

**Haya Energy Solutions** 

“Solutions builder for your energy challenges”

**NucMonitor** 

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# What is NucMonitor?

NucMonitor is a regular report developed by HES experts that provides an analysis and a progressive comparison of the availability of the French generation fleet.

## Context

In France, nuclear energy represents almost 70% of the energy mix. However, the French nuclear fleet is facing a series of challenges which considerably reduce its production and this unavailability has an impact on the markets.

The NucMonitor tool highlights how availability forecasts vary, which is essential for understanding and anticipating market reactions.

## Monthly average capacity

Table 1. Average expected availability on the French nuclear fleet (MW)

	Dec-22	Jan-23	Feb-23	Mar-23	Nov-23	Dec-23
Forecast update - 05/12/2022	43,033	50,205	53,115	50,973	52,176	55,518
Forecast update - 21/11/2022	46,712	51,159	53,005	50,973	52,512	55,607
Delta	-3,679	-955	110	0	-336	-89

Table 2. Average expected availability on the French generation fleet (MW)

	Dec-22	Jan-23	Feb-23	Mar-23	Nov-23	Dec-23
Forecast update - 05/12/2022	66,453	73,790	76,672	74,208	75,448	79,022
Forecast update - 21/11/2022	70,271	74,740	76,562	74,208	75,789	79,111
Delta	-3,817	-950	110	0	-336	-89

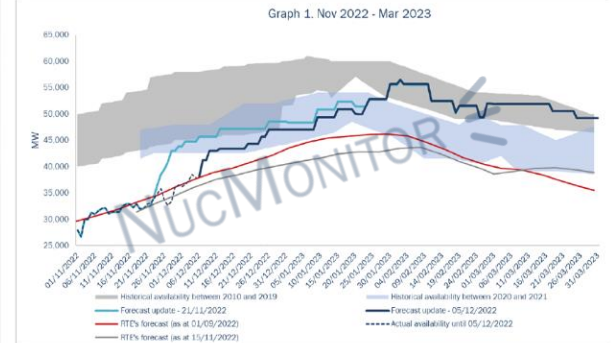
Compared to the previous NucMonitor (21/11/2022), the following changes are appreciated on French nuclear availability (Table 1.):

- for Q4 2022 and Q1 2023 (Graph 1, Nov 2022 - Mar 2023 and Table 1) the graph shows a noticeable drop in availability on the first days of December, mainly because of the delay in the restart of Gravelines 3 and Saint-Alban 2, as well as due to alternating shutdown of Paluel 1. This difference remains (although reduced) until the end of January due to particular outages reschedules.
- regarding Q4 2023 (Graph 2, Nov & Dec 2023), the expected availability figures remain almost the same as reported in the previous NucMonitor.

As the winter and the end of the planned maintenance approach, various delays are appearing. The different postponements in re-entries are making difficult for EDF to sustain its fleet at the levels of availability initially predicted, therefore the company has been forced to update those forecasts several times in a concerning downward trend.

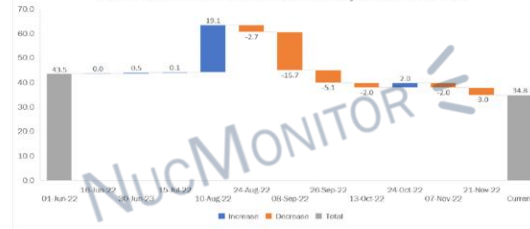
From HES, we expect to have significant changes on nuclear availability forecast as the key dates approach.

## Short term EDF & RTE's forecast



## Monthly variation analysis

Variations of the French nuclear fleet availability forecast for Nov 22



November's expected availability decreased -8,7GW (-20%) in 6 months:

As well as happened for the month of October, November's forecast has suffered several adjustments, with an overall decrease of 20% in the last 6 months. The current level of availability, together with several restart postponements, make nothing but to worsen the scenario for the French nuclear fleet.

Furthermore, considering the inaccuracy on EDF's forecasts, the arrival of the cold months and its increasing energy demand, the upcoming figures for next months could be equally worrisome.

## HES experts' analysis & conclusions

Concerning to other electricity generation technologies in France (Table 2):

- No significant changes are reported. Difference on total French generation fleet availability regarding last report date is related mainly with nuclear availability.

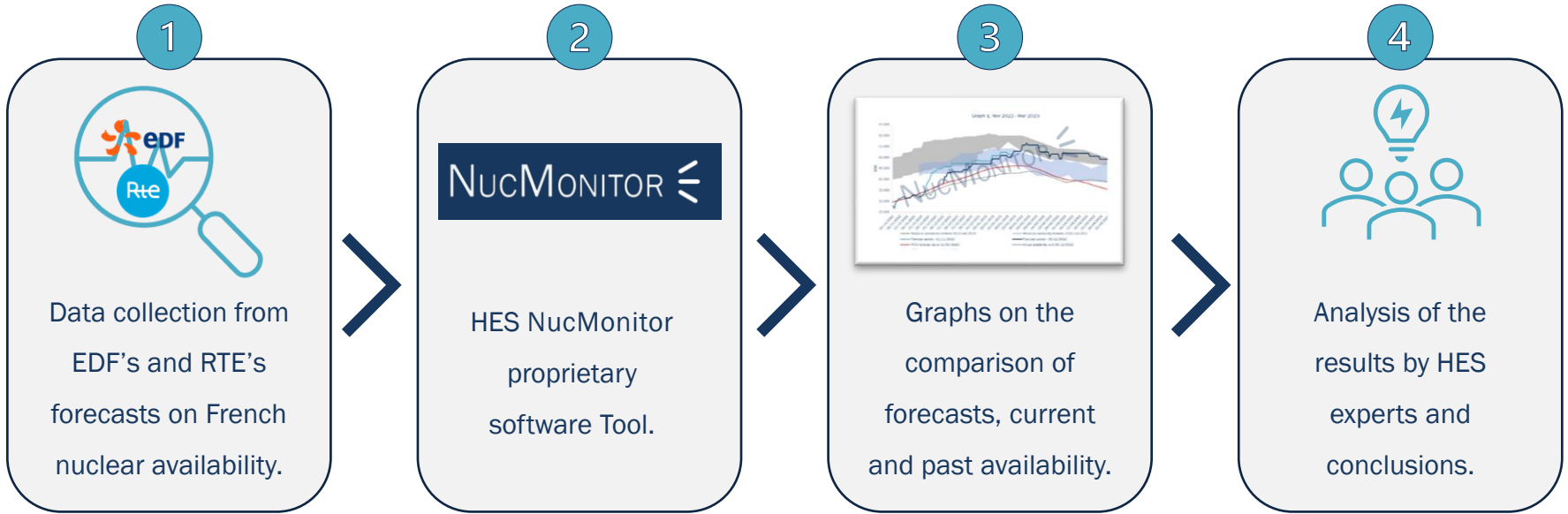
News about the current nuclear situation in France:

- The availability of the fleet exceeded 35GW last week: due to some reconnections to the grid, the availability of the nuclear fleet reached 35.4 GW (out of the 61.4 GW total capacity of the fleet). This figure should have been more substantial since EDF planned the re-entry in operation of nine reactors last week, but several of them were postponed, and only three of them could be effectively reconnected to the grid: Quasib, Tricastin 3 and Belleville 2.
- New postponements on re-entries: as mentioned above, several reactors re-entries were rescheduled last week, amongst them Gravelines 3 and Saint-Alban 2. Also, a brief shutdown of Paluel 1 decreased the overall availability in recent days, as can be seen in Graph 1, Nov 2022 - Mar 2023 and Table 1.

As continuously stated in previous releases of this NucMonitor, these continuous restart postponements and outages are currently having an impact in the availability for current month (as shown in Table 2) and, with the arrival of the cold months, the French electric system is starting to face a serious challenge, in which it is to be seen whether the provision of availabilities are met or not.

In this sense, it is worth noting that the actual availabilities seems to be more in line with RTE's least optimistic forecasts (see Graph 1 in next slide) than with EDF's ambitious ones. It's also noteworthy how RTE has consequently adjusted its own forecasts in a downward trend in recent months, anticipating what could be a very difficult winter for the French nuclear fleet.

## How does NucMonitor work?



Regular analysis



Price adjustment



Report sent by e-mail



Experts' insights

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