

America's nuclear problem

It is estimated that an average American generates about 4.4 pounds of trash every day, totalling 254 million tonnes for the country each year. This includes 22 billion plastic bottles. Though recycling of trash has increased in recent years, a large chunk of it all still ends up in more than 2,000 active landfills around the country. Given the advantage of the huge landmass they occupy, Americans have the convenience of making the waste that they make invisible in faraway lands.

However, disposing nuclear waste appears to be an intractable problem for the superpower. The country is not only sitting on the largest nuclear arsenal, but also the largest stockpile of nuclear waste. The decades-old question resurfaced again this week after the House of Representatives gave the go-ahead to the Trump administration to revive a long-stalled controversial project to build a nuclear waste dump in the Nevada desert. The repository, planned in the early 1980s, is supposed to be deep inside the Yucca Mountain.

The House passed a Bill allowing for the resumption of the licence review for project. Even if everything goes smoothly, it will not be before the middle of the century for the facility to be operational. So the plan is also create a temporary facility in New Mexico. But none of this is going to be easy, as lawmakers from Nevada have said they would stall the proposal. "If you generate nuclear waste, you should keep it in your own backyard. Don't be sending it to our backyard," said Representative Ruben Kihuen of Nevada. The proposal, passed in the House, could not cross the Senate hurdle.

According to a report by the U.S. Government Accountability Office, the U.S. has over 90,000 tonnes of nuclear waste that require disposal. The power industry alone has generated more waste than any other country — nearly 80,000 tonnes, the report says. The American nuclear weapons programme has generated spent nuclear fuel as well as high-level radioactive waste. This waste is currently spread over 80 sites in 35 States. Over the next few decades, this is expected to increase to about 1,40,000 tonnes. It is estimated that the current stockpile of waste is enough to fill a football field about 20 m deep.

Managing waste

Given the challenges of managing waste, several States have banned new nuclear plants. But there are 100 operating reactors in the U.S., which generate roughly 2,000 tonnes of spent fuel each, annually.

Low-level nuclear waste, such as gloves and tools used to handle plutonium and uranium in both commercial and military nuclear purposes, are dumped in salt caverns 2,000 feet below the New Mexican desert, in a facility called the Waste Isolation Pilot Plant or WIPP. This site also witnessed an explosion in 2014, which raised further questions about the safety of the Yucca Mountain project.

The Yucca project idea began with a 1982 law that sought to establish a federal nuclear site. In 1987, Congress mandated that the Yucca site be the only option. The project lingered on, and in 2010, the Obama administration froze the project after the then Senate Majority Leader Harry Reid — a Democrat from Nevada — opposed it. Meanwhile, some companies have floated an idea to create underground facilities in remote areas of Texas and New Mexico to temporarily store the waste. But experts say transporting waste to one location and then relocating it to another will be a huge logistical and security challenge, which itself could take decades.

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