

Where should the DFC look for future nuclear deals?

The US Development Finance Corporation (DFC) [lifted its ban](#) on supporting nuclear power projects abroad in July 2020. Advanced nuclear power is often viewed as “too far away” for development finance institutions to consider, but in just 18 months the DFC has publicly signaled support for two bids by US firms:

- **South Africa** will [open a RFP](#) for a [2500MW nuclear expansion](#) in March 2022. NuScale, a small modular reactor company based in Oregon, intends to bid with [support from the DFC](#).
- **Romania’s** state nuclear company Nuclearelectrica [announced a deal](#) with NuScale to build ~460MW of new nuclear capacity by 2028. The project will be supported by the DFC and EXIM bank.

While advanced nuclear technology is still several years away, it is not too early for the DFC to explore new potential deals around the world. Using data from the [Map of the Global Market for Advanced Nuclear](#), we identify 10 other promising emerging markets that should be on the DFC’s radar:

High income countries that need to replace a lot of coal

South Africa and Romania, both high income countries (HICs), have an interest in advanced nuclear to replace coal and decarbonize their power sectors. Other countries in a similar situation – US strategic allies which have [123 Agreements](#) for the export of US nuclear materials – include:

1. **The Czech Republic** already operates six nuclear reactors, but 40% of its power still comes from coal. The country is currently [launching a tender](#) to expand its Dukovany plant, with at least one American company expected to bid.
2. **Poland’s** electricity demand growth will be relatively limited, but it will need substantial replacement for coal in its power mix – currently ~80% – to meet its climate goals. The government plans to select a partner for its first nuclear power plant as early as 2022 with plans to begin operating by 2033.
3. **Turkey’s** electricity demand is expected to at least double by 2050, while fossil fuels currently supply nearly 60% of its power. The country is currently constructing a Russian nuclear plant, but is searching for partners for two more projects.

Large nuclear-ready emerging markets

These five countries have rapidly growing energy needs and either already operate nuclear reactors or could be ready in a short timeframe. All of these countries already possess a 123 Agreement with the United States.

4. **Brazil** operates two nuclear power plants and is on a path to more than triple its current power consumption. Its 2050 National Energy Plan includes advanced nuclear reactors, although it projects only a modest increase of around 8-10GW.
5. **Vietnam** previously agreed to build plants with Japan and Russia. Officials put these plans on hold in favor of gas and coal, but they could be [revived](#).
6. **Indonesia** operates three research reactors, has a well-developed policy and regulatory environment, and has [signed a deal](#) with US-company Thorcon International to develop a 500MW floating molten salt reactor. Population and economic growth will drive substantial electricity demand. Relatively limited renewable energy potential, along with distributed geography makes Indonesia a prime candidate for smaller advanced reactor models.
7. **India** already operates nuclear reactors. With a booming population, soaring energy needs, and a coal-based economy, India may be especially attractive for advanced nuclear power. The DFC has a history of energy investments in the country.
8. **Morocco** operates a research reactor and its electricity consumption is expected to triple by 2050.

Close US allies exhibiting strong interest in nuclear power

These two countries are US strategic allies with quickly growing economies, include nuclear power in their future energy plans, and have taken concrete preparatory steps.

9. **Jordan** is [heavily reliant on imported oil and gas](#) to generate power, making supply security a concern. Electricity demand is projected to double by 2050, while climate change could accelerate demand for desalination and air conditioning. Jordan aims to have significant nuclear capacity by 2030, and has reached advanced stages of negotiations with Chinese, Russian, and US-based companies for the deployment of small modular reactors.
10. **Ghana** is West Africa's bellwether and is expected to undergo a 10-fold increase in electricity demand by 2050. Ghana has taken multiple practical steps toward nuclear power, which it aims to bring online by the mid-2030s. Ghana has one operating research reactor.