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CONTACTS
WISE
info@wiseinternational.org
www.wiseinternational.org

NIRS
nirs@nirs.org
www.nirs.org

Nuclear Monitor
monitor@wiseinternational.org
www.wiseinternational.org/nuclear-monitor

Monitored this issue:

The struggle for acknowledgement of health impacts and compensation in Gabon,

with a look at compensation regulations in the US and Germany

Gunter Wippel

In the August 2025 edition, we focused on the struggle of uranium workers for recognition of health issues and compensation in Niger. In this edition, we look at this struggle in Gabon and also – for comparison – at 'Western' countries, the US and Germany, where there are regulations for compensation.

Often, people were unaware of the adverse impacts uranium mining, and companies and governments did not informed them. The long period of colonization which African countries had experienced, sometimes going along with brutal oppression, did not help either. The prospect of salaried jobs in often poor regions was – and is – a reason for people to work in mines.

When miners began to fall sick, died prematurely from 'unexplained' diseases – and started to question companies, asking for information and then compensation, they basically ran into a wall of disinformation and denial. The struggle started.

Additional Information

*"**GABON: UNREGULATED MINING ENDANGERS LIVES**", by WISE / NIRS Nuclear Monitor No. 616, of 1 October 2004: www.wiseinternational.org/gabon-unregulated-mining-endangers-lives/*

***The inglorious legacy of COGEMA in Gabon - Decommissioning of the Mounana uranium mine and mill site**, compiled by WISE Uranium Project, www.wise-uranium.org/udafr.html#MOUNANA and www.wise-uranium.org/udmoun.html*

GABON

Gabon was not covered in NM921 and 922 (dealing with the current uranium mining situation) since there is no more uranium mining in Gabon since 1999.
Gabon was also part of the 'Observatoire de Sante' mentioned in the article on Niger.

Exploitation of uranium had started in 1960 with open-pit and underground mines at Mounana, southeastern Gabon, by Franceville Uranium Mines Company (COMUF), majority owned by French COGEMA, and continued until 1999. The underground mine's tunnels stretch for about 30km and to a depth of 400 meters. Besides, there are several open pits and adjacent tailings.

No initial opposition or resistance against the mining of uranium is reported. People saw jobs – the health and environmental impacts would surface much later.
Company representatives and the hospital superintendent insist: "There is not a single case of an occupationally caused disease related to the uranium mining declared in our archives" [1].

The struggle of former workers, local people and civil society

In 2001, two years after the closure of the mining activities, former miners founded the Asscociation Mounana "to obtain recognition of occupational illnesses linked to uranium mining in Gabon. In 2005, we called on Sherpa, CRIIRAD and Médecins du Monde to help us in our fight." The president was Jacqueline Gaudet who had lost her father, her mother

[1] www.wiseinternational.org/gabon-unregulated-mining-endangers-lives/

and her husband to cancer; they had been living in a house built from radioactive mine tailings [2].
Some of the persons affected were French expatriates, they joined in the Association Mounana and former Gabonese workers formed the Cercle des Anciens Travailleurs Miniers de Mounana (Catram). Both groups made their fears known in regard to a possible link between the many pathologies which had surfaced and their former activities at the mine, and to find out what action, if any, could be taken. They approached CRIIRAD and SHERPA and became later on part of the "Observatoire de Sante".

Reclamation work … paid for by European taxpayer instead of company …

WISE Uranium Project reports: "The reclamation work was completed in July 2004, at a total reclamation cost of Francs CFA (XOF) 7050 million (EUR 10.7 million). The reclamation work was mainly paid for by the tax payers of the European Union, rather than by COGEMA: Since 1997, (…) Gabon has been receiving a total of over EUR 50 million in aids for the development of its mining sector. Of this amount, EUR 7 million were diverted by the Gabon mining ministry for the reclamation work performed at Mounana." [3]
It is difficult to understand how a company still existing, with a multi-million-€ parent company in the background, manages to get public funds for cleaning up the remains of its activities.

Impacts on Miners

"In 2006, Sherpa, in collaboration with Médecins du Monde and CRIIRAD, carried out a mission to assess the situation in Mounana. The findings were edifying in terms of the health of former mine workers and environmental damage: When the results of the mission were presented in 2007, Sherpa envisaged legal action against Areva for its 'serious breaches of the company's basic obligations in terms of training and prevention of risks specific to mining operations'" [4].
In 2009, an 'Observatoire de Sante' was established, same operation like in Niger. Families of mine workers and the general population in the area were not included.
An interesting detail can be found in a 2012 article by Prof. Gabrielle Hecht: She reports that one of the new directors in Gabon, … tried to follow radiation protection protocols used in his home country [France, where he had worked in uranium mines, and he used film badges to track workers' gamma exposures and ambient dosimetry to track radon.
"Almost immediately, the monitoring system recorded high levels of both gamma and alpha radiation—sometimes up to 12 times the maximum permissible levels (MPLs) established by French regulatory bodies. … In 1968, Mokta replaced des Ligneris with its own man, Christian Guizol, who was more attuned to budget constraints. … Guizol reconfigured the calculus of exposure by simply raising the MPLs, the thresholds beyond which exposure became over-exposure. He noticed that—when applied to the specific conditions that operated at COMUF—International Labour Organization guidelines were less restrictive than those used in France. And so, after a few numerical gymnastics, Guizol enacted the equivalent of a three-fold increase in MPLs. The effect was immediate: In December 1969, 56 workers exceeded threshold exposure levels. By March 1970, not a single worker exceeded the new, higher limits." [5]

[2] https://africanarguments.org/2017/07/a-forgotten-community-the-little-town-in-niger-keeping-the-lights-on-in-france-uranium-arlit-areva/
[3] www.wise-uranium.org/udmoun.html
[4] « Impacts de l'exploitation miniere sur les populations locales et l'environnement dans le Haut-Ogooue » (French), by BRAINFOREST https://brainforest-gabon.org/wp-content/uploads/2024/08/154-impacts_exploitation_miniere.pdf, page 17
[5] https://thebulletin.org/premium/2020-12/2012-an-elemental-force-uranium-production-in-africa-and-what-it-means-to-be-nuclear/

Impact on families of miners and the population in general

Besides impact on miners, families living in houses built with radioactive material (from tailings) by COMUF were affected. 200 of these houses were destroyed later on, and the company had to build new ones (WISE NM 616 [3]).

Over the years, approximately two million tons of tailings had been released into the Mitembe-Likedi River system, including waste water from the mill. Another four million tons were placed in the open pit at Mounana pit. A tailings dam was built only in 1990, but did not prevent overflow to get into the local river system [6], [7].

By 2004, "The company (COMUF) has done some remediation work …." [1] and some restrictions were made in regard to the use of water etc.

*The 2009 documentary "**Uranium, l'héritage empoisonné**" [8] by Dominique Hennequin shows that imposed restrictions were not effective: the local women were soaking their cassava in the Mitembe River downstream from the Ngamaboungou, whose waters have high radiological levels.*

By 2011, as a result of the struggle supported by SHERPA and Medecins du Monde, Jacqueline Gaudet of Association Mounana, was compensated for the loss of members of her family by AREVA.

Media reported:

*Jeune Afrique: **Mine d'uranium au Gabon: Areva indemnisera des proches d'ex-salariés** [9] (Uranium mine in Gabon: Areva to compensate relatives of former employees)*

*Reporterre: **Areva indemnise une victime française du nucléaire** [10] (Areva compensates French nuclear victim)*

***However, many victims were not compensated:** "Examined by an Areva doctor and another appointed by Sherpa, 16 cases were found to be unrelated to professional activity. Four other cases were reviewed by an expert at the Court of Appeal: two were recognised and two rejected", explains Dr Alain Acker, Areva's Medical Director, who bases his analysis on table no. 6 of the French Social Security system." [10]*

The reason: Whereas UNSCEAR, the United Nations Scientific Committee on the Effects of Atomic Radiation recognizes 21 types of radiation-induced cancer, only three pathologies are recognized by the French social security system[10], in fact, thus excluding many cases a proiri!

By 2017, no progress had been reached in regard to compensations.

On the occasion of the anniversary of the closure of one of the mines, journalists reported: "By the end of 2016, 367 former workers had died from 'pulmonary respiratory infections' linked to working in the mine, according to MATRAC, a campaign group gathering 1,618 former employees. The surviving miners, many of them old and sick, have unsuccessfully demanded compensation for 12 years in the belief they were exposed to dangerous levels of uranium contamination." [11]

***In 2024**, February 14, COMUF's general director, Gilles Recoche, presented a report of*

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[6] https://world-nuclear.org/information-library/country-profiles/others/uranium-in-africa

[7] "Impacts de l'exploitation miniere sur les populations … » by BRAINFOREST, footnote 14, page 7

[8] https://www.dailymotion.com/video/xuydiy

[9] www.jeuneafrique.com/depeches/61732/politique/mine-duranium-au-gabon-areva-indemnisera-des-proches-dex-salaries/

[10] https://reporterre.net/Areva-indemnise-une-victime

[11] www.france24.com/en/20171129-gabons-sickly-uranium-miners-long-quest-compensation and www.agenceecofin.com/uranium/2511-52387-gabon-les-anciens-travailleurs-de-la-comuf-reclament-des-reparations-pour-des-situations-liees-a-leur-travail

a study to the Minister of Mines, Gilles Nembe, saying that mining uranium would have had no impact on the health of employees. However, some common pathologies were detected.[12]

Taking into account that the "Observatoire de Sante" had been created in 2009, it has taken 15 (!) years to prepare a study concluding that the mining activities would have had no impact on the health of miners. It is not known how many of the former miners passed away in the meantime, reducing their or their descendants respectively, chance for compensation to zero.

Additional information

*"**Impacts de l'exploitation minière sur les populations locales et l'environnement"** by BRAINFOREST, https://brainforest-gabon.org/wp-content/uploads/2024/08/154-impacts_exploitation_miniere.pdf*

Compensation regulations in the US and Germany

United States

Compensations for health damages of miners are – to our knowledge – only awarded in the USA and, later on, in Germany. In the US, in addition, victims of nuclear weapons testing ('downwinders') are also eligible for compensation.

***In the US**, miners and mill workers had worked since the mid-1940s in mines, many of them rather pits than proper mines, often without ventilation; many of the workers were Dine (Navajo, indigenous people in the Southwest US).*

At the time, uranium was exclusively mined for the production of nuclear bombs.

*When people started to fall ill from lung cancer and other diseases later on, the struggle for compensations started. It took many years and activities, lobbying and hearings till the **Radiation Exposure Compensation Act (RECA)** was passed in 1990. (see 'Additional information at the end of this paragraph).*

Up to March 2025, 9 445 former uranium miners, mill workers and ore transporter or their descendants received compensations of US$ 943 874 500 [13] *in compensations. The compensation is US$ 100 000 per person (or descendant).*

The number of applications had been much higher: only 64.3% of the applications were approved (on average).

Some of the former uranium workers or their descendants find that RECA or its handling is not satisfactory; for example, "many uranium miners were Native Americans, and their wives did not have standard marriage licenses required to establish a legal connection to the deceased" and were thus unable to get compensation.

In general, the responsibility of the US government was acknowledged and a number of persons have been compensated.

An attempt by the current (2025) US administration to phase-out RECA did not pass: In July 2025, RECA was reauthorized and criteria for eligibility under RECA were expanded [14].

When in 2023 the film "Oppenheimer" was released, downwinders from New Mexico who had been refused acknowledgement spoke up: The New York Times published an article "What the [film] 'Oppenheimer' does not show you about the Trinity Test" [15], *by Tina Cordova about the suffering of her community impacted by fallout from the very first US nuclear weapons test.*

In 2024, she was awarded the Nuclear Free Future Award [16], *as well as Hinamoeura*

[12] www.wise-uranium.org/udafr.html#GA

[13] https://www.justice.gov/civil/awards-date-03042025

[14] https://www.justice.gov/civil/common/reca

[15] https://www.nytimes.com/2023/07/30/opinion/international-world/oppenheimer-nuclear-bomb-cancer.html

[16] https://nuclearfreefutureaward.org/tina-cordova-usa-2/

Morgant-Cross from (French) Polynesia whose community shares a similar ordeal [17] and Benetick Kabua Maddison from Marshall Island where the US had conducted 67 nuclear weapons tests [18].

We pointedly mention the victims of nuclear weapons tests since nuclear bombs are one of the final products in the nuclear fuel chain, with uranium mining being its first step. Both ends of that chain are very destructive and need to be acknowledged.

Additional information

***Navajo Uranium Miners Fight for Compensation**, by Timothy Benally, Sr., 1999*
www.inmotionmagazine.com/miners.html

***The History of Uranium Mining and the Navajo People**, by Prof Doug Brugge, 2002*
https://pmc.ncbi.nlm.nih.gov/articles/PMC3222290/

***List of documents: The Navajo Uranium Mining Experience 2016-1952**, compiled by Chris Shuey, 2016,*
www.sric.org/uranium/navajorirf.php

GERMANY

With the reunification of East and West Germany in 1990, the task and the financial responsibility for reclamation of former East German uranium mines, operated by (former) SDAG Wismut, was adopted by the West German government, as well as taking care of former uranium workers.
Compensation issues are handled by the 'Berufsgenossenschaft' (BG), the employer's liability insurance association, of West Germany.

Details on the impacts on miners, and how compensation claims are handled, see:
WISE Uranium Project www.wise-uranium.org/uwis.html#2, paragraph 2.

Between 1946 and 1990, 7 163 uranium miners who had been employed with Wismut passed away from lung cancer; for 5 237 (73%) of them, the occupational exposure was recognized as the cause of the disease. One year of work in the uranium mines during the early years (before 1955) is regarded as sufficient to attribute an observed lung cancer to the occupational exposure[19].
After 1990, over 22 000 'suspicious cases' were reported to the employer's liability insurance (BG). Up to June 2021, about 7 900 cases were accepted as occupational diseases, and 5 300 persons were compensated with (monthly) pensions[20].
In addition to lung cancer, quartz pneumoconiosis and larynx cancer were finally accepted as caused by radiation exposure.
Compensations are paid as (monthly) pensions, and individual amounts are not public. A regional newspaper stated that a total of 1.1 billion € were expanded for pensions and treatment of former East German uranium workers[21] since re-unification.
A number of uranium workers were denied pensions, some of them took the matter to court, with varying degrees of success.

Note

The German Bundesamt für Strahlenschutz (BfS, Federal Office for Radiation Protection) has done much research on the relationship between radiation exposure and diseases of (former) uranium miners. BfS states "Because of its scope, the long observation period, and the wealth of available information, the study is particularly unique."

[17] https://nuclearfreefutureaward.org/hinamoeura-morgant-cross-french-polynesia/
[18] https://nuclearfreefutureaward.org/benetick-kabua-maddison-usa-2/
[19] https://www.wise-uranium.org/udde.html
[20] MDR 31. July 2021, www.mdr.de/geschichte/ddr/wirtschaft/wismut/lungenkrebs-silikose-berufskrankheit-strahlung-entschaedigung-100.html
[21] https://www.mdr.de/geschichte/ddr/wirtschaft/wismut/lungenkrebs-silikose-berufskrankheit-strahlung-entschaedigung-100.html

The main studies is a 'cohort study' of uranium miners, the 'Wismut Uranbergarbeiter-Kohortenstudie':
https://www.bfs.de/EN/bfs/science-research/effects-risk-ion/ongoing/wismut.html
(English version)
Under "publications" numerous studies on specific issues can be found:
https://www.bfs.de/EN/bfs/science-research/effects-risk-ion/ongoing/publications.html

Conclusion

Uranium workers in industrialized countries (US, Germany) were able to secure some compensation – after a long struggle in the US, and after reunification of 'East' and 'West' in Germany.
With uranium miners in the 'Global South', health impacts are denied, and thus compensation; the process is being dragged out. One might think that mine operators are delaying things until the workers have passed away.

The Non-Peaceful Atom

Vladimir Slivyak, co-chair of the Eco-Defense group

In what ways does Russia use nuclear energy as a strategic tool? Why have sanctions failed to end Europe's dependence on the Russian nuclear industry? How is Rosatom involved in the war? Vladimir Slivyak, co-chair of the Eco-Defense group, answers these questions

As a strategic instrument of the Kremlin, Rosatom helps to create and entrench geopolitical dependencies. This dependence rests on the promotion of nuclear energy but has ramifications that extend far beyond the energy sector. Rosatom is both directly and indirectly involved in Russia's war against Ukraine. In particular, Rosatom played a key role in Russia's seizure of the Zaporizhzhia nuclear power plant and has offered to procure materials and components for Russian arms manufacturers under sanctions.

Nevertheless, the European nuclear industry continues to collaborate with Rosatom. For instance, Rosatom supplies uranium to Framatome's ANF nuclear fuel plant in Lingen, Germany. Rosatom is also involved in expanding this facility, even though the German authorities have not yet approved such cooperation. If the Framatome-Rosatom project, which has been in development for over three years, goes ahead, the Russian regime will further strengthen its political influence in Western Europe despite the war in Ukraine.

Rosatom as a Civil-Military State Corporation

Rosatom is a state-owned corporation that operates in both the civilian and military spheres of nuclear energy and nuclear weapons. As the successor to Russia's Ministry of Atomic Energy, Rosatom brings together over 350 companies engaged in nuclear activities. The corporation was created by a decree by Russian President Vladimir Putin in 2007.

Rosatom is directly owned by the Russian state. It is one of seven Russian "state corporations," grouped together with Rostec, Roscosmos, and others. In 2012, former Prime Minister Dmitry Medvedev described Rosatom as a "corporation of a special kind" that not only seeks to expand its activities but also carries out "certain ministerial tasks."

The corporation's Supervisory Board is its main decision-making body. This board includes Sergey Kirienko, the deputy head of the Russian presidential administration, who is currently under sanctions from the EU, the UK, and the US, as well as Sergei Korolev, the first deputy director of the Federal Security Service of the Russian Federation (the main successor to the Soviet KGB). In relation to the war in Ukraine, Korolev has also been sanctioned by the EU, Australia, Canada, New Zealand, Switzerland, the UK, and Ukraine. The Supervisory Board also includes two Russian deputy prime ministers and two aides to President Vladimir Putin.

The European Parliament has repeatedly called for sanctions on Rosatom and for an end to all nuclear cooperation with Russia, including uranium imports and investments in critical infrastructure.

Participation in the War

Since Russia's full-scale invasion of Ukraine began, Rosatom has been directly and indirectly involved in the war. According to a letter obtained by Ukrainian intelligence and published in the American press, Rosatom offered assistance to the Russian arms industry in securing goods needed for the production of weapons, tanks, and aircraft after that sector had been hit by international sanctions.

In his December 2022 address to Rosatom on the occasion of its 15th anniversary, President Vladimir Putin praised the corporation for its "enormous contribution to the development and deployment of advanced weapons systems and military equipment."

In the early days of the invasion, Rosatom employees assisted Russian troops who occupied the Chernobyl exclusion zone in Ukraine. The Russian state corporation also facilitated the illegal seizure of Ukraine's Zaporizhzhia Nuclear Power Plant. Rosatom employees have taken over key management positions at the facility. Following a decree by the Russian president, Rosatom created a new subsidiary specifically tasked with taking control of the plant.

In October 2023, Ukrainian nuclear operator Energoatom reported that the safety culture at the plant was deteriorating under Rosatom's control. This deterioration included poorly performed work, insufficient staffing, and inadequate inspections. The company stated that these problems had led to significant damage to critical components of the Zaporizhzhya Nuclear Power Plant (NPP), including leaks in the radioactive primary

coolant circuit. There is also credible evidence that Rosatom employees assisted the Russian military in selecting targets at the Zaporizhzhya NPP; they reportedly "helped direct Russian artillery fire at the plant."

Rosatom as a Geopolitical Tool

Rosatom is a central player in the Russian regime's "geopolitics." The company's goal is to make as many countries as possible dependent on Russian nuclear technology, services, and fuel. Rosatom purchases essential equipment for nuclear reactors under construction from European companies and supplies the EU with unenriched and enriched uranium, fuel, and other nuclear services. This cooperation helps fund the continuation of the war in Ukraine. It also locks Europe into dependence on Russian nuclear fuel and services, which ultimately translates into political influence.

Hungary is perhaps the clearest example. It is almost entirely dependent on Russia for nuclear energy services and has repeatedly blocked any attempt by the EU to impose sanctions on Rosatom. Russia controls the supply of nuclear fuel and the maintenance of existing Hungarian reactors and has provided a €10 billion loan for the construction of Paks-2 nuclear power plant. In addition, Siemens Energy and Framatome are providing key equipment and control systems for new Russian-made reactors in Hungary.

Rosatom states that it is currently building more than 30 new reactors in about a dozen countries. Last year, its subsidiaries exported approximately $2.2 billion worth of nuclear energy-related goods and materials. The Russian state budget covers more than 90% of the cost of Rosatom's construction of new nuclear power plants around the world.

Rosatom has signed agreements with nearly 20 African countries to build nuclear power plants and research reactors. So far, however, only one plant is actually under construction: the Al Dabaa plant in Egypt. Rosatom has also purchased a uranium mine in Tanzania. A previous attempt to build a nuclear power plant in South Africa collapsed due to resistance from environmental activists. In South America, Rosatom is involved in smaller but still significant projects, such as a research reactor and lithium mining in Bolivia.

Despite Russia's war in Ukraine, the French nuclear company Framatome continues to purchase uranium from Rosatom. Between 2022 to 2023, at least ten shipments of uranium went from Russia to the ANF nuclear fuel plant in Lingen, a Framatome subsidiary. According to the German government, these deliveries took place under two federal government licenses issued in September, November, and December 2022, as well as in April and May 2023. In August 2023, German authorities granted a new license authorizing up to 40 more shipments. Deliveries are still ongoing.

Prospects

In the four years since Russia's full-scale invasion began, the EU has adopted nearly twenty packages of sanctions against the Russian economy and industry. Other countries, including the United States, the United Kingdom, Canada, and Japan, have also imposed sanctions. However, Russia has faced virtually no pressure in the field of nuclear energy, one of its key sectors with both civilian and military significance. On the contrary, Rosatom has expanded its operations and almost tripled its profits from trade with Western countries.

Europe's dependence on Russia in the nuclear sphere is roughly comparable to its reliance on pipeline gas supplies before the war. First, Putin used gas deliveries as leverage over Europe, and then the Russian pipeline was destroyed in an act of sabotage. Without these developments, we would now likely be talking about the EU's crippling dependence on Russia for both uranium and pipeline gas. In such a situation, it is reasonable to assume

that Ukraine would not have been able to rely on the level of support it currently enjoys in Europe.

This dependence on Russian supplies did not arise by a happy accident for Moscow but from strategic steps the Russian regime has taken over the past 10–15 years. It is not known for certain whether Putin had been planning a full-scale war throughout this entire period. However, it is clear that making Europe's economy as dependent as possible on Russian energy supplies was one of Moscow's strategic priorities. Under this strategy, many European countries were meant to end up in the position Hungary finds itself in today.

As a result of the war in Ukraine, Europe's dependence on Russian supplies has fallen sharply, though it has not disappeared. For instance, Germany, the EU's largest economy, no longer relies on Russian pipeline gas. The fight against the "shadow fleet" transporting Putin's oil to fund the war is under way, albeit with mixed results. Furthermore, Russian coal has been completely banned from Europe. Russia's coal industry, one of the most profitable, is currently in a deep crisis — direct evidence that Russia has been unable to offset the consequences of Europe's refusal to buy Russian coal. Even in the nuclear energy sector, the least affected by sanctions, there have been notable shifts. For instance, Finland has abandoned plans to build a major nuclear power plant with Russian involvement. In several cases, European companies have been unable to supply Rosatom with equipment for its projects in other countries.

Unfortunately, efforts to reduce dependence on Russian uranium are progressing extremely slowly, and there is still no clear timeline for this process. A full break with Russian uranium in the foreseeable future seems unlikely, especially if Hungary goes ahead with a new nuclear power plant project involving Rosatom. Russia is also trying to increase its liquefied natural gas exports to Europe. However, it now seems unlikely that European authorities will once again allow a situation in which Vladimir Putin can make their economies dependent on Russia.

Rosatom is arguably the biggest Russian thorn in Europe's flesh today, and half-measures won't remove it. A "surgical extraction" would cause severe and painful shocks to the economies — and, in turn, the politics — of several EU member states. The problem is not that the threat is underestimated; Europe understands it perfectly well. The issue is that freeing itself from this nuclear dependence would require enormous time and effort. The question is: will there be enough of either?

This article is reprinted with permission of the author and was published on https://www.posle.media/article/the-non-peaceful-atom, 7 January 2026.

Microsoft wants to restart Harrisburg reactor, but is it possible?

Jan van Evert, reporter WISE-Netherlands

Microsoft has signed a contract to purchase electricity from the notorious nuclear power plant at Three Mile Island (TMI) Pennsylvania, better known worldwide as the Harrisburg nuclear power plant. It owns its bad reputation due to the meltdown of Unit 2 back in 1979. Unit 1 was shut down on September 20, 2019 because it was not profitable. Exelon, the previous owner, lost over $300 million over the last half-decade despite it being one of its best-performing power plants. In April 2019, the company stated it would cost $1.2 billion over nearly sixty years to completely decommission Unit 1.

photo by Alessandro Rampietti

Constellation Energy, the company that currently owns TMI Unit 1 (Unit 2 is owned by EnergySolutions), will sell power to Microsoft for $98 per megawatt-hour (MWh), compared to market power prices of around $50/MWh.

But The former chairman for the Federal Energy Regulatory Commission, Neil Chatterjee, warns in a newly posted opinion piece from The Hill that restarting the reactor is far from easy. “The reactor vessel could be brittle and fatigued. The core rods may need to be refurbished, the steam generators might have corroded, the turbines may break after not being rotated for years. And we know the cooling tower was partially removed as a fire hazard," Chatterjee said. Apart from technical problems, Chatterjee warns for bureaucracy: " I have seen firsthand how red tape can choke even the best intentioned projects under goodwill regulators. Reactors that were permanently shut down must go through an extensive regulatory review process and request special exemptions for both their operations and use of radioactive fuel”.

TMI is not only a nuclear power plant. It is also a high-level radioactive waste site. There are 700 tons of high-level radioactive garbage stored on-site. If TMI-1 operates for another twenty years, central Pennsylvanians will be asked to accept an additional 600 tons of toxic waste. So far, the federal government has paid two billion dolllars to keep nuclear waste at Pennsylvania’s nuclear power plants. And the bill will rise: TMI is out of waste space so two new nuclear waste storage facilities have to be build.
Despite these problems, Constellation has ensured a restart slated for 2027.

This is the second plan to restart a mothballed nuclear power plant: last year, plans were announced to restart the Palisades nuclear power plant near Chicago. (see Nuclear monitor 930).

Jan van Evert

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https://www.tmia.com/content/case-against-restarting-three-mile-island%E2%80%99s-unit-1

Wikipedia

Report: Nuclear Power Isn't Viable In Hawai‘i

Lynda Williams, Community Voice, Honolulu Civil Beat

The Hawai‘i State Energy Office has released the final report of the Nuclear Energy Working Group created by the Legislature under SCR-136. I served on the working group as a representative of 350 Hawai‘i.

The report concludes that nuclear power is not viable in Hawai‘i and that the state should not change its laws or Constitution to enable it.

The most fundamental obstacle is legal. Hawai‘i’s Constitution restricts nuclear fission construction, and nuclear power is excluded from the state’s Renewable Portfolio Standard. These restrictions apply regardless of reactor size, design, fuel type, or branding. Small modular reactors and so-called “advanced” reactors are still nuclear fission reactors. Making nuclear power legal in Hawai‘i would require amending the Constitution — a process that requires a two-thirds legislative vote. The working group did not recommend taking this step.

Beyond the law, the technology itself remains unfeasible. No advanced nuclear reactors are operating commercially in the United States, and none are expected to come online in any timeframe relevant to Hawai‘i’s energy or climate goals. Projects cited by nuclear advocates remain stuck in licensing pipelines, demonstration phases, or heavily subsidized pilot programs. Without commercially operating reactors, reliable cost estimates, construction schedules, or grid-integration analyses do not exist. Nuclear power cannot meaningfully address climate change when it cannot be deployed at scale.

The report also acknowledges that radioactive waste is a decisive and unresolved problem. There is no permanent disposal repository operating anywhere in the United States. Hawai‘i has no capacity to store or manage spent nuclear fuel, and no federal facility exists to accept it. The Hawai‘i Constitution explicitly bars nuclear waste storage and disposal facilities unless approved by a two-thirds vote of both legislative chambers. Any nuclear project would therefore require indefinite on-island storage of radioactive material in direct conflict with the Constitution, creating ongoing risks related to containment failure and transport. For an isolated island state, this reality alone makes nuclear power unrealistic.

The Bikini Atoll nuclear test, Castle Bravo, is the subject of this iconic doomsday photo. (Wikimedial Commons)

Emergency preparedness and regulatory capacity further reinforce that conclusion. Hawai‘i does not have a nuclear regulatory agency, a trained nuclear emergency-response workforce, evacuation-planning capacity, or land suitable for exclusion zones. These are not minor administrative gaps. They reflect the absence of the institutional and physical capacity needed to respond to potentially catastrophic nuclear accidents.

The analysis also places nuclear power in the context of Hawai‘i’s history in the Pacific, including nuclear weapons testing and long-term harm to island and Indigenous communities. Public trust cannot be assumed, and meaningful public evaluation is impossible without concrete information about reactor designs, fuel cycles, waste handling, and accident scenarios — information that does not exist.

Hawai‘i is not alone in facing industry efforts to dismantle state-level protections. Over the past decade, several states with laws restricting or prohibiting new nuclear plant construction — including Wisconsin, Kentucky, Montana, West Virginia, Connecticut, and Illinois — have repealed or weakened those laws to allow so-called advanced nuclear technologies such as small modular reactors (SMRs), often justified by climate or grid-reliability claims. These rollbacks occurred despite the continued absence of commercially operating advanced reactors, the lack of a permanent nuclear waste repository, and mounting evidence that nuclear power cannot be deployed fast enough to play a meaningful role in addressing climate change.

Now is not the time to weaken Hawai‘i’s protections against nuclear power. At the federal level, environmental protection and public oversight under the National Environmental Policy Act (NEPA) are being aggressively gutted through executive orders and legislation such as the SPEED Act. These measures are designed to shorten environmental review, eliminate meaningful public participation, restrict judicial oversight, and prevent courts from stopping unlawful projects even when agencies violate the law. As federal safeguards are dismantled, Hawai‘i’s constitutional and statutory protections against nuclear power become more critical, not less.

The report’s only weak point is its suggestion that the state revisit nuclear power every three to five years. Even under the most optimistic assumptions, advanced nuclear reactors, including SMRs, will not be commercially operating, fully tested, or economically viable within that timeframe. Any nuclear reactor operated in Hawai‘i would require radioactive waste to remain on island for extended periods to cool before transport, and shifting that waste burden onto other Indigenous lands is not an ethical solution and is inconsistent with the values of aloha ‘āina. Nuclear power is not viable in Hawai‘i and never will be; the state should instead focus on renewable energy, storage, efficiency, grid modernization, and community-centered planning grounded in reality.

To read the final Nuclear Energy Working Group report, visit: https://energy.hawaii.gov/wp-content/uploads/2025/12/SCR136_AdvancedNuclearHawaii_2025LegReport.pdf

Lynda Williams is a physicist and journalist based in Hilo.

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Another miserable year for nuclear power as renewables surge

Dr. Jim Green, ***national nuclear campaigner with Friends of the Earth Australia and a member of the Nuclear Consulting Group***

The World Nuclear Industry Status Report (WNISR-2026) has crunched the numbers to show that 2025 was another underwhelming year for nuclear power. Here are the 2025 global figures:

* power reactor startups (grid connections): 4 reactors, 4.4 gigawatts (GW) capacity
* permanent shutdowns: 7 reactors, 2.8 GW
* net growth of nuclear capacity: 1.6 GW
* power reactor construction starts: 11 reactors, 12.0 GW

The four reactor startups were in China (2), Russia and India. That is the lower number of startups since 2017.

The seven permanent reactor shutdowns were in Belgium (3), Russia (3) and Taiwan.

The net decline of three operating reactors makes 2025 the worst year on that criterion since 2012, when many reactors were permanently closed due to the Fukushima disaster in March 2011.

The 11 construction starts in 2025 -- the highest number since 2010 -- were in China (9), South Korea and Russia.

As of 1 January 2026, according to WNISR-2026:

* 404 nuclear power reactors were operating in the world -- five less than a year earlier and 34 less than the historic peak of 438 in 2002.
* Nuclear accounted for 9.0 percent of global electricity generation, barely half its historic peak of 17.5 percent in 1996.
* 31 countries were operating nuclear power plants worldwide, one fewer than a year earlier as Taiwan closed its last reactor in May 2025.

Taiwan is the fifth country to abandon its nuclear power program following Italy (1990), Kazakhstan (1999), Lithuania (2009) and Germany (2023).

Overall, the 25-year pattern of global stagnation continues, with no end in sight.

Installed nuclear capacity of 4.4 GW in 2025 was 180 times lower than the estimated 793 gigawatts of new solar and wind capacity (up from 717 GW in 2024).

In China, new nuclear capacity in 2025 amounted to 2.5 GW whereas solar capacity installed in the first 11 months of 2025 amounted to an estimated 275 GW. The nuclear share of electricity generation in China has fallen for four years in a row after peaking at 5.0 percent in 2021. That's despite China's status as the only significant growth market in the world, with a net growth of around 50 reactors over the past 20 years and a net decline of around 50 reactors in the rest of the world.

Conspicuously absent from the lists of reactor startups and construction starts are any small modular reactors or any 'Generation IV' reactors such as fast neutron reactors, fusion reactors, molten salt reactors, etc.

Dramatic drop in number of countries building reactors

The number of countries building power reactors has fallen off a cliff. WNISR-2026 notes:

"The number of building countries declined by almost one third, from 16 to 11, in just two years, with several countries having completed their last construction project (France, United Arab Emirates, United States), or suspended if not terminated construction (Argentina, Brazil,

Japan), while only one country was added to the list (Pakistan).

"Only eight of the 31 countries currently operating commercial nuclear plants are building new ones, while three are newcomer countries (Bangladesh, Egypt, Türkiye) in the course of building their first reactors, all implemented by the Russian nuclear industry."

The number of countries operating power reactors reached 32 in the mid-1990s. Since then it has fallen to 31.

Globally, the number of power reactors under construction increased by seven in 2025 -- entirely due to China. China has 36 reactors under construction, more than half of the global total of 66.

Not a single power reactor is under construction across the 35 countries of the American continent.

Only one reactor is under construction in the European Union (in Slovakia). Solar and wind (30 percent combined) overtook fossil fuels (29 percent) for EU electricity generation last year. All renewables (including hydro) accounted for 47.7 percent while nuclear (which fell by nearly two percent last year) now accounts for less than half that amount (23.4 percent).

Over the six-years from 2020-26, Chinese and Russian companies have been the only builders worldwide responsible for reactor construction starts, with the exception of one project in South Korea. Only Russia, China and France are building reactors abroad.

The 'peaceful atom'

WNISR-2026 notes that of the total of 66 reactors under construction in 11 countries, 63 (95 percent) are either in nuclear-weapon states (50) or are implemented by companies controlled by nuclear-weapon states in other countries (13). Only the three construction projects in South Korea fall outside this category.

Iran's uranium enrichment program drew attention to the potential to weaponise the 'peaceful atom' and the military attacks on Iran's nuclear facilities last year by Israel and the US added to the long history of nation-states attacking nuclear plants to prevent weapons proliferation (or for that reason among others).

Other examples of conventional military attacks on nuclear plants to prevent weapons proliferation include Israel's destruction of reactor components awaiting shipment to Iraq, in France in 1979; Israel's destruction of a research reactor in Iraq in 1981; military strikes by Iraq and Iran on each other's nuclear facilities during the 1980-88 war; the United States' destruction of a research reactor in Iraq in 1991; Iraq's attempted missile strikes on Israel's nuclear facilities in 1991; and Israel's bombing of a suspected nuclear reactor site in Syria in 2007.

Russia's attacks on nuclear plants in Ukraine probably aren't motivated by weapons proliferation concerns. Nonetheless, the risk of a nuclear catastrophe on top of the ongoing mass murder of conventional warfare highlights the role of nuclear plants as stationary terrorist targets or weapons of mass destruction.

International Atomic Energy Agency chief Rafael Grossi recently said that fighting around the Zaporizhzhia nuclear power plant has left Europe's largest nuclear plant in an "extremely fragile, volatile condition".

Apart from the fragile, volatile situation at Zaporizhzhia, low-lights in 2025 included a drone attack which seriously damaged the protective dome over the stricken Chernobyl #4 reactor and, more importantly, more than 10 attacks on nuclear power plant substations in Ukraine which are, according to the IAEA, "essential for nuclear safety and security" and "absolutely indispensable for providing the

electricity all nuclear power plants need for reactor cooling and other safety systems."

Industry hype

Despite the 25-year pattern of stagnation, the World Nuclear Association claims that global nuclear power capacity could more than triple to reach 1,446 GW by 2050. But there's plenty of fine-print undermining the absurd projection:

* A big chunk of the projected growth (542 GW) "is not yet supported by identified projects".
* Another big chunk (425 GW) comprises reactors that are planned, proposed or potential … all essentially meaningless categories.
* A "substantial" share of the required capacity growth depends "on large-scale programmes for proposed, potential, and government-targeted capacity that are not yet supported by firm investment decisions".
* The required 65 GW per year from 2046-2050 is "roughly double the historic peak build rate seen in the 1980s".
* Achieving the projection will require "unprecedented construction rates, strategic lifetime extension of existing reactors, and significant policy and market reforms".
* Several national targets (such as the 293 GW of new capacity required to meet the United States' 400 GW target) "rely heavily on an expansion of nuclear capacity where there is currently little or no ongoing construction, or identified reactors planned or proposed for deployment".

It's all comical nonsense. A much more likely scenario is that the past 25 years of nuclear stagnation will be followed by another 25 years of stagnation. If there is any growth -- and there may not be due to the ageing of the global reactor fleet and the industry's other challenges -- it will be marginal growth.

Nuclear stagnation vs. renewables growth

As noted above, installed nuclear capacity of 4.4 GW in 2025 was 180 times lower than new solar and wind capacity.

The International Energy Agency (IEA) predicts the installation of 4,600 GW of new renewable capacity in the five years from 2025-2030, twice as much as in the previous five years. (Current global nuclear capacity is 369 GW.)

The IEA stated in October 2025 that:

* Renewables will surpass coal at the end of 2025 (or by mid-2026 at the latest) to become the largest source of electricity generation globally. (The World Economic Forum states that renewables overtook coal in the first half of 2025.)
* The share of renewables in global electricity generation is projected to rise from 32 percent in 2024 to 43 percent by 2030.
* From 2025-2030, renewables are expected to meet over 90 percent of global electricity demand growth.

Over the past decade we've seen renewable electricity generation double then triple nuclear power generation. By the end of this decade renewables will out-generate nuclear by a factor of 5-7.

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Japanese nuclear power company falsified earthquake data

Jan van Evert, reporter WISE-Netherlands

On January 7th, Japans Nuclear Regulation Authority (NRA) announced that it was halting the screening needed to restart Chubu Electric Power's Hamaoka Nuclear Power Station Units 3 and 4. The plant is located about 200 kilometres west of Tokyo on a coastal area known for its potential risks from so-called Nankai Trough megaquakes. A whistleblower already alerted the NRA in February of last year, but the issue only became public early January this year. The NRA decided to conduct on-site inspections at the headquarter of the Chubu Electric Power Co. in Nagoya, as well as to demand the company to submit materials concerning the details and background of the wrongdoing, and a report from its third-party committee detailing the facts of the misconduct and measures to prevent the recurrence. NRA chairman Shinsuke Yamanaka said: "Ensuring safety is the first and foremost responsibility for nuclear plant operators and (data fabrication) is an act of betrayal to their task and one that destroys nuclear safety".
The NRA has scrapped the entire review process for the Hamaoka reactor Units 3 and 4, and will issue a notice to other nuclear plant operators, urging them to ensure their application materials are prepared appropriately. It has also begun investigating other nuclear power plant operators for similar misconduct.

Chubu Electric Power had applied for the safety screening to resume operations at the two reactors in 2014 and 2015. Chubu Electric President Kingo Hayashi acknowledged that workers at the utility used inappropriate seismic data with an alleged intention to underestimate seismic risks. He apologized and pledged to establish an independent panel for investigation.
The company issued a press release describing in detail how it manipulated the seismic safety data. Risks were evaluated at least in part by scaling up the ground motion using data from smaller earthquakes. This is an inexact process, so the standard approach is to create a group of twenty different upscaled earthquake motions and find the one that best represents the average among the twenty. Of Japan's 57 commercial reactors, less than a quarter (13) are currently in operation, 20 are offline and 24 others are being decommissioned, according to NRA. The Japanese government wants to restart several nuclear power plants, so this incident is a major setback.

The Citizens' Nuclear Information Center (CNIC), a Japanese anti-nuclear group, issued a statement in which they called the situation 'absolutely unacceptable'. They point out that 'the NRA failed to detect the deterioration of safety culture at Chubu Electric'.
The Federation of Electric Power Companies of Japan warned its members that the situation was a "gravely serious matter that could shake the very foundations of the industry", urging them to ensure proper operations.

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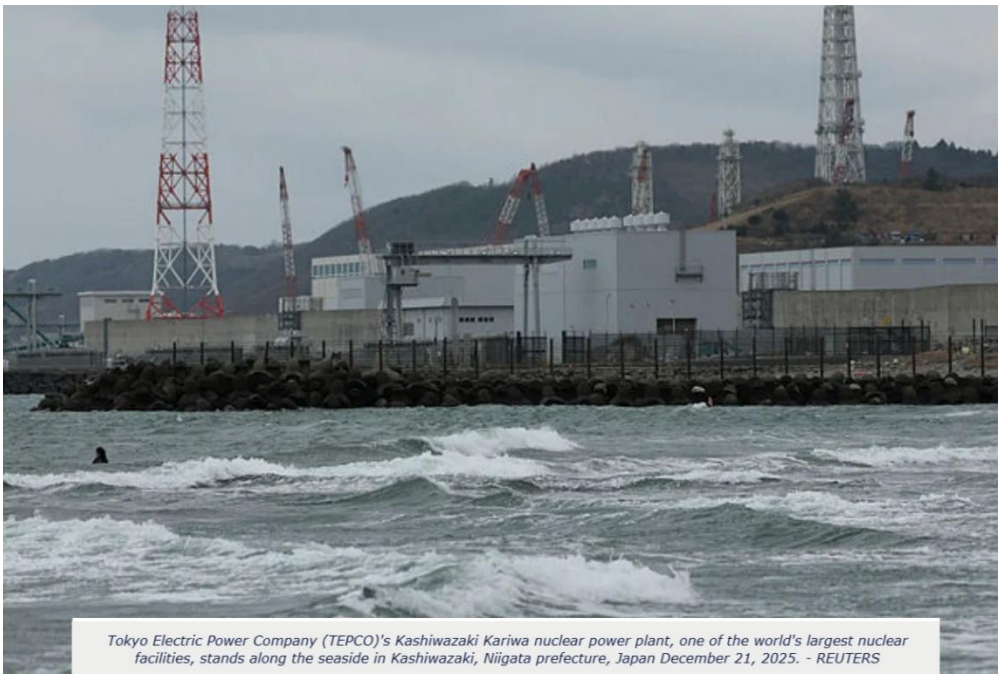
World Nuclear Power Status

Number of Reactors
(as of January 2026)

The world’s largest nuclear power plant was shut down due to alarm malfunction



Tokyo Electric Power Company (TEPCO)'s Kashiwazaki Kariwa nuclear power plant, one of the world's largest nuclear facilities, stands along the seaside in Kashiwazaki, Niigata prefecture, Japan December 21, 2025. - REUTERS

TEPCO's Kashiwazaki-Kariwa Nuclear Power Station Unit 6 (the world’s largest nuclear power plant), restarted on January 21, a day later than originally planned. Less than a day after its restart, it was shut down due to a malfunction in the control-rod monitor alarm.

The Citizens' Nuclear Information Center (CNIC), Japan issued a statement protesting the hasty decision to restart Unit 6 of the Kashiwazaki-Kariwa NPS.

Please check English version of the statement from the following link:
https://cnic.jp/english/?p=8871