

Explained | Does the China-Pakistan nuclear deal flout global rules?

PREMIUM

What are the Pakistan government's reasons for going ahead with a nuclear power plant with Chinese help? Why has Beijing not sought waivers from the Nuclear Suppliers Group? How will it impact the governance of nuclear commerce?

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ANANTH KRISHNAN

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The story so far: On June 20, China and Pakistan signed an agreement for a 1,200 MW nuclear power plant in the Chashma nuclear complex in Pakistan. The deal, reported to be worth \$4.8 billion, comes amid Pakistan facing a dual energy and economic crisis. The latest nuclear deal between China and Pakistan has implications not only for the crisis-hit country but also for the global governance of nuclear commerce, with Beijing proceeding with the recent deal without seeking necessary waivers from the Nuclear Suppliers Group (NSG).

What is the latest deal?

Pakistan's Prime Minister Shehbaz Sharif on June 20 witnessed the signing of the agreement for the construction of a 1,200 MW nuclear plant. This is the fifth reactor at the Chashma nuclear complex (C-5). The financial details have not been spelled out, but Mr. Sharif said China had given "special concessions" for financing the construction amid Pakistan's continuing financial crisis and on-going negotiations for a bailout from the International Monetary Fund (IMF). C-5 will be the biggest reactor at Chashma, where China has already constructed four phases of the complex, with four reactors of around 325 MW each. It will use China's Hualong One reactor, which has also been installed in two plants in Karachi.

How many other nuclear plants has China built for Pakistan?

Pakistan is currently operating six China-built nuclear plants, four smaller reactors at the Chashma complex and two at the Karachi Nuclear Power Plant (KANUPP). Pakistan's oldest reactor, the Canada-built KANUPP-1, is now decommissioned, while KANUPP-2 and KANUPP-3 both use 1,100 MW Chinese Hualong One reactors. KANUPP-3, with a \$2.7 billion investment, went fully online in the past year and was hailed by Mr. Sharif as helping ease Pakistan's energy crisis. An agreement for KANUPP-3 was signed in 2013, the year Chinese President Xi Jinping launched his Belt and Road Initiative (BRI), and became a flagship energy project as part of the China Pakistan Economic Corridor (CPEC) of the BRI.

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According to Pakistan's Ministry of Energy, faced with a continuing energy deficit, financial crisis and rising import bills, the country needs to urgently increase the share



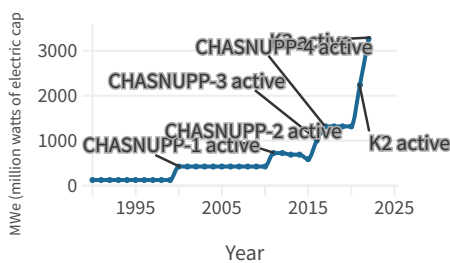
market and massive depreciation of the Pakistani rupee is making oil imports more expensive, triggering external sector pressure and widening trade deficit of the country.”

The Alternative and Renewable Energy Policy rolled out in 2019 envisages increasing the share of renewables to 30% by 2030. Currently, thermal sources account for 61% of the energy mix, while hydropower accounts for 24%, nuclear 12%, and wind and solar only 3%, according to the 2021-22 Economic Survey. On the nuclear side, gross capacity of nuclear plants had increased by 39% annually to 3,530 MW.

Annotations show when Pakistan's six nuclear power plants connected to the grid for the first time



Pakistan's operable nuclear power capacity



Source: [World Nuclear Association](#) • The Hindu Graphics

A Flourish data visualization

What are the broader implications?

China’s civilian nuclear projects with Pakistan have come under scrutiny because the Nuclear Suppliers Group (NSG), which describes itself as a group of nuclear supplier countries “that seeks to contribute to the non-proliferation of nuclear weapons through the implementation of two sets of Guidelines for nuclear exports and nuclear-related exports”, explicitly prohibits the transfer of nuclear technology by its members to countries that have not signed the nuclear Non-Proliferation Treaty (NPT). China joined the 48-member grouping in 2004, and argued subsequently that the Chashma 3 and Chashma 4 reactors were “grandfathered” under its earlier Chashma deals with Pakistan that pre-dated its joining of the NSG.

Chinese analysts have now justified the continuing nuclear commerce, despite Beijing’s



their civilian nuclear deal, which was granted in 2008, paving the way for India to enter the tent of global nuclear commerce.

That was, however, only granted after India undertook a number of commitments such as placing facilities under International Atomic Energy Agency (IAEA) safeguards, separating civilian and military nuclear programmes and a continued moratorium on testing. Neither has China sought any such waiver from the NSG nor has Pakistan undertaken similar commitments. China has suggested that the reactors being under IAEA safeguards would suffice.

While China had explained its C-4 and C-5 deals as being part of an earlier agreement, the KANUPP-2 and KANUPP-3 plants were agreed to in 2013, a decade into its NSG membership. Meanwhile, long-running negotiations to include India as a full-fledged NSG member have run into a Chinese wall. A years-long effort, which included talks with China, appeared to run aground in 2015 when Beijing started to link India's aspirations for NSG membership with that of Pakistan's. Experts fear the latest deals have only further eroded the global rules governing nuclear commerce, and also raised questions about both the continuing relevance and future of the NSG and governance of global nuclear commerce.



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