

# Jaitapur: A risky and expensive project

Unless the government is transparent about details, it will be engulfed in yet another controversy



SUVRATA RAJU & M.V. RAMANA

In December, the French company Électricité de France (EDF) submitted a “techno-commercial proposal” to the Indian government for the Jaitapur nuclear power project in Maharashtra. The idea of importing six nuclear European Pressurised Reactors (EPRs) was initiated by the United Progressive Alliance government more than a decade ago, but the project had made little progress due to concerns about the economics and safety of the EPRs, local opposition, and the collapse of the initial French corporate partner, Areva. Despite these problems, in the past few months, the Modi government has taken several high-level steps towards actuating the project.

In March 2018, EDF and the Nuclear Power Corporation of India (NPCIL) signed an “industrial way forward” agreement in the presence of Prime Minister Narendra Modi and French President Emmanuel Macron. Last month, after meeting the French Foreign Minister, Jean-Yves Le Drian, External Affairs Minister Sushma Swaraj announced that “both countries are working to start the Jaitapur project as soon as possible”. The urgency is inexplicable as it comes before the techno-commercial offer has been examined and as earlier questions about costs and safety remain unanswered. Moreover, with the Indian power sector facing surplus capacity and a crisis of non-performing assets (NPAs), a large investment in the Jaitapur project is particularly risky.

## Delays and cost increases

It is clear that electricity from the Jaitapur project will be more expensive than many other sources of electricity, including solar and wind power. Using international estimates of capital costs for EPRs from the 2010-2012 period, and after adjusting for cost savings in India, we had shown in 2013 that first year tariffs from the project would be around ₹15 per kilowatt-hour (“Repeating Enron in Jaitapur”, June 21, *The Hindu*). Even this



“Safety concerns about the project are exacerbated by India’s flawed nuclear liability law.” Protests in Mumbai in 2011 against the proposed Jaitapur nuclear power plant in Maharashtra. •PAUL NORONHA

figure must be revised upwards to account for the construction experience with EPRs over the past five years. Across the world, EPRs have experienced delays and cost increases. The first EPR entered commercial operation in December 2018 at the Taishan site in China, five years later than originally projected. Its final capital cost was estimated by industry sources to be “40% over the original estimate”. The story in Europe is more dramatic. The EPR at Flamanville in France, for example, went from an expected start date of 2012 to 2020, and a cost estimate of €3.3 billion to €10.9 billion. Two EPRs have been planned at Hinkley Point in the U.K. Even before construction began, the estimated cost has risen significantly to £20 billion (about ₹1.75 lakh crore). The British National Audit Office assessed that the project “locked consumers into a risky and expensive project with uncertain strategic and economic benefits.”

While nuclear costs have been rising, other low-carbon sources of electricity, especially solar energy, have become cheaper. In 2010-11, tariffs for solar photovoltaic (PV) projects under the National Solar Mission were between ₹10.95 and ₹12.76 per unit. But several projects approved under Phase II of the mission have been connected to the grid in the last year with tariffs below ₹5 per unit. In recent auctions for solar PV projects, winning tariff bids in the range of ₹2 to ₹2.50 per unit have become routine.

The high capital costs of the EPRs are of particular concern because power-generating capacity in India has grown faster than demand causing projects to run into financial difficulties. In March 2018, the parliamentary standing committee on energy listed 34 “stressed” projects, including NPAs and “those which have the potential to become NPAs”, with a cumulative outstanding debt of ₹1.74 lakh crore. In this context, the government seems to be throwing caution to the winds by investing lakhs of crores in the Jaitapur project. Because the NPCIL’s debts would ultimately be underwritten by the Indian government, if the project encounters financial difficulties, the costs would fall on Indian taxpayers.

## Safety problems

In addition to the high costs, safety problems with the reactor design and construction have emerged in several EPRs. The most serious of these pertained to the pressure vessel, which is the key barrier that prevents the spread of radioactive materials from the reactor. In April 2015, the French nuclear safety regulator, Autorité Sûreté Nucléaire, announced that some sections of the pressure vessel that the French Creusot Forge had supplied to the Flamanville and Taishan reactors had too much carbon in the steel. The Flamanville project was also found to have substandard welding in the reactor’s pipes. The EPR at Olkiluoto in Finland encountered problems

with vibrations in the pipe that connects the primary coolant system with the pressuriser, which maintains the pressure of the water circulating in the reactor.

These safety concerns are exacerbated by India’s flawed nuclear liability law. If and when completed, Jaitapur “will be the largest nuclear power plant in the world”. In the event of an accident, the nuclear liability law would require the public sector NPCIL to compensate victims and pay for clean-up, while largely absolving EDF of responsibility.

The Indian law provides NPCIL with a limited opportunity to obtain compensation from EDF for the “supply of equipment... with... defects... or sub-standard services”. But the joint statement issued in March 2018 promises that the “enforcement of India’s rules” would be in accordance with the international Convention on Supplementary Compensation for nuclear damage, which severely limits the operator’s right of recourse. This raises the disturbing possibility that the NPCIL may have promised not to exercise its right to claim compensation from EDF as allowed by Indian law. In any event, there is a “moral hazard” here: since EDF can escape with limited or no consequences even after a severe accident, it has little material incentive to maintain the highest safety standards, particularly if the requirements of safety come into conflict with the imperative to lower costs. Such pressures might be accentuated by EDF’s poor financial state.

The Modi-Macron statement “emphasized the need for the project to generate cost-effective electricity”. It is hard to see how this is possible. To begin with, the government must answer several specific questions: how much will the entire project cost, who will be accountable for cost increases and delays, and what is the precise arrangement that the government has reached with France on liability? Unless it is transparent about these details, the Modi government may well find itself engulfed in yet another controversy involving overpriced French equipment.

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# A different outreach

The Modi government’s over-reliance on religion for diplomatic engagements is problematic



VINAY KAURA

Chief of the Army Staff General Bipin Rawat’s argument that Pakistan must “develop as a secular state” to have any dialogue with India can be interpreted to convey two contradictory messages. The first is that India has no intention of engaging with Pakistan since there is no possibility of Pakistan being converted into a secular country in the foreseeable future. The second is that the Modi government’s “faith diplomacy” has obvious limitations, and may prove costly for India’s national interests in the longer run. That diplomacy rooted in religion can be a double-edged sword became evident when the narrative of Pakistan’s “googly” forcing the Modi government’s presence at the groundbreaking ceremony of the Kartarpur corridor gained widespread currency.

## Marketing brand India

Prime Minister Narendra Modi has enthusiastically used the religious dimension of India’s soft power in order to market brand India. Yoga and Ayurveda cannot be strongly associated with religion; however, Hinduism and Buddhism are being used to promote India’s interests in the neighbourhood as well as to reconstitute the geopolitics of the Indo-Pacific region. Mr. Modi has often made visits to Hindu and Buddhist shrines in the neighbourhood, apparently to counter China’s promotion of Buddhism. India hosted Sri Lankan military personnel and their families in Bodhi Gaya last year. This was projected as an innovative way of wooing Sri Lanka back into India’s geopolitical orbit. Serious attempts are also being made to encourage Nepal to reciprocate India’s attempts to forge Hindu-based civilisational bonds with the country. U.P. Chief Minister Yogi Adityanath visited Janakpur in Nepal in December on the occasion of Vivah Panchami. Being an advocate of restoration of Nepal’s monarchy and Hindu status, Mr. Adityanath’s visit put a question mark on the usefulness of such gestures in creating an atmosphere of goodwill between the two countries.

Pakistan has been a master manipulator of religion to achieve its goals. If the Modi government believed that the success of the Kartarpur corridor project would allow it the elbow room to expand Sikh diplomacy to other holy sites, it was mistaken. The Pakistani establishment took advantage of cricket-turned-politician Navot Singh Sidhu’s vi-

sit to Pakistan in August for Imran Khan’s swearing-in. Pakistan’s Army chief Qamar Javed Bajwa suggested to Mr. Sidhu that the Kartarpur corridor should be opened to mark Guru Nanak’s 550th birth anniversary. Since no diplomatic communication took place between the two countries regarding the project, the Modi government announced plans to develop the corridor till the border, and asked the Imran Khan government to follow suit. Pakistan was waiting for this moment. Soon, Islamabad declared that Mr. Khan would have a groundbreaking ceremony for this purpose on November 28. Hastily, India laid the foundation stone on the Indian side on November 26, which ironically marked the 10th anniversary of the Mumbai terror attacks carried out by Pakistan-based terrorists.

The proponents of Hindutva ideology believe that India’s identity is made up of Hinduism and other religious faiths which originated from Indian soil, such as Buddhism, Sikhism and Jainism. Since the Modi government has given primacy to Hinduism and Buddhism for diplomatic outreach, quietly ignoring the rich Indian legacy of Sufi Islam, it could not afford to be seen denying India’s Sikh community an opportunity to visit the Kartarpur shrine when Pakistan seemed willing to roll out a red carpet for them.

## The impression Pakistan created

Given India’s continued refusal to engage with Pakistan, it would have been a huge loss of face had External Affairs Minister Sushma Swaraj attended the groundbreaking ceremony in Pakistan. However, since it was not possible for India to be unrepresented in an event with so much symbolic value, two Union Ministers were sent to attend the ceremony. Is it not laughable that Mr. Sidhu was termed an anti-national when two Union Ministers represented the Modi government?

India made it clear that the opening of the corridor can’t be the basis of a thaw between the two countries. However, Pakistan seems to have created an impression of generosity towards all Sikhs living in India, as well as projected itself as a champion of reconciliation. The Modi government seems to have become a victim of its own over-reliance on religion for diplomatic engagements.

There have been concerns that the government has been undermining India’s secular foundations. It is time to ask whether the government’s eagerness in tapping India’s “original” religions as diplomatic resource has promoted India’s interests or restrained its actions.

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## SINGLE FILE

# Border separations

Steps that the Trump administration could consider to mitigate the problem

NARAYAN LAKSHMAN



Starting around late 2017 and accelerating through 2018, the process of separating migrant children from their families at the U.S.-Mexico border resulted in an angry public backlash against the Trump administration’s “zero-tolerance” approach to dealing with undocumented migrants. The President then ostensibly backed down on this policy, as a sense of dismay mounted over disturbing images and videos of screaming toddlers in the custody of Customs and Border Protection personnel, and of chain-link cages filled with children. But it now appears that the federal government has quietly resumed family separations, in many cases using “vague or unsubstantiated allegations of wrongdoing or minor violations against the parents... as justification.”

During the first phase of family separations, between October 2017 and May 2018, reports suggest that more than 2,000 children were separated from their parents. Now, based on information reported to members of Congress and subsequently reported in the media, it seems that 12,800 children were held in federally contracted shelters in September 2018. Updates to that figure in mid-December put the number at 15,000. The sheer numbers are not the entire story, however. Disturbing accounts have also surfaced of immigration officials arrested for the sexual abuse of children in their care, even though the Immigrations and Customs Enforcement detention centres have denied responsibility for these violations.

Then matters took a turn for the worse. First, political pressure on the Trump administration soared after a caravan of more than 7,000 migrants from Central America made its way through Mexico and reached the U.S. border, only to be tear-gassed by law enforcement. Images of families with children fleeing caused outrage across the world. Second, Republicans lost the House of Representatives to Democrats in the midterm elections, leading to more tension on Capitol Hill over border policy, especially Mr. Trump’s proposal for the border wall. Third, and most tragic, two children, Jakelin Caal Maquin (7) and Felipe Gomez Alonzo (8), died in the custody of immigration officials in December leading to bitter recrimination on all sides. Homeland Security Secretary Kirstjen Nielsen suggested that the families of the children were to blame for undertaking such an arduous crossing, while the families and human rights group alleged lack of custodial care for the children.

A potential way out of this politically tenuous, arguably inhumane border crackdown would be for the Trump administration to consider adopting the policy of “catch and release” — where migrant families would be released from custody pending their deportation case adjudication. Otherwise under a decree known as the Flores settlement, migrant children may not be held with their parents in immigration detention for more than 20 days, usually insufficient time for a ruling in the case.

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## NOTEBOOK

# Beyond the lens in Jantar Mantar

Conversations with street vendors and children on the sidelines of protests

PRISCILLA JEBARAJ

As a journalist in Delhi, I have spent at least a couple of days every month at Jantar Mantar, the premier protest venue since the early 1990s. On some days mega rallies take place under the gaze of dozens of cameras. But even after the crowds have left, the space is dotted with small groups of people who simply want to be heard.

I spent one late summer afternoon exploring some of the more esoteric groups, bored with the long-winded speeches of the rally I had been assigned to cover. After a few minutes each at protests by railway coolie workers, PDS traders, and self-described anarchists, I stopped by a group of women gathered around a portrait of a young girl.

The girl was a high-schooler from a Gujarati community in northern Delhi, and had been harassed by a man for

several months. Days before her final school exams, she fell to her death. Local police ruled it an accident. Her neighbours were there to demand a thorough investigation, suspecting that she had either been pushed or killed herself. There were too few facts to write a news report. In any case, the women seemed more interested in telling me about the girl’s life than her death. I may have forgotten every aspect of the rally I was there to cover, but I will never forget that the girl’s favourite sweets were jalebis, that she loved to dance the dandiya, and that her family wanted her to become a teacher.

While protesters may come and go, there are some constant faces at Jantar Mantar. In my early days in the city, a veteran reporter told me how to bypass the crowds at large rallies, the place to stand for the best view of both

the crowd and the stage, and which vendors on the side streets served unhygienic food. Those vendors are also a good source for an informal estimate of crowd size in comparison to previous protests.

During one rally for higher pensions, I chatted with Lal Poddar, who works in a small shop closest to the stage. He had seen hundreds of protests, but this one struck close to home. After 24 years in the shop, he wanted to return home in Bihar, but did not want to be a burden to his relatives. With a pension of ₹3,000 per month, as the protesters were demanding, he could stay an independent man.

There are also tiny entrepreneurs at Jantar Mantar, street children who weave through the crowds selling pens, flowers or colouring books. Some ask for a meal. Once you’ve covered a few protests, you learn to

## FROM THE HINDU ARCHIVES

FIFTY YEARS AGO JANUARY 8, 1969

## Future of Kenya Asians

East Africa is not willing to be turned into a refugee camp for British citizens of Asian origin, Mr. Tom Mboya, the Kenya Minister for Economic Planning and Development, said here [Nairobi] yesterday [January 6]. Speaking as the Secretary of the Kenya delegation to the Commonwealth conference, Mr. Mboya stated, “if this subject comes up at the conference we shall want to know why, Britain is discriminating against its own citizens. This is a British problem because Britain is refusing its own citizens the right to return to their home.” Meanwhile, the Committee on U.K. Citizenship in London is convinced that the London conference will discuss immigration and in particular the future of Asian Britons in East Africa.

A HUNDRED YEARS AGO JANUARY 8, 1919.

## India and Burma

The European Association at Rangoon proposes pressing for the appointment of a committee of officials and non-official Europeans and Indians to enquire into and report on the financial relations between Burma and India in view to the ultimate goal of separation of the former from the latter country. Sir Reginald Craddock’s wish to keep Burma “unspotted” from India is very natural, but as we have said before Sir Reginald is a bird of passage and India and Burma go on for ever. In her palmiest days, Burma was never able to get on without India. Antiquarian research both in India and Burma prove that the very closest relations existed between the two peoples for centuries, and if Burmans now, as it is alleged, desire complete political separation, they must be doing it in ignorance of the great assistance India is to them materially and morally. It only wants railway communication between India and Burma to accelerate the best interests of both countries. Without India to back her, and cut off from the control of the Viceroy and placed under the bureaucratic control of a Lieut-Governor, Burma would fast develop symptoms of atrophy political and social — and lend herself to foreign spoliation only too easily.

## CONCEPTUAL

# Primordial soup

BIOLOGY

This refers to a hypothesis regarding the origin of life on earth. It states that life on the planet originated around 4 billion years ago through the combination of abiogenic material on the earth’s surface and some form of external energy. This natural reaction led to the birth of the most primitive cells that are the building blocks of life. It is believed that, over time, these primitive cells gradually evolved into a huge variety of complex living organisms. The hypothesis was first proposed by Soviet biologist Alexander Oparin in 1924 and later independently by English geneticist John Haldane in 1929.

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