

Can a small modular reactor power a data centre?

Deep Atomic said its MK60 light-water reactor offers a compact and scalable energy solution. Courtesy Deep Atomic. A Switzerland-based nuclear energy startup has revealed plans for a compact small modular reactor (SMR) specifically aimed at powering the growing number of energy hungry data centres.

How many small modular reactor projects have been selected?

The European Commission has selected nine small modular reactor projects - including two lead-cooled fast reactors - in the initial round of applications to form Project Working Groups under the European Industrial Alliance on SMRs.

What is a Mk60 small modular reactor?

The MK60 small modular reactor design, developed specifically to provide power and cooling to data centres, has been unveiled by Deep Atomic. The MK60 is a light water small modular reactor (SMR) incorporating multiple passive safety systems. Deep Atomic says it is "compact, scalable, and built on a foundation of proven technology".

What is a small modular reactor?

Small modular reactors have a power output of less than 300 MWe. The term "modular" in the context of SMRs refers to its scalability and to the ability to fabricate major components of the nuclear steam supply system (NSSS) in a factory environment and then transport them to the site. Key characteristics:

What types of data centres can a nuclear reactor support?

The company - headquartered in Zurich, Switzerland - says the reactor is well-suited to various types of data centres, including those supporting traditional cloud services, cryptocurrency operations, and AI applications.

Are 60 MW reactors a good choice for data centres?

These units are large enough to sustain significant computer infrastructure but small enough for modular deployment, thus reducing initial capital outlay and project risk. Deep Atomic head of engineering Freddy Mondale said that "a 60 MW reactor with additional 60 MW of cooling capacity hits a sweet spot for data centres".

Top companies for advanced modular reactors at VentureRadar with Innovation Scores, Core Health Signals and more. Including X-energy, Transmutex, Advanced Cooling Technologies, Inc. etc ... Switzerland. Transmutex specializes in developing advanced nuclear technologies to meet the demand for carbon-free base load power. Their innovative ...

As the leader in small modular reactor (SMR) technology, we are ready to meet the rapidly growing power needs of data centers and AI. See How. Our Products & Services. We're setting new standards in the nuclear

industry with safer, more flexible options. Partnership for Global Commercialization.

Global companies including Google, Amazon and Oracle have all recently announced plans to use SMR energy to run their data centres. Deep Atomic says its MK60 light water reactor offers a compact and scalable energy ...

Kepeco Engineering and Construction Company (2.11% of NLR assets \*): A Korean company, Kepeco is a diversified business that focuses on nuclear, thermal, and other clean power sources. It has been developing an offshore small modular reactor for years with the hopes of deploying as early as 2031.

Google has ordered six to seven small modular nuclear reactors (SMRs) from Kairos Power, becoming the first tech company to commission new nuclear power plants to provide low-carbon electricity ...

tors, NuScale is one of the Small Modular Reactor companies whose designs are going through pre-licensing approval with Canada's nuclear regulator. Many are designed to be small enough to transport by truck or by shipping container. (NuScale Power) and their reactors are so transportable as illustrated in Fig. 1.1, while it is

Get access to top Companies in the Small Modular Reactor Market, with insights on Business Strategy, Financial Performance, Key Product Offerings & Performance Indicators, Risk Analysis, Industry Share, Recent Developments, Regional Presence, and SWOT Analysis. ... The small modular reactor market size was valued at USD 6.34 billion in 2024 and ...

A Swiss company pioneering "an entirely new type of nuclear energy" in the form of a thorium-fuelled reactor that can reuse existing nuclear waste is hoping to reach a levelised cost of energy (LCOE) for the technology ...

Amazon, Google and Microsoft all are investing in small, modular nuclear reactors as part of their push to secure clean energy. They hope to produce 1000s of megawatts of power by the 2030s.

Our "behind-the-meter" approach means we can deploy reactors in areas with limited or unreliable grid access, opening up new possibilities for data centre locations, allowing operators to expand into ...

PRAGUE (AP) -- The Czech power company CEZ signed a deal Tuesday with Britain's Rolls-Royce SMR to form a strategic partnership to develop and deploy small modular nuclear reactors.

ROCKVILLE, Md., October 16, 2024--X-Energy Reactor Company, LLC ("X-energy"), a leader in advanced nuclear reactor and fuel technology, today announced a Series C-1 financing round of ...

The army experimented with modular reactors starting in the 50s and all USN submarines and Air Craft Carriers are powered by reactors. Cruisers used to be as well, so it's a technology the military already uses to a wide extent ... Industrial companies are going to run their own dedicated nuclear reactors? Most of what

you've written is a ...

The Czech power company CEZ signed a deal Tuesday with Britain's Rolls-Royce SMR to form a strategic partnership to develop and deploy small modular nuclear reactors. Under the agreement, CEZ ...

The standard MSFR design is a reactor with a power output of 3000 MW(th), utilizing a fluoride fuel salt volume of 18 m<sup>3</sup>. The reactor is operated at an average fuel salt temperature of 700 °C. In 2018, novel research endeavors were initiated pertaining to compact modular iterations of the MSFR (s-MSFR).

2 ???; The company claims to "capitalise on 30 years of R& D activity in metal-cooled fast reactors and liquid-lead cooling systems. Newcleo says its reactor design "has been optimised over the last 20 years leading to the concept of an ...

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