

# NUCLEAR MONITOR

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A PUBLICATION OF WORLD INFORMATION SERVICE ON ENERGY (WISE)  
AND THE NUCLEAR INFORMATION & RESOURCE SERVICE (NIRS)



Dear readers of the WISE/NIRS Nuclear Monitor,

In this issue of the Monitor:

- A report on the controversial Australian uranium mining company Paladin Energy, which has gone bankrupt and appointed administrators after failed mining ventures in Africa.
- A report on Paladin Energy's appalling social and environmental record in Africa.
- An update on the Toshiba / Westinghouse crisis.
- Dana Marekova from Bankwatch writes about the recent Meeting of the Parties to the Espoo Convention, which deals with cross-border environmental impacts.

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](mailto:monitor@wiseinternational.org)

## US citizens – help stop a dangerous nuclear bailout!

The US nuclear industry and its political allies are trying to push a dangerous, expensive financial bailout through Congress. And if they can't win a vote on the bill (HR 1551), they may resort to sneaky tricks, like adding the tax breaks to the budget bill or another energy bill. If we can stop them, it could stop new reactors and end the so-called "Nuclear Renaissance" (what we call a "Relapse"), once and for all.

Utilities in Georgia and South Carolina are building four new reactors that are all billions of dollars over budget and years behind schedule. These reactors are so expensive they have bankrupted their manufacturer, Westinghouse, and could be cancelled soon, despite billions of dollars in state and federal subsidies. One of those subsidies – the Nuclear Production Tax Credit – is a tax break that expires in 2020, before any of these nuclear boondoggles are likely to be completed.

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Despite the massive cost of this subsidy – US\$5.2 billion in tax breaks – Senators from Georgia and South Carolina are still trying to pass it. The utilities and Westinghouse are pushing Congress to rush through a bill that would not only eliminate the 2020 expiration date, but give US\$2.6 billion in federal tax credits to tax-exempt state utilities and cooperatives that co-own half of these new reactors. Why? To allow the non-profit utilities to transfer the credits to the for-profit utilities and Westinghouse.

The whole bill amounts to a US\$5 billion bailout to four dirty, dangerous reactors – using a new and still-unproven design – that have already had major construction and manufacturing problems.

Stop this wasteful, dangerous nuclear bailout today! Please contact your Senators today – no more tax breaks for nuclear power! Visit [www.tinyurl.com/stop-bailout](http://www.tinyurl.com/stop-bailout)

– Tim Judson and Mary Olson,  
Nuclear Information & Resource Service

# Paladin Energy goes bust

**Author:** Jim Green – Nuclear Monitor editor

*“It has never been a worse time for uranium miners.” – Alexander Molyneux, CEO of Paladin Energy, October 2016.<sup>1</sup>*

**NM847.4660** Paladin Energy Ltd appointed administrators on July 3 after Electricité de France (EDF) called in a US\$277 million debt that Paladin was unable to pay.<sup>2</sup> Paladin is a uranium mining company based in Perth, Western Australia. The company is 75% owner of the Langer Heinrich uranium mine in Namibia, 85% owner of the Kayelekera uranium mine in Malawi (in care and maintenance since 2014), and it owns sundry ‘nonproducing assets’ in Australia, Canada and Niger.

The administrators, from KPMG, will continue to operate Paladin on a business-as-usual basis until further notice. Paladin said its management and directors “remain committed” to working with the administrators to restructure and recapitalise the company.<sup>2</sup>

Paladin “was formerly a multi-billion-dollar company and was once the best-performed stock in the world” according to *The Australian* newspaper.<sup>3</sup> The company’s share price went from one Australian cent in 2003 to A\$10.80 in 2007, but has fallen more than 200-fold and traded at 4.7 cents before trading was suspended in early June 2017.<sup>4</sup> Paladin had just US\$21.8 million in cash at the end of March 2017.<sup>4</sup> The company’s losses totalled US\$1.9 billion between 1994 and 2014.<sup>5</sup>

Later this year, China National Nuclear Corporation (CNNC), which already owns 25% of the Langer Heinrich mine, may purchase Paladin’s 75% stake. The move comes as a result of CNNC seeking to exercise a debt-default option to acquire the 75% stake. Paladin wanted to challenge CNNC in court, but after consulting with debt holders agreed not to do so due to prohibitive cost.<sup>6</sup> Paladin could gain US\$500 million from the sale but will still be in debt. In addition to the US\$277 million it owes EDF, Paladin owes bondholders US\$372 million.<sup>3</sup>

Assuming the Langer Heinrich sale goes ahead, Paladin will have nothing other than ‘nonproducing assets’ and the Kayelekera mine – which also a nonproducing asset since it is in care and maintenance. So the administrators have very little to work with. Just keeping Kayelekera in care and maintenance costs about US\$10 million per year.<sup>7</sup>

Paladin said in 2014 that its decision to place Kayelekera on care and maintenance “is the latest in a sequence of closures, production suspensions and deferrals of major planned greenfield and brownfield expansions in the uranium sector, including Paladin’s decision in 2012 to suspend evaluation of a major Stage 4 expansion of the Langer Heinrich Mine in Namibia.”<sup>8</sup>

Paladin said in 2015 that a price of about US\$75 per pound would be required for Kayelekera to become economically viable<sup>9</sup> – but that price hasn’t been seen since 2011 and it is more than three times the current spot price and more than double the long-term contract price.<sup>10</sup> Paladin also said that the availability of grid

power supply would be necessary to restart Kayelekera, to replace the existing diesel generators.<sup>9</sup>

## Selling nonproducing assets

Late last year, Paladin was reduced to selling nonproducing assets for a song. Paladin sold a number of Australian uranium exploration projects to Uranium Africa for A\$2.5 million, including Oobagooma in Western Australia and the Angela/Pamela and Bigryli projects in the Northern Territory.<sup>11</sup> Paladin told shareholders that the assets were ‘noncore’ and it was unlikely the company would be in a position to conduct any meaningful work developing the projects over the next decade.<sup>11</sup> The A\$2.5 million did little to improve Paladin’s financial situation, but the company is also spared from further spending on rates, rents and statutory commitments payable to keep the tenements in good standing.<sup>11</sup>

Last year, Paladin also sold its 257.5 million shares in uranium exploration company Deep Yellow for A\$2.6 million, with shares priced at one Australian cent a share.<sup>11</sup> Deep Yellow, like Paladin, is an Australian-based company whose main interests are in Africa. Deep Yellow is now headed by John Borshoff, who founded Paladin in 1993 and agreed to step down as managing director and chief executive in August 2015.

Some ‘nonproducing assets’ can’t be sold, not even for a song. Paladin hoped to sell a 30% stake in the Manyingee uranium project in Western Australia to Avira Energy for A\$10 million, but Avira did not raise the required capital by the 31 March 2017 deadline.<sup>12</sup> Avira said in April 2017 that investors who had previously committed to support its capital increase had withdrawn as a consequence of a “challenging” environment for new uranium projects in Western Australia.<sup>12</sup> Development of Manyingee (and all other non-approved deposits) is prohibited under the policy of the current Western Australian government.

The *Australian Financial Review* reflected on happier days for Paladin: “John Borshoff was once one of Western Australia’s wealthiest businessmen. The founder of Perth-based Paladin Energy developed an enviable portfolio of African uranium mines supposed to satiate booming global demand for yellowcake. When the company’s Langer Heinrich mine began shipments in March 2007, as the spot price for uranium eclipsed \$US100 per pound, Paladin was worth more than \$4 billion.”<sup>13</sup>

Borshoff, described as the grandfather of Australian uranium, made his debut on the *Business Review Weekly*’s ‘Rich 200’ list in 2007 with estimated wealth of A\$205 million.<sup>13</sup> *Reuters* describes Paladin as the world’s second largest independent pure-play uranium miner after Cameco and the seventh or eighth largest globally.<sup>1</sup> When the company’s two mines in Africa were operating,



Paladin's Langer Heinrich mine in Namibia.

annual production capacity was about eight million pounds of uranium oxide – about 5% of world demand.

### Paladin gambled and lost

Paladin gambled and lost, relying heavily on debt financing to quickly develop the Langer Heinrich and Kayelekera mines in Africa.<sup>13</sup> Another failed gamble was to sell primarily on the spot market, thus missing the opportunity to lock in long-term contracts when the price was relatively high<sup>13</sup> – the long-term contract price has halved since the Fukushima disaster.

Another failed gamble was Paladin's A\$1.2 billion hostile takeover bid for Summit Resources in 2007.<sup>13</sup> Paladin owns 82% of Summit, which is sitting on uneconomic uranium deposits in Queensland – an Australian state which bans uranium mining. In 2015, Paladin booked a A\$323.6 million write-down on its exploration assets in Queensland.<sup>14</sup>

A July 2013 *mining.com* article said that “to put things lightly, management is overpaid”, and suggested that management's focus may be “on its own best interests rather than the interests of all shareholders”.<sup>15</sup>

Dave Sweeney, nuclear free campaigner with the Australian Conservation Foundation, told *Nuclear Monitor*:

*“Paladin's ambition and appetite has always exceeded its capacity and competence and now the gap between its inflated promises and its profound under-performance is absolute. This company has always been a uranium bull. It's former CEO John Borshoff promised unrealistic wealth for Africa while dismissing Fukushima as a 'sideshow'. When the market was buoyant they paraded their portfolio and were market darlings, now they are desperate, dateless and on administrative life-support.”*

*“A real concern here is the impact on the environment and communities in which Paladin operate. The risk is that more corners will be cut in African operations in relation to rehabilitation, worker entitlements and environmental protection. Paladin's boom to bust case study is a further clear example of the lack of independent scrutiny of the uranium sector and also reflects poorly on the activities of Australian miners operating in nations with limited governance and regulatory capacity.”*

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# Paladin Energy's social and environmental record in Africa

Author: Jim Green – Nuclear Monitor editor

**NM847.4661** Paladin Energy's operations in Africa – the Kayelekera uranium mine in Malawi and the Langer Heinrich mine in Namibia – have been marked by regular accidents and controversies. The WISE-Uranium website has a 'Hall of Infamy' page dedicated to the company.<sup>1</sup> Some of the accidents and controversies are listed here and a more detailed account is posted on the *Nuclear Monitor* website.<sup>2</sup>

**April 2006:** Paladin CEO John Borshoff told ABC television: "Australia and Canada have become overly sophisticated. They measure progress in other aspects than economic development, and rightly so, but I think there has been a sort of overcompensation in terms of thinking about environmental issues, social issues, way beyond what is necessary to achieve good practice."<sup>3</sup>

**November 2006:** NGOs groundWork and the Centre for Civil Society gave out the 'Southern African Corpse Awards' – an annual mock ceremony for big business – in Durban. Paladin was awarded the 'Pick the Public Pocketprize' thanks to a nomination from Malawian NGOs.<sup>4</sup>

**2007:** Criticisms of operations at Kayelekera outlined by the Catholic Church and other Malawian community and environmental organisations included the following issues of concern: inadequacy of the Environmental Impact Assessment; flaws in community consultation; government deferring its role in safeguarding community interests to the company; destruction of cultural and historic sites; increased social disorder; unfair compensation for those forcibly relocated; and undue interference with makeup of community based organisations.<sup>5</sup>

**4 January 2007:** Two Malawian NGO members were ordered to go to the Karonga Police Station by the Chief of Police and threatened with arrest for taking an Australian photojournalist sponsored by the two Australian unions (MUA and CFMEU) to Kayelekera. The Chief of Police said they were acting on a complaint from Paladin.<sup>6</sup>

**March 2007:** Paladin's Kayelekera project would not be approved in Australia due to the major flaws in the assessment and design proposals, independent reviewers concluded. Their report covered baseline environmental studies, tailings management, water management, rehabilitation, failure to commit to respecting domestic laws, use of intimidation and threatening tactics against local civil society, improper community consultation and payments to local leaders, and destruction of cultural heritage.<sup>7</sup>

**27 March 2008:** The open pit at Paladin's Langer Heinrich mine was flooded with run-off water from a rainstorm and was out of use for about one month.<sup>8</sup>

**April 2008:** A spill of a large quantity of sulphuric acid at the Langer Heinrich mine raised questions about safety

procedures at the mine. *The Namibian* newspaper was informed that a mine employee lost grip on the hose transferring the acid from a truck to a storage facility. The employee apparently fled to call for help, after which a forklift dumped a large quantity of caustic soda on the spill to neutralise the acid. The result was explosive – a series of loud bangs could be heard from a distance, but nobody was injured.<sup>9</sup>

**16 March 2009:** A chemical fireball and explosion killed two workers and badly injured another at the Kayelekera mine. Over the next two days, the fatal accident prompted 200 contract workers to strike over pay and working conditions. The International Consortium of Investigative Journalists noted in a 2015 report that three more workers, including a contractor, died in other incidents at Kayelekera in the years after the fireball.<sup>10</sup>

**18 March 2009:** Malawian police fired tear-gas at workers at the Kayelekera mine construction site. The workers, mostly casual laborers, were on a sit-in since the previous day to pressure management for better working conditions. The strike forced Paladin management to temporarily shut down the mine and evacuate its senior managers to Lilongwe.<sup>11</sup>

**August 2009:** Neville Huxham from Paladin Energy Africa said: "We're taking the uranium out of the ground, we're exporting it to be used for productive purposes, so we should be getting a medal for cleaning up the environment."<sup>12</sup>

**September 2009:** Australia's Fairfax press reported on the Kayelekera mine: "The company's approach has caused friction with local non-government groups, which took legal action to impose tougher controls on the project in 2007. The case was settled out of court. Since then it has been accused of lax safety standards (three workers have died in accidents this year) and failing to bring promised benefits to local communities ..."<sup>13</sup>

Australian-based scientific consultant Howard Smith said regulations were "essentially a self-regulation system, which will ultimately result in releases [of contaminated water] that are under-reported, uncontrolled and hidden from the affected public."<sup>13</sup>

**October 2009:** Fourth death in 2009 at Kayelekera. The company said that an employee had died at the mine as a result of a mini-bus rollover on October 7. Paladin said 19 people including the driver were injured, with 15 admitted to hospital. Paladin advised on August 25 that a construction contractor had died at the mine, also as a result of a motor vehicle incident. The company reported on April 5 that two sub-contractors had died in a flash fire at the mine construction site on March 16.<sup>14</sup>

**September 2010:** Paladin orders miners to work at Kayelekera in spite of a shortage of dust masks. A

*Nyasa Times* undercover journalist who visited the mine on 23 September 2010 found that most miners did not wear masks, and their hands and face were caked with uranium ore. The workers protested to management about the development. The geology superintendent of the mine, Johan De Bruin, confirmed the lack of dust masks. In a September 23 email sent to mine workers, he ordered staff to continue working despite the shortage of dust masks. "Mining is a 24 hour operation and cannot be stopped as a result of a shortage of available dust masks," said De Bruin in his September 23 email.<sup>15</sup>

**June 2011:** A truck driver died in an accident at the Kayelekera mine – the Tanzanian national died after the truck he was driving struck a water tank.<sup>16</sup>

**15 August 2011:** Progress on Expansion Phase Three of the Langer Heinrich mine came to a standstill after employees of the main contractor, Grinaker LTA, downed tools due to grievances related to impending layoffs. According to a workers committee representative, more than 600 employees stopped work at noon on August 15 and continued to strike the following day.<sup>17</sup>

**2012:** CRIIRAD, a French NGO specialising in independent radiation monitoring, conducted radiation monitoring activities around the Kayelekera mine. Its report stated: "CRIIRAD discovered hot spots in the environment of the mine and a high uranium concentration in the water flowing from a stream located below the open pit and entering the Sere river. Results that relate to the radiological monitoring of the environment performed by the company are kept secret. The company should publish on its web site all environmental reports. No property right can be invoked to prevent public access to Paladin environmental reports (especially as Malawi State holds 15 % of the shares of the uranium mine). It is shocking to discover that million tonnes of radioactive and chemically polluting wastes (especially tailings) are disposed of on a plateau with very negative geological and hydrogeological characteristics."<sup>18</sup>

**11 May 2012:** Workers at Kayelekera went on strike over labor conditions: The local workers told *Nyasa Times* that they were demanding a pay increase from Paladin. Workers downed tools on May 11, halting production at the site. On May 16, Paladin announced that an agreement in principle was achieved for a return to work by the striking employees.<sup>19</sup>

**December 2012:** Paladin threatened 75-year old Australian pensioner Noel Wauchope with legal action for posting on her antinuclear.net website an article critical about Paladin's operations in Malawi. The threat backfired when it was publicised in the widely-read Fairfax press in Australia. Fairfax business columnist Michael West wrote: "The price of Noel Wauchope's concern for the people Karonga was a long and intimidating letter of demand from Ashurst on behalf of the uranium company Paladin Energy ..."<sup>20</sup>

**2013:** A detailed report by the African Forum and Network on Debt and Development states:<sup>21</sup>

*"Consistent with what many analysts and commentators have said, this research study unequivocally established that the benefits that Malawi, as a country, is gaining from the deal made with Kayelekera are tangential and dismal. Among the reasons why benefits are skewed more favourably towards the mining company are that the negotiations were done hastily under an atmosphere that was not transparent. Furthermore, the government officials involved were not experienced and were no match for the skilled negotiators for Paladin.*

*"Above and beyond this, the major problem that contributed to the disproportionate sharing of benefits are the country's archaic laws that fail to hold the Multinational Corporation (MNCs) more accountable to pay taxes and remit profits to Malawi. ... The investment incentives offered to Paladin have revenue implications to the Malawi government. These include; (1) 15% carried equity in project company to be transferred to the Republic of Malawi, (2) Corporate tax rate reduced from 30% to an effective 27.5%, (3) 10% resource rent reduced to zero, (4) Reduced Royalty rate from 5% to 1.5% (years 1 to 3) and 3% (thereafter), (5) removal of 17 % import VAT or import duty during the stability period, (6) immediate 100% capital write off for tax purposes, The capitalisation (debt: equity) ratio of 4:1 for the project, and (7) stability period of 10 years where there will be no increase to tax and royalty regime and commitment to provide the benefit of any tax and royalty decrease during the period. This clause in the agreement statement implies amortization of profits. This means that there shall be a reduction or cancellation of taxes to be paid during future years of subsequent profits as a means to compensate the debt accrued by the company during years of registering losses."*

**27 June 2013:** About 300 workers, including mine staff and contractor employees, picketed at the Langer Heinrich mine, protesting the way they were being treated and paid. The protesting workers and media were barred from the mine site where the demonstration was supposed to take place.<sup>22</sup>

**July 2013:** UN Special Rapporteur on the Right to Food, Olivier De Schutter, rubbished the Kayelekera uranium mine deal between Malawi and Paladin, saying Malawi had a raw deal that is robbing the poor. He said that over the lifespan of the mine, Malawi is expected to lose almost US\$281 million. "Mining companies are exempt from customs duty, excise duty, value added taxes on mining machinery, plant and equipment. They can also sign special deals on the rate of royalty owed to the government," he said.<sup>23</sup>

**30 July 2013:** An employee died in an accident in the Kayelekera mine's engineering workshop after being struck in the chest by a light vehicle wheel he was inflating.<sup>24</sup>

**October 2013:** The Opposition People's Transformation Party (PETRA) appealed to government authorities to renegotiate what it called the "stinking development agreement" between Malawi and Paladin regarding the Kayelekera mine.<sup>25</sup>

**3 October 2013:** Three miners were injured at Langer Heinrich following a "serious electrical incident". Paladin said two of the workers received significant burns while

a third worker suffered smoke inhalation. One of the workers was flown to South Africa for treatment.<sup>26</sup> On October 30, Paladin announced that the injured worker flown to South Africa had died in hospital.<sup>27</sup>

**February 2014:** Paladin reported that a truck carrying a container of uranium from Kayelekera overturned. The container fell loose and was punctured by a tree stump, and a “small quantity” of uranium oxide concentrate spilled out. Paladin said the uranium and the soil it came in touch with were removed and taken back to the tailings dam at the mine.<sup>28</sup>

**2 October 2014:** About 50 employees staged a protest at the Langer Heinrich Uranium (LHU) mine’s head office in Swakopmund before handing over a petition listing their complaints. Workers employed by companies sub-contracted to LHU claim they had been mistreated at work. The workers from Sure Cast, Gecko Drilling, LBS, Quick Investment, RVH and NEC Stahl claimed they were made to work without benefits, such as medical aid, transport allowances and pension.<sup>29</sup>

**November 2014:** Paladin came under fire from a coalition of 33 Malawian civil society groups and chiefs over its proposal to discharge mining sludge into the Sere and North Rukuru rivers. The toxic substances that would flow from the tailings pond at the Kayelekera mine into Lake Malawi 50 kms downstream include waste uranium rock, acids, arsenic and other chemicals used in processing the uranium ore, the coalition said. The lake provides water for drinking and domestic use to millions of Malawians. Part of the lake is protected as a national park.<sup>30</sup>

**2015:** A report by the office of Namibia’s Prime Minister said there is a lack of safety at the Langer Heinrich mine and that workers are not aware of policies, rules and procedures as outlined in the radiation management plan.<sup>31</sup>

**January 2015:** At the Kayelekera mine, heavy rain caused a liner in the plant run-off tank to rupture, releasing some 500 cubic metres (500,000 litres) of material to the bunded areas of the site. Up to 50 litres may have overtopped one of the containment bunds.<sup>32</sup>

**February 2015:** About 60 permanent employees of the Langer Heinrich mine participated in a demonstration to hand over a petition to mine management. Employees sought the removal of the manager for human resources on allegations of victimising employees as well as disregarding employees’ safety. They also accused him of implementing a new salary structure without union agreement. The workers, through the Mineworkers’ Union of Namibia (MUN), also demanded the removal of the mine’s managing director, saying he had total disregard for the union. Workers also said the mine never implemented recommendations made after a 2013 accident that claimed the life of a miner. The workers’ petition said: “Our members are exposed to safety hazards. The company does not properly investigate incidents at the mine.” The workers also alleged that the removal of contract workers from the mine resulted in a lack of rest and increase in fatigue.<sup>33</sup>

**April 2015:** Despite opposition from a group of 33 civil society organizations, Paladin began discharging treated

waste water from the Kayelekera mine into the Sere River. The discharge of contaminated water was expected to take place for three months. Paladin decided to discharge the waste because the dam at the Kayelekera mine was full, raising the possibility of unplanned and uncontrolled discharges after heavy rains.<sup>34</sup>

**June 2015:** A report by ActionAid stated that Malawi – the world’s poorest country – lost out on US\$43 million revenue from the Kayelekera mine over the previous six years due to “harmful exemptions from royalty payments from the Malawi government, and tax planning using treaty shopping by Paladin.”<sup>35</sup>

Australia’s Fairfax press reported: “Between 2009 and 2014, Paladin Energy moved \$US183 million out of Malawi to a holding company in the Netherlands and then on to Australia. A 15-page report by London-based ActionAid has found the Dutch transfers and a special royalties deal – in which Malawi’s mining minister agreed to drop the initial tax rate applied to the uranium mine from 5 per cent to 1.5 per cent – have cost the Malawi public \$US43 million. In Africa’s poorest nation, where per capita GDP is just \$US226 a year and life expectancy 55, that money could provide the equivalent of 39,000 new teachers or 17,000 nurses, according to the aid group.”<sup>36</sup>

**December 2015:** Matildah Mkandawire from Citizens for Justice wrote: “In August this year, Citizens for Justice and Action Aid Malawi, with support from the Tilitonse Fund, organized an interface meeting with the local communities, government representatives at district level and Paladin representatives. The aim of this meeting was to discuss the concerns of the community regarding the failure of Paladin to stick to the agreements in the MOU. Paladin cancelled with us at the 11th hour claiming they needed a formal letter of invitation and not the one they got from the community. The meeting had to go ahead without them although this left the community furious as the issues they wanted to raise were key to their health and sanitation, environmental health and social well-being. The lack of clean water, and the delay in providing educational and health facilities as agreed, spoke volumes of the company’s lack of responsibility for the community it operates in.”<sup>37</sup>

**2016:** A human rights body in Malawi sued Paladin Africa Ltd for alleged damage the Kayelekera mine has caused to some miners and the surrounding communities in Karonga district. The Centre for Human Rights and Rehabilitation accused Paladin of not prioritising the welfare of its employees and the community.<sup>38</sup>

**16 June 2016:** Security guards at the mothballed Kayelekera mine downed tools over poor working conditions.<sup>39</sup>

**September 2016:** Human Rights Watch released a detailed report on mines in the Karonga region of Malawi, including the Kayelekera uranium mine: “Using Karonga district in northern Malawi as a case study, the report documents how Malawi currently lacks adequate legal standards and safeguards to ensure the necessary balance between developing the mining industry and protecting the rights of local communities. It examines how

weak government oversight and lack of information leave local communities unprotected and uninformed about the risks and opportunities associated with mining.<sup>40</sup>

**20 December 2016:** Eight Tanzanians were arrested while travelling to participate in a fact-finding mission of the Kayelekera mine. They are from the area where the Mkuju River uranium mine is planned in Tanzania. They were accused of trespassing, spying and working as foreign agents. They were denied bail and held in sub-standard conditions; their legal access was impeded and their legal team harassed with death threats and the mysterious disappearance of their laptops; their legal defence team was prevented from

fully cross-questioning witnesses; and the trial was postponed on six occasions, each time disrupting the defence team that travelled from Lilongwe and Dar-es-Salaam. In April 2017, after almost five months in detention, the eight people were convicted of Criminal Trespassing and carrying out a reconnaissance operation without a permit, and given suspended four-month sentences.<sup>41</sup>

**January 2017:** Paladin and the Malawi government rejected requests to disclose the results of water monitoring performed in the surroundings of the Kayelekera mine.<sup>42</sup>

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# Update on the Toshiba / Westinghouse crisis

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**NM847.4662** The Toshiba / Westinghouse crisis continues to drag on without any clear resolution in sight. As things stand:

- Toshiba will probably survive in a much-weakened form, assuming it can sell profitable assets to cover debts.
- Profitable parts of Toshiba's US-based nuclear subsidiary Westinghouse will survive in one form or another after a restructuring plan has been developed and approved by the bankruptcy court. Westinghouse might survive in a weakened form or it might be carved up for sale and no longer be a recognizable entity.
- Toshiba would like to sell its entire 90% stake in Westinghouse but that may not be possible.
- Toshiba and Westinghouse will no longer take on reactor construction projects in their home countries or abroad.
- Much of the discussion about the four partially-built AP1000 reactors in the US assumes that one way or another the reactors will be completed. The four reactors – two in Georgia and two in South Carolina – are largely responsible for the crisis facing Toshiba and Westinghouse due to cost overruns of around US\$13 billion. But to push ahead would entail enormous risk and it would be no surprise if the owners of the nuclear plants decided to cancel one or both of the reactors at each plant.
- Toshiba / Westinghouse and the NuGen consortium have yet to acknowledge that the plan for three AP1000 at Moorside in the UK is dead ... but it is dead.
- The likelihood that the plan to build AP1000 reactors in India will proceed is vanishingly small.

## Toshiba

Toshiba hopes to submit audited financial figures for the 2016/17 fiscal year, which ended 31 March 2017, by August 10.<sup>1</sup> Toshiba and its auditor PwC Aarata are still working to reach agreement on the figures and to resolve their disagreement as to whether Toshiba should correct past financial reports.<sup>2</sup>

On June 23, Toshiba said it expects to report a negative net worth as of 31 March 2017 of ¥581.6 billion (US\$5.18 billion), a 7.7% increase on earlier estimates.<sup>3</sup> The

company's estimated net loss for the 2016/17 fiscal year has also increased, to ¥995 billion (US\$8.87 billion).<sup>3</sup>

Also on June 23, the Tokyo Stock Exchange (TSE) announced that from 1 August 2017, Toshiba shares will be demoted from the exchange's first section to its second tier.<sup>2,3</sup> The TSE is also reviewing Toshiba's internal control systems to decide whether to remove the company from the exchange's designation as a "security on alert."<sup>2</sup>

Toshiba is trying to sell its prize asset, its memory chip business, to stave off bankruptcy and to avoid being delisted altogether from the TSE. But negotiations over the sale of the memory chip business have become complicated, as reported by *Nikkei Asian Review*:<sup>3</sup>

*"Massive losses from its U.S. nuclear unit plunged the once-mighty Toshiba into negative net worth in fiscal 2016. The company is now desperately trying to raise enough funds to save itself from remaining in negative net worth for a second year – a scenario that would see the company face delisting from the TSE. On Wednesday [June 21], it decided to prioritize negotiations with a Japanese government-led alliance for the sale of its flash memory unit.*

*"Any conclusion to the deal, however, faces obstacles. Bain Capital, the private equity firm in the alliance, is collaborating with South Korean chipmaker SK Hynix, making a protracted examination into antitrust matters a possibility.*

*"In addition, Toshiba chipmaking partner Western Digital has sought an injunction against the sale in a California court. With the U.S.-based company weary of the involvement of direct rival SK Hynix, the government-led alliance will have to negotiate with Western Digital, either by asking it to drop the case or trying to include it in the consortium.*

*"The formation of the alliance was mostly orchestrated by Japan's Ministry of Economy, Trade and Industry, which wants to keep Toshiba's sensitive chip technologies under domestic control."*

Some bankers and potential investors are reportedly pressing the Toshiba board to consider alternatives to the sale of its memory chip business. But selling other assets is problematic as Toshiba has few of sufficient



value, and a piecemeal sell-off could take too long.<sup>4</sup> Toshiba will be automatically delisted from the TSE if it cannot drag itself out of its negative shareholder equity position by the end of the current fiscal year, ending 31 March 2018.<sup>5</sup>

In mid-June, Toshiba said it is being jointly sued by 70 shareholders, foreign institutional investors, and individuals seeking damages of ¥43.9 billion (US\$391 million) related to a US\$1.3 billion profit-padding scandal from 2008–2014. Separately, Toshiba has been sued by 26 groups and individuals over the scandal with total damages of ¥108.4 billion (US\$960 million) being sought.<sup>6</sup>

There was a moment's respite for Toshiba in early June when its share price rose, partly due to an agreement to cap Toshiba's liabilities for the AP1000 reactor project in Georgia at US\$3.68 billion.<sup>7</sup> But Toshiba lost all those gains and more and its stock price fell to half what it was before the problems with the US AP1000 projects came to light last December.<sup>8</sup>

## Westinghouse

According to a July 3 *Reuters* report, citing industry and diplomatic sources, the US administration has said that Westinghouse will emerge from Chapter 11 bankruptcy and be sold to a US investor by the end of the year.<sup>9</sup>

But of course the government can't force investors to buy a bankrupt company. Toshiba has previously tried to sell Westinghouse, without success, and has openly flagged its ongoing desire to rid itself of Westinghouse. But the process is on hold until Westinghouse emerges from Chapter 11 bankruptcy proceedings with a court-approved restructuring plan.<sup>9</sup>

According to *Reuters*: "Some form of U.S. backing or involvement, industry experts say, could avoid a Chinese or Russian buyer unpalatable to Washington, which would prefer to keep Westinghouse's advanced nuclear technology out of the hands of its foreign rivals."<sup>9</sup>

In court records filed on June 5, the US Committee on Foreign Investments in the United States said that the sale of Westinghouse or its assets could be subject to the panel's review. Consisting of various cabinet members, the Committee is authorized to review transactions which could result in foreign persons or entities acquiring US businesses.<sup>10</sup>

In May, Westinghouse was in trouble with the US Nuclear Regulatory Commission (NRC) because of problems at its nuclear fuel plant in Columbia, South Carolina.<sup>11</sup> After finding an accumulation of uranium in an air pollution control device last year, in May the NRC cited one additional violation related to the same piece of equipment. In June 2017, the NRC issued a notice of non-conformance to Westinghouse over lax quality assurance at its Mangiarotti subsidiary in Italy.<sup>12</sup> The problem concerns incorrect use of material for AP1000 passive residual heat removal heat exchanger stiffener plates, identified in an earlier inspection. As with the problem at Columbia, Westinghouse has been slow to act. NRC inspections were carried out at Mangiarotti's plant in Italy in July 2016. Follow-up inspections were carried out at Westinghouse's plant in Rockville, Maryland in April 2017. The NRC concluded that

Westinghouse "had not taken prompt corrective action or identified the cause of a significant condition adverse to quality", which involved the use of a different type of stainless steel in the manufacture of the component from that required.<sup>12</sup>

It has emerged that Toshiba didn't know that Westinghouse was preparing for a bankruptcy filing even after Westinghouse had hired lawyers for the task late last year, according to court records and Toshiba's official timeline. The *Wall Street Journal* commented: "If Toshiba's timeline is accurate, it suggests poor communication between parent and subsidiary contributed to letting the problems at Westinghouse get out of hand. Toshiba, one of Japan's biggest and oldest conglomerates, has said it has doubts whether it is a going concern because of its unit's bankruptcy. Conversely, if Toshiba did know about the unit's bankruptcy plans ahead of time but failed to disclose them promptly, it could worsen trust among investors at a time when stock-exchange officials in Tokyo are weighing whether to delist Toshiba shares."<sup>13</sup>

## AP1000 reactors under construction in the US

Decisions about the fate of the partially-built AP1000 reactors in Georgia and South Carolina keep being deferred. Westinghouse is expected to break its contracts with the owners of the Vogtle (Georgia) and Summer (South Carolina) plants. Meanwhile the plant owners are weighing up their options regarding the future of the reactors, and paying for work to continue in the meantime. The owners of the South Carolina plant hope to make a decision on the fate of the two AP1000 reactors by August 10.<sup>14</sup> And Southern Co. hopes to make a decision about the two reactors in Georgia "sometime in August" according to CEO Tom Fanning.<sup>15</sup> But no previous deadlines have been met and the issue is likely to drag on for months.

Georgia Power and Westinghouse have finalized an agreement which allows for the transition of project management at the Vogtle plant from Westinghouse to Southern Nuclear and Georgia Power. Under the agreement, finalized on June 9, Toshiba will meet its contractual obligations by paying Southern Co. US\$3.68 billion from October 2017 to January 2021 to help cover the costs of completing the two reactors, while Southern Co. agreed not to ask for more, even if the project continues to run over budget.<sup>16</sup> The agreement has been approved by the US Department of Energy, which has a stake in the outcome of the negotiations because it approved a US\$8.3 billion loan guarantee for the Vogtle project.

Toshiba may strike a similar agreement with SCANA and Santee Cooper in relation to the two AP1000 reactors under construction in South Carolina. SCANA and Santee Cooper would take responsibility for completing (or abandoning) the reactors, and Toshiba would make a payment to settle contractual obligations.<sup>17</sup>

On May 15, Toshiba said it had set aside ¥670 billion (US\$6.0 billion) to cover parent company guarantees for the Vogtle and Summer plants. Thus a payment of US\$2.3 billion for the South Carolina plant can be expected in addition to the US\$3.68 allocated for Georgia.

Another modest win for those hoping to complete the reactor projects in Georgia and South Carolina came on June 15 when the House of Representatives approved a bill on tax credits that could amount to around US\$2 billion in subsidies for each of the nuclear plants – Vogtle and Summer.<sup>18</sup> However the future of the bill in the Senate is uncertain. The owners of the nuclear plants need the tax-credit subsidies locked in, and soon.

Despite the Toshiba agreement with the Vogtle owners, and the House of Representatives' vote on tax credits, the future of the Vogtle and Summer reactors is still very much in doubt. Construction of the four reactors is less than half complete so there is ample scope for further delays and cost overruns. A report by consultants to the Georgia Public Service Commission found that attempts to improve efficiency have had little success: over the past year, four core activities at the Vogtle plant fell an average of 325 days further behind schedule.<sup>19</sup>

A recent document written by South Carolina state regulators states: "The projection of time and costs is made more difficult given the incredible variances in time and costs actually incurred in comparison to Westinghouse's previous quotes and projections of time and costs."<sup>14</sup>

Owners of the nuclear plants are doing their best to estimate the likely costs to complete the four reactors – but it is a guessing game. Analysts at Morgan Stanley say future costs could exceed current estimates by as much as US\$8.5 billion, more than double what shareholders of the two companies are effectively pricing in.<sup>20</sup>

The Southern Alliance for Clean Energy (SACE) estimates that the total cost of the two reactors in Georgia could reach US\$29 billion.<sup>19</sup> SACE based its estimate on a June 2017 report by two utility consultants to the Georgia Public Service Commission. The consultants' report is based on a scenario in which the project comes online in 2022, and Westinghouse's bankruptcy adds further costs.<sup>19</sup>

A Morgan Stanley report in March 2017 said the final cost of the two Summer reactors could be as high as US\$22.9 billion – double the original estimate.<sup>18</sup>

Using the SACE figure for Georgia, and the Morgan Stanley figure for South Carolina, the total cost for the four reactors could be US\$51.9 billion, more than double the original estimate of US\$23.9 billion (US\$14.1 billion for Vogtle and US\$9.8 billion for Summer).

Nuclear corporations and lobby groups argue that completion of the Vogtle and Summer reactors is a "national security issue" and a "strategic national imperative". Typically, those meaningless assertions are backed up with the meaningless justification that the US will be "left behind" by other countries such as Russia and China if it exits the global nuclear industry. The Nuclear Energy Institute has gone one step further. The industry lobby group has been circulating a document in Washington arguing the case for tax credits to support nuclear power projects. The document states that if the Vogtle and Summer plants aren't completed, it would stunt development of the nation's nuclear weapons

complex because the engineering expertise on the energy side helps the weapons side.<sup>21</sup>

A further complication for the owners of the South Carolina plant is that they learnt in June, much to their astonishment, that Westinghouse's detailed construction schedule for the two reactors is non-existent.<sup>18</sup> "I'm just floored that they haven't been able to produce a schedule for their own project," said Tom Clements from Savannah River Site Watch. "That violates a basic tenet of sound construction management, and I think it reveals that there are more problems to be encountered if the project continues."<sup>18</sup>

Friends of the Earth and the Sierra Club filed a complaint with South Carolina state regulators on June 22, calling for a hearing on whether construction should be allowed to move forward at the Summer plant and whether the utilities should be forced to pay back money customers have already spent through higher rates to build the reactors.<sup>18</sup> The South Carolina Public Service Commission approved the groups' request and a hearing is scheduled for August 14 in Columbia.<sup>18</sup>

The groups call on the Summer plant owners to "cease and desist from expending any further capital costs related to the Project" and referred to "unreasonable electric rates" – in particular, nine electricity rate hikes since 2008 to help fund the Summer project.<sup>17</sup>

Dr Mark Cooper from the Institute for Energy and the Environment at Vermont Law School has written a detailed paper for Friends of the Earth and the Sierra Club in support of their complaint to the South Carolina Public Service Commission.<sup>22</sup> Cooper argues:

*"Management will waste more money going forward in a futile attempt to complete the project ... Future costs may be twice as much as the costs that have been sunk. This report outlines five steps that can be taken to soften the negative blow to both SCE&G ratepayers and the economy of South Carolina:*

- *Stop wasting money by abandoning the project.*
- *Claw back improperly expended sunk costs through reclamation under the bankruptcy laws and reparation for imprudent costs improperly incurred.*
- *Return to traditional least-cost, used and useful principles for utility resource acquisition.*
- *Rely on lower cost, cleaner resources, like efficiency, renewables and dynamic system management to meet any growth in demand or reduction in emission of pollutants.*
- *Mitigate the bill impact by enhancing ratepayer ability to lower their electricity costs with on-bill financing of efficiency, reducing the profit paid on wasted capital expenses, and extending the period for cost recovery."*

Cooper argues that "even under the unjustifiably optimistic projection of no future delays and cost overruns, ratepayers will be better off if the utility abandons the project, even if ratepayers are forced to bear the costs that have been sunk to date." In the best-case scenario, swift action by the Public Service Commission could save ratepayers as much as US\$10 billion.

## Planned AP1000 reactors in the UK

Numerous media reports over the past six weeks have flagged the possibility that South Korea's Kepco could buy into the NuGen consortium that planned to build three AP1000 reactors at Moorside in the UK. Toshiba would be more than happy to sell most or all of its stake in NuGen to Kepco – or anyone else. But Kepco wants to build its own APR1400 reactors instead of Westinghouse AP1000s. That brings with it another set of problems – financing, the anti-nuclear stance of recently-elected South Korean President Moon Jae-in, and the several years it would take for the APR1400 reactor design to go through a generic design assessment process in the UK. Suffice it here to note that previous plans to build AP1000 reactors at Moorside appear to be stone cold dead.

## Planned AP1000 reactors in India

Indian Prime Minister Narendra Modi and US President Donald Trump issued a communique after their meeting in Washington in late June. The two leaders "looked forward to conclusion of contractual agreements between Westinghouse Electric Company and the

Nuclear Power Corporation of India for six nuclear reactors in India and also related project financing," the communique said.<sup>23</sup>

However there is very little likelihood of contractual agreements, no clarity about financing, no obvious reason why India would pay for Westinghouse reactors when cheaper options are available to meet energy needs, no obvious reason why India would sign up for AP1000 reactors given the massive cost overruns in the US, and an unresolved disagreement about India's nuclear liability law.

Another obstacle is that Westinghouse – assuming that Westinghouse even exists after the bankruptcy process – is exiting the reactor construction business. *The Hindu* reported: "Westinghouse is working out a new model with its lenders under which they will design the reactor and provide consultations, but Indian companies would be entrusted with the actual construction of the plant. A process is underway to ascertain who will do what in the new business model and which Indian companies could be involved."<sup>24</sup>

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# Nuclear safety in Europe: decision-making behind closed doors?

**Author:** Dana Marekova – campaigner with Bankwatch in Slovakia.

**NM847.4663** European citizens don't want to be left out of decision-making over nuclear power. But a recent meeting of the Espoo Convention reveals how concerns over reactor life-time extensions are being sidelined.

After Fukushima, you might think that nuclear power is a thing of the past. Or that our focus on climate is the only issue of public concern when it comes to the energy sector. Yet the recent Meeting of the Parties<sup>1</sup> to the Espoo Convention, which deals with environmental impact assessments across borders, was hijacked by ongoing disputes over reactor construction and lifetime extension. In Minsk, 200 participants representing the 45 states who are members to this UN Convention held heated discussions over problematic cases, such as Hinkley Point C (UK), Ostravets (Belarus) and a number of old Ukrainian reactors going through their lifetime extensions.<sup>2</sup>

This dispute has arisen largely because the rules on who has a say when decisions regarding nuclear operations are made are unclear. Which countries and their citizens should be notified and involved in decision-making on a new nuclear installation such as Hinkley Point C? And how about extending the lifetime of old reactors, like the Yuzhnoukrainsk power plant in south Ukraine? These are questions to be addressed in the framework of the Espoo Convention.<sup>3</sup>

But are we really solving the dilemma of whether nuclear operations can have a significant transboundary impact, which should, according to the Espoo Convention, trigger communication across borders with potentially affected parties? Or are we witnessing a political game, fueled by self-centered interests of nuclear positive countries and the nuclear business, which is trying to remodel itself by “climate-neutral marketing” of its product?

The recent Meeting of the Parties to the Espoo Convention was an unfortunate display of the influence that politics and the nuclear lobby have over decisions with severe impacts on health and environment. One of the most important tasks of the Meeting of the Convention parties, which convenes every three years, is to endorse draft decisions on non-compliance. These are prepared carefully and over the course of few years by the Convention's Implementation Committee. Such decisions, despite being tailored to each specific case of challenged non-compliance, should have general implications across similar cases, reflecting the principal of an equal treatment. Endorsed decisions should bring needed clarity – in this case clarity concerning rules for nuclear decision-making.

Unfortunately, the Minsk meeting has torn the draft decisions apart with last minute revisions, which were agreed behind the closed doors of “coordination meetings” and “ad hoc working groups”. Civil

society members, whom this (and some other) UN environmental convention assigns a special role, were closed out from all key deliberations. At some point, shortly before midnight on the penultimate day of the Meeting, most participants lost track of a number of parallel meetings and groups.

At the end of this political show there were too many revisions proposed to be seriously considered. All decisions were postponed for an extraordinary meeting to take place in the course of the next year – just when the clarity on how to proceed with all the nuclear decision-making concerning old and new nuclear installations is much needed. Confusion continues, which lowers efficiency of the Convention on nuclear issues. The main purpose of the Convention – to be an instrument for a more inclusive decision-making leading to a better protection of environment – was abandoned.

To end on a hopeful note, there are three almost positive developments resulting from the Meeting.

First, the mere acknowledgement that there is a lack of clear rules for nuclear decision-making. In Minsk, this became obvious and the issue finally “came out of the closet”.

Second, delegations as well as other participants seemed to have agreed in principle that when a state is making a decision on a nuclear project, they should send notification to potentially affected countries, and that the fact that a severe accident can cause widespread impacts has to be taken into account.

Thirdly, on the topic of extended operations of old nuclear units past their officially designed lifetime, the Meeting created a working group to clarify the need for transboundary environmental assessments. This particular issue generated significant interest among different mostly EU countries. By expressing their interest to be members of this working-group, states have acknowledged the relevance of this issue. This is hardly surprising: Europe is heading into a decade when 93 nuclear reactors will be (or not) up for their lifetime extension. And one does not need to be a nuclear scientist to understand increased risks associated with any aging technology, let alone nuclear.

Nuclear safety is a matter of high concern and relevance to all of us. We have a right to be asking questions related to nuclear operation, to receive good quality answers and demand highest possible safety measures. This is all possible in the frame of the Espoo Convention on the environmental impact assessment in transboundary context. What we need now is to make it work. The international working group created in Minsk should make it crystal clear that lifetime extensions of nuclear reactors require broad engagement and public participation across borders. Resistance of

some governments and the European Commission to this logical solution to nuclear decision-making is dangerously illogical. If “everything is ok and safe” as we are being assured, then why is wider public participation on decisions with immense potential impact generating so much opposition?

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*[www.opendemocracy.net/od-russia/dana-marekova/nuclear-safety-in-europe-decision-making-behind-closed-doors](http://www.opendemocracy.net/od-russia/dana-marekova/nuclear-safety-in-europe-decision-making-behind-closed-doors)*

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European citizens don’t want to be left out of decision-making. It is important to renew our trust in political governance to feel that our interests are duly accounted for and represented – on nuclear issues, democracy from behind the closed doors can have fatal consequences.

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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.

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