Nuclear is clean energy

According to the Energy Information Administration, nuclear energy is the largest clean energy source in the United States, producing more carbon-free electricity than all other sources combined.

- Nuclear energy produces electricity for one in five homes and businesses across the U.S., with 93 reactors at 55 plants in 28 states.
- Nuclear energy has one of the lowest environmental impacts of all energy sources (comparable with the total MW/footprint of wind and solar) and produces more electricity on less land than any other clean air source.[1]
- All of the used fuel ever produced by the commercial nuclear industry since the late 1950s would only cover a football field to a height of fewer than 10 yards.[2]

Nuclear energy generates more than **50% of the United States' carbon-free electricity** and 20% of its total electricity.[3]

Nuclear helps to avoid more than 471 million metric tons of carbon emissions each year, equivalent to **taking nearly 100 million passenger cars off the road**.[4]

CEBA
Clean Energy Buyers Association

Nuclear Energy is critical to the Clean Energy Buyers Association's (CEBA) vision of a 90% carbon-free U.S. electricity system by 2030.[5]

Union of Concerned Scientists

"We found an important need to preserve the capacity of existing nuclear power plants - we support across the board policies that would give new nuclear power plants the opportunity to compete in a marketplace against wind and solar and other forms of decarbonized energy."

Ken Kimmell - President, Union of Concerned Scientists

Stakeholders recognize nuclear is key to a carbon-free future

Growing consensus among leaders in energy, science and policy is that nuclear energy is essential to achieving clean energy goals.

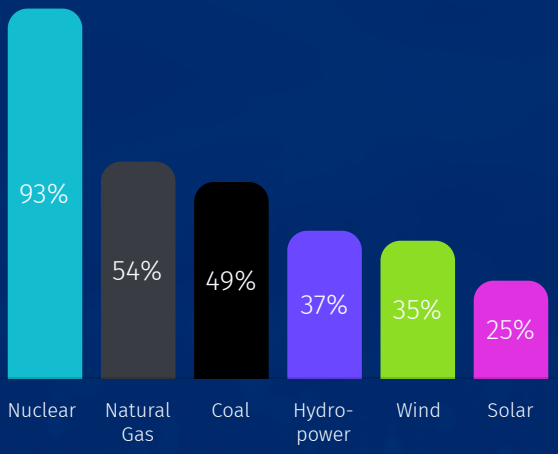
- Influential environmental organizations, including The Union of Concerned Scientists, United Nations, and The Nature Conservancy recognize nuclear energy as key to achieving a carbon-free future.
- Investors are looking to nuclear energy as an essential tool in reducing carbon emissions and meeting ESG commitments, and this is expected to grow following the EU's inclusion of nuclear in its taxonomy.
- In 2022, the European Commission adopted the Complementary Climate Delegated Act which adds nuclear to the list of green technologies covered by EU taxonomy, a classification system used by the EU to guide private investment toward environmentally sustainable projects.
- There has been strong bipartisan support for nuclear energy.

[1–3] Nuclear Energy Institute (NEI) | [4] epa.gov | [5] cebuyers.org/about/vision

Scott Hanna | scott.hanna@cumulusinfra.com |

CUMULUS DATA

Capacity Factor by Energy Source (2021)[1]



Susquehanna's average capacity factor is 95% which allows Cumulus Data to deliver an industry-leading TCO with one of the lowest all-in power costs in the U.S. ($0.029 / kWh), while acting as a zero-carbon baseload which can be supplemented by renewables.

Nuclear is reliable and provides resiliency to complement other clean energy sources

- Nuclear plants operate 24/7/365 and can fulfill the demand of data center operations while being complemented by other intermittent carbon-free sources like wind and solar.
- Nuclear energy is the most reliable, abundant, and stable energy source on the grid.
- Nuclear generation units can run for up to 24 months without the need to refuel and enough fuel currently exists to power plants for the next 500 years.

PJM issues Susquehanna a transferrable **Emission-Free Energy Certificate (EFEC)** for each MWh of electricity produced, allowing tenants full rights to claim the benefits of zero-carbon electricity.

Nuclear Plants Exceed Industry Standards for Safety and Operational Performance

America's nuclear power plants are among the safest and most secure industrial facilities in the world. Multiple safety systems, the industry's commitment to comprehensive safety procedures, robust training programs, and stringent federal regulation keep nuclear plants and neighboring communities safe.

- In the history of U.S. commercial nuclear energy, there have been no radiation-related health effects linked to their operation.
- The defense-in-depth approach prevents accidents and releases of radiation through redundant layers of defense so that no single layer is exclusively relied upon.
- There has never been a radioactive release associated with the U.S. nuclear fleet through 28 million hours of operation.

Radiation is all around us - a person is **exposed to 200% more radiation in the average U.S. home** than individuals living near or working at a nuclear power plant.[2]

Whole-body CT (single procedure)
1,000 millirems

200% difference

Radon in average U.S. home
228 millirems (annual)

Cosmic radiation living in Denver
80 millirems (annual)

U.S. coast-to-coast flight
3.5 millirems

Living near or working at a nuclear plant
0.009 millirems (annual)

[1] eia.gov | [2] National Council on Radiation Protection & Measurements