

ANS Webinar Changing Strategy: International Deployment of Nuclear Power Plants 29 July 2024

## At COP28 25 Countries committed to tripling global nuclear capacity by 2050

## مضاعفة إنتاج الطاقة النووية ثلاث مرات بحلول عام 2050 الإمارات العربية المتحدة، ديسمبر 2023

## **TRIPLING NUCLEAR ENERGY BY 2050**

**United Arab Emirates, December 2023** 



WORLD NUCLEAR ASSOCIATION

# Nuclear energy is the largest source of carbon-free electricity in OECD countries

Operates nuclear reactors, plans to continue, and/or is building new reactors

Plans to build new reactors

- Political debate about using nuclear energy
- Nuclear phase-out complete or planned

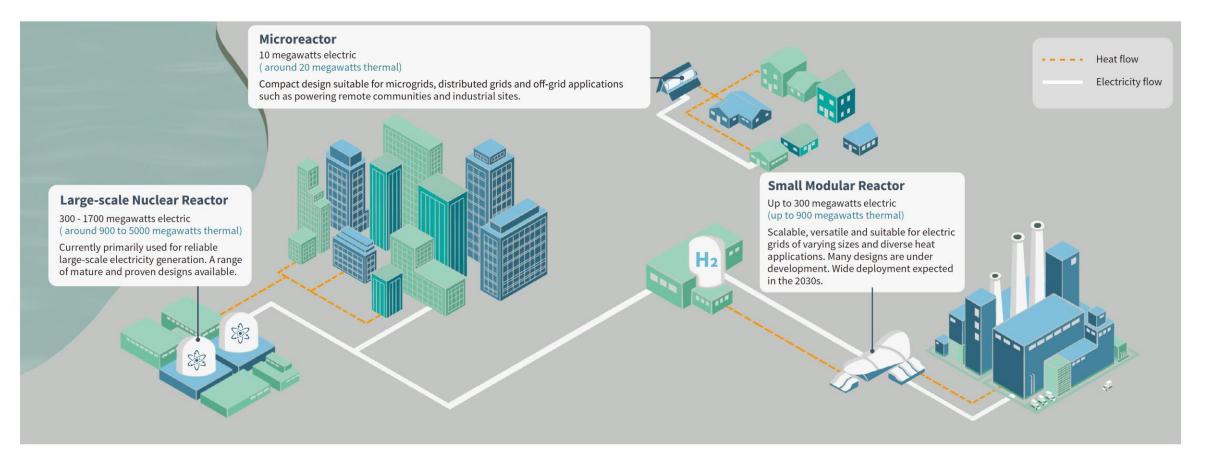
Source: World Nuclear Association (2023), IAEA (2023) @OperadorNuclear

## Nuclear energy can help decarbonize the entire economy

### **NUCLEAR POWER**

Nuclear power is an important source of low-carbon electricity and heat that contributes to attaining carbon neutrality







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## Nuclear electricity is key for data centers



Energy & Environment | New Nuclear | Regulation & Safety | Nuclear Policies | Corporate | Uranium & Fuel | W

## Talen sells carbon-free data centre to Amazon cloud company

05 March 2024

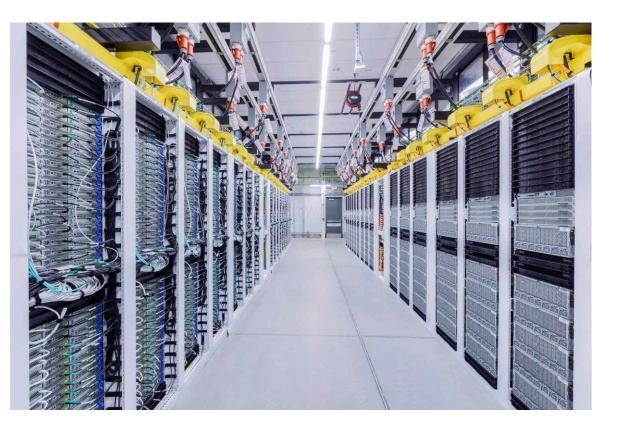


Talen Energy Corporation has announced the sale of its 960 MW Cumulus data centre campus in northeast Pennsylvania to Amazon Web Services, with a long-term agreement to provide power from Talen's Susquehanna nuclear power plant.



Susquehanna (Image: Talen Energy)

The Cumulus campus is directly connected to the two-unit nuclear power plant. The data centre's four substations have a total potential 960 MW of redundant capacity, including 200 MW that is currently associated with the Nautilus cryptocurrency facility, in which Talen will retain its 75% interest. A further 240 MW of redundant capacity for data centres is expected to be ready this year. The campus features a "robust and redundant" fibre network.



#### **Typical Power Densities**

- Traditional Data Center: 4 to 6 kW per rack
- Cloud Service Providers: 10 to 14 kW per rack
- High-density AI: more than 20 kW per rack

## Nuclear electricity and heat could help decarbonize scope 1 and 2 of the oil and gas industry















Sama.BilbaoyLeon@world-nuclear.org

www.world-nuclear.org info@world-nuclear.org







