an exterior fence of the mine, but were prevented from reaching the mine, by a main reinforced steel gate. A few days later, after the official lizards revenge festival ended, about 40 people blocked Olympic Way, one of te road's leading to Olympic Dam. They pushed a car onto the road, let down its tyres and locked the steering. Two men then chained themselves to the underside. Both were arrested and charged with illegal interference.

But the July 28, edition of the Weekend Australian newspaper reported that BHP Billiton is reconsidering investments in several mining projects. BHP Billiton chief executive Marius Kloppers said that a faster-than-expected slowdown in China and increasing European instability will rule out a "near-term" improvement in operating conditions, forcing the world’s biggest miner to re-think spending on its portfolio of major projects. The Aus$30 billion (US$31bn or 15.5bn euro) expansion of its Olympic Dam mine is shaping up as the first major victim of the volatile economic conditions.

A decision by the world’s biggest miner on whether to proceed with the proposed expansion of its mine will not be made until 2014 rather than by the end of this year, as previously stated by BHP. The expansion of Olympic Dam is one of three major BHP projects seen by analysts as vulnerable to setbacks as markets soften. The company has until early December to give the final go-ahead for the Olympic Dam project or it faces the need to renegotiate state government approvals.
project are “challenging” in that a development would not be profitable at current uranium prices. Prices are 34 per cent below where they need to be for a viable project. Cameco chief executive Tim Gitzel told analysts that Cameco was “not going to develop Kintyre at any cost.”

It means that Cameco and its 30 per cent partner, Japan’s Mitsubishi Devel-

opment, will not begin development of what would have been WA’s first uranium mine in early 2014 as first planned. A 2014 start to production would have meant first production in 2016. Discovers more than 25 years ago, the contemplation of Kintyre’s development only became possible with the elec-

tion of the pro-uranium mining Barnett government in 2008.

Belgium confirns Nuclear Phase-

out by 2025, but Extends Lifetime of Tihange-1

On July 4, the Belgian government finally took a decision about the fate of nuclear power. According to the 2003 nuclear phase-out law, all seven PWR’s (4 at Doel and 3 at Tihange, with a total of 5,900 MW) should be decommissioned after 40 years of operation. In 2015, the three oldest reactors Doel-1, Doel-2 (both 433 MW) and Tihange-1 (900 MW) will reach the age of 40. The four other reactors are scheduled to be decommissioned between 2022 and 2025. Today nuclear power produces 54% of the country’s electricity.

(573.4261) Greenpeace Belgium - In the governmental agreement of December 2011, the majority parties agreed to respect “in principle” the 2003 nuclear phase-out law, but the closure of the three oldest reactors in 2015 would be subject to an “equipment plan” about the security of supply. At the end of May, the state secretary for Energy, Mel-

chior Wathelet, presented his equip-

ment plan. The report, made by his administration, concluded that till 2017-

2018, under extreme winter conditions, temporary supply problems could occur if the three oldest reactors would be closed in 2015. Nuclear plant operator GDF-Suez/Electrabel stated clearly that they were not ready to invest in the necessary upgrades and back fittings of those old reactors if they would not get a lifetime extension approval for at least ten years. Finally, on July 4th, the minister council took the following decision:

* The twin units Doel-1 and Doel-2 will be closed in 2015, after 40 years of operation as stipulated in the nuclear phase-out law.
* The lifetime of Tihange-1 will be extended with 10 years, till 2025.
* The four other reactors will be closed after 40 years of operation, as stipulated in the nuclear phase-out law: Doel-3 in 2022; Tihange-2 in 2023; Tihange-3 and Doel-4 in 2025.

The minister council also decided to delete article 9 of the 2003 nuclear phase-out law, which stipulates that the lifetime of the reactors may be extended over 40 years “if the security of supply is endangered”. The government argued that this will secure the nuclear phase-out calendar, so that no new lifetime extensions could be granted in the future. Furthermore the government decided to facilitate the investment in new flexible replacement capacity, especially thermal gas plants. Because of the lifetime extension of Tihange-1, the existing gas plants become less profitable. To compensate this, the government intends to subsidize new gas plants. It remains very questiona-

ble that de European Commission will allow this governmental support for new fossil plants. Furthermore, in an attempt to cut the electricity price, the government decided to place 1,000 MW of GDF-Suez/Electrabel’s cheap nuclear capacity at the disposal of the other power companies.

The anti-nuclear platform Stop Nuclear & Go Renewables, initiated by Green-

peace Belgium, WWF Belgium, Bond Beter Leefmilieu Vlaanderen and Inte-

Environment Wallonie, is not impressed by the governments decision, which looks like a typical Belgian compromise. By extending the lifetime of the 900 MW Tihange-1 reactor with ten years, investors in new and flexible production capacity like efficient modern gas plants or renewables, will be deterred. Why should they invest in new expensive production capacity, if they will have to compete with the cheap electricity of old reactors which have been written off already for two decades? By taking only 866 MW of nuclear capacity from Doel-1 and -2 off-line in 2015, the grid will still be dominated by nuclear base-

load power, making it very difficult to integrate more renewable capacity into the grid.

Tihange-1 is a second generation PWR, build in the early 1970’s. An indepen-

dent review of the recent EU stress tests performed on Tihange-1 concluded: “Both the probability and the potential consequences of a severe accident are relatively high, therefore the risk of Tihange-1 is unjustifiably high. Consid-

ering all facts, we recommend to shut down Tihange-1 immediately.” (Antonia Wenish, Oda Becker: “Critical Review of the EU Stress Test Performed on Nuclear Power Plants.” Study commissioned by Greenpeace. Wien/Hannover, May 2012.) Some 840,000 peoples are living within 30 km from the Tihange NPP, including the cities of Liège and Namur. The German city of Aachen (260,000 inhabitants) is at 60 km, the Dutch city of Maastricht (120,000 inhabitants) is at 40 km.

Source and contact: Eloi Glorieux, Energy campaigner Greenpeace Bel-

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Sources: ABC, 17 July 2012 / Reuters, 28 July 2012/ Australian, 28 & 29 Au-

gust 2012 / www.lizardsrevenge.net

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SELLAFIELD: REPROCESSING TO END IN 2018 – OR...?

The Nuclear Decommissioning Authority’s (NDA’s) strategic review has confirmed what has been expected for a while. The Thermal Oxide Reprocessing Plant (THORP) in Cumbria, England, will complete it reprocessing contracts (both UK and overseas) and then close. However, signs that the NDA has little confidence in predicting the closure of the magnox reprocessing plant are evident in documents published in July.

(753.4262) WISE Amsterdam – THORP’s reprocessing contracts should be completed by 2018, at which time THORP would cease reprocessing activities and enter a post-assurance clean out phase prior to decommissioning. Any remaining spent AGR fuel from UK reactors, including any future arisings, will be placed into interim storage pending a decision to dispose of it in a geological disposal facility.

There are, however, a number of ‘performance risks’ that could impact on the delivery of the strategy. In other words, THORP might break down, which would be no great surprise given past experience. The NDA had previously expected to complete reprocessing contracts at THORP in 2010, but operational difficulties both in THORP and in downstream support plant, had delayed the completion of that work. Operational difficulties could result in the reprocessing of less than the currently planned amount of spent fuel by late 2018. The NDA says: “We believe, therefore, we should continue to examine alternative options so that we can manage these risks to the delivery of our strategy.”

The NDA says keeping THORP open significantly beyond 2018 would require a major, multi-billion pound investment program with like-for-like replacement of many support facilities with little or no prospect of significant new business and hence a return on this investment.

MaGnox reprocessing
If THORP does shut in 2018, it would mean that by then all site reprocessing will have ceased because Magnox reprocessing (at the so called B205 plant) was suppose to end the year before. But serious doubts about this has been raised by NDA itself. The Magnox Operating Plan (MOP9) and accompanying Strategy Position Paper reveal how the NDA has been forced into a ‘pick and mix’ approach because of what it describes as the inconsistent and unpredictable performance of the plant and associated facilities. When the last operating plan MOP8, published in 2010, had projected a plant closure in 2016, the date was based on a ‘single assumed’ annual throughput being achieved. Continuing poor performance however resulted in an almost immediate extension of the closure date to 2017, and even this is now deemed to be ‘increasingly unrealistic’. MOP9 now tentatively suggests at least 2 closure dates (or something between the two) for B205 by assuming two different annual reprocessing rates – an upper bound of 740 tons per year and 450 tons per year lower bound. Put in context, the latter rate tallies almost exactly with the average throughput achieved annually by B205 over the last 5 years of operation, whilst the upper bound of 740 tons per year has not been achieved for 8 years.

As the NDA publications show, 3800 tons of magnox fuel remained due for reprocessing as at April this year - 3000 tons held in reactor/dry storage and 800 tons in pond storage at Sellafield or reactor sites. Reprocessing the 3800 tons of magnox fuel remained due for reprocessing, at 740 tons per year would see a 2017/18 closure of the reprocessing plant whereas, at 450 tons per year, reprocessing would continue to 2020 at least. Added to this workload is the 44 tons of metallic fuel from the Dounreay Fast Reactor (DFR), with transports to Sellafield expected to begin from Scotland this year. MOP9 recognises that the addition of this fuel could impact on the overall MOP program but confirms that, with priority given to magnox fuel, reprocessing the DFR fuel will not be allowed to significantly extend the program without a strategy review.

Though a number of initiatives to improve reprocessing performance are incorporated in a Magnox Throughput Improvement Plan (MTIP) set up last year, the NDA acknowledges that if improvements do not materialize, the annual throughput rate of 450 tons for B205 would ‘seem a reasonable value to select’ and will result in a 2020 end to reprocessing. If implemented, it will result in future years’ of radioactive discharges to the environment from the reprocessing plant at levels that pose an added threat – denied by the NDA - to meeting the already jeopardized international treaty targets on marine pollution signed up to by the UK Government at the OSPAR convention in 1998. At greatest risk would be the target of concentrations of radioactivity in the marine environment being ‘close to zero’ by 2020.

In operational terms, this ‘reasonable value’ of 450 tons per year represents a significant downgrading of reprocessing targets made by the NDA just 5 months ago in a supplement to its much vaunted Sellafield Plan. Described as ‘the first credible and underpinned lifetime plan for the Sellafield site’, it projected throughput rates for magnox reprocessing from 2012 to 2017 which ranged from 650-800 tons per year. Given the well documented frailties and problems of the ageing reprocessing plant and associated facilities – and its recent track record - these projections were patently incredible and appear to have been plucked from thin air rather than being based on a professional appraisal of the plant’s operational capabilities.

Although a large proportion of the 10,000 strong Sellafield workforce is employed on reprocessing, the anticipated number of job losses is not as great as first expected due to more focus on removing Sellafield’s high-hazard risks and increased NDA financial resources to accelerate decommissioning projects. It is also possible that the Government will eventually give the go-ahead for a second Mox plutonium recycling plant.

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UK NUCLEAR PROGRAM – NOT DEAD YET AS GOVERNMENT TRIES TO SAVE FACE

The Times reported on July 15, that according to “well placed industry sources”, EDF Energy wants a subsidy of £2.8 billion (US$3.6bn or 3.5bn euro) a year for the next 25 years to build two new nuclear reactors at Hinkley Point in Somerset, England at a cost of £14 billion. The French, mostly state-owned company, will only build the two European Pressurised Water Reactors (EPRs) with huge subsidies, paid for through fixed levies on electricity bills.

(753.4263) Pete Roche - In May the UK Government published a Draft Energy Bill see (Nuclear Monitor 750, June 1) which details plans for so-called Electricity Market Reform. The proposals include the introduction of a complicated support mechanism for low carbon electricity called “Contract for Difference” (CfD). Basically if the market price for electricity falls below a guaranteed “strike price” the nuclear or renewable energy operator would be paid the difference, but would also have to pay money back if the electricity price goes above the strike price. The Government doesn’t expect the Energy Bill to be passed into legislation until towards the end of next year, and strike price rates won’t be finalized until then. However, under the terms of the draft Bill, the government can issue a likely strike price in advance of formalizing the rate and introducing CfD in 2014.

EDF Energy and its junior partner Centrica want to make their final investment decision on Hinkley before the end of 2012. So talks have begun between the Department of Energy and Climate Change (DECC) and the two companies to provide them with some firmer guarantees in order to make sure plans for Hinkley Point go ahead. With RWE and E.ON having recently dropped their UK nuclear plans, EDF Energy has the Government over a barrel, and will no doubt be telling DECC what strike price it wants before going ahead – in effect writing its own subsidy cheque from the electricity consumer.

According to The Times, EDF says it needs about £165 per megawatt hour (£/MWh), almost four times the existing wholesale price of electricity, if it is to go ahead. This works out at a subsidy of £68 billion over 25 years, or an average of about £50 extra a year on every household bill.

Let’s not forget that the Coalition Agreement between the Tories and Liberal Democrats pledged to not subsidize nuclear power.(1) Despite this, the Secretary of State for Energy and Climate Change, Liberal Democrat Ed Davey, now seems to be prepared to agree a high strike price with the nuclear industry, whilst pretending the Government is not planning to subsidize dangerous new reactors at all.

The Times says the Government has warned EDF Energy, and its junior partner Centrica, that nuclear power subsidies must be lower than offshore wind power, but EDF is arguing that the giant new offshore wind projects planned for the North Sea will cost £180 M/MWh, making nuclear slightly cheaper. In fact currently under the UK Renewables Obligation, offshore windfarms now being installed are being paid around £135 per MWh. According to senior lecturer on Energy Policy at Birmingham University, David Toke, EDF has been forced to come clean on nuclear costs, so now it is making dubious claims about offshore wind.(2) A Government and Industry taskforce set up to reduce offshore wind costs says offshore wind costs can be reduced to £100/MWh by 2020.(3)

Ed Davey says “nuclear will not receive a higher price than comparable generation technologies whether they be renewables or indeed gas generation once its emissions have been abated by carbon capture and storage."(4) If it is more expensive to get electricity from new nuclear power stations than offshore wind then the government’s commitment to nuclear will become difficult to maintain – we might as well just build more offshore wind farms.(5)

Toke asks “will the British Treasury sign off on this plan to increase average British electricity prices by 8 per cent for 25 years to produce 6 per cent of UK electricity from nuclear power?” The Government claims that energy bills will have to go up whatever we do. Its answer to this was supposed to be The Green Deal. But this now looks increasingly unlikely to deliver the savings to consumers promised. The plan is to offer Green Deal loans of up to £10,000 to help consumers insulate their homes and reduce fuel bills, but the interest charged will be at the usual rate of around 7.5%. So consumers will have to spend £22,000 to pay the loan back over 25 years requiring households to deliver energy-efficiency savings of £900 a year to cover the cost of annual loan repayments.(6)

In contrast, in Germany, where nuclear power is being phased out by 2022, loans at very low interest rates of 1-2%, have helped insulate over 2m homes, employing 200,000 people a year in the process, and German homeowners can borrow up to £75,000 to give them a very cosy and efficient home indeed. (7)

Greenpeace and WWF wrote to The Times pointing out that the costs of nuclear power are going up not down. The EPRs at Flamanville and Olkiluoto are now £2.7 billion and £2.6 billion over budget respectively. The huge subsidy of £2.8 billion per year being sought for two reactors at Hinkley was in stark contrast to another fight within Whitewall over levels of support for onshore wind power with the Treasury pushing for a reduction in support for wind power that would save less than £20 million per year. (8) (The Treasury lost the battle, but only after DECC made concessions on gas)

EDF denied that it was negotiating for a strike price of £165/MWh. It said it expects to reach a transparent agreement with the Government that is fair and balanced. It will show that nuclear is affordable and cost-competitive. (9) The Nuclear Industry Association (NIA) said “if it were true, the figure of £165/ MWh would make new nuclear virtually untenable. Fortunately, it is not true. Rather, it is spectacular speculation.” (10) But NIA does not speculate on what the real price might be.

The cost of the EPR being built at Flamanville, has already doubled to €6 billion (about £4.5 billion) from €3 billion and the project is four years behind schedule. Flamanville-3 is the reference design for the UK EPR. At £5 billion, Ian
Jackson of Chatham House estimates that EDF would need £91.50/MWh just to break even on a Hinkley Point reactor. In addition to breaking even, EDF is expecting to earn a return on its investment which would bump the final strike price up to about £148/MWh. Other analysts, notably Peter Atherton of Citibank, have publicly projected a strike price of between £150 and £200/MWh. (11) The Financial Times says a person close to the negotiations on the level of government support energy companies should receive reckons that EDF Energy and Centrica will need a price of at least £100/MWh – more than double the present wholesale price of about £41/MWh – to justify the huge investment needed in new nuclear plants. He said the upper limit of any such support would be about £130-£140/MWh – the cost of electricity generated by offshore wind farms. “If you can’t do [nuclear] for that price, then you might as well build more wind farms”. (12)

David Toke says the Government could hardly set the strike price any higher than £100/MWh because this is the figure the Treasury wants offshore wind power to come down to. This would be a soft landing for a policy retreat. The Government may say that £100/MWh is profitable for nuclear power, but it is unlikely to lead to any being built. Lots of rumors, hopeful stories, yes, because the British Government (and the nuclear industry) does not want to admit that nuclear power is a dead duck. (13)

The latest news is that the chief executive of General Electric, has described nuclear power as so expensive compared with other forms of energy that it has become “really hard” to justify. (14) And now EDF says it is considering looking for more partners for its UK nuclear projects to help it share costs and limit its debt burden – an admission perhaps that French state-owned industry is no longer able to afford the huge nuclear costs on its own. (15)


BURNING OUR RIVERS: THE WATER FOOTPRINT OF ELECTRICITY

The availability and use of water is becoming more and more an important issue. Higher water temperatures and reduced river flows in Europe and the U.S. in recent years have resulted in reduced production of thermoelectric power plants, resulting in increased electricity prices. A new research report shows that in the U.S. thermoelectric energy (including coal, nuclear and natural gas) is the fastest growing use of freshwater resources in the country. But there are “water-friendly” energy options: wind and PV solar technologies have by far the lowest water-use factors.

(753.4264) River Network – Electricity -as we generate it today- depends heavily on access to free water. The impact to our freshwater resources is an external cost of electrical production. What the market considers “least cost” electricity is often the most water intensive. There are clearly some low water technologies and some water hogs. For example, wind and PV solar technologies have by far the lowest water-use factors and hydropower, coal and nuclear have the largest water use factors.

It takes water to produce electricity. As many Americans retreat to air-conditioned environments to get out of the heat, the flame increases under our limited freshwater resources. The electrical energy used to create our comfort zones requires massive withdrawals of water from our rivers, lakes and aquifers to cool down nuclear, coal and natural gas power plants. Some of this water is evaporated while the majority of this water is warmed up -causing thermal pollution- killing aquatic life, increasing toxic algae blooms and decreasing the sustainability of our water supplies.

Thermoelectric energy (including coal, nuclear and natural gas) is the fastest growing use of freshwater resources in the country. The U.S. Geological Survey (USGS) reports that 53% of all of the fresh, surface water withdrawn from the environment for human use in 2005 went to operating our thirsty electrical grid. Water behind dams is not included in USGS numbers. So, while all other sectors of society are reducing per capita water use and overall water diversion rates, the electrical industry is just getting started.

A newly released report by the River network (‘Burning our rivers: The water
footprint of electricity) is a snapshot of the current water impacts of electrical production and an introduction to the choices we face as a nation trying to sustain water and energy in a warming world. Many watersheds in the United States are already running out of water to burn—especially in the Southeast, the Great Lakes and in many parts of the West. Over the last several years, Georgia has experienced water stress because Georgia Power’s two nuclear plants require more water than all of the water consumed by residents of downtown Atlanta, Augusta and Savannah combined. In 2011, the Union of Concerned Scientists (UCS) reported that, in at least 120 vulnerable watersheds across the U.S., power plants are a factor contributing to water stress.

As a nation, we have “water-friendly” energy options. Energy efficiency and water conservation programs are crucial strategies that can help protect our waterways from the impacts of electricity production. Expanding the deployment of wind energy and photovoltaic (PV) solar power could vastly reduce water use conflicts in some regions. And we must change the technologies we use in existing power plants. Energy companies could conserve more water by modernizing “once-through” cooling systems than could be saved by all of our nation’s residential water conservation programs combined.

But instead of moving towards greater water efficiency and use of renewables, we are trending towards an electrical grid that uses more water and is less reliable. Without stronger federal water use standards, thermoelectric plants may continue using water-intensive cooling technologies. At the same time, water uncertainty is causing cities to explore new water sources such as desalination, deeper wells and longer pipelines—all of which would increase electrical use. Across the country “non-conventional” drilling for natural gas has raised concerns about water quality. In Colorado, natural gas “fracking” operations have actually begun to compete with farmers for water. The water footprint of coal-fired power plants will only increase with new carbon capture and sequestration (CCS) technologies.

Based on the available published water-use information, River Network calculates that in 2009 the water footprint (WF) of U.S. electricity was approximately 42 gallons per kilowatt hour (kWh) produced. (1 –US- gallon is 3.785 liters)

An average U.S. household’s monthly energy use (weighted by cooling technology and fuel mix) requires 40,654 gallons of water, or five times more than the direct residential water use of that same household. This estimate does not include major portions of the lifecycle of electrical production for which we could not find documentation. As the world’s largest electrical consumer, the U.S. needs to consider the sustainability of this course before investing in more water-intensive electrical infrastructure.

Today, our thirsty electric grid carries pollutants into our rivers and causes algae-blooms and fish kills. But, there are other paths. According to River Network calculations, eliminating ‘once-through’ cooling—by itself—could reduce the water footprint of thermoelectricity by more than 2/3rd. Increasing wind and PV solar energy to 40% of the grid would have a similar effect and reduce consumptive water use by 11%. Taken together, these two actions could reduce the water footprint of thermoelectricity by 82% and consumptive water use by 27%. While there are site-specific limitations and trade-offs to consider, our society stands to benefit from a wider discussion of how water saved in the energy sector might be used to meet future needs, grow food or restore fisheries and water quality.

Source: the report ‘Burning our rivers: The water footprint of electricity’ is available at: www.rivernetwork.org/sites/default/files/BurningOurRivers_0.pdf
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Chart 1. Lifecycle Water Use of Electricity (Gallons/MWh)
SELLAFIELD’S GERMAN PU ‘CUT AND PASTED’ TO FRANCE BY UK GOVERNMENT

In a move that overkeys one of the major contractual obligations of Sellafield’s overseas reprocessing customers, the UK’s Department of Energy and Climate Change (DECC) has announced a deal that will see German-owned plutonium already stored at Sellafield transferred into the UK stockpile rather than being repatriated to German utilities as required under the original contracts.

(753.4265) CORE - These contracts, in which customers committed to having their spent nuclear fuel reprocessed in the Thermal Oxide Reprocessing Plant (THORP), specifically required the physical repatriation of recovered plutonium to the country of origin. Such contracts, until now, have been robustly defended by Government as being sacrosanct with no leeway for renegotiation.

In what many will see as a significant U-turn by Government on customers’ obligations, the new deal will inevitably raise questions as to why, with a click of a computer mouse, similar arrangements cannot now be made for other foreign owned materials stockpiled at Sellafield, thus eliminating the need for further contentious shipments of highly radioactive materials to be undertaken to overseas customers. These stockpiled materials include the vitrified high level waste (HLW) scheduled for repatriation to Germany and at least 12 tons of Japanese-owned plutonium.

The 13th July 2012 announcement by DECC’s Minister of State for Energy Charles Hendry refers to ‘around 4 tons’ of German plutonium being involved in the deal, some of which had previously been earmarked for conversion to mixed oxide (MOX) fuel in the now defunct Sellafield MOX Plant (SMP). For commercial and security reasons, details of the ‘financial benefits’ to the UK under the new arrangement are not disclosed but are considered by the Government to be sufficient to pay for the estimated costs of managing the plutonium long-term in the UK.

The commercial arrangements of the deal – agreed between the Nuclear Decommissioning Authority (NDA), France’s Areva and the German utilities – will allow the utilities to take ownership of an equivalent tonnage of plutonium held at French reprocessing facilities, and to have MOX fuel fabricated in France for their reactors in advance of Germany’s approaching national reactor shutdown. In a move that clearly recognizes the political, security and logistical problems of physically transporting prime terrorist material to Europe, this paper-swap of German plutonium holdings to the UK stockpile also fits conveniently into the Government and NDA’s ‘preferred option’ of re-using plutonium in the form of MOX fuel, even though the NDA appears to be having second thoughts with its belated appraisal of GE Hitachi’s PRISM fast breeder reactor to consume the plutonium as an alternative to its reuse as MOX fuel.

The new deal hastens the end the German utilities’ less than happy experience of dealing with Sellafield and THORP. When the plant opened in 1994, Sellafield had secured over 1400 tons of spent fuel reprocessing business from Germany – the plant’s second largest overseas customer.

By 2005 however, when the ban on spent fuel transports from Europe came into force and with some contracts already cancelled, a total of just 850 tons of German spent fuel had actually been delivered to Sellafield. Originally scheduled for completion by 2010, some of this spent fuel still awaits reprocessing today. With other European customers, German utilities have in the past voiced their frustration at Sellafield’s inability to make THORP work properly and vented their anger at the additional reprocessing costs they consider to have been unfairly passed on to them over the years.

Whilst DECC’s announcement does not make it clear whether the ‘around 4 tons’ swapped under the new deal accounts for Sellafield’s total holdings of German plutonium, figures from international sources suggests that it does not. They show, for example, that the reprocessing at THORP of 850 tons of German spent nuclear fuel would have resulted in a total of just over 7 tons of plutonium being recovered - including at least 4.5 tons of fissile material. Of this 7-ton total, a small quantity will already have been returned to German customers via a shipment of 4 MOX fuel assemblies from Sellafield in 1996 containing 120kg plutonium, and a further shipment of 16 MOX fuel assemblies - expected to be made in the near future - containing around 450kg of plutonium.

The former MOX was fabricated at Sellafield’s MOX Demonstration Facility (MDF – the forerunner to SMP) and the latter at SMP.

Further, in May 2008, an estimated 300kg of plutonium (in dioxide powder form) was shipped from Sellafield to France as repayment for French plutonium used in making MOX fuel orders that had been sub-contracted to France by the failing SMP. Of these sub-contracted orders a number are confirmed to have been for German utilities and this 2008 shipment is likely therefore to account for a further amount of plutonium having been repatriated to Germany. At most, this shipment together with the 2 MOX shipments would account for a total of up to 875kg of plutonium having been exported from Sellafield’s 7-ton German stockpile. With a further 4 tons now ‘exported’ under the new deal, there would appear to be at least 2 tons of German-owned plutonium still remaining at Sellafield.

Source: CORE Briefing 2/12, 15 July 2012
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Since 1998 the Nuclear-Free Future Award (NFFA) is an award given to anti-nuclear activists, organizations and communities. The Award annually honours the architects of a nuclear-free planet. The 2012 Nuclear-Free Future Award Recipients come from Japan, France, Germany, Portugal, and Switzerland.

The physicist and former East German civil rights activist is a long-time atomic civil rights activist: for decades he has been a source of dependable data, filtering out the lies and laundered statistics of the nuclear industry. Sebastian Pflugbeil is President of the Gesellschaft fuer Strahlenschutz ("Society for Radiation Protection"), founded in 1991, and the chief editor at Strahlen-Telex.

Special recognition: Susan Boos Editor-in-chief at the Swiss weekly WOZ, Susan Boos is one of the few reliable authorities on nuclear energy in the European media world. Her most recent work, Fukushima lässt grüßen ("Fukushima Sends Greetings"), published by Rotpunktverlag, has won great acclaim.

The 2012 Awards Ceremony, hosted by Verein Dunant2010Plus in cooperation with IPPNW Switzerland, will take place on 29 September 2012 in Heiden, Switzerland.

Source and contact: www.nuclear-free.com

NUCLEAR-FREE FUTURE AWARDS 2012

U.S.: PLANNED LEVY COUNTY REACTORS: OUTSTANDING ISSUES

Intervention in the proposal by Progress Energy Florida to site two reactors in a rural area of Florida, rich in natural freshwater springs that support many threatened and endangered species, has recently become turbo-charged. While only one contention remains from a field of 14, this one is one of the broadest environmental impact issues ever admitted by an Atomic Safety Licensing Board, the body which hears challenges to license action by the US Nuclear Regulatory Commission.

The Levy County Nuclear Power Plant is a proposed nuclear power plant in Levy County, Florida consisting of two Westinghouse AP1000 reactors. Progress Energy Florida in 2006 estimated that the reactors would cost US$5 billion and would commence operation in 2016. But it has become clear that the new Levy County reactors will not start operating for at least another decade, if ever. The utility now estimates that the reactors will cost between US$17 billion and US$22 billion, not counting financing charges and cost overruns.

An area Fund that prefers to remain unnamed offered US$50,000 to the Ecology Party of Florida and Nuclear Information and Resource Service (NIRS) to support legal action against the Levy County proposal. The gift provided for an expert legal team and the retention of three additional technical experts. "We are confident our case will force a wider consideration of the impact of using water to service and cool the splitting atoms than the NRC provides in its very weak Final Environmental Impact Statement," said Mary Olson, Southeast Regional Coordinator for NIRS. The FEIS on the Levy County 1 & 2 plan was published in April and is posted on the NRC website. Selected intervener documents in the Levy challenge are posted on the NIRS website.

In addition to the immediate environmental concerns is the matter of
previous protections that were enacted to preserve the same area. Progress Energy Florida (PEF) and the NRC have ignored restrictions on activities along the Marjorie Harris Carr Greenway - previously, and now again called the Cross Florida Barge Canal by PEF since it wants to reverse the flow of this man-made trough to bring salty water from the Gulf of Mexico to discharge into the fragile Levy terrain via two draft cooling towers.

The intervener’s contention will be heard by the Atomic Safety Licensing Board on paper between now and October 31, and then on Halloween, PEF will defend its plan to split atoms atop some of the most fragile and pristine freshwater is North America.

An outstanding issue for PEF is a seismic analysis in order to respond to the NRC’s Fukushima Request for Additional Information. The two AP1000 units proposed at Levy are already unique since there is no bedrock that can be used to anchor the units, a 30-foot thick ‘mat’ of rolled concrete has been added below each nuclear island; the concept is that in the event of liquefaction during a seismic event, the whole reactor pad would float. It is not clear how the interface with other critical safety equipment would be handled. The new seismic study is due out this month, and could impact the hearing schedule if the results warrant a new contention.

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IN BRIEF

Nuclear activists jailed in Belarus for protesting deal with Russia. One of the few remaining countries that claims the nuclear renaissance is real is Russia. The renaissance is not so real at home, where the number of planned nuclear power stations always looks impressive, but actual construction slows down. So, Russia looks to the outside world to push new reactors. On July 18 in the Belarusian capital, Minsk, the Russian and Belarusian officials signed a general contract on the joint project that envisions Russia’s Rosatom building a 2,400-MW nuclear power plant in the Belarusian town of Ostrovets in Grodno Region. The contract specified start of operation of Ostrovets unit 1 in November 2018 and unit 2 in July 2020. A price tag of US$10 billion was put on the turnkey project to build the two NPP-2006 model VVER-1200 pressurized water reactors and all associated power plant infrastructure.

Several journalists and environmentalists who are critical of the plan wanted to give him a petition. Even before they were on their way to the Russian Embassy in Minsk to deliver the petition, Russian nuclear physicist and journalist Andrey Ozharovsky and his Belarussian colleague and organizer of the petition Tatjana Novikova were arrested. Both were convicted that same day, Ozharovsky was given 10 days in jail and Novikova five days. They were accused of “hooliganism.” The only witnesses called were the police people who arrested them. They said Ozharovsky and Novikova had screamed foul language that was audible way to the Russian Embassy in Minsk to deliver the petition, Russian nuclear physicist and journalist Andrey Ozharovsky and his Belarussian colleague and organizer of the petition Tatjana Novikova were arrested. Both were convicted that same day, Ozharovsky was given 10 days in jail and Novikova five days. They were accused of “hooliganism.” The only witnesses called were the police people who arrested them. They said Ozharovsky and Novikova had screamed foul language that was audible further than 50 meters away. Well, “hooliganism” is the new magic word to persecute unwelcome political activism in current Belarus and Russia, just remember the members of punkgroup Pussy Riot who are facing a 7-year jail sentence for playing an anti-Putin song at the altar of one of Moscow’s main cathedrals. Furthermore, new legislation in Russia oblige nongovernmental groups that receive funding from abroad to register as “foreign agents” or risk heavy fines and jail time.


Remembering Toni Wenisch

We are very sad we have to inform our international friends and contacts that Toni Wenisch passed away after a short severe illness on July 21, much too early at the age of only 61 years.

Toni Wenisch was born in 1950 in the UK, but spent all her life in Vienna. She started to study mathematics at the University of Vienna but switched to the College for Electronic Engineering; she worked 1975-1983 as a measurement technician in the semiconductor laboratory. In 1979 Toni’s daughter Johanna was born.

In 1986 Toni joined the Austrian Institute of Ecology. Shortly after the nuclear disaster at Chernobyl Toni on her own initiative founded the gamma spectroscopy laboratory, to give citizens access to affordable radiation tests; hundreds of food and soil samples were examined. In addition a hot-line free of charge was established to inform people about radiation and its health effects.

She published studies in cooperation with many other experts on most issues, from nuclear waste in Austria, safety at Temelin, Bohunice, Toni contributed to many expert statements in trans-boundary EIA process for nuclear programs. In addition to working as the nuclear expert at the institute she also became the head of the Institute of Ecology in 1996. In her consequent and modest way she steered the team into a sustainable future. The last years she started to phase herself out of managing the institute and looking forward her “retirement”, which would give her more time to work scientifically on her topic; in 2010 she started to work as an independent expert on nuclear safety, energy and environment. She continued to prepare studies on nuclear safety, among the most recent were assessments of NPP Borssele, construction of a new NPP in Belarus, of the Ukrainian safety program and the stress tests. She was one of the few women who worked in the field of risk and technology assessment.

We will miss Toni, many of us in our daily work and life. That way she stays alive in our memories and we carry on with the work she started.

We will miss Toni, many of us in our daily work and life. That way she stays alive in our memories and we carry on with the work she started.
Renewables to rescue Areva? Areva’s renewable energy division contributed positive operating cash flow for the first time in the first half of this year, highlighting the emerging importance of green energy to the French group as it looks to improve its cash position and pursue cost-cutting measures. Revenues from the Renewable Energies division hiked four-fold on the year to EUR253 million (US$308.7 million), on growth in offshore wind, solar and biomass sectors, helping drive up group revenues by 8.3% to EUR4.3 billion. “It’s an encouraging sign because we know that renewable energy can contribute to the cash generation objective that we have in general for the group,” Chief Financial Officer Pierre Aubouin said July 26 at the company’s results presentation. The group has undergone a slim-lining program following costly delays for the construction of third-generation nuclear plants, while the Fukushima nuclear disaster has substantially dented the commercial prospects for nuclear reactor makers. “Ongoing efforts begun in late 2011 to reduce operating costs, with savings measures at the end of June 2012 implemented for nearly 20% of the objective set for the group through 2015, on an annual basis, another 45% of the objective being secured in addition,” chief executive Luc Oursel said. The group, which also suffered from major write-downs on its uranium mining assets, still believes that nuclear is to remain a reliable source of energy on a long term, notably in Asia. Shares in Areva over the past 12 months have lost more than 55% of their value on the worries related to the impact of Fukushima on the group’s outlook, as well as the massive write-down on the mining assets.


Lithuania: Referendum on new nuclear power plant. On July 16, Lithuanian Parliament decided that there will be a referendum about Visaginas Nuclear Power Plant project. Text of the referendum will be: “I approve construction of the new nuclear power plant in Lithuania” Yes/No. Sixty-two lawmakers voted in favour of the opposition proposal to hold the referendum, which will not be binding, in tandem with the Baltic state’s general election on October 14, while 39 were against and 18 abstained. “Visaginas nuclear power plant will be built on Lithuanian land, with increased danger, therefore we must ask the opinion of the Lithuanian people,” said opposition Social Democrat Birute Vesaite. Lithuania’s governing Conservatives opposed the referendum plan, accusing the opposition of simply seeking pre-election political gains. The government will not be bound by the results of the referendum, but the vote may add uncertainty to the already-sluggish nuclear project, which lacks strong support from opposition parties that lead the election polls.

At the end of 2009, Lithuania closed its only nuclear power plant, located near Visaginas in the northeast. The shutdown was one of the terms of Lithuania’s 2004 admission to the European Union. A referendum on extending the old plant until a new one was ready was held alongside the last general election in 2008, but while 89 percent voted in favour, turnout was only 48 percent, rendering it invalid.

Now a new wave of propaganda and information about nuclear power is expected. But it is impossible to speak of a level playing field for pro and anti-nuclear organizations, considering the differences in financial means.

AFR, 16 July 2012

Olkiluoto-3 delayed indefinitely. Finnish electricity company TVO says the Olkiluoto 3 EPR nuclear reactor will not be ready by the latest deadline of 2014 and a new timetable has not yet been set. Olkiluoto 3, originally due to be ready by 2009, is being built by French nuclear company Areva and German engineering giant Siemens. In a statement, TVO said it was “not pleased with the situation” although solutions to various problems were being found one by one and work was “progressing”. It said it was waiting for a new launch date from Areva and Siemens. Work on the site in south-west Finland began in 2005 but has been hit by repeated delays and has run way over budget. TVO has disagreed with the Areva/Siemens consortium over who is responsible for the delays. On July 16, it cited delays in automation system engineering and installation works. The International Chamber of Commerce’s arbitration court is processing the dispute on cost overruns between the consortium and TVO.

A similar project in Flamanville in northern France is itself running four years behind schedule. China looks set to be the first country to operate an EPR reactor with one due to enter service in 2013. China is building two such reactors at Taishan in the south-east of the country with the first due to enter service at the end of next year and the second a year later.

On August 11, people are going to block the roads to Olkiluoto nuclear power plant in Eurajoki. Previous years have seen people blocking the roads using banners, drumming, performances and peaceful civil disobedience.

BBC, 16 July 2012 / Reuters, 16 July 2012 / Olkiluotoblockade2012.wordpress.com

Japan: founding Green Party shows strong anti-nuclear feeling. While a second reactor (Ohi-4) was restarted and resumed supplying to the grid on July 20, anti- nuclear sentiment is still growing. Anti-nuclear campaigners in Japan have launched the country’s first green party. Greens Japan, created by local politicians and activists, hopes to satisfy the legal requirements to become an officially recognised political party in time for the general election, which must be held by next summer but could come much earlier. The party said it would offer voters a viable alternative to the two main parties, the ruling Democratic party of Japan and the minority opposition Liberal democratic party [LDP] both supported the nuclear restart. Akira Miyabe, Greens Japan’s deputy leader, said voters had been deprived of the chance to support a party that puts nuclear abolition and other green policies at the top of its agenda. “We need a party that puts the environment first,” he said at a launch event in Tokyo.

Meanwhile, anti-nuclear protest is continuing. The Friday evening demonstration in Tokyo usually attracts over 100,000 people and a human chain against the Diet building on Sunday July 29 again brought ten of thousands to the streets. In a rare move by a former Japanese prime minister, Yukio Hatoyama joined a anti-nuclear demonstration outside his old office on July 19, another sign that the ruling party he once led is fracturing over energy and other policies. Also in other Japanese cities regularly demonstration take place.

Reuters, 20 & 21 July 2012 / Guardian, 30 July 2012 / Website Metropolitans against nukes www.coalitionagainstnukes.jp
WISE/NIRS NUCLEAR MONITOR

The Nuclear Information & Resource Service was founded in 1978 and is based in Washington, US. The World Information Service on Energy was set up in the same year and houses in Amsterdam, Netherlands. NIRS and WISE Amsterdam joined forces in 2000, creating a worldwide network of information and resource centers for citizens and environmental organizations concerned about nuclear power, radioactive waste, radiation, and sustainable energy issues.

The WISE/NIRS Nuclear Monitor publishes international information in English 20 times a year. A Spanish translation of this newsletter is available on the WISE Amsterdam website (www.antenna.nl/wise/esp). A Russian version is published by WISE Russia and a Ukrainian version is published by WISE Ukraine. The WISE/NIRS Nuclear Monitor can be obtained both on paper and in an email version (pdf format). Old issues are (after two months) available through the WISE Amsterdam homepage: www.antenna.nl/wise.

Receiving the WISE/NIRS Nuclear Monitor

US and Canada based readers should contact NIRS for details of how to receive the Nuclear Monitor (address see page 11). Others receive the Nuclear Monitor through WISE Amsterdam.

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