

The cost of “new era” nuclear: the unbearable lightness of EDF

GREENPEACE REPORT SUMMARY

In 2007, EDF Energy Chief Executive claimed that **by Christmas 2017, British turkeys would be cooked using “new era” nuclear energy.***

The first high-density concrete for the first EPR unit was **finally poured in December 2018** at Hinkley Point C and commissioning of the reactors pushed back to 2030.



* Financial Times, [UK nuclear plant hit by new multiyear delay and could cost up to £46bn](#), 23 January 2024

This anecdote illustrates the story of **an EPR sector** which, over time, has become a **global-scale industrial and economic fiasco** involving a **systematic underestimation of costs and construction times for EPR reactors**. In light of this experience and the current capabilities of the French nuclear industry, **neither the cost nor the timetable announced by EDF for the “new era” nuclear programme** to build six EPR2 nuclear reactors can be considered **credible**.

A questionable preparedness

Successive upward reassessments of project costs and the recent delay in finalising detailed EPR2 plans demonstrates **a lack of preparedness on the part of the nuclear industry and the hastiness of efforts to expand nuclear production. These reassessments invalidate the hypothetical RTE scenario of an energy mix including “new era” nuclear** on which political and economic decision-makers are counting to take decisions.

They discredit the findings of initial audits conducted on programme costs and raise the question of whether these auditing firms can be objective. **The choice of NucAdvisor and Accuracy** for this work is questionable to say the least given their connection to the EPR fiasco. Accuracy has been involved in financial assessments for several EPR projects that have run far over initial budgets, including Flamanville; NucAdvisor is staffed with former nuclear industry executives involved in several catastrophic projects. These auditing firms

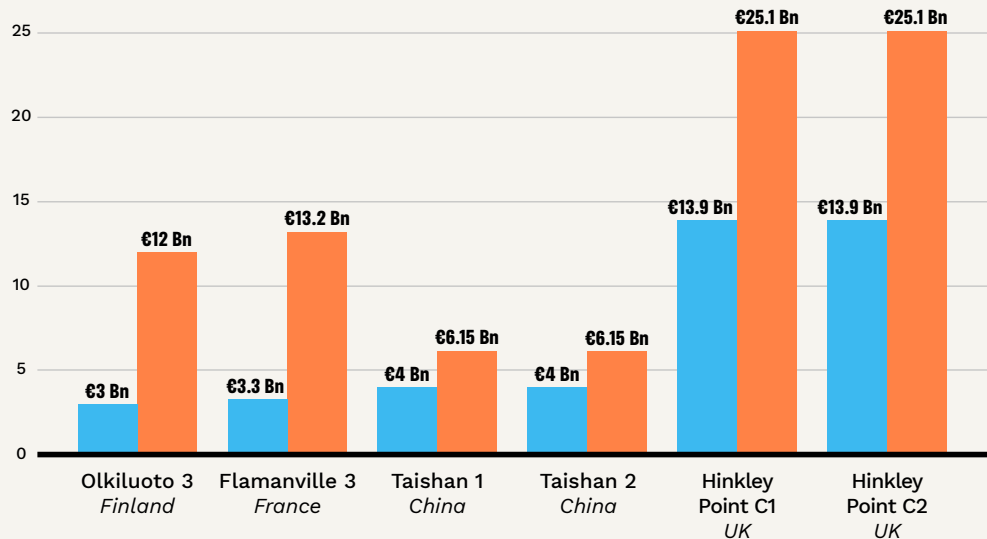
have only roughly validated initial financial estimates without testing them against the ample feedback available on the subject (French Court of Auditors, the Jean-Martin Folz Report, Greenpeace assessments and more).

A compromised profitability

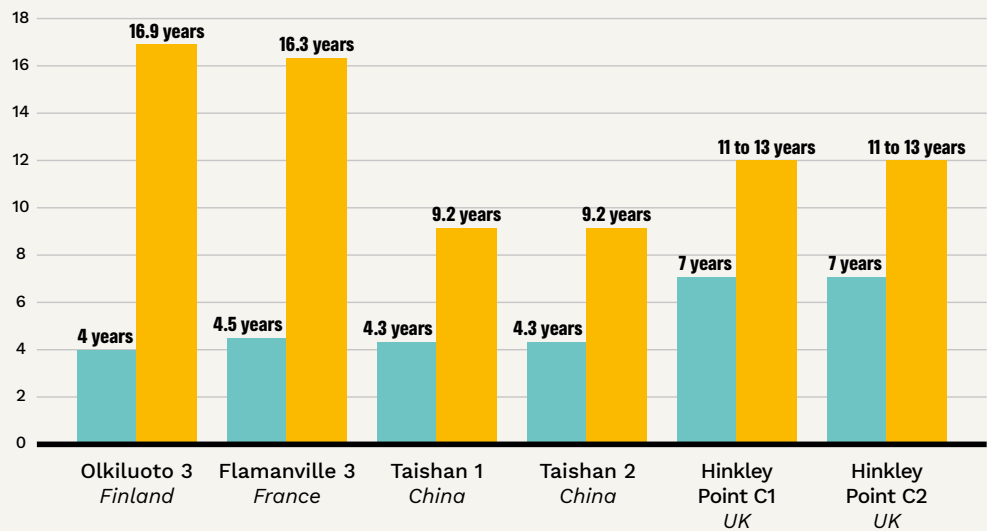
If no one can say exactly how much six EPR2 reactors will ultimately cost while the project is in the development stage, it is likely that spending and delays will continue to rise substantially.

Scenarios evaluated by Greenpeace suggest a bill of more than **€100 billion including financing costs**, for a per-MWh electricity production cost of between €135 and €176, far from the current reference of €70/MWh. **This thoroughly compromises the profitability of the “new era” nuclear project and its consequences for taxpayers and public finances could be unsustainable.**

Comparison of planned/observed EPR construction costs



Comparison of planned/observed EPR construction times



Sources : EDF, French Court of Auditors, Greenpeace France

Underestimated construction times

Construction times announced for the six EPR2 reactors are equally unrealistic in light of feedback from the EPR industry: EPR reactors currently in service around the world took **156 months** on average to build, but EDF predicts that **105 months will be needed to build the first EPR2 reactor and 90 for the last.**

An overoptimistic “series effect”

EDF is planning a programme that counts on cost savings and deadlines shortened by a ‘series effect’, but the track record of the EPR sector, to the contrary, demonstrates **a series of disasters with astronomical additional costs and systematic delays on all sites.**

A lack of transparency

This report highlights the urgent necessity **for more transparency** on the figures presented by EDF for the “new era” nuclear programme and the **publication of auditing reports in their entirety** in order to hold an informed debate before taking a decision that will weigh heavily on the French population for decades.

Once again, EDF and the French government are **employing a ‘done deal’ strategy to launch colossal projects before preliminary plans are even completed** and despite uncertainties as to the feasibility of such a programme or whether it can meet costs and deadlines. This is inadmissible in light of the energy, climate and financial issues at stake. Emmanuel Macron’s decision to approve new nuclear production in France with the construction of six or even 14 EPR2 reactors **flies in the face of economic and industrial realities** and is a recipe for an even bigger disaster than EPR 1.0.

A risky “whatever the cost” policy

By persisting in the **illusion that “new era” nuclear is needed “whatever the cost”** – over €100 billion for six EPR2 reactors, in this case – Emmanuel Macron and his government are **sabotaging the energy transition and French and European climate objectives**. The amounts at play should be invested in measures that reduce greenhouse gas emissions far more quickly and efficiently: sobriety, energy efficiency and the development of renewable energies.

All of the information sources contained in this summary are developed in the Greenpeace France report [*The cost of “new era” nuclear: the unbearable lightness of EDF,*](#) published by Greenpeace France on 19 March 2024. The French version shall prevail.

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