

Friends of the Earth Japan expresses grave concerns on IFI financing nuclear power projects because of the reasons listed below. I hope you take our concerns seriously.

**Nuclear power is risky and costly**, especially the cost of accidents, which are enormous. Human history has experienced severe nuclear accidents, such as Three Mile Island, Chernobyl, and Fukushima. People are still suffering from the consequences of these disasters even after decades have passed. Since the Fukushima nuclear crisis happened, the cost of decontamination, decommissioning, compensations has skyrocketed<sup>1</sup>. **It is unrealistic to assume any insurance could exist to cover all these costs.**

According to the Lazard, the cost of electricity produced by nuclear power is increasing while cost of renewables are most of the time declining<sup>2</sup>.

The entire fuel chain from uranium mining, enrichment and operation creates vast amounts of **radioactive and toxic waste**. The waste needs to be dealt with for a long time period. High level radioactive wastes and spent fuel must be handled and stored with great care. The only way that radioactive waste can become less harmful is through decay. This process takes hundreds of thousands of years, putting the public and environment at risk for a very long time. Neither the IFIs nor the operators are unlikely to monitor the waste management for such a long period of time.

**Nuclear power plants are unstable and cause numerous accidents and encounter many difficulties.** In France, French reactors generated zero power on 152 days in 2022 on average. France turned into a net importer of electricity, with Germany as an exporter. Utility Électricité de France (EDF), facing potential bankruptcy over record losses and unprecedented net debt levels (€202364.8 billion or US\$70 billion as of mid-2023), was renationalized according to the World Nuclear Industry Status Report 2023.

The recent Russian invasion of Ukraine highlighted the **risks of military attacks on nuclear power plants** (i.e. Zaporizhzhia Nuclear Power Plant in Ukraine).

**Nuclear power is increasingly vulnerable to climate change**<sup>3</sup>. Two in five nuclear plants operate on the coast, and at least 100 have been built a few meters above sea level<sup>4</sup>. Nuclear power requires cooling water; thus most of the power plants are built alongside the water. If new nuclear power plants are going to be built, additional cost for climate impact is expected. In France, due to the heatwaves, nuclear power plants were forced to suspend its operation<sup>5</sup>.

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<sup>1</sup> Kazunari Hanawa, Fukushima cleanup costs swell with no end in sight, Nikkei (Mar. 11, 2023), <https://asia.nikkei.com/Spotlight/Fukushima-Anniversary/Fukushima-cleanup-costs-swell-with-no-end-in-sight>

<sup>2</sup> Lazard, 2023 Levelized Cost Of Energy+, <https://www.lazard.com/research-insights/2023-levelized-cost-of-energyplus/>

<sup>3</sup> In Japan, the additional costs for safety measures required following the 2011 Fukushima nuclear disaster reached over 6.09 trillion yen (\$44.3 billion) in January 2023. This is the sum of the additional cost that 11 major power companies spent. Some companies do not include cost for counter terrorism measures.

<sup>4</sup> Paul Dorfman, Nuclear energy isn't a safe bet in a warming world – here's why (June 28, 2021), <https://theconversation.com/nuclear-energy-isnt-a-safe-bet-in-a-warming-world-heres-why-163371>

<sup>5</sup> Forrest Crellin, et al. France issues 'red alert' over heatwave in south, Reuters

**Nuclear power cannot solve the climate crisis.** The climate crisis is an urgent issue we have to tackle. In order to stay below 1.5 degrees Celsius temperature rise, we must halve emissions by 2030 and zero by 2050. Nuclear power will take time to be installed, and the cost is enormous. World Nuclear Industry Status Report 2023 says since the beginning of the nuclear power age, there has been a clear global trend towards. The report states “The longer-term perspective confirms that short construction times remain the exceptions. Ten countries completed 66 reactors over the decade 2013–2022—of which 39 in China alone—with an average construction time of 9.4 years (see Table 3), slightly higher than the 9.2 years of mean construction time in the decade 2012–2021.”<sup>6</sup> This is too long to deal with the urgent climate crisis.

**The financial security of the recipient countries** will be put in jeopardy. The cost of building new nuclear power plants skyrocketed in recent years. According to the IEA, the Middle East and Africa are the only areas where nuclear power generation capacity will more than triple (World Energy Outlook 2023, Announced Pledge Scenario, national commitment scenarios that will lead to a 1.7°C temperature rise in 2100). IAEA Director General Grossi stated in November 2023 in Paris that within the next few years 12 or 13 countries would join the list of new nuclear powers, mentioning Ghana, Kenya, Morocco, Nigeria, Namibia, the Philippines, Kazakhstan, and Uzbekistan. The cost of installing nuclear power plants in some of these countries will exceed national expenditure. Even the cost of the NuScale project, a small modular reactor that is considered relatively inexpensive to install, is close to \$10 billion<sup>7</sup>. Financing new nuclear power is likely to worsen the financial security of recipient countries.

Due to the sensitivity of the information, especially in relation to **nuclear security, information disclosure is likely limited compared to other projects.** Some sensitive information might not be included in the Environmental Assessment Reports. Therefore, it is doubtful that IFIs can make fully informed decisions or that stakeholders can have full access to information.

**Nuclear power threatens human rights.** From uranium mining to working in the nuclear power plants, people are threatened by radiation exposure. Uranium mining is an extractive industry and often associated with human rights violations in indigenous communities. Radioactive pollution indiscriminately harms future generations, poisoning the environment for hundreds to thousands of years. Workers in nuclear power plants suffer from leukemia<sup>8</sup>.

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(Aug, 21, 2023),

<https://www.reuters.com/business/energy/frances-edf-takes-13-gw-nuclear-reactor-offline-amid-heatwave-2023-08-21/>

<sup>6</sup> Mycle Scheider, The World Nuclear Industry Status Report 2023 (Dec. 2023),

<https://www.worldnuclearreport.org/IMG/pdf/wnisr2023-v4-hr.pdf>

<sup>7</sup> Citizens' Nuclear Information Center, CNIC Statement: Nuclear Industry Dancing in Other People's Shoes Regarding the Pledge to Triple NPPs (Dec. 5, 2023),

<https://cnic.jp/english/?p=6899>

<sup>8</sup> Fukushima No. 1 worker's leukemia officially deemed a work accident, Japan Times, (Oct. 20, 2015), <https://www.japantimes.co.jp/news/2015/10/20/national/science-health/nhk-says-health-ministry-confirms-link-workers-leukemia-fukushima-blast/>