

North Carolina's load forecast nearly doubled. Your capital plan is where that lands.

Data centers and new manufacturing are stacking demand onto the Carolinas grid faster than any plan on the books anticipated, while coal retires, gas and solar build out, and the state's 2030 carbon deadline falls away. Each of those forces reshuffles the projects on your list. Invizion helps electric utilities re-sequence a capital portfolio in a click — and defend every decision.

~2x¹ How much Duke roughly raised its Carolinas load-growth forecast in its Carbon Plan update, driven by data centers and manufacturing.	8,000+ MW² Remaining coal capacity the state's Carbon Plan directs Duke to retire by 2036.	~\$83B³ Duke Energy's enterprise-wide five-year capital plan (2025–2029).	36,337 MW⁴ North Carolina's net summer generating capacity — 8th largest in the nation.
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THE NORTH CAROLINA LANDSCAPE

Four forces are moving your project list at once

None of these is theoretical, and none of them waits for your next budget cycle. Together they mean the capital plan you approved last year may already be the wrong plan.

DEMAND — LOAD GROWTH**Data centers rewrote the forecast**

Duke Energy roughly doubled its Carolinas load-growth outlook in its Carbon Plan / Integrated Resource Plan update, citing a pipeline of large-load data centers and new manufacturing that its earlier plans never assumed¹

North Carolina already generates the 9th-most electricity of any state;⁴ every gigawatt-scale customer that lands is a capacity commitment competing for the same capital and the same interconnection window.

RELIABILITY — PEAKS & ADEQUACY**Growing load against a winter-peaking grid**

The Carolinas system is winter-peaking, and the resource additions in the Carbon Plan are sized to keep pace with demand that is now climbing far faster than in prior cycles¹

With about 36,337 MW of summer capacity and natural gas as the leading source of generation,⁴ reliability now hinges on new gas, solar, storage, and nuclear all landing on schedule.

GENERATION — THE TRANSITION**Coal out; gas, solar, storage and SMRs in**

The Commission's Carbon Plan order directs Duke to retire more than 8,000 MW of coal by 2036 and add roughly 3,460 MW of solar and 1,100 MW of battery storage by 2031, 900 MW of combustion turbines by 2030, 2,720 MW of combined-cycle gas by 2031, and 300 MW of advanced nuclear (SMR) by 2034 with another 300 MW by 2035²

The 2025 legislature's Power Bill Reduction Act (SB 266) repealed the interim 2030 target while keeping the 2050 carbon-neutrality goal,⁵ and solar already supplies roughly 9% of the state's electricity.⁶

CAPITAL — GRID & HARDENING**Build for growth, harden for storms**

Duke's enterprise-wide five-year capital plan runs to about \$83 billion,³ and a large share flows to the Carolinas grid it has spent years modernizing.⁷

Hurricane Helene's 2024 devastation across western North Carolina added a hard mandate: rebuild to a more resilient standard, not just restore. New obligations don't replace the backlog — they stack on top of it, and something on the list has to move.⁷

WHO RUNS NORTH CAROLINA'S GRID

Two Duke utilities, a smaller investor-owned utility, plus co-ops and public power

North Carolina's grid is carried overwhelmingly by Duke Energy's two Commission-regulated utilities, with Dominion in the northeast, member-owned electric cooperatives, and municipal public-power systems filling in the map. The pressures are shared; the accountability path differs.

Investor-owned utilities

Rates & capital recovery regulated by the NCUC

Duke Energy Carolinas (DEC) ~2.9M electric customers · NC & SC ⁸

Duke Energy Progress (DEP) ~1.7M electric customers · NC & SC ⁸

Dominion Energy North Carolina ~120,000 customers in northeastern NC ⁹

Duke's two Carolinas utilities carry the large majority of North Carolina's load, and Duke's five-year capital plan runs to roughly \$83 billion enterprise-wide. ³

Cooperatives & public power

Governed by boards & members, not NCUC rates

North Carolina EMCs (via NCEMC) Wholesale power to 26 member cooperatives ¹⁰

ElectriCities public-power systems Dozens of municipal electric systems statewide ¹¹

Municipal & distribution co-ops Boards & members set local rates

Co-ops and municipal systems make capital decisions in front of their boards and members — a different forum, the same defensibility test.

Every capital dollar has to be defensible

Whether you answer to the Utilities Commission or a board of members, the question is the same: why this project, why now, why at this cost?

North Carolina Utilities Commission (NCUC) regulates rates, capital recovery, and the biennial Carbon Plan / Integrated Resource Plan for the investor-owned utilities; it was reduced from seven commissioners to five in 2024¹²

Multi-year rate plans (HB 951) let Duke Energy Carolinas and Duke Energy Progress recover capital across three-year plans with performance-based mechanisms, at authorized returns on equity near 10% — approvals are not a formality¹³

The 2024 Carbon Plan order (Docket E-100 Sub 190) sets the resource path through 2035; Duke filed its next update, the 2025 CIPRP (E-100 Sub 207), on September 1, 2025²¹

SB 266, the Power Bill Reduction Act (Session Law 2025-78), became law over the Governor's veto effective July 29, 2025 — repealing the interim 2030 carbon target, keeping the 2050 goal, and authorizing construction-work-in-progress cost recovery for new baseload generation.⁵

The money is moving — can your plan absorb it?

North Carolina utilities have more grid and clean-energy capital available than they've had in a generation. The constraint is readiness: which projects qualify, which are shovel-ready, and how the timing lines up.

USDA New ERA & DOE grid programs — federal clean-energy and grid-resilience funding is available to North Carolina's cooperatives and utilities for solar, storage, and hardening projects¹⁴

IRA elective (direct) pay lets electric cooperatives and municipal public-power systems capture investment and production tax credits on utility-scale solar and storage — capital that used to require a tax-equity partner¹⁴

CWIP cost recovery under SB 266 lets utilities begin recovering financing costs on new baseload and nuclear plants during construction — changing the cash-flow math on multi-year builds⁵

Duke's ~\$83B five-year capital plan is the internal engine most NC grid work rides on — the question is sequencing tens of billions against load, retirements, and storm rebuilding at once³

NORTH CAROLINA'S GRID, IN BRIEF

Questions North Carolina utility leaders are asking

Short, sourced answers — the same facts we dig into with utilities looking at their capital programs.

How fast is North Carolina's electricity demand growing?

Duke Energy roughly doubled its Carolinas load-growth forecast in its Carbon Plan / IRP update, driven by data centers and new manufacturing; North Carolina already ranks 9th nationally in electricity generation¹⁴

What's happening to North Carolina's coal plants?

The Utilities Commission's Carbon Plan order directs Duke to retire more than 8,000 MW of remaining coal capacity by 2036, replacing it with gas, solar, storage, and advanced nuclear²

Did North Carolina drop its 2030 carbon target?

Yes. SB 266, the Power Bill Reduction Act (Session Law 2025-78), became law over the Governor's veto in July 2025 and repealed the interim 2030 70% carbon-reduction target while keeping the 2050 carbon-neutrality goals¹⁵

Does the Utilities Commission set my utility's rates?

The NCUC regulates rates, capital recovery, and the Carbon Plan / IRP for investor-owned utilities such as Duke Energy Carolinas, Duke Energy Progress, and Dominion. Electric cooperatives and municipal public-power systems are governed by their own boards and members³²

What new generation is Duke building in the Carolinas?

Under the Carbon Plan, roughly 3,460 MW of solar and 1,100 MW of battery storage by 2031, 900 MW of combustion turbines by 2030, 2,720 MW of combined-cycle gas by 2031, and 300 MW of advanced nuclear by 2034 with another 300 MW by 2035²

How does Invizion help North Carolina electric utilities plan capital?

Invizion is scenario-based capital portfolio optimization for utilities. It lets you model how a data-center load surge, a retirement date, a grant, or a storm-rebuild mandate reshuffles your whole project list, re-sequence the portfolio automatically, and keep a defensible record of every decision for the NCUC or your board.

REFERENCES

Sources

Every figure in this briefing is tied to a primary or authoritative source.

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ABOUT INVIZION

Capital program optimization for utilities

Invizion is a purpose-built capital lifecycle management platform for utilities. It integrates budgeting, CIP, scenario analysis, and funding-source tracking in one system — so utilities can re-sequence a capital portfolio in a click and demonstrate audit-ready, defensible decisions to regulators, boards, and rating agencies.

See how utilities keep capital plans current and defensible with Invizion.

Explore Invizion →