French nuclear power? Russia cooperation and other key questions

Media information

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Macron in Prague to sell French Nuclear Power: A range of problems and cooperation with Russia

One of the key topics of French President Emmanuel Macron's visit to Prague will be efforts to support French state-owned EDF, which is bidding to build new nuclear reactors in the Czech Republic. Some disturbing facts surface if we look behind the propaganda used to present the French-Czech nuclear cooperation. For one, there is the failure to build new nuclear power plants on time and at the agreed price, not only abroad but also in France. Moreover, the Czech Republic would be the first country in the world where EDF would attempt construction of its EPR 1200 reactor: EDF bid for this reactor type in the ongoing tender, however, it is still under development. On top of these naked realities, it turns out that EDF has strong ties with the Russian nuclear industry which have never been terminated – and EDF/Framatome are set to increase their cooperation with the Russian state-owned nuclear giant Rosatom.

All **EPR reactor** projects to date have faced or are facing significant technical difficulties which have led to substantial budget increases and construction time delays. The Finnish **Olkiluoto** reactor was built by Areva (now Framatome). The problematic project (with a delay of twelve years past the original schedule) was one of the main reasons for Areva's financial collapse and takeover by EDF. The contracted fixed cost with the Finnish investor was €3 billion, while the actual cost was €12.4 billion [1].

The construction of the two EPR reactors for China's Taishan Nuclear Power Plant took over nine years. In July 2021, the plant experienced a problem with damaged fuel rods, resulting in a radioactive gas leak. Resolving the problem required a one-year shutdown of the first reactor [2].

The only Flamanville 3 reactor under construction in France experienced similar problems to those in Finland. EDF is currently forecasting a total cost of €13.2 billion, excluding financing costs, whereas when construction started the cost was estimated at €3.3 billion. It is expected to start up in 2024 after 17 years of construction and a 12-year delay [3].

EDF is the main investor in two EPR reactors at the UK's **Hinkley Point C** site. In an optimal situation, the first unit will come on line in 2029 (after ten years of construction), while other possible scenarios envisaged by EDF are 2030 and 2031. The latest estimate in January for construction costs (overnight costs) of £31-34 billion = €36-40 billion in 2015 prices [4].

EDF also had to resolve the many challenges of its operating reactors in France. At the end of 2021, a problem with corrosion of the cooling system pipes was initially identified in four 1450 MWe reactors and subsequently in twenty 1300 MWe reactors. The problem is apparently not

related to the ageing of the reactors, as it does not occur in the older 900 MW units [5].NGOs call attention to France's dependence on the Russian nuclear industry

EDF continues to use Russian uranium enrichment services. In February 2024, the Dutch nuclear authority ANVS authorised the transport of up to six shipments of enriched uranium from Russia to Urenco in Almelo destined for EDF. After the start of the Russian aggression in Ukraine, Urenco declared that it would terminate all contracts with Russia, but this did not occur. "Since the beginning of the war, we have been documenting and disclosing uranium deliveries from Russia to EDF's subsidiary in Lingen, including through the port of Rotterdam," says Vladimir Slivyak, Right Livelihood award winner of the Russian NGO Ecodefense [6].

Edvard Sequens, energy consultant at Calla, said: *"The French nuclear industry is facing very serious problems. It cannot build new reactors on time and at the promised price, it lacks the technical capacity to maintain its ageing domestic nuclear plants and regarding the construction of new plants EDF is likely put domestic interests over contracts abroad. Moreover, for Dukovany, EDF is offering a reactor that does not yet exist. This is reason enough to view Macron's nuclear mission in Prague with a critical eye."*

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[6] Urenco is back in business with Russia – despite of war in Ukraine: International NGOs reject uranium deliveries from Russia to Almelo, 22.2.2024, for more information please contact Vladimir Slivyak, Ecodefense Russia, tel.: 0049-178-1792352, email: ecodefense@gmail.com