



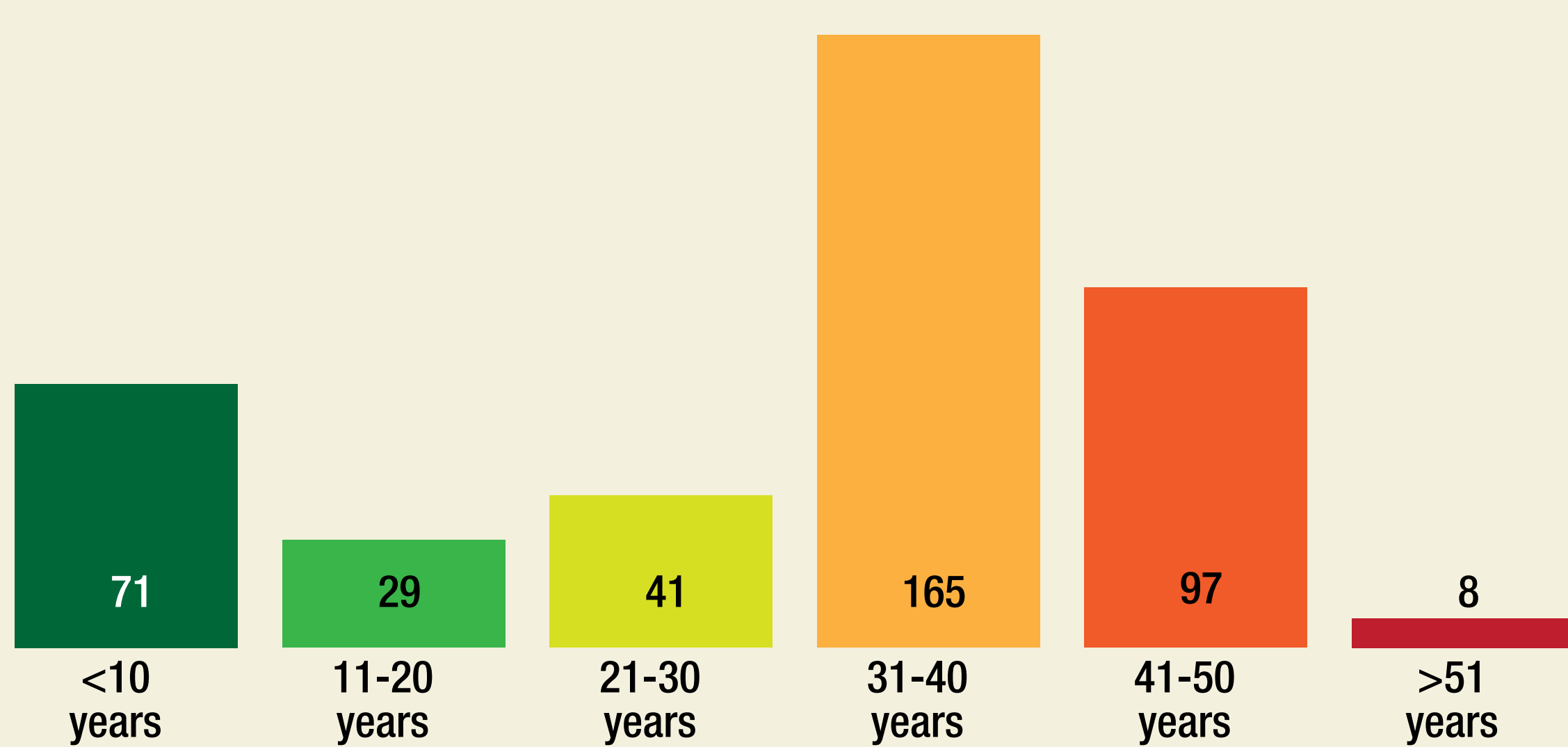
Nuclear's Aging Issue

It's hard to build new reactors, so the nuclear fleet is becoming increasingly older. **By Jeffrey Winters**

The “atomic age” used to be a futuristic phrase, hinting at wonders to come. Nuclear power is still pretty neat—featuring low operating costs and zero carbon emissions—but the difficulty in building new reactors in recent decades has taken the youthful shine off the technology.

A recent report by Mycle Schneider Consulting underscores the problem. The World Nuclear Industry Status Report 2022 is a 385-page comprehensive document that covers virtually every aspect of the technology and every country developing new reactors.

Age of World's 411 Nuclear Reactors as of July 2022



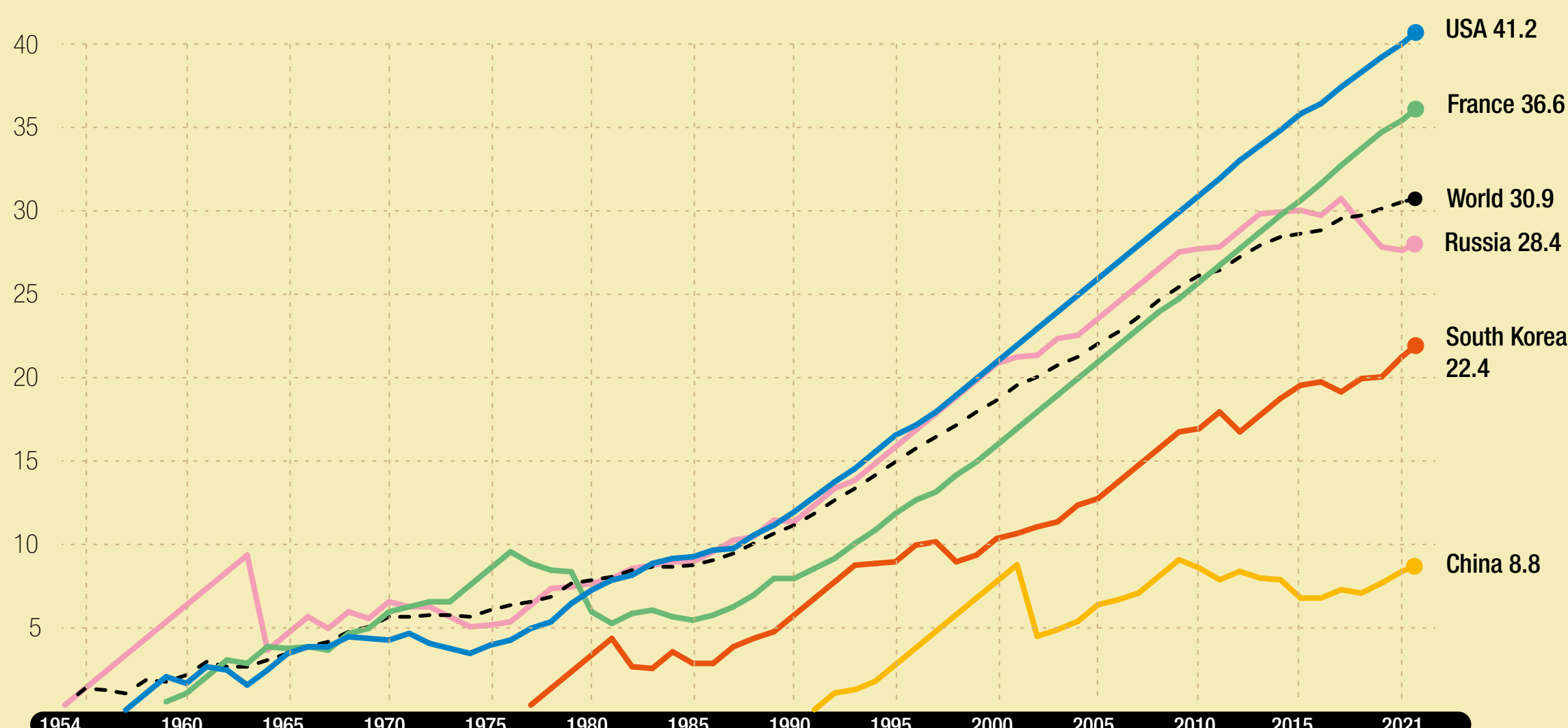
One issue that received coverage is the increasing age of operating reactors. “In the absence of significant, successful new-build over many years, the average age (from grid connection) of operating nuclear power plants has been increasing since 1984, and as of mid- 2022 is 31 years.”

That average age is brought down by the recent building spree in China. In the United States and France, which rank first and third in the number of reactors, the average age is 41.2 years and 36.6 years, respectively.

Sources: WNISR, with IAEA-PRIS, 2022

Evolution of Mean Age of Top 5 Reactor Fleets in the World

Mean age in years, as of year-end 1954–2021



While most reactors in the United States were initially licensed for 40 years, the report notes that as of mid-2022, 97 U.S. units had received a 20-year license extension. In fact, six U.S. reactors have been on the grid 50 years or more.

In recent years, however, the average age of retired nuclear reactors in the U.S. is 46.5 years. Unless construction picks up markedly in the next few years, it seems likely that age will catch up with the nuclear industry in the coming decade or two.

Sources: WNISR/Mycle Schneider Consulting, with IAEA-PRIS, 2022

To download the whole report, visit:
www.worldnuclearreport.org