

# NUCLEAR MONITOR

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## MONITORED THIS ISSUE:

## ROUSSELY REPORT: SAVING FRENCH NUCLEAR INDUSTRY WITH OUTRAGEOUS MEASURES

**After France's failure to win the contract for four nuclear power plants in the United Arab Emirates, President Sarkozy ordered a report on the French nuclear industry. The outline of the Roussely report (named after Francois Roussely, a former EDF president), dated June 16, was made public –in French- by the Elysée Palace on 27 July 2010**

**(715.6078) Sortir du nucléaire** - In the report, author Francois Roussely recognizes the scale of the problems facing the French nuclear industry: lack of export competitiveness, falling domestic load factor, delays and cost overruns in EPR construction projects.

### **French nuclear industry: disastrous economic and industrial results**

The Roussely report recognizes the scale of the setbacks experienced by Areva and EDF at the EPR reactor construction sites in France and Finland: *"the credibility of both the EPR model and the French nuclear industry's ability to build new reactors has been severely eroded by the difficulties encountered at the Finnish construction site of Olkiluoto and at the site of the third tranche of the Flamanville plant."* At fault is the *"complexity of the EPR"* which *"without doubt hinders its construction and consequently impacts on its cost."*

By stating that *"the nuclear industry must become sufficiently competitive to attract private investment"*, Roussely **admits that the nuclear industry has so far never been competitive nor economically efficient**, in contrast with

the claims made by Areva, the merchant of nuclear plants. Roussely points out the inadequate performance of the French nuclear reactors: *"whereas global average nuclear plant availability has significantly increased during the last 15 years, nuclear plant availability in France has seen a marked decrease in the last few years."*

The failure of the EPR is such, according to Roussely, that *"it is the credibility, and therefore the very existence"* of the French nuclear industry which is at stake. In the face of this, Roussely uses all available means to recommend various equally outrageous *"emergency measures"*.

### **Passing the cost onto the consumer and misuse of public funding**

Roussely recommends *"a moderate but regular increase of electricity tariffs, opening the way towards financing the renewal of nuclear installations"*. Is nuclear power too costly? That's no problem, the consumer can pay. By becoming "regular", the tariff increase is unlikely to remain "moderate" for any length of time...

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## **Roussely proposes the diversion of some of the funding available for renewable energy to benefit the nuclear industry.**

The uranium used in nuclear plants is a finite mineral resource and is non-renewable: nuclear power is a fossil energy as much as oil and coal. Yet Roussely suggests *“taking firm political action to ensure that all multilateral funds for renewable energy should also be available to the nuclear industry”*.

## **Savings at the expense of safety**

The Roussely report confirms a dangerous trend: the reduction of safety and security requirements in the face of economic constraints: *“Continually increasing safety requirements cannot be the only rational way forward”*. Roussely calls for the optimal realignment between safety requirements and economic constraints. This politically correct jargon means that safety requirements are governed by the industry’s criteria of profitability and profit. *“Safety indeed, but only if we can afford it!”*

Nuclear energy is not *“attractive enough for private investment”*, so the construction of new reactors is not a foregone conclusion. Roussely recommends an increase in the lifespan of French nuclear power stations to 60 years, when they were designed to operate for 30! The oldest French reactors have already experienced incidents far more numerous than the average across nuclear installations as a whole. To pretend they can operate for another 30 years is therefore a high-risk strategy, totally irresponsible. Several hundred million euros would be needed to repair each reactor, which would still be cheaper than the 5 billion required to (maybe) build an EPR. And how much would a major accident like

Chernobyl cost, in euros and in human lives?

Given the economic constraints, Roussely gives little thought to the appalling working conditions of the 20,000 external workforce employed by 600 subcontracting firms. Last May, eight temporary workers were forced to go on strike at the CEA site at Carradache: they were not being paid and had to buy their own radioactive protection gear! Yet Roussely only proposes a working conditions “charter”, i.e. a non-binding list of commitments left to the goodwill of companies...

## **Gagging a cautious French Safety Authority**

Roussely calls for a reduction in the scope of the Autorité de Sûreté Nucléaire (ASN) in favor of the government: *“the government must define a balanced modus vivendi with the ASN, it must re-establish a sovereignty which it shouldn’t relinquish to an independent authority.”* This is clearly a way to reduce the small margin of autonomy available to the official organization controlling the nuclear industry.

Although very muted, criticisms from the ASN remain an embarrassment for Areva and EDF: *“events with very limited effects [i.e. incidents and design errors documented by the ASN] should not result in undeserved suspicion of [nuclear] technology as a whole.”*

The Roussely report confirms the fact that the government sees the ASN as a useful alibi, a tool to “reassure” the population. Does the French Safety Authority only have authority in name?

## **Making nuclear waste acceptable to the public**

Roussely admits that *“public acceptance*

*[...] is an essential condition for developing the civilian nuclear industry”*. Roussely points out that *“[nuclear waste] is the most convincing argument against nuclear power for 60 to 70% of French people”*.

Yet there is no solution to the serious problem of nuclear waste, some of which remains dangerous for hundreds of thousands of years. Roussely lets slip a telling confession: *“a list of realistic specifications”* is yet to be drawn up for the nuclear waste burial site at Bure, due to become operational in 2015. **So Roussely admits in veiled terms that all the fine words uttered for years by the French National Radioactive Waste Management Agency ANDRA are not “realistic”**.

Thus, one shall not be surprised that Roussely is panicking to such an extent that he addresses all the industry’s players: *“It is now essential that ANDRA determines as a matter of urgency the detailed operational plans being set up for 2015 in relation to the deep disposal centre. To achieve this, it is proposed that ANDRA urgently involves EDF, AREVA and the CEA (French Atomic Energy and Alternative Energies Commission) in defining the best possible specifications for the deep disposal center and its completion.”*

An English translation of the published summary of the Roussely report is available at: <http://www.psr.org/nuclear-bailout/resources/roussely-report-france-nuclear-epr.pdf>

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# OLKILUOTO BLOCKADE

**Saturday August 28 was the day of the first publicly announced blockade of a nuclear site in Finland ever. More than 100 activists from Finland and other countries did several blockades on the roads to the nuclear power plant. While a bigger blockade with picnics, sit-ins and other activities closed the entry to the main access road to the NPP blockading also several times the highway passing this place, smaller action groups showed up at many points on the roads to the power station.**

**(715.6079) Olkiluoto blockade** - The police could not prevent most of the actions, although they closed a huge area of public roads for everyone who was not a resident or a nuclear power plant worker. Even media had no access to that region. However, activists used the forests to reach the forbidden area and successfully blockaded many roads for up to nine hours.

While smaller action groups had spread over the region closed for public by the police for that day and did several blockades with sit-ins and lock-ons, a bigger group of more than 50 activists blockaded the access from the highway E8 to the main road to the nuclear power plant (NPP) Olkiluoto for some 9 hours. In the time between they several times also blockaded the highway for a couple of minutes.

The police had announced a few days before to follow the wishes of TVO (operator of the nuclear power plant) to keep the roads open and allow protest

only besides the streets. Rumors said that (para-)military and special riot police forces were stationed at the plant and in the forests close to the power station. There were also police on the water around the peninsula on which the plant is located, some people reported. Actually, most blockaders just saw a few police units at the main access road junction to the highway and at important junctions of smaller access roads to the plant, where they had street barricades to stop public from reaching this public area.

In Finland's countryside "everyone's right" is ruling - private property owners of land can't prohibit anyone to go to the forests, camp there, have camp fire etc. Only a small circle of a couple of meters around houses are protected against trespassing. Anyway, there are exceptions for capitalist companies (of course), and the nuclear power plant has a security area because of risks of terrorist attacks and whatever. But even they are limited and although a huge

area around Olkiluoto is owned by the atomic industry the prohibited area is small and public is allowed to use the forests very close to the power station.

People made music, had talks with local people, showed banners to the cars on the highway next to the blockade, discussed about nuclear power and chances to fight against it and had picnics, coffee and cakes. Cars leaving the nuclear area were usually allowed to pass the blockade as well as ambulances or other emergency cars. In the beginning the police forced people to let a few trucks pass, too. But later, when the blockade had been completely established and the smaller blockades of other roads were also closing streets, traffic had been stopped here totally. The police arrested 30 activists.

**Source:** Indymedia Germany, 29 August 2010

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## **Uranium: A blessing or a curse? Pan-African trainingsweek in Tanzania, in November**

Africa is the next frontier to meet energy needs. Oil and gas are being exploited as never before, exacerbating conflict in many African nations. At the same time, renewed demand for uranium is being explored on the continent more than at any other time in history. Yet the continent's huge potential for truly renewable energy is not fully being realized.

In the past years WISE has been approached by many civil society groups in different African nations to help develop networks, materials and (ways to develop) strategic campaigning plans and, in general, start helping the ngo's in their efforts to counter the pro-mining agenda. After several successful meetings and trainings in different countries and with different audiences and groups involved, we now have the opportunity to organize a truly Pan-African week for real in-depth trainings and networking/capacity development.

The training will take place in Tanzania, very close to the capital, at the coast. In seven days (November 20 – 27) a group of 30 representatives from 12 different African countries will learn, exchange and practice. Presentations will be given by different experts from Europe, Asia, Africa and the USA, all with a clear aim to educate and learn. The week of training is free for the invited participants from the 12 African countries but is in principal also open for interested activists and campaigners from non-African countries. The costs are 700 euros (plus of course your ticket to Tanzania)

Would you be interested to take part in this unique week, to learn, exchange and get to know the African struggle for environmental justice; contact WISE for more details on the program.

# HAUNTED BY HISTORY: NUCLEAR NEW BUILD IN BRITAIN

## Part 2 The Force of 'Legacy'.

**In January 2008, Gordon Brown's cabinet formally decided to permit private businesses to build new nuclear power stations in England and Wales. Politically, there was nothing surprising about the news. Key decisions had been made well before 2008. Tony Blair, as Prime Minister, had declared for new nuclear as early as July 2004.**

**(715.6080) East Midlands Campaign for Nuclear Disarmament** – (This is the second and last part on the history of new build in Britain. Part 1 was printed in Nuclear Monitor 714, 20 August 2010) a

### New Nuclear and Coalition

The May 2010 election in Britain changed the prospects of building new nuclear power stations significantly. Labour under Blair and Brown favored new nuclear from around 2004-5. This was not shared by the parties that came to form the coalition. The Conservatives changed to conditional support for nuclear only in December 2007. The Liberal Democrats opposed both the replacement of the Trident nuclear weapon system and nuclear new build and went to the electorate on this basis:

'More nuclear power will soak up subsidy, centralize energy production and hinder development of Britain's vast renewable resources. Nuclear has a dirty legacy and increases global security risks. We oppose construction of further nuclear power stations'.

As a result the coalition's statement on nuclear power seems ambiguous – in a country where coalitions are unfamiliar. The parties' positions are recapitulated, the Conservative position being described as 'allowing the replacement of existing power stations provided they are subject to the normal planning process for major projects ... and also provided they receive no public subsidy'. Liberal Democrats agree to allow the government to put a new 'National Planning Statement' to Parliament, where one Liberal Democrat MP may speak against, but the rest must abstain from voting. The issue is not 'a matter of confidence' that can threaten the coalition and its government.

Liberal Democratic opposition is absorbed in a solution similar to Labour's. The joint program insists on 'no public subsidy' without defining what a subsidy is. It promises to modify Labour's changes in the planning process, increasing ministerial powers, abolishing Labour's new quango - the Infrastructure Planning Commission - and strengthening Parliamentary oversight. It implies only the 'replacement' of existing power stations, a retreat from Labour's embrace of whatever 'the market' allows.

The Minister with the new powers is the Secretary of State for Energy and Climate Change, a post now held by Christopher Huhne, a Liberal-Democrat, who was previously an opponent of nuclear power. In the latest Commons debate he reaffirmed coalition policy, insisting that

as an economist, I am skeptical about the economics of nuclear power, but I recognize that it is entirely up to investors to make that decision. If there is no public subsidy and if investors think that it is worth taking the risk, as they increasingly do, looking forward to rising oil and gas prices and a rising carbon price, then they will take those decisions.

Asked to explain why Labour's loan to the Sheffield Forgemasters (to produce large metal vessels for reactors) had been cancelled, he replied that this was a subsidy. Subsidy, he declared, is now impossible for, to quote the Chancellor of the Exchequer, 'there is no money left'. Generally, the Coalition adopts an anti-Keynesian approach to the crisis in state finance caused by rescuing the banking system. It blames Labour for the deficit and is cutting and privatizing public services. It hopes that the private

and the voluntary sectors will fill the gaps in employment and in vital social functions (Cameron's 'Big Society'). This has implications too for financing nuclear revival. The coalition's neoliberal consensus bars open subsidies, it seems, but the underlying instability of the financial system remains and the banks are reluctant to lend.

The companies, however, have been reassured that the government welcomes nuclear power in its energy strategy, although they must submit definite financial and technical programs for the subsequent decommissioning. A new Nuclear National Plan will be submitted 'in the autumn', followed by more 'consultation', and a proposal to Parliament in Spring 2011. It is to be expected that the industry is already lobbying hard, without enjoying perhaps Labour's preferential access. According to the KPMG, one of the Big Four auditors, all that is currently on offer is to fix the carbon floor price and this is insufficient security for investors. RWE, hoping to build in Britain, argues that nuclear should get the same level of public subsidy as renewables, a position also pushed by the CBI, the national employers' organization. This demand comes on top of more hidden subsidies that include fixing the carbon price, indemnity for accident and government finance for legacies of waste and decommissioning. Government is therefore faced with dilemmas. Can it depend on a renewables sector, grossly under-supported in the past and lagging by European standards? Can it make an explicit break from 'no subsidy'? Will nuclear split the coalition? Can government make a secret deal with the industry or can subsidies be further fudged? Will the public stand a hike in energy prices to accommodate nuclear?

The government's difficulties are

increased by the revival of anti-nuclear campaigning after a period of relative quiet, broken mainly by Greenpeace and the Shut Down Sizewell campaign in Suffolk. The need for carbon reduction, and the (usually exaggerated) claims for nuclear on this score, complicated issues for some green activists, while anti-nuclear movements, especially the Campaign for Nuclear Disarmament (CND) has focused on weapons. Latterly, however, issues have been clarified and new local movements have sprung up. These are centred on nuclear waste dumping (e.g. Kings Cliffe Waste Watchers - Northants; Radioactive Landfill No Thanks! - Keekle Head, Cumbria) and new power station sites (e.g. Stop Hinkley; Shut Down Sizewell; BANNG – Bradwell, Essex; Heysham Anti-Nuclear Alliance; Stop Wylfa – Anglesey and a number of movements in Cumbria (Cumbrians Opposed to A Radioactive Environment, Radiation Free Lakeland, Save Kirksanton, Toxic Coast). CND, locally and nationally, increasingly stresses the overlaps between the global proliferation of uranium and plutonium weapons and the civil nuclear cycle and has joined other NGOs in an umbrella group opposing nuclear power. The local movements are also networking through meetings and campaigning and educational websites (e.g. No New Nukes; Energy Fair; Stop Nuclear Power; NuclearSpin). A substantial body of independent expert opinion opposes nuclear new build for health and economic reasons. There are plausible projections of how to meet (reduced) energy needs without nuclear power and convincing arguments for the superior employment impacts of green investment compared with the nuclear industries and the arms trade.

If the new waste dumps and power stations are finally approved they will face non-violent direct action as well as the citizen strategies already being used. Because opportunities for intervening in formal planning processes have been reduced, local non-violent direct action may grow.

### **Legacy Lesson I: Subsidy**

As we have seen, pro-nuclear governments and industry seek to split the awkward past of civil nuclear power off from its future promise and

prospects, repeating an older story about the 'good' and 'bad' atom. The new stations, it is said, will produce less waste and be safer. This splitting of old from new is discursive, with the 'Nuclear Renaissance' presumably contrasting with the Nuclear Dark Ages, but it is also institutional and a matter of balance sheets. The creation of a new public body, the Nuclear Decommissioning Agency (NDA) in April 2005, was a crucial institutional move because it allocated 'legacy waste' and decommissioning to a public balance sheet. Moreover the NDA wields a complicated system of sponsorship, 'parent bodies' and subcontracting that will obscure further subsidies.

Actually the past history of civil nuclear power has effects in the present both as lessons from the past and as material legacies or burdens – as very material ghosts in fact.

The major lesson from the past is that nuclear electricity generation means public subsidy. This arises from the high capital costs of construction and the uncertainty that investors can recoup large loans. The object lesson in the British case was the near insolvency of the monopolistic nuclear energy company British Energy in 2002. This required a major government bail out and led to the creation of the NDA, siphoning off some industry obligations.

The high capital costs arise in large part from the dangers to life on earth from ionizing radiation. Epidemiological research shows that these dangers arise not only from accidents, which can be catastrophic, but also from the routine operation of nuclear installations. For example, the repeated finding of higher rates of childhood leukemia near nuclear installations has been confirmed by the important German KIKK study, large-scale 'hard science' in terms of the discipline. (see Nuclear Monitor 703, 29 January 2010). Regulatory agencies argue that radiation from emissions is 'too low' to affect health, but developments in cellular biology and genetics show that risk levels need to be revised. The science is complex and contested and needs fuller treatment, but, in sum, policy needs to take due account of the effects of 'internal emitters' – particles of radionuclides found inside the body, spread to the

environment from nuclear installations or contained in waste. Omnibus categories like 'low level radiation' or 'low level waste' are unsafe. The way is now open for more adequate explanations of childhood leukemia and other contested findings.

In economic terms, the intense radioactivity of reactor cores demands fortress-like containment and shielding, complex accident prevention measures, close monitoring and protection of workers, rigorous management, well-trained staff and tight regulative surveillance and policing. It is arguable that there should be regular epidemiological checks on surrounding populations. Should accidents or attacks with evil intent occur, damage could be massive, costly, and in many ways irreparable. All this adds to economic risk and pressure on costs. Moreover, especially with privatization, the narrow margin of profitability sets up a dangerous dynamic, a balancing of safety with profit, with companies under pressure to cut costs by reducing safeguards and to campaign for looser safety codes and inspection. Lower tenders may be accepted from less competent subcontractors, with a lowering of knowledge and skill at a time of skill shortages. There is already evidence, in the case of low-level waste, that companies will try to dump on the cheap without adequate engineering. If the new power stations really are safer, they are likely to cost more.

In building power stations, delays, rising costs and reduced ambitions have been commonplace. In the UK this has meant eleven Magnox stations instead of twenty, reduced and slow building of the AGR fleet, one PWR reactor instead of four, one failed fast-breeder reactor only. The last power station built in Britain was the one and only PWR Sizewell B. Costs rose from a budget of £1.69 billion to the eventual cost of £2.5 billion (US\$3.8 bn or 3 bn euro); the design was approved in 1987, generation started in 1995. Areva and Siemens' EPR power station at Olkiluoto, Finland was already more than three years over schedule and 55% over budget in August 2009. In May 2009 the Finnish government's Radiation and Nuclear Safety Authority threatened to halt construction, because of faulty safety systems, lack of expertise in design and

construction and 'evident errors' in building. Costs are high or unpredictable where designs are new or when a design approved in one country encounters a new regulatory regime. Public opposition may also cause delays as at Sizewell. Construction in England and Wales of the AP1000 and the EPR risks these delays and neither design has yet been passed by the Nuclear Installations Inspectorate.

Critics of nuclear power have listed the many forms of indirect subsidy. In Britain, subsidy has also been direct, most clearly since the industry was privatised. From 1990, for example, a nuclear levy was introduced to cover the difference between nuclear and coal-fired generation adding 11% to electricity bills. Intended for a decommissioning fund, the levy was diverted to pay for Sizewell B.

### **More Ghosts in the Material World: Legacy Waste and Decommissioning**

Similar problems arise in waste storage, reprocessing and decommissioning. Since 2005, one public institution, the NDA has inherited these problems. They are also concentrated spatially in a nuclear House of Horrors, the Sellafield site on the Cumbrian coast, home to many ghosts that haunt the nuclear industry today. These include Calder Hall, the first power station built primarily to provide fissile material for nuclear weapons; a plutonium pile at 'Windscale' which caused the most serious nuclear accident in Britain in October 1957; the Magnox plant built to reprocess spent fuel for first generation reactors; the Thorp Reprocessing plant closed because of serious incidents for much of its history; the troubled vitrification plants which prepare high-level waste for long-term storage; the Actinide Removal Plant, source of the radioactive pollution of the Irish Sea; the MOX plant which was supposed to use excess plutonium and natural uranium to create reactor fuel; and a large number of radioactive waste stores. The Drigg low-level waste depository is 6km away.

Sellafield's and the NDA's problems figure in concerned official reports from 1992 to late 2008. The NDA was in a state of administrative disarray by 2008, the critical year for accepting consortia bids for decommissioning and waste

management. By July 2008 42% of budget of the department responsible (then called Business, Environment and Regulatory Reform) was going to the NDA, £15 million (US\$23 million or 18.1 million euro) of it switched from funding for renewables and some even from the wartime military budget. Sub-contracting companies like AMEC complained of 'turbulence', with key NDA executives leaving and staff sent for retraining. Decommissioning started then stopped on key projects, including removing old reactors from sites where new are planned. Several waste projects were also curtailed. Overall, the cost of decommissioning the 19 nuclear plants within NDA's remit has risen steadily from £61 billion to £73bn (January 2008) to £83bn (July 2008) (US\$127.3 bn or 100.4 bn euro), far outstripping any possible earnings.

Apart from military applications, the hope of making money from waste from civil nuclear activity has been disappointed. Vitrification, long-term storage and Thorp's reprocessing have been dogged by breakdowns, broken contracts and financial losses. There is a long history of expert anxiety about safety at Sellafield, about Magnox 'swarf' (which contains plutonium), the 23 separate intermediate-level waste streams, and about contaminated buildings. The storage of large amounts of very radioactive material in liquid form is vulnerable to leakage, earthquakes and sabotage. Clean-up costs at Sellafield are estimated at just over £45.5bn (US\$70 bn or 55 bn euro). The new private managing consortium will surely be back with urgent safety-backed requests for additional public funds.

Meanwhile long-term waste storage is in crisis. Material from decommissioning generations of old plant must go somewhere. For low-level waste, with Drigg almost full, waste disposal companies are looking to 'go nuclear' and use their ordinary hazardous waste landfills. Apart from offers from Cumbria County Council to host waste storage at the cost of £75 million (US\$ 115m or 90.7m euro) compensation from public funds, little progress is being made with vitrification and the building of deep level storage. Generally public opposition to the dumping of waste is growing.

Pro-nuclear advocates argue that the threat of climate chaos and increases of oil and gas price favour nuclear as part of 'the energy mix'. An economic nationalist case for 'energy security' is also argued, yet, in UK today, nuclear means dependence on French, German, American and Spanish companies who can take capital and skills elsewhere. New nuclear will add further accumulations of radioactive plant and waste. Given the geological time-spans involved, nuclear 'clean up' and waste storage maybe problems beyond human capacity to solve. Certainly the technical knowledges, institutional frameworks and longer-term political wisdom do not yet exist. Neoliberal doctrine disallows firm correctives to the short-term competitive interest that rules under capitalist conditions. If new nuclear goes forward, it will add weighty burdens to over-stressed world, while safer green alternatives will be stifled, as nuclear enterprise gobbles up public resources. In the end, the best approach to nuclear electricity generators (or nuclear weapons of course) is simply not to have them.

**Sources** (in addition to those cited in Part 1 in NM 714): Health and Safety Commission, Advisory Committee on the Safety of Nuclear Installations (HMSO 1992); National Audit Office Press Release 30th Jan 2008 (on Decommissioning and the NDA) <http://www.nao.org.uk/pn/07-08/0708238.htm> Internal BERR audit of NDA reported Guardian 24 July 2008; Liberal Democrat Policy Briefing - Climate Change and Energy, May 2010; The Coalition: Our Programme for Government, May 2010; Sunday Telegraph 17 July 2010, reported in NM 714.

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# NUCLEAR ENERGY DECREASES WORLD STABILITY AND INCREASES INEQUALITY

**Jordanians are wondering why the United States is opposing efforts from Jordan to establish a uranium enrichment program. The Nuclear Non-Proliferation Treaty (NPT) and other international accords "guarantee the right of all nations to develop nuclear energy meant for peaceful purposes", which includes uranium enrichment.**

**(715.6081) WISE Amsterdam** - Jordan has huge uranium reserves. The International Atomic Energy Agency (IAEA) has estimated that the country has uranium deposits of nearly 112,000 tons, ranking 11th on the global chart. It has licensed French energy company Areva to extract 2,000 tons of uranium ore annually from its central and southern deserts. A British-Australian company and a Chinese firm are also exploring other regions for deposits.

Jordan Atomic Energy Commission Chairman Khaled Toukan says the country's nuclear project, including uranium enrichment "is not a choice but a national necessity that will guarantee the nation's future."

## **A Jordanian view:**

But the US is opposing uranium enrichment in Jordan. According to the US proposal, Jordan must exchange its uranium for enriched uranium produced in foreign countries, a move that would impose a burdensome expenditure on Jordan. The US is not just trying to impose this restriction on Jordan. In fact,

Washington wants to deprive all Arab states of their national and international right to enrich uranium.

Jordan and the US signed a memorandum of understanding on nuclear cooperation in 2008 that guaranteed Jordan's right to enrich uranium. In the same year, Jordan also entered into talks with two US companies for the construction of its first nuclear power plant, and without consultation with any other Arab country, waived its right to enrichment. Saudi Arabia and Egypt will probably also be forced to accept the same fate. However, the main difference is that those two countries both sit atop vast oil reserves.

Jordan signed a peace treaty with Israel in 1994 and has remained one of Washington's main unwavering allies in the Middle East. It is referred to as a NATO partner. All these concessions should allow the country to demand its right to enrich uranium, as enumerated in international agreements.

One Jordanian official says the real US policy is to ban foreign enrichment and nuclear fuel production. According to this policy, nuclear programs from the Nile to the Euphrates would be required to be dependent on nuclear fuel exporting countries. In the Middle East, only Israel is allowed to enjoy access to the complete nuclear fuel cycle, and the US is opposed to any efforts that could break this monopoly.

What was that again on nuclear power and independence?

At the moment, Jordan needs to import 95% of its oil and gas needs. In 2007, the nation of 7 million people spent US\$3.2 billion to buy oil. This figure swelled to US\$3.9 billion in 2008, which is about 20% of Jordan's gross domestic product. Imagine the possibilities of solar and what that would mean for dependency and the gross domestic product! Because there are (too) many examples that nuclear power does not decrease dependency on oil.

**Source:** Press.tv, 14 August 2010

# MORE PLUTONIUM DESTINED FOR WIPP?

**The Department of Energy (DOE) Savannah River Site in South Carolina is proposing to ship up to six metric tons of surplus plutonium from nuclear bombs to the Waste Isolation Pilot Plant (WIPP) in southeastern New Mexico.**

**(715.6082) CNCS** – Before making the decision to ship surplus plutonium to the WIPP, DOE must provide detailed information about the proposal and consider reasonable alternatives in an environmental impact statement. Public meetings will be held in Carlsbad and Santa Fe late August. The draft statement might be published in 2011 and released for public review, comment and hearings.

In the 1990s, DOE completed two environmental impact statements, but

neither of them proposed that any of the surplus plutonium would be destined for WIPP. They proposed a two-track solution where the plutonium would be immobilized or made into nuclear reactor fuel.

DOE now plans to supplement those statements in order to reconsider what to do with 13 metric tons of surplus plutonium. DOE is proposing that approximately six metric tons could be prepared for disposal at WIPP and is considering how to handle the other

seven metric tons, including through immobilization.

Activists agree that the scope of the new statement must address whether the plutonium will fit into WIPP, which has a capacity for about seven metric tons. Further, it must address why the plutonium should be transported again. Much of the six metric tons was already shipped from the DOE sites at Hanford, Livermore, and Los Alamos to the Savannah River Site. DOE claims that the waste is similar to that at WIPP.

Activists question why the plutonium was not shipped directly to WIPP in the first place.

The Waste Isolation Pilot Plant (WIPP), managed by the Carlsbad Field Office of the U.S. Department of Energy (DOE), is an underground repository for transuranic radioactive waste, or TRU waste, left over from the production of nuclear weapons. WIPP began operations on March 26, 1999 and is located in the remote Chihuahuan Desert of southeastern New Mexico, about 26 miles southeast of Carlsbad. TRU waste is currently stored at 23 locations nationwide. Over WIPP's life

cycle, it is expected to receive about 37,000 shipments.

Tom Clements, with Friends of the Earth, based in South Carolina, said that they support immobilization. One option in the current statement is to fill small cans with plutonium that is mixed with molten glass and high-level waste. When the small cans are cooled, they are then placed inside a much larger canister that is then filled with the molten high-level waste mixture. He said "For safety, security, non-proliferation and cost reasons, DOE should abandon the option of making surplus plutonium into nuclear reactor fuel and instead

vigorously pursue the immobilization option of mixing it back into the high-level waste from which it came."

**Sources:** Factsheet WIPP at [www.spdsupplementaleis.com/WIPPFactsheet.pdf](http://www.spdsupplementaleis.com/WIPPFactsheet.pdf) / CCNS news update 20 August 2010

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## PROLONGING NUCLEAR POWER WILL HINDER RENEWABLES

**A new report has outlined why ending the use of nuclear energy matters for the development of a renewable energy infrastructure. Electricity needs in Germany can entirely be met through renewable energy sources by 2050. The report states that the last nuclear power plant can be removed from the grid in 2023 and the last coal-fired power plant in 2046. Extending the lifespans of nuclear power plants would damage vital investment interests and set back the switch to renewable energy by decades.**

**(715.6083) WISE Amsterdam** - The study, "2050. Die Zukunft der Energie" (2050. The future of Energy, only available in German), concludes that nuclear is incompatible with renewable energy sources (RES) and that nuclear power plant lifetime-extension will seriously hamper RES-development. With a quick phase-out of nuclear and coal, Germany's electricity consumption could be covered 100 percent by RES by 2030. If coal and nuclear is phased out slowly, it will take until 2050.

The author of the study, Professor Dr. Olav Hohmeyer, is member of the German Expert Council for the Environment (SRU), who advises the German Government, and also vice-chairman of IPCCs working group on climate change mitigation. SRU has recently published an analysis, in which it concludes that the potential of renewable energy outweighs the current and future need for electricity in Europe many times.

In the midst of the ongoing debate over whether to extend the lifespan of Germany's 17 nuclear power plants, German Chancellor Angela Merkel's center-right coalition has said it will raise 2.3 billion euro annually from the fuel-rod tax from 2011 as part of its austerity

measures for the coming years. The nuclear tax plan is tied to an ongoing debate about extending the operating lives of nuclear reactors. Above that Merkel said she is in favor of the plant operators making further financial contributions in return for longer reactor operating lives to promote RES.

Germany's nuclear reactor operators -E.ON, RWE, EnBW AG and Vattenfall Europe AG- have warned that the government's plan to tax the fuel could make reactors unprofitable and they were forced to close the power plants (proponents of nuclear power thought that was a stupid threat).

During 2009 four of the 17 nuclear power plants in Germany were out of commission for more than 10 months, and that at times as many as eight of them were out of commission.

On August 30, Angela Merkel, coming off a recent tour of energy facilities around Germany, said in an interview with public broadcaster ARD that "on technical grounds, [an additional] 10 to 15 years is reasonable." In a statement two days earlier, Merkel said renewable energies should supply half of all energy needs by 2050 and that nuclear and coal power would

continue until supplies could be met entirely by clean energy. But that, many say, is a false argument: What is needed is more competition in the field of energy and that will happen if nuclear is phased out and allow investors to install new production capacity.

Electricity in Germany isn't particularly cheap. In theory, the German power market has been liberalized since 1998, but there is little true competition. The four large nuclear energy firms produce around 80 percent of Germany's power. This market dominance keeps consumers from profiting from economically produced nuclear power. If the lifespan of reactors is extended, it will merely cement this dominance – likely leading to higher prices. On the other hand, systematically taking nuclear power plants off the grid would provide openings for potential competitors. Many municipal utilities have already prepared for the nuclear phase-out by investing in renewable energy. Keeping reactors running longer will snuff out their chances before they even get started.

A rapid conversion to renewable energy would have the added benefit of hindering a market-dominating concentration of power production. In the future, electricity creation will be

more decentralized and there will be a greater number of providers. Proper competition ensures lower prices and hinders companies from developing a market monopoly.

The '2050. Future of Energy' report claims extending operational life of nuclear power stations will not be as profitable as expected after all, because energy from renewable sources enjoys legal priority over nuclear and coal power. It is fed into the grid before electricity from non-renewable sources.

"Renewable energies are feeding into the system in a flexible way, depending on weather conditions for example," Bjoern Klusmann, director of Germany's Renewable Energy Association told Deutsche Welle. "Because of the priority given to renewables in the German grid, the conventional power stations, so coal and nuclear and other fossil power stations, have to react in a flexible way to the production from renewables. Nuclear energy is not as flexible as is needed for this future concept of renewable energy being the dominant part in our grid."

As the capacity of electricity from wind or solar sources increases, conventional electricity sources will only be needed to fill in gaps when there is a lack of wind or sun. But it takes about 50 hours to restart a nuclear power plant that has been completely shut down, meaning it would be necessary to keep the plant

running at 50 or 60 percent capacity. Gas powered turbines, however, can be turned on within 20 minutes and can also be run on biogas. Other possibilities to bridge fluctuations in renewable electricity output include the decentralized approach of using micro-power stations or accessing the batteries of electric cars.

It was calculated that if the lifespan of the power plants were increased by 28 years, energy companies will have to come to terms with turning the reactors off some 15,800 times between 2020 and the date when the last plant is shut down. That would cost the operators between 21 and 80 billion euros (US\$26.7 billion to US\$101.7 billion).

So it is clear that the nuclear operators will try very hard lobby vehemently to reverse the law giving electricity from RES priority on the grid. And that would be very bad consequence of lifetime extension and hinder the development of RES enormously. That is one of the reasons for the fact that with a quick phase-out of nuclear and coal, Germany's electricity consumption could be covered 100 percent by RES by 2030. If coal and nuclear is phased out slowly, it will take until 2050.

The debate over extending the running time of Germany's nuclear plants has sparked a deep debate in the German parliament. Merkel said any extension would come in a form that circumvents

Germany's upper house of parliament, the Bundesrat.

However, doubts have been raised by the interior and justice ministries that an extension of more than 10 years could be illegal if it were not approved by the Bundesrat, which is made up of the governments of Germany's 16 states. And the Bundesrat has a SPD/Green Party majority after the May election in North Rhine-Westphalia.

The government now faces resistance to its plans to postpone the phase-out schedule with nine out of 16 German states opposed to them, including Hamburg, Thuringia and Saarland which are led by Merkel's own Christian Democrats. Ministers from both North Rhine-Westphalia and Rhineland-Palatinate have said that they will press for a judicial review in Germany's Constitutional Court, if the government goes ahead without Bundesrat approval. A decision on the policy is expected late September.

**Sources:** FOX Business, 26 August / Deutsche Welle, 26, 28 & 30 August 2010 / Die Zeit, 27 August 2010 / '2050. Die Energie der Zukunft', University of Flensburg, August 2010, available at [www.lichtblick.de/uf/LichtBlick-Zusammenfassung\\_2050\\_Die%20Zukunft%20der%20Energie.pdf](http://www.lichtblick.de/uf/LichtBlick-Zusammenfassung_2050_Die%20Zukunft%20der%20Energie.pdf)

## IN BRIEF

**Doctors against uranium.** The International Physicians for the Prevention of Nuclear War (IPPNW) on September 1 adopted a resolution at its International Council meeting in Basel, Switzerland, calling for a ban on uranium mining and the production of yellowcake (uranium oxide). The resolution described both processes as "irresponsible" and "a grave threat to health and to the environment".

The resolution also describes uranium mining and yellowcake production as a "violation of human rights". The right to life, liberty and security, to physical integrity, self-determination, the protection of human dignity, the right to clean water are just some of the rights that are afflicted by uranium mining and its processes, say the doctors. IPPNW calls for appropriate measures to ban uranium mining worldwide

Although many national branches of the IPPNW network have been campaigning against uranium mining and nuclear energy for many years already it is seen as a major breakthrough that now the international federation has taken a firm position and has committed itself to support campaigns against uranium mining.

**Source and contact:** IPPNW, Anne Tritschler, Tel.: +49 (0) 30-698074-14  
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**Iran: Buser reactor finished after 36 years!** On August 21, Russia started loading fuel into the reactor at Iran's first nuclear power station Bushehr. The Bushehr plant is on the Gulf coast of southwest Iran. It is Iran's first nuclear power plant. Construction of two pressurized water nuclear reactors began in 1974 with the help of German contractor Siemens and French scientists. The Bushehr I reactor was 85 percent complete and the Bushehr II reactor was partially complete prior to the 1979 Iranian Revolution and the fall of the Shah. The project was halted and the site was then damaged during the 1980-88 Iran-Iraq war, and equipment was looted.

The project was later revived with Russian help but construction ran into repeated delays blamed by Russia on problems with receiving payment from Iran. Current plans are for one reactor to be launched. Bushehr will have an operating capacity of 1,000 MW.

**Reuters, 21 August 2010**

**Sudan: 4 reactors in 2030.** Well, if you think you read it all.... Sudan plans to build a four-reactor nuclear power plant to "fill a gap in the energy needs" of Africa's largest country by 2030, Mohamed Ahmed Hassan el-Tayeb, head of Sudan's atomic energy agency, said on August 24. He also said that the International Atomic Energy Agency (IAEA) would help to build a research reactor and power plant for Sudan by providing expert training for staff, fellowships and feasibility studies.

He said Sudan was hoping for "a medium size four-unit power plant with each reactor producing between 300-600 MW per year". El-Tayeb said bidding for equipment and technology could begin in five years time and a further 10 years for construction of the plant, so it could be completed by 2030, costing between US\$3-6 billion.

Currently 20% of the population has access to electricity.

**Reuters, 24 August 2010**

#### **No Nukes Asia Forum in Taiwan**

Activist from Indonesia, Malaysia, Vietnam, Taiwan, Japan, Korea, the Philippines, Thailand and India will hold their (almost) annual meeting in Taipei, from September 18- 22.

NNAF began in 1993 and unites Asian based antinuclear organizations. The forum always combines education and exchange with direct action and media outreach. This year the international delegation will travel to Taiwan's nuclear power station no. 1 and 2 at the northeast coast and nuclear power plant no. 3 at the southeast coast. At the University of the capital Taipei a two-day program will discuss the danger of nuclear power plants in earthquake prone areas, the debate on climate change and the role of nuclear power and the situation in the different countries.

Contact and more information: hsiujung.lee@gmail.com

**Nuclear power: Goal or means?** Vice President Boediono of Indonesia said on August 20, that a proposal to build a nuclear power plant in Indonesia was still on the table although he could not say when or where it may be built. "We will continue trying. Someday, somewhere we will build the nuclear power plant."

More often than not it seems that nuclear power is rather a goal than a means to boil water (because that's all there is to it, or not...?).

**Jakarta Post, 20 August 2010**

**Radioactive boars on the rise in Germany.** Almost a quarter century after the 1986 Chernobyl nuclear meltdown in Ukraine, its fallout is still a hot topic in some German regions, where thousands of boars shot by hunters still turn up with excessive levels of radioactivity and considered potentially dangerous for consumption. In fact, the numbers are higher than ever before. The total compensation the German government paid last year for the discarded contaminated meat shot up to a record sum of 425,000 euro (US\$558,000), from only about 25,000 euro ten years ago, according to the Federal Environment Ministry in Berlin. "The reason is that there are more and more boars in Germany, and more are being shot and hunted, that is why more contaminated meat turns up," spokesman Thomas Hagbeck told The Associated Press. Boars are among the species most susceptible to long-term consequences of the nuclear catastrophe 24 years ago. Unlike other wild game, boars often feed on mushrooms and truffles which tend to store radioactivity and they plow through the contaminated soil with their snouts, experts say.

However, boars are actually the beneficiaries of another ecological crisis — climate change. Central Europe is turning into a land of plenty for the animals, as warmer weather causes beech and oak trees to overproduce seeds and farmers to grow more crops the boars like to feast on such as corn or rape, said Torsten Reinwald of the German Hunting Federation.

"The impact of the Chernobyl fallout in Germany, in general, has decreased," said Florian Emrich, spokesman of the Federal Office for Radiation Protection. For example, radiation has ceased to be a problem on fields cultivated with commercial crops, he said. But forest soil in specific regions that were hit hardest after Chernobyl — parts of Bavaria and Baden-Wuerttemberg in southern Germany — still harbors high amounts of radioactive Cesium-137 which has a half life of roughly 30 years, Emrich said. In fact, the Cesium from the Chernobyl fallout is moving further into the ground and has now reached exactly the layer where the boars' favorite truffles grow. Therefore, the season for such truffles — a variety not eaten by humans — usually means a rising number of radioactive boars.

**AP, 18 August 2010**

**Russian reactor too expensive for Belarus?** Alyaksandr Lukashenko said that Belarus might abandon plans to have its nuclear power plant project built by Russia and financed with a Russian loan, according to BelaPAN. The Belarusian leader said that the signing of an interstate agreement on the project had been postponed once again, and that the government did not reject the possibility of the plant being built by a contractor other than Russia's Atomstroieksport. Belarus chose Russia on the basis of "what they promised to us," Mr. Lukashenko noted. "They urgently demanded from us that they build this plant and then they started putting pressure on us for, I believe, purely subjective reasons. You know what the reasons are," he said.

Russia wanted Belarus to pay "in fact a double price," but Minsk refused, saying that

there had been an agreement that the price would be "the same as in Russia," he said, adding that Belarus had agreed to pay the price at which the last nuclear power plant was built in Russia.

**www.naviny.by, 16 August 2010**

## 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](http://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](http://www.antenna.nl/wise).

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