

NUCLEAR MONITOR

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A PUBLICATION OF WORLD INFORMATION SERVICE ON ENERGY (WISE)
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Editorial

Dear readers of the WISE/NIRS Nuclear Monitor,

In this issue of the Monitor:

- Charly Hultén from WISE Sweden writes about the new Swedish government's energy policies.
- We summarise a court-ordered suspension of work on two reactors in Pakistan.
- Nuclear Monitor editor Jim Green summarises problems and delays with new reactor types – integral fast reactors, compact fusion reactors, and small modular reactors.
- Donnachadh McCarthy, former Deputy Chair of the UK Liberal Democrats, writes about undemocratic collusion between the state and the nuclear industry in the wake of the European Commission decision to approve government subsidies for the Hinkley Point C reactor project.
- Jan Haverkamp writes about the broader implications of the European Commission decision.
- Nico Taylor summarises an interesting and important initiative, the Archive of Nuclear Harm.
- We summarise problems with nuclear safeguards in India.
- We summarise the latest developments with South Africa's nuclear program, in particular the signing of a nuclear cooperation agreement with France.

Feel free to contact us if you have feedback on this issue of the Monitor, or if there are topics you would like to see covered in future issues.

Regards from the editorial team.

Email: monitor@wiseinternational.org

New Swedish government aims for sustainability, nuclear energy in question

Author: *Charly Hultén, WISE Sweden*

NM793.4422 On September 14, Swedish voters threw out a Right-centrist coalition that had been in power for eight years. The Social Democrats (31.0%) find themselves in a weak coalition with the Greens (6.9%), having chosen to exclude the Left (5.7%) from the government. Green Party leader Åsa Romson is Minister for Climate and the Environment and Deputy Prime Minister.



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With less than 40% of the votes in Parliament, the new government faces the prospect of having to negotiate *ad hoc* majorities from issue to issue. The first hurdle, of course, was reaching agreement within the coalition. Non-socialist commentators touted energy policy as 'Mission Impossible' in this regard, even before the election. But to their – and perhaps even many

Social Democrats' – surprise, on October 1 the parties announced that they had reached an agreement.

Up to then, the Greens were very clear on nuclear energy, urging a prompt phase-out – taking as many reactors off-line as possible, as soon as possible. The Social Democrats, however, have been of two minds regarding nuclear. For decades. Especially the party leader, now Prime Minister Stefan Löfven, who formerly headed up Sweden's most powerful union, IF Metall, has been hesitant about any move that might endanger investment in Swedish industry or Swedish jobs. Which, to his mind, a phase-out would do.

Meanwhile, the Social Democratic party congress has taken a stand for sustainability in the energy sector, favoring investment in renewable energy sources and aiming for a phase-out of nuclear when renewables and energy saving measures fill the gap nuclear would leave behind.

The new Social-Democratic Minister for Industry, Mikael Damberg, will head a red-green panel of ministers that will oversee the management of Vattenfall. Damberg has long spoken for the 'sustainability' wing of the party, but in recent weeks he has also characterised Vattenfall's demands on the German government as "reasonable".

The compromise reached between the two parties rests on the "as soon as possible" that unites all three groups, but does not specify either the number of reactors that can be taken off-line or when. Nor does it forbid future 'new build'. What it does contain is this:

- Nuclear energy shall "assume a greater share of its costs to society".
- Reactor safety shall be improved – e.g., cooling mechanisms that are independent of the reactor's status – lessons from Fukushima that are being acted out throughout the EU.
- The surcharge on electricity use, levied to cover the costs of waste management and storage, will be increased (albeit not enough to actually cover costs).
- State-owned Vattenfall has been instructed to suspend immediately all planning for new nuclear reactors – reputed to have cost well over 100 million SEK (US\$13.7m; €10.8m) to date. Instead, the company shall focus on developing renewable energy sources.
- Alongside energy savings, offshore wind and solar power will be stimulated.

There is no parliamentary majority for phasing out nuclear energy. The new government is using its prerogative as owner of Vattenfall to issue a directive to the company. Vattenfall was the only actor in Sweden that actually had plans for 'new build'. Does this mean The End for nuclear power?

It is the first point above that is open to widely ranging interpretations. Put another way, it means an end to at least some of the *de facto* subsidies that nuclear power enjoys. But how far-reaching is the goal? Does it mean, for example, that reactor operators will have to take out liability insurance, like any other risky business? At present they do not.

The compromise has been applauded for its political sophistication. Other than the directive to Vattenfall, there is no fiat, no explicit prohibition of either R&D or investment in nuclear reactors. The 'how many' and 'when' is left to two extraparliamentary institutions: the market, on the one hand, and a new Energy Commission, to be composed of major energy users, providers, authorities and politicians, that will be asked to discuss Sweden's path toward sustainability in the energy sector after 2020.

The principal motive for convening the Energy Commission is the PM's desire to assure the long-term stability of the new energy policy. Uncertainty has been perceived to be the Number One threat to the health of the economy, and a major deterrent to investments in energy saving technologies and a shift to renewable sources.

The glut

The truth is that Swedish nuclear energy is no longer the 'cash cow' that it once was. Sweden produces more electricity than it can use, and the export market is not what it used to be. The glut has depressed prices. The expected expansion of renewables, in combination with energy saving technologies, has dampened enthusiasm for investment in nuclear energy. Just when an ageing reactor park requires massive investment.

Some weeks before the election, Mikael Odenberg, CEO for Svenska Kraftnät (the state-owned power distribution utility), published his view, that there is currently no rational basis for investing in new nuclear capacity. Then, only days before the election, Oskarshamn's Kraftgrupp (OKG) reported an operating loss of 2.5 billion krona (US\$343m; €271m) for their two oldest reactors over the past two years. (Two additional reactors at Ringhals are equally small and old, but their owner, Vattenfall, has not publicly discussed their profitability.)

As for the proposed Energy Commission, the Prime Minister has stated the government's "position at entry" into the discussions: "Nuclear power will be replaced by renewable energy sources and energy savings." The immediate reaction from the most pro-nuclear parties and organisations has been one of shock. Vattenfall's new CEO among them. Energy-intensive industry and IF Metall are up in arms – but will no doubt take part in the discussions once their shock subsides. The Liberal Party leader complains that the outcome of the talks has already been decided and seems disinclined to take part. But the smaller former coalition parties are still in 'campaign mode'. Hopefully, they will get back down to the business of Parliament soon.

So, the situation at present is not entirely clear. The new government has signalled a change of course in the energy sector. Sustainability is the goal. But how long it will take to get the ship on course remains to be seen. The composition of the Energy Commission and its members' willingness to think outside their accustomed boxes will be decisive.

Energy Commission

In connection with the publication of a comprehensive progress report on the attainment of Sweden's



Vattenfall's ageing Ringhals nuclear power plant.

sustainability goals, Erik Brandsma, Director-General of the Swedish Energy Agency, urges broad participation in the planned Energy Commission. In *Dagens Industri* on October 2, Brandsma wrote:

"As for the attainment of our goals, here is where we will stand in 2020:

- *The goal of 50% renewable energy: We'll be at 55%.*
- *The goal of 10% renewable energy in the transport sector: It will actually be 26%, thanks to the use of bio-fuel additives.*
- *The goal of 20% lower energy intensity (energy efficiency measures) since 2008: 19%, but the figure is sensitive to GNP growth and the possible shutdown of a nuclear power reactor before 2020.*
- *The goal of 40% less CO2-emissions (since 1990) – we'll reach this goal, too, with the help of emissions reductions of 40 million tons outside Sweden's borders...*

"Energy is decisive for our competitive strength and quality of life. The challenges will come after 2020. But to

ensure that we can meet these challenges we need, now, to engage in a constructive dialogue on energy systems of the future. We need to move on from a for-or-against debate over individual energy sources [a reference to the bitter legacy of Sweden's referendum on nuclear energy in 1980] and instead consider the whole.

"The whole' implies a program of action that tackles energy efficiency, energy production, storage and distribution (the grid). And all this in an international context. Different groups having an interest in energy – industry, interest groups and politicians – have a lot of ideas about "what others should do", and they voice these ideas in seminars, studies and articles in the media. Now it is time for a constructive dialogue, in which all the participants shoulder a responsibility.

"A new Energy Commission may be a good vehicle for such a discussion. We have the data, but facts and documentation mean nothing unless they are used in constructive dialogue. We all have a common goal: a sustainable energy system for Sweden. This means competitive strength, security and minimal impacts on human beings, the environment and the climate."

Swedish Radiation Safety Authority: Second-rate safety good enough for old reactors

After the multiple meltdowns at Fukushima Dai-ichi in 2011, nuclear safety authorities throughout Europe have reviewed nuclear power plants' ability to withstand "extreme external conditions". In Sweden, the Radiation Safety Authority (SSM) has focused particularly on the need to have independent core cooling systems, i.e., systems that can supply cooling water to the core when existing cooling systems fail and the electricity supply has been cut off. The systems shall have a capacity to operate at least 72 hours and be designed to operate under highly improbable, up to one-in-a-million, conditions. So far, so good.

A memorandum circulated to operators on October 9 requires fully functional independent systems to have been installed in every reactor by 2017. But the memorandum also notes that, in the interval to 2020, SSM will accept so-called "intermediate solutions" which, they admit, may not provide the same level of safety as mandated. They mention mobile on-site backup systems – equipment that can be moved between reactors as needed – as one such solution. (Advantage: they are cheaper. The main drawbacks are three: the time it takes to get them on-site and set up, whether they can be

moved under emergency conditions; and they can only serve one reactor at a time.)

Ironically, SSM finds such second-rate solutions appropriate for reactors that have been in operation longer than they were designed to be and may be expected to be taken offline "shortly after 2020".

This assessment drew immediate fire from Greenpeace Sweden. The organisation has long studied the problems of over-age reactors, and the statistics clearly show aged reactors to be risky business. Sweden has four reactors that are 40+ – two at Oskarshamn, two at Ringhals.

Rather than trying to save reactor owners' money, Greenpeace argues, the regulator should focus on safety. If their owners don't think the old reactors are worth the expense, maybe it's time to shut them down. Moreover, Greenpeace continues, the determination violates the Environmental Code, which requires use of "best available technology" in all aspects of nuclear safety. It is this last point that may well force SSM to think again.

– Charly Hultén, WISE Sweden

Pakistan: Court orders suspension of work on two Karachi reactors

NM793.4423 On October 16, the Pakistan Atomic Energy Commission (PAEC) was ordered by the Sindh High Court to suspend site preparation works for the construction of two Chinese-designed ACP1000 reactors at Karachi. The ruling followed a challenge to the project's compliance with environmental laws. The Court has given the PAEC, the Sindh Environmental Protection Agency (SEPA) and other parties until 11 November to file comments on the petition against SEPA's approval of the project.¹

The petition was filed by human rights activist Sharmeen Obaid Chinoy, physicists Dr Pervez Hoodbhoy and Dr Abdul Hameed Nayyar, and architect Arif Belgaumi.² According to Abdul Sattar Pirzada, counsel representing the petitioners, the Environmental Impact Assessment filed by the PAEC was in violation of the Pakistan Environmental Protection Act. Key problems included the failure to hold any public hearings to take stakeholders' concerns into consideration, and the failure to publicly release relevant information about the project.^{2,3}

In an apparently reference to China–Pakistan nuclear collaboration, the PAEC official in charge of the Karachi reactor project told the press that, “We requested SEPA not to hold a public hearing because of international politics.”⁴

Pervez Hoodbhoy said the PAEC claimed it could not share environmental assessment reports on the project for “national security” reasons, and the Environmental Impact Assessment was approved by unnamed but handpicked persons.^{4,5}

Dr Hoodbhoy wrote on the *Bulletin of the Atomic Scientists*: “Publics indoctrinated in the virtues of nuclear weapons let their nations' atomic energy establishments get away with almost anything. ... Nuclear establishments need not reveal their plans for disaster management, prove these plans' adequacy, develop environmental impact mitigation schemes, or educate the population about radiation hazards. These establishments, operating almost unchallenged, feel little need to make the case for nuclear power over alternative energy technologies. Bureaucracies, shrouded in layer after layer of secrecy and relying on official secrecy acts, can continue to hide from the public gaze their appalling inefficiency and incompetence.”⁴

Citizens raising questions about nuclear safety are frequently labeled agents of foreign powers. Individuals not belonging to the PAEC, or the Pakistan Nuclear Regulatory Agency, are forbidden from attempting to monitor radiation levels near any nuclear facility.⁵

Pirzada said the reactors would be built by the China National Nuclear Corporation on a design has not been operational even in China: “The ACP-1000 reactor so far exists only on paper and in computer programmes and any real life experience, tests and trials ... on the ACP-1000 design will be from operating the reactors in Karachi.”⁶

Other issues raised by various parties include:

- The lacked of infrastructure or preparation for a mass evacuation of inhabitants of Karachi in the event of a nuclear accident.⁷
- Seismic risks have been underestimated.⁵
- Well-armed religious terrorists, often with insider help, have successfully attacked even tightly guarded military institutions. If security forces cannot protect their own bases, it is hard to see how they could successfully defend a nuclear power plant.⁵

A groundbreaking ceremony was held in November 2013 for the construction of two 1100 MW ACP1000 reactors, to be supplied by China National Nuclear Corporation on a turnkey basis. The two reactors, worth US\$4.8 billion (€3.8b) each, are to be funded in part by a US\$6.5 billion (€5.1b) loan from China.^{8,9}

Pakistan operates three small power reactors with a total capacity of 725 MW. Two small reactors (total capacity 600 MW) are under construction. In addition, a military plutonium production reactor is under construction at Khusab.¹⁰

Government and nuclear officials have floated plans to build as many as 32 new power reactors.⁹ Perhaps the strategy is to dangle the prospect of a massive reactor building program in front of international vendors and to let vendor countries do the hard work of overturning international prohibitions against nuclear trade with Pakistan – just as they did with India.

Written by Nuclear Monitor editor Jim Green.

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New reactor types are pie in the sky

Author: Jim Green – Nuclear Monitor editor

NM793.4424 There's an Alice in Wonderland flavour to the nuclear power debate with lobbyists promoting all sorts of non-existent reactor types – an implicit acknowledgement that conventional uranium-fuelled reactors aren't all they're cracked up to be. Some favour non-existent Integral Fast Reactors, others favour non-existent Liquid Fluoride Thorium Reactors, others favour non-existent Pebble Bed Modular Reactors, others favour non-existent fusion reactors, and on it goes.

Two to three decades ago, the nuclear industry promised a new generation of gee-whiz 'Generation IV' reactors in two to three decades. That's what they're still saying now, and that's what they'll be saying two to three decades from now. The Generation IV International Forum website states: "It will take at least two or three decades before the deployment of commercial Gen IV systems. In the meantime, a number of prototypes will need to be built and operated. The Gen IV concepts currently under investigation are not all on the same timeline and some might not even reach the stage of commercial exploitation."¹

Likewise, the World Nuclear Association notes that "progress is seen as slow, and several potential designs have been undergoing evaluation on paper for many years."²

Integral Fast Reactors ... it gets ugly moving from blueprint to backyard

Integral Fast Reactors (IFRs) are a case in point. According to the lobbyists they are ready to roll, will be cheap to build and operate, couldn't be used to feed WMD proliferation, etc. The US and UK governments have been analysing the potential of IFRs. The UK government found that the facilities have not been industrially demonstrated; waste disposal issues remain unresolved and could be further complicated if it is deemed necessary to remove sodium from spent fuel to facilitate disposal; and little could be ascertained about cost since General Electric Hitachi refuses to release estimates of capital and operating costs, saying they are "commercially sensitive".³

The US government has considered the use of IFRs (which it calls Advanced Disposition Reactors – ADR) to manage US plutonium stockpiles and concluded that the ADR approach would be more than twice as expensive as all the other options under consideration; that it would take 18 years to construct an ADR and associated facilities; and that the ADR option is associated with "significant technical risk".⁴

Unsurprisingly, the IFR rhetoric doesn't match the sober assessments of the UK and US governments. As nuclear engineer Dave Lochbaum from the Union of Concerned Scientists puts it: "The IFR looks good on paper. So good, in fact, that we should leave it on paper. For it only gets ugly in moving from blueprint to backyard."

No-one has cracked fusion yet

Lockheed Martin recently claimed that it "is working on a new compact fusion reactor (CFR) that can be developed and deployed in as little as ten years." Lockheed "anticipates being able to produce a prototype in five years" – which is very different from saying that it will actually build a prototype in five years. According to Lockheed's Tom McGuire, "The smaller size will allow us to design, build and test the CFR in less than a year."⁵

Matthew Hole, an academic and Australia's representative on the IAEA International Fusion Research Council, wrote in an October 7 article⁶:

"Aerospace giant Lockheed Martin's announcement this week that it could make small-scale nuclear fusion power a reality in the next decade has understandably generated excitement in the media. Physicists, however, aren't getting their hopes up just yet. ...

"Lockheed Martin claims that its technology development offshoot, Skunk Works, is working on a new compact fusion reactor that can be developed and deployed in as little as ten years. The only technical details it provided are that it is a "high beta" device (meaning that it produces a high plasma pressure for a relatively weak magnetic field pressure), and that it is sufficiently small to be able to power flight and vehicles.

"This isn't enough information to substantiate a credible program of research into the development of fusion power, or a credible claim for the delivery of a revolutionary power source in the next decade. ... Lockheed Martin will need to show a lot more research evidence that it can do better than multinational collaborative projects like ITER. So far, its lack of willingness to engage with the scientific community suggests that it may be more interested in media attention than scientific development."

The World Nuclear Association (WNA) has also thrown cold water on Lockheed's claims.⁷ The 'compact fusion reactor' concept remains "undemonstrated", the WNA notes. Moreover, Lockheed has itself acknowledged that it is "searching for partners" to help advance the technology.

Small Modular Reactors ... a new occupant in the graveyard of the 'nuclear renaissance'

The Energy Green Paper recently released by the Australian government is typical of the small-is-beautiful rhetoric: "The main development in technology since 2006 has been further work on Small Modular Reactors (SMRs). SMRs have the potential to be flexibly deployed, as they are a simpler 'plug-in' technology that does not require the same level of operating skills and access to water as traditional, large reactors."⁸

The rhetoric doesn't match reality. Interest in SMRs is on the wane. Thus Thomas W. Overton, associate editor of POWER magazine, wrote in a recent article: "At the

graveyard wherein resides the “nuclear renaissance” of the 2000s, a new occupant appears to be moving in: the small modular reactor (SMR). ... Over the past year, the SMR industry has been bumping up against an uncomfortable and not-entirely-unpredictable problem: It appears that no one actually wants to buy one.”⁹

Dr Mark Cooper, Senior Fellow for Economic Analysis at the Institute for Energy and the Environment, Vermont Law School, notes that two US corporations are pulling out of SMR development because they cannot find customers (Westinghouse) or major investors (Babcock and Wilcox). Cooper points to some economic constraints: “SMR technology will suffer disproportionately from material cost increases because they use more material per MW of capacity. Higher costs will result from: lost economies of scale; higher operating costs; and higher decommissioning costs. Cost estimates that assume quick design approval and deployment are certain to prove to be wildly optimistic.”¹⁰

Westinghouse CEO Danny Roderick said in January: “The problem I have with SMRs is not the technology, it’s not the deployment – it’s that there’s no customers.”¹¹ Westinghouse is looking to triple its decommissioning business. “We see this as a \$1 billion-per-year business for us,” Roderick said. With the world’s fleet of mostly middle-aged reactors inexorably becoming a fleet of mostly ageing, decrepit reactors, Westinghouse is getting ahead of the game.

Academics M.V. Ramana and Zia Mian state in their detailed analysis of SMRs: “Proponents of the development and large scale deployment of small modular reactors suggest that this approach to nuclear power technology and fuel cycles can resolve the four key problems facing nuclear power today: costs, safety, waste, and proliferation. Nuclear developers and vendors seek to encode as many if not all of these priorities into the designs of their specific nuclear reactor. The technical reality, however, is that each of these priorities can drive the requirements on the reactor design in different, sometimes opposing, directions. Of the different major SMR designs under development, it seems none meets all four of these



World Nuclear Association illustration of a futuristic nuclear power plant.

challenges simultaneously. In most, if not all designs, it is likely that addressing one of the four problems will involve choices that make one or more of the other problems worse.”¹²

Likewise, Kennette Benedict, Executive Director of the *Bulletin of the Atomic Scientists*, states: “Small modular nuclear reactors may be attractive, but they will not, in themselves, offer satisfactory solutions to the most pressing problems of nuclear energy: high cost, safety, and weapons proliferation.”¹³

Some SMR R&D work continues but it all seems to be leading to the conclusions mentioned above. Argentina is ahead of the rest, with construction underway on a 27 MWe reactor – but the cost equates to an astronomical US\$15.2 billion (€12b) per 1000 MWe.¹⁴ And that cost would be greater still if not for Argentina’s expertise and experience with reactor construction – a legacy of its covert weapons program from the 1960s to the early 1980s.

So work continues on SMRs but the writing’s on the wall and it’s time for the nuclear lobby to come up with another gee-whiz next-gen fail-safe reactor type to promote – perhaps a giant fusion reactor located out of harm’s way, 150 million kilometres from Earth.

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Nuclear power trumps democracy

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NM793.4425 Why is our democracy failing to tackle the horrific urgency of the climate crisis and the decimation of our eco-systems? And why are all the main political parties betting the farm on nuclear power in spite of its madhouse economics – and against all their promises to either oppose nuclear power altogether, or to refuse subsidies for it?

In my new book, 'The Prostitute State – How Britain's Democracy Has Been Bought', I set out my view that there is a single problem at the root of our nation's difficulties. A corporate elite have hijacked the pillars of Britain's democracy. The production of thought, the dissemination of thought, the implementation of thought and the wealth arising from those thoughts, are now controlled by a tiny, staggeringly rich elite.

As a result the UK is no longer a functioning democracy but has become a 'Prostitute State' built on four pillars: a corrupted political system, a prostituted media, a perverted academia and a thieving tax-haven system.

This has disastrously resulted in a flood of wealth from the poor and middle classes to the top 1%. This stolen wealth is built on the destruction of the planet's ecosystems, which are essential for humanity's survival.

Nuclear power defeats democracy

The reversal of government policy on nuclear power is a classic example of how the Prostitute State trumps democracy. Betrayed environmental activists must understand that – notwithstanding the noble form of democratic structures – what they are really up against is a corrupt corporate state.

The concept of lobbying is reasonably well known, but few of us understand how far lobbying has penetrated and hijacked the political parties themselves.

For example, most people are perplexed at how the nuclear industry managed to persuade the UK's previous Labour government to build a fleet of hugely expensive experimental nuclear power stations on land prone to flooding from rising sea levels.

They also struggle to comprehend and why Labour's shadow energy and climate change minister, Caroline Flint MP, having stated that she would only support nuclear power if built without public subsidies, now supports the £15–20 billion subsidy package for Hinkley C nuclear power station

Labour managed this policy U-Turn despite the Three Mile Island, Chernobyl and Fukushima nuclear catastrophes; the failure to find safe waste-disposal sites capable of protecting radioactive waste for over 100,000 years; and insurance companies' point blank refusal to provide nuclear accident insurance.

It's the money, stupid

My simple answer is that the nuclear industry has poured millions of pounds year after year into a massive political lobbying campaign.

They bought a whole swathe of senior ex-politicians to work as nuclear lobbyists, spent a fortune on trying to manipulate public opinion through media and advertising, and even funded school trips to their nuclear plants.

As they managed to persuade a Labour government to abandon their 1997 election manifesto commitment to oppose new nuclear power stations, it is crucial to understand how deeply the nuclear lobby is embedded in the Labour party.

My personal belief is that a complex web of financial interests ensured that the Labour government served the nuclear industry – no matter what Labour party members or the British public wanted.

Just consider for example the following list of Labour Party politicians:

- Former Energy Minister Brian Wilson became a non-executive director of Amec Nuclear, a client of BNFL, a nuclear operator.
- Former Energy Minister Helen Liddell was hired to provide "*strategic advice*" by the nuclear corporation British Energy.
- Former Secretary of State John Hutton, who as Business Secretary published the government White Paper announcing government plans to build new nuclear stations, was appointed Chair of the Nuclear Industry Association in 2011. He also joined the advisory board of US nuclear corporation Hyperion Power Generation in July 2010.
- Colin Byrne, the Labour Party's former chief press officer, headed up lobbying giant Weber Shandwick's UK arm, which BNFL hired to lobby for new nuclear plants.
- Gordon Brown's brother, Andrew, was nuclear giant EdF's head of media relations in the UK.
- Yvette Cooper was the Planning Minister who introduced fast-track planning for nuclear power stations. Her father was chair of nuclear lobbyists The Nuclear Industry Association and is director of the Nuclear Decommissioning Authority.
- Alan Donnelly, former leader of the Labour MEPs, runs the lobbying company Sovereign Strategy, which represented US nuclear engineering giant Fluor. His website promised "*pathways to the decision makers in national governments*".

- Former Labour Minister Jack Cunningham was legislative chair of the Transatlantic Nuclear Energy Forum, an organisation founded by lobbyist Alan Donnelly to foster “*strong relationships*” between nuclear power companies and governments.
- The Tory Peer Lady Maitland was a paid member of Sovereign Strategy’s board.
- Donnelly funded Labour leadership contender David Miliband’s constituency office refurbishment.
- David Sainsbury, Labour Minister for Science from 1998 to 2006 told the House of Lords that he regarded nuclear power as a form of renewable energy.
- Ed Miliband’s barrister wife Justine Thornton advised EdF Energy on its Development Consent Order for a new nuclear plant at Hinkley Point.

Of course I cannot say that the financial links of any individual with the nuclear industry had any bearing on the party’s change in policy. However this wholesale hiring of senior Labour Party figures by the nuclear lobby may have been influential in the fact that a number of key aims were achieved over the last ten years:

- the reversal of Labour’s commitment to rule out new nuclear power stations.
- Labour ministers’ introduction of a fast-track planning process for new nuclear plants without lengthy inquiries.

The saintly Lib Dems

It is also noteworthy that whilst governments across the world were abandoning nuclear power after the Fukushima disaster, the new Tory / Lib Dem coalition abandoned their manifesto commitments to provide no public subsidy for new nuclear, by guaranteeing multi-billion pound annual subsidies.

The Tory / Lib Dem government also made the taxpayer liable for nuclear disaster costs, after the private insurers refused to do so – as just one catastrophic accident would bankrupt most global insurance companies.

To understand the comparative power of political lobbying versus voting at elections, you need to realise that the final two aims above were achieved despite the Lib Dems having for decades supposedly opposed nuclear power and the Tories having opposed nuclear subsidies in the 2010 general election.

I was never convinced by the Lib Dem leadership’s opposition to nuclear power after it successfully, in the late ‘90s, squashed the adoption in policy papers of the phrase “*a renewable energy economy*” that I had proposed to replace “*a low carbon economy*” which they favoured.

The latter of course allowed the switch to a pro-nuclear policy once the Lib Dems were in government.

The prominent Lib Dem MP Ed Davey stood for election opposing nuclear energy, but as Secretary of State for Energy and Climate Change, he became nuclear power’s chief cheerleader – announcing that the government’s entire industrial strategy was now based on new nuclear!

The UK government is already spending the equivalent of 93% of the Department of Energy and Climate Change’s

entire annual budget on nuclear subsidies! This was achieved despite polls indicating overwhelming support by the public for renewable energy over nuclear power.

Lib Dem nuclear links

Ed Davey’s brother, Henry Davey, works for the global law firm Herbert Smith Freehills which has advised EdF on its purchase of nuclear plants and the development application for a new nuclear plant at Hinkley Point.

Also Lib Dem peer Tim Clement-Jones, Nick Clegg’s Party Treasurer at the last general election and the Party’s spokesman on culture and sport in the House of Lords, is founder and chairman of Global Government Relations, the lobbying arm of the huge multinational law firm DLA Piper, and serves as DLA Piper’s London Managing Partner.

DLA Piper is listed as a member of the Nuclear Industry Association, and boasts of its widespread experience with many nuclear industry companies. According to its website it:

- advised AREVA SA on their investment in New Nuclear Build at Hinkley Point C including the new Contract for Difference regime, waste management strategy and HM Treasury Infrastructure Guarantee Scheme.
- advised Sellafield Limited on all aspects of their waste management and decommissioning programme covering annual capital spend of £1billion.
- is advising the Nuclear Decommissioning Authority on the application of the International Nuclear Liability Conventions in respect of the marine transport of high level radioactive waste from Europe to Japan.
- is advising nuclear supply chain on tendering exercises in support of new nuclear build in the UK.
- is advising Westinghouse, Nuclear Decommissioning Authority, Magnox Limited and International Nuclear Services Limited on all aspects of fuel supply contracts, enrichment, waste management and radioactive transportation in support of activities in UK and globally.

Of course this could all be complete coincidence and we cannot conclude that Lord Clement-Jones had any influence on Lib Dem policy changes as regards nuclear power.

But what we do know is that Davey won the battle at the European Commission to overthrow the Commission’s previous ban on state aid for new nuclear power, following intense political and industry lobbying of the 28 Commissioners.

Thus the Lib Dems’ legacy will be to have thrown open the floodgates to new nuclear power right across Europe, despite their election manifesto having promised to oppose it.

This article is based on an extract from Donnachadh McCarthy’s new book ‘The Prostitute State – How Britain’s Democracy Has Been Bought’. The book is available from:

*Printed copies: www.theprostitutestate.co.uk/buy.html
Ebook: Lulu.com <http://goo.gl/5vUs92>*

The European Commission's nuclear decision threatens our clean energy future

Author: Jan Haverkamp – nuclear expert consultant at Greenpeace Central and Eastern Europe

NM793.4426 The authorisation by the European Commission of massive subsidies for the UK's Hinkley Point C nuclear project is an enormous set-back for the country's development of a sustainable and clean energy future. Not only that, it may well stall the development of renewable energy and energy efficiency in large parts of Europe for the next decade.

Strong nuclear lobbies in countries like Bulgaria, the Czech Republic, Finland, Hungary, Lithuania, Poland, Romania and Slovakia are pinning their hopes for survival on the Hinkley project. The chance to funnel large sums from state coffers and consumers' pockets to these megalomaniac pet projects will cause frantic activity in those countries where old, centralised energy systems are still popular with politicians.

Plans for 19 new nuclear reactors in Europe are based in the east of the European Union. Excluding the 12 reactors planned in the UK, there are none so far in Western Europe. It's hard to believe that even multi-billion euro hand-outs could change the atmosphere in countries like Italy, Spain, Belgium, Germany, Sweden and Switzerland, who are all phasing out their nuclear fleets.

There is a small risk that this will lead to new operating nuclear reactors. Nuclear power has priced itself out of the market in Europe with massive construction costs

(5000 € / kWe or more). It's simply impossible to find sufficient financial backing unless countries are willing to sell themselves out completely to Russia's Rosatom and Vladimir Putin's financial and energy moguls, as Hungary and Finland are currently doing.

More disturbing is the threat of the discussion about energy efficiency and clean (and cheaper) renewable energy sources being pushed into the margins again. Europe needs to start urgently harvesting its abundant reserves of clean energy and plans for new nuclear reactors stand in the way.

The one non-nuclear country in the midst of it all, Austria, has announced it will fight the Commission decision in the European Court. It stands a good chance, because this deal breaks too many EU rules. As my colleague, Greenpeace EU legal adviser Andrea Carta, says: "It's such a distortion of competition rules that the Commission has left itself exposed to legal challenges. There is absolutely no legal, moral or environmental justification in turning taxes into guaranteed profits for a nuclear power company whose only legacy will be a pile of radioactive waste."

Reprinted from: www.greenpeace.org/international/en/news/Blogs/nuclear-reaction/the-european-commissions-nuclear-decision-thr/blog/50928/

South Africa signs nuclear cooperation agreement with France

NM793.4429 Weeks after signing a nuclear cooperation agreement with Russia, South Africa has signed a similar agreement with France on October 14. The agreement covers areas including skills development, localisation of nuclear technology as well as research and development in South Africa.^{1,2}

French nuclear company Areva said it "is ready to support this development, notably through its Generation III+ EPR reactor technology."¹

South Africa's two operating nuclear power plants at Koeberg, operating since the mid-1980s, were built by French company Framatome (now Areva).

The NeutronBytes blog notes: "However, it is unlikely Areva, which has worked hard to land business in South Africa, will see any contracts for new reactors there. The reason is the Russians have offered to finance their deal, and Areva, which just dodged a "junk" rating of its stock, has committed to significantly cut back on new capital expenditures, by over 600 million euros over

the next four years, to retain "investment grade" status. For its part, South Africa does not have the money to finance eight new reactors on its own."³

After earlier reports that Russia and South Africa had struck a US\$50 billion (€39b) deal for eight reactors, fanned by inaccurate and overblown comments by Rosatom and contradicted by South African officials, Rosatom has acknowledged that the bilateral agreement contains "nothing concrete" in terms of actually financing and building reactors.³

It is doubtful whether Rosatom can finance a large reactor program in South Africa given its other commitments. According to the World Nuclear Association, Russia has 14 reactors planned or under construction in export markets for which it is providing at least 80% of the finance: in Belarus, Hungary, India, Bangladesh, Vietnam and Turkey.

South African government officials said nuclear cooperation agreements with other countries – France, China, South Korea, the US and Japan – were likely to follow.²

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See also <http://neutronbytes.com/2014/10/05/areva-stock-facing-junk-status-from-sp-rating/>

Critique of nuclear safeguards in India

NM793.4428 The Australian government's plan to permit uranium sales to India has been subjected to a strong critique by the former Director-General of the Australian Safeguards and Non-Proliferation Office (ASNO), John Carlson.¹

Others to have raised concerns include former Defence Department Secretary Paul Barratt, and Ron Walker, former Chair of the International Atomic Energy Agency (IAEA) Board of Governors. But Carlson's critique carries particular weight given his 21 years experience as the head of Australia's safeguards office. Moreover, Carlson is a strident nuclear advocate who oversaw the weakening of Australia's uranium export safeguards requirements and occasionally indulged in offensive and arguably defamatory attacks on nuclear critics. He's the last person you'd expect to be criticising the India-Australia nuclear cooperation agreement.

Carlson notes that agreement signed by Australia and India in September contains "substantial departures from Australia's current safeguards conditions" which suggest "that Australia may be unable to keep track of what happens to uranium supplied to India."

Carlson writes: "Disturbingly, it is reported that Indian officials will not provide Australia with reports accounting for material under the agreement, and that the Abbott Government seems prepared to waive this requirement for India. ... The reporting procedures are not optional; they are fundamental to Australia's ability to confirm that our safeguards conditions are being met. ... There is absolutely no case to waive them for India."

Carlson notes that the 'administrative arrangement' which will append the nuclear cooperation agreement may be "even more consequential than the agreement itself" as it sets out the working procedures for the agreement. But the public will never get to see the administrative arrangement. And the public will never be able to find out any information about the separation and stockpiling of weapons-useable plutonium in India; or nuclear accounting discrepancies ('Material Unaccounted For'); or even the quantity of Australian uranium (and its by-products) held in India.

The debate has international ramifications. Carlson writes: "Disturbingly, it is reported that Indian officials will not provide Australia with reports accounting for material under the agreement, and that the Abbott Government seems prepared to waive this requirement for India. The same issue has arisen under India's arrangements with the US and Canada. In response, Washington has held firm: the US-India administrative arrangement has been outstanding for several years; reportedly the US is insisting on receiving tracking information and India is refusing. In the case of Canada, the Harper

Government gave in to India, an outcome described as the 'meltdown of Canadian non-proliferation policy'. The Canadian Government refuses to reveal the details of its arrangement. If Australia follows Canada down this path, it will put the wrong kind of pressure on the US, the EU and Japan in their own dealings with India."

He further states: "If India succeeds in delinking foreign-obligated nuclear material from individual bilateral agreements, making it impossible to identify which batch of material is covered by which agreement, then India could work a 'pea and thimble' trick in which no supplier could tell whether their material was being used contrary to bilateral conditions. The mere possibility of this is sufficient to call into question India's commitment to observing bilateral agreements."

There are many concerns other than those noted by Carlson. For example, nuclear material could be diverted and reports falsified with little likelihood that the falsification would be detected.

It seems reasonable that the public should be able to find out how often IAEA safeguards inspections are carried out in India, which facilities have been inspected, and whether any accounting discrepancies were detected. But national governments refuse to supply that information.²

The IAEA used to release aggregate information on the number of inspections carried out across three countries – India, Pakistan and Israel. From 2005-09, 44–50 safeguards inspections were carried out each year in those three countries, and in 2010 the figure was 67 inspections. But the 2011, 2012 and 2013 IAEA Safeguards Statements are silent about the number of inspections carried out.³

Arms Control Today thoroughly dissected the IAEA-India safeguards agreement and noted that: "Reporting provisions ... not contained in India's agreement cover information such as nuclear fuel-cycle-related research and development, nuclear-related imports, and uranium mining. The Indian additional protocol also does not include any complementary access provisions, which provide the IAEA with the potential authority to inspect undeclared facilities."⁴

Even if strict safeguards were in place, uranium sales to India would create an intractable problem: uranium exports freeing up India's domestic reserves for weapons production. K. Subrahmanyam, former head of the India's National Security Advisory Board, has said that: "Given India's uranium ore crunch and the need to build up our minimum credible nuclear deterrent arsenal as fast as possible, it is to India's advantage to categorise as many power reactors as possible as civilian ones to be refuelled by imported uranium and conserve our native uranium fuel for weapons-grade plutonium production."

Written by Nuclear Monitor editor Jim Green.

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Archive of Nuclear Harm

NM793.4427 The Archive of Nuclear Harm¹ collects material on life and death in the nuclear age. Items in the collection explore the full range of harms – emotional, bodily and ecological – that result from nuclear weapons, accidents and waste.

The mission is to create an accessible resource deep into the nuclear future. For instance, the governments of Finland and the United States conceive of nuclear harm in timescales of 100,000 to 1,000,000 years, respectively. This will therefore be a cultural institution like no other.

The collection was established in 2012. It now includes over 1,000 items in its collection, including a small number of items that have been digitized which were previously publicly unavailable such as booklets on medical preparedness for nuclear war, illustrations of the effects of nuclear war, and the personal correspondences of a nuclear planning committee member.

These are the project phases:

Phase 1 – 2012: Launch of the nuclearharm.org online repository to make materials collected either online or in hardcopy accessible to all with an internet connection.

Phase 2 – 2013: nuclearharm.org digitizes and collects over 1,000 items.

Phase 3 – 2015: Relocation of the physical materials in the Archive to Europe, in association with the curator's academic institution. The materials will be accessible to the public by appointment.

Phase 4 – 2020: The opening of a very-long term storage vault. The location will be determined in consultation with the financial sponsor and the Archive's advisors. Discussions are presently underway.

References:

1. www.nuclearharm.org, www.facebook.com/NuclearHarm
2. <https://medium.com/alternative-pathways-to-wmd-free-worlds>
3. <http://nuclearfutures.org/>

The Archive of Nuclear Harm is part of both the Alternative Pathways to WMD-free Worlds² project series at The New School in New York City, and the Nuclear Futures³ partnership initiative. Alternative Pathways to WMD-free Worlds is a series of inter-cultural and interdisciplinary collaborations convened at The New School in NYC. Nuclear Futures is an international collaboration between artists and atomic survivor communities in Australia, Japan, Kazakhstan and the Marshall Islands.

If you have material that may be of interest, please contact:

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An atomic playboy celebrates Bikini tests. November 5, 1946 at the Officers Club of the Army War College in Washington, D.C. US Navy Vice Admiral William H. P. Blandy, his wife, and Rear Admiral Frank J. Lowry share a cake commemorating the completion of a series of nuclear bomb tests on Bikini Atoll in the Pacific. Around this time, William Blandy said: "I am not an atomic playboy, as one of my critics labeled me, exploding these bombs to satisfy my personal whim." *Photo from <http://nuclearharm.org/post/54827499626>*



WISE/NIRS Nuclear Monitor

The World Information Service on Energy (WISE) was founded in 1978 and is based in Amsterdam, the Netherlands.

The Nuclear Information & Resource Service (NIRS) was set up in the same year and is based in Washington D.C., US.

WISE and NIRS joined forces in the year 2000, creating a worldwide network of information and resource centers for citizens and environmental organizations concerned about nuclear power, radioactive waste, proliferation, uranium, and sustainable energy issues.

The WISE / NIRS Nuclear Monitor publishes information in English 20 times a year. The magazine can be obtained both on paper and as an email (pdf format) version. Old issues are (after 2 months) available through the WISE homepage: www.wiseinternational.org

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