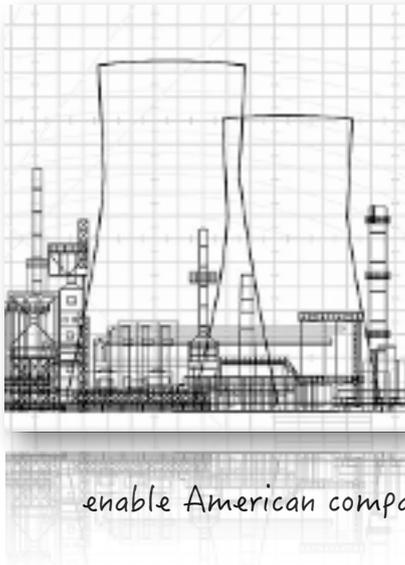


## Forging a new nuclear deal

The India-U.S. civil nuclear agreement is obsolete. In reviving it, India must heed the new global realities



Watching the Republic Day parade, where 10 ASEAN leaders were chief guests, it was easy to miss the fact that the dates of their visit also marked the anniversary of another big visit three years ago: the visit by then U.S. President Barack Obama, when he announced a “breakthrough” in the India-U.S. civil nuclear deal, to finally pave the way for a commercial contract.

*“The deal is done,” Sujatha Singh, who was Foreign Secretary at the time, said as the government issued papers and held briefings describing the nature of the agreement between India and the U.S. on supplier liability and tracking requirements, which would enable American companies to build nuclear power reactors in India.*

### A decade on

Today, nearly a decade since the memoranda of understanding were inked, and three years after the last wrinkles were ironed out, there is no sign yet of any concrete contract between an American company and the Indian authorities to build a reactor. In 2009, both GE-Hitachi and Toshiba-Westinghouse had begun talks on techno-commercial agreements for six reactors each in India. These commercial contracts were to be the start of the ‘payoff’ for the U.S. that had considerably shifted its stand on non-proliferation to give India the waivers needed, and they were to herald India’s arrival on the global nuclear power stage in return.

Instead, GE-Hitachi’s plans were shelved after it rejected the Obama-Modi agreement in January 2015, saying GE would not accept the compromise formula on supplier liability. (While others have indicated they would accept the liability offer, none of them has put that on paper.)

Toshiba-Westinghouse then carried the baton to actualise the India-U.S. civil nuclear deal, but ran into a different storm as both Toshiba and Westinghouse had major financial troubles last year. After a near-bankruptcy, Toshiba jettisoned Westinghouse for just \$4.6 billion to a Canadian consortium, a deal that is now expected to be cleared by the end of 2018.

As the U.S. sends Westinghouse officials to India next week to reopen negotiations, the government must consider all that has changed before deciding to go ahead with the commercial contract. With shifts in global politics, renewable energy technology, the U.S.’s commitment to India, and the supplier’s capacity and ability, it would be ridiculous if India remained steadfast to a deal envisaged a decade ago under very different circumstances.

To begin with, there are changes in the deal itself. The financial crisis was set off because *Westinghouse* went into major cost overruns, possibly worth more than \$15 billion, in building four AP1000 reactors at two projects in the U.S., the same reactors as the ones meant for India. When work was halted on the *Westinghouse* projects in South Carolina, the construction was already five years over schedule. India's past record with Russian projects (the only foreign collaboration operational so far) puts the mean time to construct a reactor here at nine years. This would mean that even if an India-U.S. techno-commercial contract is finally readied in 2019, and the ground breaking begins immediately, it may not see fruition until 2029, a good 20 years after the nuclear agreement was signed. *Westinghouse's* new buyers have already pared the business, will not construct the nuclear power project in India, and will only supply reactors and components. In the terrible scenario of a Fukushima-type nuclear accident in India, this further dilutes the liability that U.S. companies would carry. This was certainly not the future envisioned by those who first negotiated the India-U.S. civil nuclear agreement, and it calls into question whether the agreement, as it stood in January 2015 when Prime Minister Narendra Modi and Mr. Obama made that announcement, is even valid.

## The Trump effect

Second, Donald Trump's presidency has taken a very sharp turn away from renewable energy, and even the promise of nuclear dollars have dimmed in comparison to the lucre of fossil fuels in America. In his *State of the Union* address last week, Mr. Trump said that the U.S. has

*"ended the war on beautiful, clean coal," and will now mine, export and push oil, gas, coal and shale trade into its foreign outreach.*

A case in point is the big pitch Mr. Trump made during his meeting with Mr. Modi in Washington last June, which led to Indian orders for both oil and gas shipped from America. As a result, New Delhi may not get the support that the Obama administration had promised both on financing renewable energy projects and in facilitating India-U.S. civil nuclear power deals.

India has already received a rude shock with the U.S. pulling out of the *Paris climate change accord*, and from Mr. Trump's singling out India as a "*leading polluter*" during his announcement of that decision last year. This, after the Obama administration had browbeaten India into acceding to the Paris accord two months ahead of deadline, by promising to help India reduce its dependence on fossil fuels.

Third, India's own requirements from the India-U.S. civil nuclear deal have changed considerably. In May 2017, the Cabinet approved a \$11 billion, 7,000 MW construction plan for 10 Indian-made *pressurised heavy water reactors (PHWRs)*. With existing constructions and the current capacity of 6,780 MW, India hopes to have 14,600 MW of nuclear power online by 2024. Even as it makes a push for indigenous nuclear power plants, the *Department of Atomic Energy* is also advocating *PHWRs* in more inland sites in Rajasthan, Haryana, Karnataka and Madhya Pradesh, with concerns about too many nuclear projects dotting the southern coastline which lies along tsunami and earthquake faultlines, as the U.S. and French projects are.

India has also found much more comfort in its existing agreement with Russia's *Atomstroyexport*, that began with the *Intergovernmental Agreement* for Kudankulam 1 and 2 in 1988, and has kept a slow but steady pace in delivering reactors and operationalising power projects. When asked about India's new focus for other foreign collaborations, the long-serving Russian Ambassador Alexander Kadakin, who passed away last year, used to reply,

“When you see the first nail in the first beam of the first power project built by anyone other than us (Russia), ask me the question again.”

Another issue relates to the cost that India is prepared to pay for nuclear energy through foreign collaborations. Indo-French negotiations for six 1,650 MW *European Pressurised Reactors (EPRs)* in Maharashtra’s Jaitapur have dragged on for a decade on this count, with the *Department of Atomic Energy* announcing in 2013 that the cost “cannot go above”  $\text{₹}6.50$  per unit, and the French company *Areva* (the project has now been handed to *EDF*) clearly seeking more.

## A changed landscape

Finally, shifts in the world nuclear industry must be studied closely before heading back into negotiations with new companies. As the pressure to lower nuclear power tariffs increases, nuclear safety requirements have become more stringent, putting intense strain on all those in the business. Ironically, while French President Emmanuel Macron visits India for the *International Solar Alliance* this March, much of his bilateral negotiations will focus on getting a better deal in Jaitapur for *EDF*, which is counting on the nuclear project for its own financial future. Most nuclear companies globally are staring at major losses over their nuclear businesses, and this too must be factored into India’s negotiations. More countries now see nuclear power as a “base-load” option, to be kept as back-up for the unstable, but infinitely less costly and eco-friendly solar and hydroelectric power options. That is, nuclear power is losing its primacy in the energy mix. In 2016, for example, global wind power output grew by 16%, solar by 30%, but nuclear energy only by 1.4%.

As a result of all these changes, the India-U.S. civil nuclear agreement for commercial projects, as it was completed all those years ago, is now obsolete and reviving it will require a different template that takes into account India and the new global realities. The deal that was “done” is now dead. Long live a new deal.

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