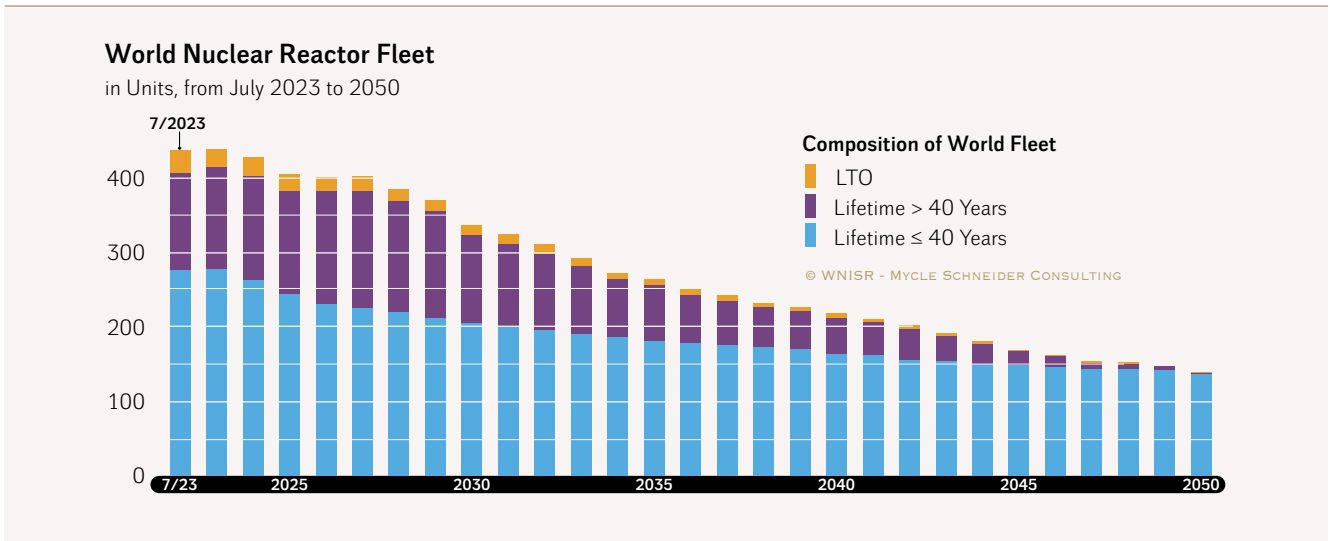


Figure 25 • Forty-Year Lifetime Projection versus PLEX Projection



Sources: Various, compiled by WNISR, 2023

Notes: This figure illustrates the trends, and the projected composition of the current world nuclear fleet, taking into account existing reactors (operating and in LTO) and their closure dates (40-years Lifetime vs authorized Lifetime Extension) as well as the 58 reactors under construction as of 1 July 2023.

The graph does *not* represent a forecasting of the world nuclear fleet over the next three decades as it does not speculate about future constructions.

This figure takes into account the restarts of Bruce-6, Darlington-3, Penly-1, Takahama-1 & -2 during the second half-year of 2023.

Notes pertaining to Figure 23, Figure 24 and Figure 25:

Those figures include one Japanese reactor (Shimane), two Chinese 1400 MW-units at Shidao Bay and two Russian 55 MW RITM reactors, for which the startup dates were arbitrarily set to 2025, 2024 and 2027, as there are no official dates.

Restarts or closures amongst the 31 reactors in LTO as of 1 July 2023 are not represented in Figure 23 and Figure 24, although at least two Canadian, two Japanese and one French reactors that were in LTO have restarted since, and will thus be later closed as well. Those are counted as “operating” in Figure 25 (under the criteria of the PLEX projection).

The figures take into account current political decisions or legally binding obligations as of end of July 2023 to close reactors prior to 40 years (South-Korea). These decisions are under discussions and might be reversed after the editorial deadline of WNISR2023, as is the case in Belgium, with discussions on a ten-year lifetime extension for two reactors beyond the current license expiration in 2025.

In the case of reactors that have reached 40 years of operation prior to 2023, the 40-year projection also uses the end of their licensed lifetime (including 6 reactors licensed for 80 years in the U.S., even though the licenses of four of these units have been suspended).

In the case of French reactors that have reached 40 years of operation prior to 2023 (startup before 1983), we use the deadline for their 4th periodic safety review (visite décennale) as closing date in the 40-year projection. In case this deadline is or will be passed by the end of 2023 (10 reactors), we use a 10-year extension, although no licensing procedure has been completed for this extension besides Tricastin-1. For all those that have already passed their 3rd periodic safety review, the scheduled date of their 4th periodic safety review (or 10-year extension for the cases previously mentioned) is used in the PLEX projection, regardless of their startup date.