

# The Indo-US Nuclear Deal

## A Closer Look

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Well over a decade has passed since that moment of epiphany when the United States (us) as the sole global superpower explicitly assumed mentorship over India's passage into the league of great powers. This special status was to be consecrated by the recognition of India's unique status within the nuclear realm, in both its civilian and military dimensions.

India's capabilities had been won in splendid isolation, to some degree self-imposed. Energy was always the cover story for India's intensive research and development effort in nuclear science and technology, but the military objective was never far behind. The early political leadership managed to stick to the peaceful use rationale, in part because of the enduring power of the doctrine of non-violence bequeathed by the Indian freedom movement. Internal and external insecurities on two notable instances compelled an effacement of that vital distinction. First came the nuclear test of 1974, which was rather implausibly portrayed as "peaceful" in intent, but led to global sanctions. And, then, came an explicit statement of intent to weaponise the nuclear option in 1998.

### Nuclear Non-proliferation Treaty

Chaitanya Ravi's *A Debate to Remember: The us-India Nuclear Deal* takes up the

**A Debate to Remember: The US-India Nuclear Deal** by Chaitanya Ravi, *New Delhi: Oxford University Press, 2018; pp xix + 311, ₹995.*

2005 nuclear deal with the us, which was the breakout moment from isolation for India. The nuclear non-proliferation treaty (NPT) in force since 1968 granted only five states the legally recognised right to bear nuclear arms. India was now allowed entry, not as a nuclear weapons state under the NPT, but as part of a newly confected and rather ambiguous category called "a responsible state with advanced nuclear technology." It was a niche uniquely created for India, involving a judgment call by more privileged nuclear club members of how far India lived up to expected levels of responsibility. But, even with that leverage, the us was not willing to allow an unravelling of the NPT that it was principally responsible for enforcing, though often—as with apartheid South Africa and Israel—with unprincipled selectivity.

As the first down payment, India was obliged to separate its military and civilian nuclear facilities and, in accordance with NPT procedures, place the latter category under safeguards by the International Atomic Energy Agency (IAEA). That would institute an audit of nuclear materials and ensure that a diversion

from civilian to military applications did not occur. As things turned out, the separation asked for was a tough call since the Indian nuclear programme had just gotten used to functioning without internal walls.

The constructivist model sees technological change as a process propelled by the demands, often in conflict, of "relevant social groups." There is no efficiency drive or teleology that technological change fulfils, only the articulated demands and expectations of various social groups with determinant power. The theory has a certain explanatory power over technological development begun *de novo*, as for instance, in explaining how the choice between different objectives articulated by relevant social groups were resolved in the development of a mass-produced artefact, such as the bicycle. Ravi alters the terms of the model in applying it to a study of how existing technological artefacts, are absorbed into milieus with differing configurations of social power, though he seems inattentive to this shift in the argument.

In importing the model into a study of the bargaining that followed the first statement of intent by India and the us, Ravi identifies certain "relevant social groups and individuals." The first such coalition included former Prime Minister Manmohan Singh, his cabinet colleagues and a number of strategic affairs' commentators and officials, notably from the foreign service, who saw an opportunity to secure India's energy supplies, while forging advantageous strategic alliances. Anil Kakodkar, then head of the Department of Atomic Energy (DAE), is grouped

within the first coalition, though subsequent events were to reveal that he was not entirely at ease in the company.

### **Eight Horsemen**

A second coalition comprised a number of retired officials who had overseen the DAE in its years of isolation following 1974 and retained a possessive sense of pride over the know-how secured through that period. P K Iyengar (Kakodkar's predecessor once removed as the head of the DAE), A N Prasad (a retired chairman of the Nuclear Power Corporation), and A Gopalakrishnan (a former head of the watchdog body, the Atomic Energy Regulatory Board) were key players here. Their intervention on public forums leveraged the prestige gained from years in the spotlight as explorers of the nuclear frontiers, and gained additional traction when it was joined by a constellation of luminaries, including all the surviving heads of the DAE going back to Homi Sethna, the oldest among the fraternity with claims burnished by his oversight of the 1974 nuclear test. At key moments, this gathering of scientific grandees, which Ravi confers with the collective appellation of the "eight horsemen," drew support from the incumbent DAE head.

Kakodkar's most significant public intervention was to actively oppose a separation plan, proposed by the foreign policy establishment—with the tacit endorsement of the us—that would place India's fast breeder reactor (FBR) programme within the civilian side. The status of the FBR within India's long-term energy plans was decided early in the 1950s by Homi Bhabha, who helmed the DAE through its first decade. Recognising India's relatively low mineral endowments of uranium, the fuel of choice for the first generation of nuclear plants, Bhabha conceived of a second stage powered by the FBR, using plutonium extracted from uranium-fuelled reactors. With a blanket of low-grade uranium around the reactor core, this stage would "breed" more plutonium. At a later stage, India's abundant thorium resources would be mined to create the blanket around the FBR core, enabling its transmutation into the fissile uranium-233

isotope that would power the third generation of reactors.

The plan was a leap into the unknown, in being a tightly interconnected nexus of technologies, mostly unproven in the 1950s. In principle though, the energy objectives would not be seriously constrained from the FBR being categorised as civilian, subject to periodic material audit. India's FBR programme, both the test reactor and scaled-up prototype, had been functioning in the DAE's Kalpakkam facility, though without ever approaching expected efficiency parameters. By insisting on keeping these out of the scope of civilian oversight, Kakodkar disrupted the early concord emerging between the us and India. He also perhaps gave away more than intended about the material connections between India's civilian and military nuclear programmes.

Kakodkar's open dissent, as Ravi recounts, raised an imminent possibility of the deal unravelling. There were some who thought the episode was choreographed by the Indian strategic establishment to extract more advantageous terms. Ravi thinks not, since there was seemingly a real possibility of Kakodkar being sanctioned for speaking out of turn. However, events transpired behind the scenes; the outcome was a happy one for India's nuclear establishment, with the us acceding to the military categorisation of the FBR programme.

### **The Termination Clause**

The deal was not yet out of the woods. The next irritant was the "termination clause," which stipulated a complete suspension of all cooperation if India were to test a nuclear device. The "eight horsemen" pushed back strongly against this stipulation, focusing their ire in private on one of their own. Kakodkar's immediate predecessor, R Chidambaram, had overseen the 1998 nuclear tests and since retired to take up an advisory position in the Prime Minister's Office (PMO). He is believed to have assured the political leadership that the 1998 tests were final and had enabled sufficient data harvesting to sustain India's nuclear deterrent on the required scale and scope. Iyengar, in particular, was unconvinced,

since he had reason to believe, with corroboration from one individual scientist on the inside track in 1998, that the fusion device tested alongside four fission devices performed well below expectation.

That assessment was sharply contested by the DAE, and the dispute remains unresolved. During the nuclear negotiations, Kakodkar is believed to have spoken, this time more discreetly, to the political leadership about the imprudence of acceding to the termination clause. It is believed that he spoke of unforeseen security contingencies and the likelihood that India would be severely handicapped in its response if it stood to jeopardise investments committed to the nuclear energy sector in collaboration with foreign partners.

The dilution of the termination clause showed how keen the us was to gain India's partnership in pushing back against China's growing power. Disregarding the urgings of the counterproliferation lobby at home, the us administration of President George Bush replaced the termination clause with a gentler variant, which allowed for consultations before action from either side.

Narrowly construed, India was a gainer from the negotiations over the nuclear deal, though there were significant losses incurred on the broader canvas. India was, in particular, put through two tests of loyalty as the us, scrambling desperately to undo the damage caused by the Iraq invasion, launched a campaign of attrition against Iran. The focus of this campaign was Iran's uranium enrichment programme, which had been shown after IAEA audit to be in marginal breach of NPT obligations. It was an awkward place for India, which had, since late-2004, been negotiating an ambitious pipeline project that would fetch Iranian gas through Pakistan, to feed India's hunger for energy. The main architect of the project, Mani Shankar Aiyar, was a temporary occupant of the petroleum ministry, but he proved to be a quick learner, driven by a vision of shared stakes in growth, bridging the chasm between India and Pakistan.

When strategic partnership with the us emerged as a possibility, the definitive assurance of energy security that

the Iran pipeline conveyed proved to be an insufficient restraint on the enthusiasm of India's leadership. After unequivocally backing Aiyar's proposals, External Affairs Minister Natwar Singh and then Prime Minister Manmohan Singh jumped ship at the first sign of a deal with the us.

Though not public, Ravi suggests that Natwar Singh's apostasy came without even the broad details of the deal being agreed. Manmohan Singh followed immediately after the terms of the deal were put down in a joint statement. Asked specifically, he admitted rather casually that the Iran pipeline might prove an impossible dream. Since finance for the project could well be impossible to organise, he would not invest too much hope in it.

Soon afterwards, India voted along with the us in the IAEA, censuring Iran for its breaches of the NPT. Prior to another crucial vote early in 2006, Aiyar concluded a 25-year deal with Iran for the supply of liquefied natural gas through seaborne containers. India went along with the us nonetheless, voting to refer Iran's very marginal breaches to the United Nations Security Council.

### Nuclear Energy Industry

The promised bounties of nuclear power have since failed to materialise. As Ravi points out, hopes of the Indian nuclear market supporting "250,000 high-tech American jobs" have "been dashed." The nuclear energy industry globally is in

retrenchment. Westinghouse, one of the two us corporations with proven competence in nuclear energy, filed for bankruptcy early in 2017 after massive cost overruns plunged its projects into chronic financial unviability. After the takeover by Japanese giant Toshiba, Westinghouse returned to the fray, successfully bidding for a giant 6,000 megawatt nuclear power plant in Andhra Pradesh. Two years since the agreement, the project remains in a limbo between public apprehensions of dispossession and environmental despoliation, and the financial uncertainties of stepping into the Indian market without the relaxed liability laws that us corporations lobbied for.

India's installed nuclear capacity remains around a third of the DAE's ambitious target for 2020 and a still more minute fraction of the figure touted by Manmohan Singh when he sought to sell the deal. The nuclear contribution to India's electricity mix remains a modest 3.2%. And, India's relationship with the strategic adversaries named by Prime Minister Atal Bihari Vajpayee, in his secret communication to us President Bill Clinton after the 1998 tests, remains as testy and adversarial as ever. An energy source not amounting to much and a weapons option that will never be used—that perhaps is how the nuclear deal will be remembered, after all the political drama and byzantine manoeuvres that led to the fatal marginalisation of India's left parties.

### The Third Coalition

That being the case, at least one serious challenge could be posed to the theses advanced in this book. In addition to the first and second coalitions identified above, Ravi also mentions a third, comprising scientists from outside the establishment and social activists unconvinced by the case for nuclear energy. This third coalition warned that the sub-text of the deal was lost in the cluttered political dialogue. With potentially unfettered access to materials and technology, India was at greater risk of sliding down the slippery slope of nuclear deterrence into an arms race. In its quest for expansion moreover, nuclear energy would run into the environmental issues that had been suppressed through years of immunity to public scrutiny. This "third coalition" had the facts right, but was unlike the others in not being politically influential, or more precisely, in terms of the constructivist model, "socially relevant." Through all the months when the nuclear deal was the top item on the news agenda, this coalition remained on the margins of public dialogue. This perhaps was the greatest tragedy: that India's dreams of self-aggrandisement with us patronage successfully defeated voices of dissent, which urged more egalitarian and environmentally sustainable alternatives.

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