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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 incoherent new energy policy agreed to by major political parties.
- Prerna Gupta and Kumar Sundaram discuss a fatal uranium mine accident in India and put the accident in context.
- We summarize three reports on the strong growth of renewable energy sources (and the stagnation of nuclear power).
- We discuss the latest attempts to impose radioactive waste dumps on the homelands of Australia's Aboriginal people.

The Nuclear News section has reports on the aging of nuclear power plants; Dutch MPs urging the closure of Belgian nuclear plants; and the U.S. EPA's proposed huge increase in radioactivity allowed in drinking water.

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

Monitored this issue:

Sweden: Parliamentary parties put differences on nuclear energy aside

Author: *Charly Hultén – WISE Sweden*

NM825.4562 It was rabbit-out-of-the-hat time in the Swedish Parliament last Friday, June 10, when Energy Minister Ibrahim Baylan presented an agreement reached within the Energy Commission he appointed in March 2014. Support for the agreement is broad, with five of the eight parties represented in Parliament pledging to honor it. The remaining three parties represent 24% of the electorate, but they do not form a bloc of any kind.

The compromise consists of nine principal points:

– The goal is for Sweden's electricity supply to be 100% from renewable sources in 2040.

– New nuclear plants may be built at existing reactor sites. The total number of Swedish reactors at any time is limited to 10; they may operate, as needed, beyond 2040.

– The existing system of premiums for electricity generated from renewable energy sources will be extended and expanded by 18 TWh between now and 2030.

– Nuclear operators' liability for accidents will triple, from 4 billion SEK to 12 billion. (The so-called Paris Convention contained such a provision, and it has been on the books in Sweden since 2010. But until

now, it would take effect only when all the signatories have ratified the Convention. Now, Sweden is taking the step, regardless.) Operators will be required to have full insurance coverage.

– The tax on installed reactor capacity, which the government recently raised, will be scrapped entirely within the next two years. (The fiscal deficit will be covered by a 0.04 SEK hike in energy taxes for households and business. Energy intensive industry is exempt.)

– A comprehensive program for more effective and efficient energy use in the decade starting 2020 is to be drawn up. Funding will also be made available to research on innovative technologies to increase the efficiency of renewable energy sources.

– Currently protected stretches of the country's major rivers will continue to be 'untamed' by dams, etc.

– Property taxes on hydroelectric installations will be reduced (gradually, over the next four years) by an amount that corresponds to the removal of the capacity tax on nuclear power.

– Transmission capacity between Sweden and neighboring countries will be expanded.

Plus a couple of recommendations:

– A special program for energy efficiency in power-intensive industries should be introduced.

– The existing fee for connecting marine-based wind power to the national grid should be removed.

Seen from an energy policy perspective, the agreement is rife with inconsistencies. Not least the first two points on the list are hard to reconcile. The only way to understand it is to see it as a way out of a dilemma, one that has paralyzed energy policy since 1980.

That year, an advisory referendum on the future of nuclear energy in Sweden was forced upon the Social Democratic government. The Social Democrats, who had ruled Sweden a half century, had started a massive nuclear energy program without popular support. The Government narrowly avoided defeat by introducing a third alternative to Yes and No, namely, "Yes, but No": the number of nuclear reactors would continue grow, from six to twelve, but all would be 'retired' by 2010. That short-term subterfuge resulted in a generation-long party-political stalemate.

Last week's grand compromise would appear to follow the same sort of 'logic', this time, "No, but Yes".

But this is not about energy policy, it's all about solving a massive parliamentary impasse. The 'genius' of the compromise is that everyone at the table leaves with a trophy, some measure of 'triumph': "We will have 100% renewable energy by 2040, and nuclear operators will pay a greater share of their costs to society," said the negotiator for the Greens. "We've saved nuclear energy," declared the Christian Democrat, referring to the abolition of the capacity tax and the absence of a time-table for phase-out.

Both statements find support in the agreement.

All the parties stress the value of "long-term certainty" and "stability" of energy policy for industrial planning and competitive strength on world markets, and all have agreed to a laissez-faire approach to nuclear energy. Reactor owners, not politicians, will decide when to call it quits. One key factor makes this policy retreat possible: Nuclear energy is not competitive on the electricity market – even with no capacity tax – and no positive trend is foreseeable. There will be no change in E.ON's and Vattenfall's decisions over the past few months to shut down Sweden's four oldest reactors.

In an interview after the press conference announcing the compromise, Minister Baylan was asked how long the market would support nuclear energy in Sweden. He responded, "That's a matter of personal judgment", but then added that, barring unforeseen developments, he believed that Swedish nuclear energy would be a thing of the past in some thirty to forty years.

One big trophy Mr Baylan takes back to his Cabinet colleagues is this: Sweden has never had a government with such weak parliamentary support, 38% in the last general election. The figure shrinks even further when one considers that the nuclear issue splits the Social Democrats; several labor unions are vehemently pro-nuclear. Moreover, Opposition parties have rallied around nuclear, one of the few issues on which they agree. As a consequence, the one issue that might fell the 'Red-Green coalition' has been nuclear energy. The agreement neutralizes that threat – for the time being.

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Accident kills three workers in uranium mine: India's nuclear dream, adivasis' nightmare

Authors: *Prerna Gupta and Kumar Sundaram. Prerna Gupta is a student at the Tata Institute of Social Sciences, Mumbai. Kumar Sundaram is a researcher with the Coalition for Nuclear Disarmament and Peace.*

NM825.4563 On May 28, Sonaram Kisku, a young Adivasi worker aged 24 died unceremoniously in Turamdih Uranium Mine, 6 kms from Jamshedpur in Jharkhand. Sonaram, following his daily schedule entered the deepest level of the 260 meters deep mine at 7 am in the morning. At 11am he got buried with 10 other co-workers under the wet radioactive slurry that they were clearing manually. He died with two other mine workers, S K Singh and Milan Karmakar.

But Sonaram was not supposed to be there. Firstly, because the slurry that he was removing with his co-workers is not supposed to be removed manually. The slurry inside the mine – the stones and waste left after the uranium ore is extracted– still contains radioactive material and is supposed to be removed by automated machines and flushed to the tailing dam outside the mines through huge pipes with the water flowing at high speed. Dr. Surendra Gadekar, a renowned nuclear physicist, explained the process while adding that the Uranium Corporation of India Limited (UCIL) might have resorted to manual clearing of slurry due to shortage of water.

Secondly, because he was a contractual worker and not a permanent employee of the UCIL. Contractual and unskilled labour is generally kept away from the high sensitive zones of the inherently dangerous uranium mining. But UCIL has resorted to the practice of employing contractors which further have subcontractors to get cheap labour on temporary basis.

Xavier Dias, a veteran activist working on adivasi rights in Jharkhand for more than two decades, finds it particularly noteworthy that "one of the employees was the 'Safety Inspector' and the other was a foreman which means that there was some kind of crisis management going on before the accident took place."

Employing contractual workers also helps the UCIL in shifting the responsibility to the contractor. Let alone the wages, even the protective uniform given to the contractual workers by the contractors is qualitatively worse than the one given to the UCIL employees. What is even more shocking are the findings of an RTI report which shows that these contractors do not even have a license.

When asked about employing daily wage workers, Mr. C.S. Sharma, the HR head of the UCIL, said they are employed by a contractor, Mr. Triveni Singh, and not by the UCIL. When asked if it is normal for the UCIL to send contractual workers inside the mine, Mr. Singh retorted – "which goverment department doesn't employ contract workers these days."

After the accident, Jamshedpur-based Occupational Safety and Health Association of Jharkhand (OSHAJ) has demanded a thorough probe, questioning the malpractices by labour contractors and the UCIL management. Mr. Samit Kar of OSHAJ said the UCIL's obsessive focus on cost-cutting has led to a criminal neglect of basic safety practices.

However, the adivasis of Jadugoda have no resort but to work in these dangerous mines. Sonaram belonged to the second generation of Turamdih adivasi community who were promised permanent jobs in UCIL on displacement. However, like Sonaram, many remain in temporary jobs or have no job at all.

The Turamdih mine has witnessed a series of workers' disputes since it came into operation. As recently as 2013, there was a police crackdown on adivasis working inside the mine when they demanded permanent jobs, access to health facilities and other amenities like school for their children.

Perpetual job insecurity and poverty after losing their land and livelihood are, however, not the only threat to the local community here. The link between radiation exposure and cancer has been established indisputably by the vast experiences from Hiroshima to Chernobyl and uranium mining sites across the world.[1] A health survey conducted by Dr. Surendra Gadekar's team around the area of Jadugoda mines shows the harmful consequences of radiation ranging from skin diseases to infertility and cancer. There have been a number of

Tailing pond in Turamdih, which is supposed to be covered, lies open threatening the surrounding population, environment, crops and cattle.

studies establishing the radiation impact of uranium mines Jadugoda on the surrounding population and the environment, including one by the Indian Doctors for Peace and Democracy (IDPD).[2]

A recent study by Adriane Levy of US-based Centre for Public Integrity revealed that dangerous levels of radiation were found in West Bengal, 245 miles downstream of the Subarnarekha river in which the UCIL routinely dumps its waste.[3] But the nuclear establishment remains in denial, terming it a work of foreign hands. However, as recently as last week, the Ministry of Environment & Forests instructed the UCIL to look into the violations of the Forest Conservation Act and the Mining Lease in the uranium extraction in Jharkhand. In 2014, the Ranchi High Court responded to media reports about deformities around Jadugoda by instructing the UCIL to initiate an enquiry.

Ghanshyam Biruli, local activist and founder of Jharkhandi Organisation Against Radiation (JOAR), believes that the newly opened mines of Turamdih, Bandhohurang and Mohuldih are even more dangerous than Jadugoda. Ghanshyam, a native of Jadugoda, has been raising the issue of radiation for more than a decade. He told us "the company employs all methods to keep us away from any public hearing". When in January his son Ashish Biruli tried entering a public hearing, the local UCIL employees deployed at the gate begged him to return for the sake of their jobs.

Sagar Besra confirms the firing of employees from jobs is not an empty threat. He himself was fired from Turamdih mines for raising concerns over negligence of safety norms. He is still fighting in the High Court what he claims to be a fabricated case put against him by the company. Besra is not alone, there are many permanent and temporary workers dismissed by the company using various pretexts and fictitious police charges often leveled by using other hapless adivasis.

Arjun Samad, a fiery young activist respected by the whole community, has been fighting an unequal battle against the company since he was 14 and put in jail on the charge of murder in 2005. Arjun has only recently been acquitted and told us that he has also been offered a bribe and a job to stop voicing his opinion, and called anti-national and even threatened. Dumka Murmu of JOAR says that they are often called traitors, anti-nationals and even Pakistani agents for opposing uranium mining.

In its desperation to obtain uranium for weapons, the government actually reopened the mines in Turamdih, Badhuhurang and Mohuldih, which were dismissed initially for having low-quality ore in early 1980s. The ruling BJP seeks to expand India's nuclear arsenal which would only mean more death and destruction in Jadugoda. Caught in a meaningless choice of joblessness and working in hazardous uranium mines, the adivasis of Jadugoda have to bear the burden of martyrdom in a nation which has consistently undermined their voices. The accident that we saw in Jadugoda was not an aberration. Soon after we came back to Delhi, while PM Narendra Modi was in the U.S. signing the nuclear deal, there was another accident.[4] The four pipes carrying radioactive waste from the Jadugoda mill to the tailing pond leaked and reached a nearby pond where two kids were bathing.

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Renewables 2016: Global Status Report

NM825.4564 REN21 – the Renewable Energy Policy Network for the 21st Century – has released 'Renewables 2016: Global Status Report', the latest edition of a report produced annually since 2005.[1]

REN21 comprises a range of governments, non-governmental organisations, research and academic institutions, international organisations and industry. It is an international non-profit association based at the United Nations Environment Programme in Paris. The latest Global Status Report involved over 500 authors, contributors and reviewers.

The report notes that 2015 was an "extraordinary" year for renewable energy:

"Renewables are now established around the world as mainstream sources of energy. Rapid growth, particularly in the power sector, is driven by several factors, including the improving cost-competiveness of renewable technologies, dedicated policy initiatives, better access to financing, energy security and environmental concerns, growing demand for energy in developing and emerging economies, and the need for access to modern energy. Consequently, new markets for both centralised and distributed renewable energy are emerging in all regions."

On the economics of power sources, the report states:

"Electricity from hydro, geothermal and some biomass power sources has been broadly competitive with power from fossil fuels for some time; in favourable circumstances (i.e., with good resources and a secure regulatory framework), onshore wind and solar PV also are cost-competitive with new fossil capacity, even without accounting for externalities. In 2015 and early 2016, expectations of further cost improvements were made evident by record-low winning bids in power auctions in places ranging from Latin America, to the Middle East and North Africa region, to India."

Facts and figures

According to the REN21 report, an estimated net 147 gigawatts (GW) of renewable power capacity was added in 2015, up 9.7% from the 134 GW added in 2014. That 147 GW net growth is the largest annual increase in capacity ever.

By the end of 2015, renewables produced an estimated 23.7% of global electricity generation (5633 / 23,741 Terrawatt-hours). The 23.7% figure is up from 22.8% the previous year. Hydropower provided about 16.6% (3,940 TWh) of total global electricity generation in 2015 (70% of renewable generation), followed by wind 3.7%, bio-power 2.0%, solar 1.2%, with geothermal, concentrating solar power and ocean power accounting for a combined 0.4%.

Renewable electricity generating capacity (including hydro) increased from 1,701 GW to 1,849 GW in 2015, an increase of 8.7%. Renewable capacity (excluding hydro) increased from 665 GW to 785 GW, an increase of 18%.

Renewables accounted for an estimated 62.5% of net additions to electricity supply in 2015 (renewables 147 GW; coal and gas 82 GW; nuclear 6.5 GW).

Wind and solar PV saw record additions for the second consecutive year, accounting for about 77% of new renewable installations, with hydro accounting for most of the remainder.

The REN21 report doesn't predict future growth of renewables, but the International Energy Agency in an October 2015 report projected 700 GW of new renewable power capacity from 2015−2020, with renewables projected to account for almost two-thirds of new power generation capacity over that period.[2]

Investment: Global investment in renewables also reached a new record level in 2015 in spite of obstacles such as the plunge in fossil fuel prices and the strength of the US dollar (which reduced the dollar value of non-dollar investments). Investments in renewables in 2015 were US$285.9 billion (not including >50 MW hydropower projects), a 5% increase on the previous year. Including investments in > 50 MW hydropower projects, total new investment during 2015 in renewable power and fuels (not including renewable heating and cooling) was at least US$329 billion.

For the first time in history, total investment in renewable power and fuels in developing countries in 2015 exceeded that in developed economies. The developing world, including China, India and Brazil, committed a total of US$156 billion (up 19% compared to 2014). China increased its investment by 17% to US$103 billion in 2015.

Christine Lins, executive secretary of REN21, said: "It clearly shows that the costs have come down so much that the emerging economies are now really focussing on renewables."[3]

By contrast, renewable energy investment in developed countries declined by 8% in 2015, to US$130 billion. The most significant decrease was in Europe (down 21%) while in contrast, renewable energy investment in the U.S. increased by 19% to US$44.1 billion.

Solar accounted for 56% of total new investment in renewable power and fuels, followed by wind 38.3%. All technologies except solar and wind power saw investment decline relative to 2014: biomass and waste-to-energy, small-scale hydropower, biofuels, geothermal energy and ocean energy.

Jobs: Employment in the renewable energy sector (not including large-scale hydropower) increased in 2015 to an estimated 8.1 million jobs (direct and indirect), up from 7.7 million in 2014. Solar PV and biofuels provided the largest numbers of renewable energy jobs. Large-scale hydropower accounted for an additional 1.3 million direct jobs.

Policies: As of December 2015, at least 173 countries had renewable energy targets and an estimated 146 countries had renewable energy support policies, at the national or state/provincial level. And 110 jurisdictions at the national or state/provincial level had enacted feed-in policies, making this the most widely adopted regulatory mechanism to promote renewable power.

Solar PV installations increased 25% in 2015 to reach a record 50 GW, lifting the global total to 227 GW. Solar PV installations in 2015 alone were nearly 10 times the world's cumulative solar PV capacity of a decade earlier. An estimated 22 countries had enough capacity as of December 2015 to meet more than 1% of their electricity demand, with far higher shares in some countries (e.g., Italy 7.8%, Greece 6.5% and Germany 6.4%).

Concentrating solar thermal power (CSP) grew by 10% to reach a total of 4.8 GW installed capacity. Large facilities (greater than 100 MW) are increasingly the norm, as is the incorporation of thermal energy storage and dry cooling technologies.

Wind power: Globally, a record 63 GW of wind power capacity was added in 2015 for a total of about 433 GW. Non-OECD countries were responsible for the majority of installations, led by China, and new markets emerged across Africa, Asia and Latin America. Off-shore wind power grew by an estimated 3.4 GW for a world total exceeding 12 GW. Wind power is playing a major role in meeting electricity demand in an increasing number of countries, including Denmark (42% of demand in 2015), Germany (more than 60% in four states) and Uruguay (15.5%).

Energy efficiency: By the end of 2015, at least 146 countries had enacted some kind of energy efficiency policy, and at least 128 countries had one or more energy efficiency targets. Although global primary energy intensity declined by more than 30% between 1990 and 2014, energy demand has risen steadily.

Fossil fuel subsidies: The REN21 report comments on preferential subsidies for fossil fuels:

"Fossil fuel subsidies have to be phased out, as they distort the true costs of energy and encourage wasteful spending and increased emissions. Fossil fuel subsidies also present a barrier to scaling up clean energy by: decreasing the costs of fossil fuel-powered electricity generation, thereby blunting the cost-competitiveness of renewables; creating an incumbent advantage that strengthens the position of fossil fuels in the electricity system; and creating conditions that favour investments in fossil fuel-based technologies over renewables. Fossil fuel subsidies were estimated to be over US$490 billion in 2014, compared with subsidies of only US$135 billion for renewables."

Nuclear power: REN21 includes representatives from the governments of several countries with nuclear power programs (including Brazil, India, South Africa, UAE, USA). But the balance of forces is anti-nuclear, hence this commentary in the report:

"Policy design should financially discourage investments in fossil fuels and nuclear, while also removing risk from investments in renewable energy. This is crucial for scaling up renewables, which can help close the energy access gap. Although there has been some divestment from fossil fuels and advances in renewable energy investment, fossil fuel and nuclear investments continue to be favoured over clean energy in many instances, particularly when short-term gains are the primary consideration and long-term thinking is discounted. This can occur when politicians think only in terms of the next election cycle, or when companies attempt to provide shareholders with quick returns. Furthermore, fossil fuels are more institutionalised and have long-standing, well-financed lobbies."

Heating and cooling: The REN21 report states:

"Modern renewable energy supplies approximately 8% of final energy for heating and cooling services worldwide in buildings and industry, the vast majority of which is provided by biomass, with smaller contributions from solar thermal and geothermal energy. However, approximately three-quarters of global energy use for heat is fossil fuel-based. Although the total capacity and generation of renewable heating and cooling technologies continued to rise, 2015 saw global growth rates decline, due in part to low global oil prices. Policy support for renewable heating and cooling remained far below support in other sectors."

Transport: The REN21 report states:

"Renewable energy accounted for an estimated 4% of global fuel for road transport in 2015. Liquid biofuels continued to represent the vast majority of the renewable energy contribution to the transport sector. ... Policies to promote the integration of renewable energy and electric vehicles, as well as the use of renewables in aviation, rail or shipping, have been slow to develop."

The report further states:

"More emphasis needs to be placed on strengthening the role of renewable energy in the heating and cooling and transport sectors, as well as on sector coupling. Policy support for the use of renewables in these sectors has advanced at a much slower pace over the past 10 years than it has in the power sector; currently renewable heat obligations exist in only 21 countries and biofuel mandates exist in only 66 countries, compared to 114 countries with renewable energy regulatory policies in the power sector."

IRENA report

A March 2016 report by the International Renewable Energy Agency (IRENA) proposes a doubling of renewable energy generation by 2030. The annual rate of renewable energy deployment would need to increase six-fold and would require an average annual investment of US$770 billion up to 2030.

		2014	2015
INVESTMENT			
New investment (annual) in renewable power and fuels[1]	billion USD	273	**285.9**
POWER			
Renewable power capacity (total, not including hydro)	GW	665	**785**
Renewable power capacity (total, including hydro)	GW	1,701	**1,849**
Hydropower capacity[2]	GW	1,036	**1,064**
Bio-power capacity[3]	GW	101	**106**
Bio-power generation (annual)	TWh	429	**464**
Geothermal power capacity	GW	12.9	**13.2**
Solar PV capacity	GW	177	**227**
Concentrating solar thermal power capacity	GW	4.3	**4.8**
Wind power capacity	GW	370	**433**

The IRENA report outlines key benefits of a doubling of renewable power generation by 2030:

- When coupled with energy efficiency, it would limit average global temperature rise to 2°C above pre-industrial levels;
- It would avoid up to 12 gigatonnes of energy-related CO2 emissions in 2030;
- It would result in 24.4 million jobs in the renewable energy sector by 2030, compared to 9.2 million in 2014;
- It would reduce air pollution enough to save up to 4 million lives per year in 2030;
- It would boost the global GDP by up to US$1.3 trillion.

Bloomberg New Energy Finance report

In its annual *New Energy Outlook* report, Bloomberg New Energy Finance (BNEF) anticipates further sharp reductions in the cost of solar and wind power accompanied by strong growth.[5] The report does not assume any further policy measures post-2020 to speed up decarbonisation; i.e. the strong growth of renewables will be driven primarily by economics.

BNEF says solar energy costs, which have already fallen by 80% since 2008, will fall another 60% by 2040. Solar's "precipitous" cost decline sees it emerge as the least-cost generation technology in most countries by 2030. It will account for 3,700 GW, or 43%, of new power generating capacity added from 2016–40 according to BNEF. Small-scale solar makes up a bit more than a third of this new capacity; the bulk of solar PV will be utility-scale. Overall, solar PV supplies 15% of world electricity by 2040.

The cost of onshore wind power will fall a further 41% by 2040. It will account for more than 20% of new power generating capacity added from 2016–40.

Onshore wind and solar will be the cheapest ways of producing electricity in many countries during the 2020s and in most of the world in the 2030s, the report states.

Wind and solar will account for 64% of the 8,600 GW of new power generating capacity added worldwide over the next 25 years.

By 2040, zero-emission energy sources will make up 60% of installed capacity.

Electricity generation from wind and solar will rise ninefold to 10,591 TWh by 2040, and to 30% of total global electricity generation, from 5% in 2015.

Prices will remain low for coal and gas, because of falling demand, but wind and solar will still be cheaper than these fossil fuels by 2027 in most parts of the world. "This is a tipping point that results in rapid and widespread renewables development," the BNEF report says.

"With the increase in renewable generation comes a fall in the run-hours of coal and gas plants, contributing to the retirement of 819 GW of coal and 691 GW of gas worldwide over the next 25 years," the report states.

The fossil fuel plants remaining on-line will increasingly be needed, along with new flexible capacity, to help meet peak demand, as well as to ramp up when solar comes offline in the evening. The report states: "As natural gas and coal plants are increasingly idled in favor of renewables, their capacity factors will take a big hit, and lifetime cost of those plants goes up. Think of them as the expensive back-up power for cheap renewables."

On top of the US$7.8 trillion forecast in the report, BNEF says the world would need to invest another US$5.3 trillion – or US$212 billion per year – in zero-carbon power by 2040 to prevent CO2 rising above 450 parts per million.

The BNEF report has little to say about nuclear power and it anticipates negligible nuclear growth to 2040.[6] It states that nuclear retirements in Europe to 2025 will slow the decline of fossil fuel generation, but still anticipates renewables generating 70% of Europe's electricity in 2040, up from 32% in 2015.

Once again it's worth noting that the BNEF report does not assume any further policy measures post-2020 to speed the growth of renewables; it isn't underpinned by ideology or wishful thinking. Likewise, the report's projection of long-term nuclear stagnation doesn't reflect any ideological disdain. On the contrary, the Bloomberg Editorial Board published a pro-nuclear editorial on June 9.[7]

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Radioactive waste and the nuclear war on Australia's Aboriginal people

Author: *Jim Green − Nuclear Monitor editor*

NM825.4565 From 1998–2004, the Australian federal government used thuggish, racist tactics in a failed attempt to impose a national nuclear waste dump on Aboriginal land in South Australia. The government's subsequent attempt to impose a dump on Aboriginal land in the Northern Territory was even more thuggish and even more racist. But that also failed. Now the Australian government has embarked on its third attempt to establish a nuclear waste dump and it has decided to once again try to impose a dump on Aboriginal land in South Australia despite clear opposition from Traditional Owners.

The latest proposal is for a dump in the spectacular Flinders Ranges, 400 km north of Adelaide in South Australia, on the land of the Adnyamathanha Aboriginal Traditional Owners.

The proposed dump site is adjacent to the Yappala Indigenous Protected Area (IPA).[1] "The IPA is right on the fence – there's a waterhole that is shared by both properties," says Yappala Station resident and Adnyamathanha Traditional Owner Regina McKenzie. The waterhole – a traditional women's site and healing place – is one of many archeological and culturally significant sites in the area that Traditional Owners have registered with the South Australian government over the past six years.

Two Adnyamathanha associations – Viliwarinha Aboriginal Corporation and the Arnggumthanhna Camp Law Mob – wrote in November 2015 statement:[2]

"The whole area is Adnyamathanha land. It is Arngurla Yarta (spiritual land). The proposed dump site has springs. It also has ancient mound springs. It has countless thousands of Aboriginal artefects. Our ancestors are buried there.

"Hookina creek that runs along the nominated site is a significant women's site. It is a registered heritage site and must be preserved and protected. We are responsible for this area, the land and animals. Through this area are registered cultural heritage sites and places of huge importance to our family, our history and as we plan, our future. It is a very important archeological site for Adnyamathanha Traditional Owners. It is also a significant historical cultural site for non-Aboriginal people.

"We don't want a nuclear waste dump here on our country and worry that if the waste comes here it will harm our environment and muda (our lore, our creation, our everything). We call on the federal government to withdraw the nomination of the site and to show more respect in future."

Regina McKenzie said on ABC television: “Almost every waste dump is near an Aboriginal community. It’s like, yeah, they’re only a bunch of blacks, they’re only a bunch of Abos, so we’ll put it there. Don’t you think that’s a little bit confronting for us when it happens to us all the time? Can’t they just leave my people alone?”[3]

Dumping on South Australia, 1998–2004

This isn’t the first time that Aboriginal people in South Australia have faced the imposition of a nuclear waste dump. In 1998, the federal government announced its intention to build a nuclear waste dump near the rocket and missile testing range at Woomera.

In 2003, the federal government used the Lands Acquisition Act 1989 to seize land for the dump. Native Title rights and interests were extinguished with the stroke of a pen.[4] This took place with no forewarning and no consultation with Aboriginal people.

Leading the battle against the dump were the Kupa Piti Kungka Tjuta, a council of senior Aboriginal women from northern South Australia.[5] Many of the Kungkas personally suffered the impacts of the British nuclear bomb tests at Maralinga and Emu Field in the 1950s.

The Kungkas continued to implore the federal government to ‘get their ears out of their pockets’, and after six years the government did just that. In the lead-up to the 2004 federal election, with the dump issue biting politically, and following a Federal Court ruling that the government had illegally used urgency provisions in the Lands Acquisition Act, the government decided to cut its losses and abandon the dump plan.

The debate over nuclear waste dumping in South Australia overlapped with a controversy over a botched clean-up of the Maralinga nuclear weapons test site in the same state. The federal government’s clean-up of Maralinga in the late 1990s was done on the cheap and many tonnes of plutonium-contaminated debris remain buried in shallow, unlined pits in totally unsuitable geology.[6] Nuclear engineer and whistleblower Alan Parkinson said of the clean-up: “What was done at Maralinga was a cheap and nasty solution that wouldn’t be adopted on white-fellas land.”[7]

Radioactive ransom in the Northern Territory

From 2006 to 2014, successive federal governments attempted to establish a national nuclear waste dump at Muckaty, 110 km north of Tennant Creek in the Northern Territory. A toxic trade-off of basic services for a radioactive waste dump was part of the story from the start.

The nomination of the Muckaty site was made with the promise of $12 million compensation package comprising roads, houses and scholarships. Muckaty Traditional Owner Kylie Sambo objected to this radioactive ransom: “I think that is a very, very stupid idea for us to sell our land to get better education and scholarships. As an Australian we should be already entitled to that.”

While a small group of Aboriginal Traditional Owners supported the dump, a large majority were opposed[8] and some initiated legal action in the Federal Court challenging the nomination of the Muckaty site by the federal government and the Northern Land Council (NLC).[9]

The conservative Coalition federal government passed legislation − the Commonwealth Radioactive Waste Management Act[10] − overriding the Aboriginal Heritage Act, undermining the Aboriginal Land Rights Act, and allowing the imposition of a nuclear dump with no Aboriginal consultation or consent.

The Australian Labor Party voted against the Commonwealth Radioactive Waste Management Act, with Labor parliamentarians describing it as “extreme”, “arrogant”, “draconian”, “sorry”, “sordid”, and “profoundly shameful”. At its 2007 national conference, Labor voted unanimously to repeal the legislation. Yet after the 2007 election, the Labor government passed legislation − the National Radioactive Waste Management Act (NRWMA)[11] − which was almost as draconian and still permitted the imposition of a nuclear dump with no Aboriginal consultation or consent (to be precise, the nomination of a site was not invalidated by a failure to consult or secure consent).[12]

Radioactive racism in Australia is bipartisan − both Labor and the conservative Liberal/National Coalition voted in support of the NRWMA. Shamefully, the NLC supported legislation disempowering the people it is meant to represent.

The Federal Court trial finally began in June 2014. After two weeks of evidence, the NLC gave up and agreed to withdraw the nomination of Muckaty.[13] Victory for the Muckaty mob! The announcement came just days before the NLC and government officials were due to take the stand to face cross-examination. As a result of their surrender, they did not have to face cross-examination in relation to numerous serious accusations raised in the first two weeks of the trial, including claims that the NLC rewrote an anthropologists’ report.[14]

South Australia as the world’s high-level nuclear waste dump

Now Aboriginal people in South Australia face another grave threat: a plan to import 138,000 tonnes of spent nuclear fuel and 390,000 cubic metres of intermediate level waste for storage and disposal as a commercial venture. The plan is being driven by the South Australian government, which last year established a Royal Commission to provide a fig-leaf of independent supporting advice.[15] The Royal Commissioner was (and is) a gullible nuclear advocate and the majority of the members of the ‘Independent Advisory Committee’ were strident nuclear advocates.[16]

The plan to turn South Australia into the world’s nuclear waste dump has been met with near-unanimous opposition from Aboriginal people.[17] The Aboriginal Congress of South Australia, comprising people from

Emus in the Flinders Ranges, near the proposed national dump site.

many Aboriginal groups across the state, endorsed the following resolution at an August 2015 meeting:[18]

"We, as native title representatives of lands and waters of South Australia, stand firmly in opposition to nuclear developments on our country, including all plans to expand uranium mining, and implement nuclear reactors and nuclear waste dumps on our land. ... Many of us suffer to this day the devastating effects of the nuclear industry and continue to be subject to it through extensive uranium mining on our lands and country that has been contaminated. We view any further expansion of industry as an imposition on our country, our people, our environment, our culture and our history. We also view it as a blatant disregard for our rights under various legislative instruments, including the founding principles of this state."

Self-styled pro-nuclear environmentalists

Australia's self-styled 'pro-nuclear environmentalists' – academic Barry Brook, uranium and nuclear industry consultant Ben Heard, and one or two others – have never once voiced concern about attempts to impose nuclear waste dumps on unwilling Aboriginal communities. Their silence suggests they couldn't care less about the racism of the industry they so stridently support.

Silence from Brook and Heard when the federal government was passing laws allowing the imposition of a national nuclear waste dump in the Northern Territory without consultation or consent from Traditional Owners. Worse still, echoing comments[19] from the right-wing Liberal Party, Brook and Heard said the Muckaty site in the Northern Territory was in the "middle of nowhere".[20] From their perspective, perhaps, but for Muckaty Traditional Owners the site is in the middle of their homelands.

Heard's comments about the current proposed dump site on Adnyamathanha land in the Flinders Ranges of South Australia have been just as offensive. He claims there are "no known cultural heritage issues on the site".[21] Try telling that to the Adnyamathanha Traditional Owners who live on Yappala Station, in the Indigenous Protected Area right next to the dump site. So where did Heard get this idea that there are "no known cultural heritage issues on the site"? Not from visiting the site, or speaking to the Traditional Owners. He's just parroting the federal government's racist lies.

Adnyamathanha Traditional Owners Heather Stuart, Enice Marsh and Regina McKenzie

Brook and Heard are also offering up the state of South Australia for an international high-level nuclear waste dump as if it was their personal property.[22] No mention of Aboriginal Traditional Owners or their fierce opposition to such proposals.[17]

The intersection between nuclear waste and radioactive racism isn't unique to Australia, of course. In the U.S., for example, indigenous activist Winona LaDuke sums up the problem: "The greatest minds in the nuclear establishment have been searching for an answer to the radioactive waste problem for fifty years, and they've finally got one: haul it down a dirt road and dump it on an Indian reservation".[23]

The racism associated with nuclear waste dumping in the U.S. is as plain as the nose on James Hansen's face – but he hasn't said a word about it. Nor has the Breakthrough Institute or any of the other self-styled pro-nuclear environmentalists in the U.S.

Take action:

Join the Facebook group:
Fight to Stop Nuclear Waste in the Flinders Ranges, www.facebook.com/groups/941313402573199

The Aboriginal-led Australian Nuclear Free Alliance is asking organizations around the world to endorse a short statement calling on nuclear nations not to dump their nuclear waste in Australia: www.anfa.org.au/sign-the-declaration

Sign the 'No Dump Alliance' statement opposing international high-level nuclear waste dumping in Australia: www.nodumpalliance.org.au

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NUCLEAR NEWS

Nuclear plants face crisis of aging

Climate News Network reports:[1]

The nuclear industry worldwide faces an escalating battle to keep aging reactors running as about a quarter of components and computer systems become obsolete. Life extensions to nuclear plants in Europe and North America are repeatedly being granted by safety regulators. But, according to nuclear plant owners, 25% of parts are now obsolete, so keeping the reactors going is becoming an increasing problem as components wear out.

This is the background to the Nuclear Power Plant Optimisation Summit[2] held in Brussels in early June 2016.

Nuclear power plants built across the world in the 1970s and 80s rely on computer technology and components now long out of production. Replacing worn-out parts is becoming a serious problem, causing an increasing number of unplanned and expensive shutdowns while components are updated.

A survey of those employed in the industry found nine out of 10 people agreeing that the industry needed to improve its efficiency, and 86% thought the age of the plants was having a moderate or significant effect on efficiency.

Three-quarters of the problems were caused by aging equipment, partly because buying replacement parts proved impossible. And finding people with the expertise to operate obsolete equipment is a problem as experienced staff retire.

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Dutch MPs urge closure of Belgian nuclear plants

Dutch lawmakers on June 7 urged the government to push for the closure of two aging nuclear reactors in Belgium.[1] The parliamentarians noted in a resolution – adopted by 78 votes in favour with 72 against – that the Belgian reactors at Tihange and Doel have been subject to security and safety scares and they "call on the Dutch government to join with Germany and Luxembourg and ask the Belgian government to close them."

Earlier this year, Belgium opened up its two nuclear plants to inspections by ministers from Germany, Luxembourg and the Netherlands after a number of problems including leaks, pressure vessel cracks and sabotage.

Many small cracks discovered in 2012 in the reactor pressure vessels of Doel 3 and Tihange 2 caused lengthy closures of those two reactors. They were both restarted at the end of last year, one having to close quickly again, for a few days, after a water leak.

Dutch Environment Minister Melanie Schultz van Haegen visited Doel in January and said at the time that she had "serious concerns" about the aging reactors.[1]

In April, Germany and Luxembourg called for a temporary closure of Doel 3 and Tihange 2.[2] But Belgian officials said the reactors were subjected to the "strictest safety controls" and there was no reason to shut them down.

In April, the German state of North Rhine-Westphalia said it would join a lawsuit brought by the Aachen city region against the Tihange 2 reactor, which is roughly 65 kilometres (about 40 miles) away from the west German city.[3]

The Guardian reported in March 2016 that an alliance of 30 major cities and districts from three countries has joined forces to try to shut down two ageing Belgian nuclear reactors close to their borders. Cologne and Dusseldorf in Germany, Luxembourg City and Maastricht in the Netherlands are among the cities co-funding a lawsuit to close one reactor – Tihange 2 – and calling on the European commission to prepare a separate case at the European court of justice. "More than 30 districts have adopted resolutions to support us, and want to join the lawsuit," said Helmut Echtenberg, mayor of Germany's Greater Aachen region.[4]

Lawyers are already working on a second nuclear lawsuit, which may be filed in Belgium by the Dutch city of Maastricht. The regional governments of North Rhine Westphalia and Rhineland Palatinate are taking separate cases against the reactors to the UN and European commission.[4]

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U.S. EPA proposes huge increase in radioactivity allowed in drinking water

The U.S. EPA has quietly issued proposals to allow radioactive contamination in drinking water at concentrations vastly greater than allowed under the Safe Drinking Water Act. The EPA proposed Protective Action Guides (PAGs) would allow the general population to drinkwater hundreds to thousands of times more radioactive than is now legal.

Nuclear Information and Resource Service, Physicians for Social Responsibility, and Food & Water Watch opposed the proposals in a joint statement.

"Clean Water is essential for health. Just like lead, radiation when ingested in small amounts is very hazardous to our health. It is inconceivable that EPA could now quietly propose allowing enormous increases in radioactive contamination with no action to protect the public, even if concentrations are a thousand times higher than under the Safe Drinking Water Act," said Dr. Catherine Thomasson, Executive Director of Physicians for Social Responsibility.

PAGs apply not just to emergencies such as "dirty bombs," and Fukushima-type nuclear power meltdowns but also to any radiological release for which a protective action may be considered – even a radiopharmaceutical transport spill. The proposed drinking water PAG would apply not to the immediate phase after a release, but rather to the intermediate phase, after the release has been stabilized, and lasting up to several years thereafter.

The current Safe Drinking Water Act limits are based on 4 millirems per year. The PAGs would allow 500 millirems per year for the general population.

Internal EPA documents obtained under the Freedom of Information Act show that the EPA itself concluded that the proposed concentrations "would exceed MCLs [Maximum Contaminant Limits of the Safe Drinking Water Act] by a factor of 100, 1000, and in two instances, 7 million."

Diane D'Arrigo from the Nuclear Information and Resource Service said: "All of this is extraordinary, since EPA has recently accepted the National Academy of Sciences' most current risk estimates for radiation, indicating radiation is considerably more dangerous per unit dose than previously believed. Pushing allowable concentrations of radioactivity in drinking water up orders of magnitude above the longstanding Safe Drinking Water Act levels goes in exactly the opposite direction than the official radiation risk estimates go."

The public has 45 days to comment to the EPA on the Protective Action Guides.

The joint NGO statement has links to the EPA and to the Freedom of Information documents:

www.psr.org/assets/pdfs/epa-radioactivity-in-water.pdf

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

Subscriptions:

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Contact us via:

WISE International
PO Box 59636, 1040 LC Amsterdam, The Netherlands

Web: www.wiseinternational.org

Email: info@wiseinternational.org

Phone: +31 20 6126368

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