

Two more Natrium units for coal-to-nuclear switching

05 April 2023



US utility PacifiCorp has increased its ambition for using Natrium advanced reactors in the 2030s, adding two further units to its plans in addition to the demonstration unit already slated for a retiring coal power plant in Kemmerer, Wyoming.



To be repowered: Kemmerer will be the first PacifiCorp coal plant to switch to nuclear energy (Image: PacifiCorp)

While the Kemmerer project's operation has been pushed back by two years to 2030 due to the unavailability of non-Russian origin high-assay low-enriched uranium (HALEU) fuel, PacifiCorp's plan counts it as producing 500 MWe from that date, "with an additional 1000 MWe of advanced nuclear resources over the long term." Natrium reactors store heat in molten salt to boost their power from 345 MWe to 500 MWe for as long as 5.5 hours to serve peak demand or fill in for times of lower renewable generation.

TerraPower President and CEO Chris Levesque said he was "pleased" with the update. The company noted that the additional units were earmarked for Utah, but "both companies will engage with local communities before any final sites are selected."

Neither Utah nor Wyoming currently have nuclear power plants, although the University of Utah has operated a small 100 kW TRIGA research reactor on the edge of Salt Lake City since 1975 and Wyoming has a number of uranium mines.

PacifiCorp's plan includes a series of major investments which it said should result in a 70% reduction of greenhouse gas emissions from 2005 levels by 2030 and an 87% reduction by 2035.

The plan includes over 9 GWe of new wind power, over 8 GWe of storage and 7.8 GWe of new solar in addition to the 500 MWe from Kemmerer and the further 1000 MWe of nuclear promised for the long term. It also includes over 900 MWe of load control, almost 5 GW of efficiency savings and over 1200 MWe of unspecified "non-emitting peaking resources". All this will be facilitated by 2500 miles (4023 kilometres) of new transmission lines spanning the western states of Washington, Idaho, Colorado, Oregon, Wyoming and Utah which the company calls the Energy Gateway. The scope for nuclear could increase further, given that PacifiCorp and TerraPower have studied the deployment of as many as five Natrium units.

PacifiCorp's plan states: "With recent federal legislation and studies on the opportunities of a coal-to-nuclear energy transition, TerraPower and PacifiCorp remain committed to bringing the Natrium technology to market for the benefit of grid reliability and stability for energy-producing communities in Wyoming and Utah."

Researched and written by World Nuclear News

Most read

[Finland, Sweden and Ukraine consider Rolls-Royce SMRs](#)

[Grid connection for Vogtle unit 3](#)

[USA, Indonesia announce partnership on SMRs](#)

[Canadian, Polish, US companies in 'unprecedented' SMR collaboration](#)

[Construction starts on fourth Sanmen unit](#)

[Two more Natrium units for coal-to-nuclear switching](#)

[First CGN Hualong One reactor enters commercial operation](#)

[Industrial users eye small reactors for power supplies](#)

[Hot functional testing begins at Vogtle 4](#)



WNN is a public information service of World Nuclear Association



Related Stories

[HALEU fuel availability delays Natrium reactor project](#)

[US companies look to expand Natrium reactor deployment](#)

[US study assesses potential for coal-to-nuclear conversion](#)

[Wyoming site chosen for Natrium plant](#)

Related topics

[New build](#) | [Small Modular Reactors](#) | [USA](#)



[TerraPower circles 2023 for Natrium construction permit](#)

Related Information

[Fast Neutron Reactors](#)

[Molten Salt Reactors](#)

[Small Nuclear Power Reactors](#)

Related Links

[PacifiCorp](#)

[TerraPower](#)

[Energy & Environment](#) [New Nuclear](#) [Regulation & Safety](#) [Nuclear Policies](#) [Corporate](#) [Uranium & Fuel](#) [Waste & Recycling](#) [Perspectives](#) [About](#)
[Contact](#)



©2021 World Nuclear Association [Privacy Notice](#) | [Cookies Policy](#)

Tower House, 10 Southampton Street, London, WC2E 7HA, UK. Registered in England and Wales, number 01215741