Carolinas Resource Plan

Our Carolinas Resource Plan is Duke Energy's proposed road map for North Carolina and South Carolina – delivering a path to cleaner energy without compromising grid reliability, energy affordability or the energy demands of a growing region.

The utility industry is continuing its exit from coal in response to mounting pressures that threaten the long-term reliability of coal plants. Duke Energy's new resource plan maps out how to replace these facilities in a manner that continues to provide economic benefit to the Carolinas.

The plan includes new resources and an increased reserve margin to facilitate jobs and investment while providing equal or greater reliability. Based on accelerating economic development in the two states, ***Duke Energy's load growth is projected to surge by around 35,000 gigawatt-hours in the next 15 years – more than the annual electric generation of Delaware, Maine and New Hampshire combined.*** The resource plan proposes infrastructure investments of more than $90 billion to meet this need.

The plan balances traditional forms of dispatchable, on-demand resources (advanced nuclear, natural gas and pumped hydro storage) with a growing amount of complementary renewables that can deliver fuel-free energy. By targeting carbon neutrality by 2050, the plan will also help achieve customer sustainability goals, including those of the largest employers in both South Carolina and North Carolina.

At a Glance

- **Three portfolios** – all retire coal by 2035
- **An "all of the above" strategy** – diverse resources to protect reliability for our customers and communities
- **A "least cost" approach** – to accommodate growth at the lowest possible cost to customers

New Resources Selected in Proposal by Jan. 1, 2035

To meet the energy needs of a growing region, Duke Energy is taking a "replace before retire" approach.

Core Portfolios	Grid Edge	Coal Retirements	Solar	Battery	CT	CC	Onshore Wind	Pumped Storage Hydro	Advanced Nuclear	Offshore Wind
P1 Base	EE at least 1% of eligible retail sales	(-8.4 GW)	14.9 GW	6.1 GW	2.6 GW	2.7 GW	2.3 GW	1.7 GW	0.6 GW	2.4 GW
P2 Base	IVVC growing to 96% (DEC) & 97% (DEP) circuits	(-6.2 GW)	11.8 GW	6.7 GW	2.1 GW	4.1 GW	1.7 GW			1.6 GW
P3 Base	Winter DR & CPP		11.9 GW	4.3 GW			2.1 GW			*0-1.6 GW**

EE-*energy efficiency* **IVVC**-*Integrated Volt VAR Control* **DR**-*Demand Response* **CPP**-*critical peak pricing*

**Offshore wind is not included in P3 base planning period, but we will continue to monitor market developments and opportunities.*

Each portfolio has cost and execution trade-offs for state regulators to consider. All three replace coal with a diverse mix of solar, wind, advanced nuclear, hydrogen-capable natural gas and battery and pumped hydroelectric storage – this diversity is key to meeting least cost and reliability mandates in both states.

Near-Term Action Plan

The plan will be checked and adjusted every two to three years. This enables tangible results in the coming years, while allowing technology advancements and new data to be considered by regulators, customers and other stakeholders in refining the plan over time.

To expedite near-term resources while maintaining optionality for longer-term developments, Duke Energy recommends the following additions, over and above existing and currently under development Carolinas resources:

New Resources	Planned Addition (Gigawatts)	System Benefits
Solar	6 GW by 2031	Reduces fuel costs for customers; increasingly important for attracting new businesses; cleaner air for communities; improves system diversity.
Battery Storage	2.7 GW by 2031	Flexible resource that can help support weather-dependent renewables and shift output to high-demand periods; typically limited to four-hour duration.
Combined Cycle (CC)	4.1 GW by 2031 three CCs	Available 24/7; compared to coal, CCs have 60% lower carbon emissions (carbon-free once converted to 100% hydrogen), faster start-ups/ramp rates and higher reliability.
Combustion Turbine (CT)	1.7 GW by 2032 four CTs	Quick-response power, ensuring reliability when solar/wind have limited or no availability; unlike batteries, can run for days/weeks to maintain reliability during extreme weather.
Onshore Wind	1.2 GW by 2033	Same benefits as solar; output is typically highest when solar output is low.
Pumped Storage Hydro	1.7 GW by 2034 Bad Creek II	Safe and reliable energy storage with 12-hour capacity; supports weather-dependent renewables; can store low-cost energy to offset higher-cost energy at peak demand.
Advanced Nuclear	0.6 GW by 2035 two SMRs	Nuclear is the only emissions-free generation available 24/7; Small Modular Reactors (SMRs) are less expensive and more flexible than traditional nuclear.
Offshore Wind	Retain option for up to 1.6 GW by 2035	Same benefits as solar; output is typically highest when solar output is low.

Duke Energy's Commitment

Following additional input and regulator approval, Duke Energy will implement one integrated resource plan supporting both states. As proposed, the plan would …

- Ensure the clean energy transition happens at the lowest cost to customers, with equal or greater reliability.
- Prioritize existing plant sites for replacement generation, employing our existing transmission system, workforce and infrastructure.
- Create jobs and new tax base in communities across North Carolina and South Carolina as we build new infrastructure and invest in new technologies.
- Help the region's largest employers meet their sustainability commitments, while also attracting new jobs and facilitating industry expansions in both states.
- Maximize the Inflation Reduction Act, Infrastructure Investment and Jobs Act, and any other opportunities to save customers money.

What's Next?

Regulators in each state will gather additional input and conduct extensive evidentiary hearings. A South Carolina order is expected in mid-2024, followed by North Carolina at the end of 2024.