

Key Provisions of North Carolina’s New Energy Bill, HB 951

By: John Schengber

I. Introduction

In late 2021, the North Carolina state legislature enacted House Bill 951 *Energy Solutions for North Carolina*,¹ a short-but-substantial piece of energy legislation that will define the state’s energy sector for decades to come. House Bill 951 (hereinafter HB 951) aims to reduce carbon emissions from electric utilities² and also changes how rates are made in order to incentivize better utility performance.³ In doing so, the statute embodies the tension between continuing the *modus operandi* of utility regulation and preparing the grid for a radically different future.

HB 951 has three key provisions: (1) carbon reduction, (2) clean energy transition, and (3) performance-based regulation.⁴

(1) Carbon Reduction: HB 951 prescribes decarbonization goals and requires the North Carolina Utilities Commission (NCUC) to develop rules to reach those goals, in tandem with the electric utilities.⁵ The goals call for a 70% reduction in carbon emissions from the electric power sector by 2030 and carbon neutrality by 2050.⁶

(2) Clean Energy Transition: HB 951 helps accelerate retirement of non-economic coal-fired power plants by authorizing securitization of up to 50% of the remaining book value of those plants.⁷

¹ Energy Solutions for North Carolina, H.B. 951, 2021 N.C. Sess. Laws 165.

² Under North Carolina law, a public utility is a person in North Carolina who owns or operates equipment or facilities that produce or furnish “electricity, piped gas, steam or any other like agency for the production of light, heat or power to or for the public for compensation.” N.C. Gen. Stat. § 62-3(23) (2021). Therefore, an *electric* utility is a public utility that produces or furnishes electricity.

³ Energy Solutions for North Carolina, H.B. 951, 2021 N.C. Sess. Laws 165.

⁴ *Id.*

⁵ *Id.*

⁶ *Id.*

⁷ *Id.*

(3) Performance-based Regulation: HB 951 establishes a performance-based regulatory scheme that, *inter alia*, replaces backward-looking rate cases with forward-looking multiyear rate plans.⁸

By calling for decarbonization at the level of electric utilities, HB 951 represents the first time North Carolina’s legislature has incorporated climate change and carbon reduction into state energy policy.⁹ The importance of this step is underscored by the fact that international and federal bodies have largely failed to concretize significant decarbonization policies from the top down, leaving states with the burden—or opportunity—of decarbonizing on their own.¹⁰

Indeed, HB 951 advances decarbonization by targeting North Carolina’s electric sector at an opportune time for intervention. Many of the state’s coal-fired power plants are nearing the end of their economic lifetime, forcing decision makers to choose which energy sources will replace the retiring plants.¹¹ Although HB 951 does not stipulate specific fuel replacement types, it provides a framework by which NCUC must navigate this transition, with carbon reduction ostensibly serving as the North Star.¹² This paper identifies and explains the key provisions of HB 951.

II. North Carolina House Bill 951

A. HB 951 sets decarbonization goals for the electric sector but uses language that falls short of making decarbonization a clear legal mandate.

HB 951 requires the NCUC to “take all reasonable steps” to achieve two decarbonization goals: (1) a 70% reduction in CO₂ emissions from the electric power sector from 2005 levels by

⁸ *Id.*

⁹ Jonas Monast, *The state’s new energy law explained*, NC POLICY WATCH (October 14, 2021), <https://ncpolicywatch.com/2021/10/14/the-states-new-energy-law-explained/>.

¹⁰ See Lindsay Maizland, *Global Climate Agreements: Successes and Failures*, Council on Foreign Relations (November 17, 2021), <https://www.cfr.org/backgrounder/paris-global-climate-change-agreements>.

¹¹ Monast, *supra* note 9.

¹² Energy Solutions for North Carolina, H.B. 951, 2021 N.C. Sess. Laws 165.

2030, and (2) carbon neutrality in the electric power sector by 2050.¹³ For the purposes of this bill, the electric power sector includes public utilities that serve 150,000 or more North Carolinians.¹⁴ Carbon neutrality means that for every unit of CO₂ that the electric power sector emits, an equivalent measure is “reduced, removed, prevented, or offset.”¹⁵

To achieve these goals, HB 951 requires that the NCUC and state utilities develop a “Carbon Plan” no later than December 31, 2022.¹⁶ The plan “may, at a minimum, consider power generation, transmission and distribution, grid modernization, storage, energy efficiency measures, demand-side management, and the latest technological breakthroughs” in assessing how the state should meet its carbon reduction goals using a least-cost approach.¹⁷ HB 951 further requires that the Carbon Plan be developed in concert with stakeholder input and be revisited every two years.¹⁸

However, the NCUC and the utilities retain discretion in revising the Carbon Plan “as necessary.”¹⁹ This broad authorization gives the NCUC the “discretion [to achieve] the authorized carbon reduction goals by the dates specified,” as well as the discretion to determine the optimal “resource-mix.”²⁰ Postponement of the carbon reduction deadlines may be justified “in order to allow for implementation of solutions that would have a more significant and material impact on carbon reduction.”²¹ Together, these provisions signal that the NCUC has the authority to make key choices regarding the implementation of the Carbon Plan—choices which will largely dictate the nature and pace of the state’s effort to decarbonize the electric sector.

¹³ Energy Solutions for North Carolina, H.B. 951, 2021 N.C. Sess. Laws 165 (N.C. 2021).

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ *Id.* pt. I § 1(1).

²⁰ *Id.* pt. II § 1(4).

²¹ *Id.*

B. HB 951 provides a guiding framework by which North Carolina may transition to clean energy, the most important component of which entails the securitization of coal plants at 50% cost.

HB 951 authorizes the Commission to develop rules regarding the securitization of costs associated with retiring subcritical coal-fired power plants.²² Specifically, HB 951 declares that the costs of retiring the facilities early will be “securitized at fifty percent of the remaining net book value [of the facility] ... with any remaining non-securitized costs to be recovered through rates.”²³ The retirement of subcritical coal plants, which emit disproportionate amounts of carbon, is a key part of the state’s approach to achieving its carbon reduction goals.²⁴

What is securitization in the context of utility sector regulation?

Securitization is a process whereby a utility seeking to prematurely retire generation facilities can issue a bond and be paid back for money it invested in the to-be-retired facilities.²⁵ Securitization is an important tool in decarbonizing North Carolina’s electric grid because it allows utilities to retire non-economic facilities without taking a loss, while also limiting the cost to ratepayers.²⁶ Absent securitization, utilities would continue operating non-economic generation facilities as long as is necessary to recover their costs through rate payments.²⁷

²² *Id.* pt. III § 5.

²³ *Id.*

²⁴ Subcritical plants operate at relatively low pressures and temperatures, which reduces the efficiency of steam generation. As a result, subcritical coal plants are the least efficient and mostly highly polluting form of coal-fired electricity generation. “The average subcritical coal-fired power station ... emits 75% more carbon pollution than an average advanced ultra-supercritical - the most up-to-date form of coal-fired power station - and uses 67% more water.” Ben Caldecott, et. al., STRANDED ASSETS AND SUBCRITICAL COAL: THE RISK TO COMPANIES AND INVESTORS 8 (Univ. of Oxford Stranded Assets Programme Mar. 2015), <https://www.smithschool.ox.ac.uk/research/sustainable-finance/publications/Stranded-Assets-and-Subcritical-Coal.pdf>.

²⁵ Art Graham, *Ask the Chairman*, Florida Public Service Commission (July 2015), http://www.psc.state.fl.us/Files/PDF/Consumers/AskTheChairman/2015_07.pdf.

²⁶ See Sam Mardell, *Securitization in Action: How US States Are Shaping an Equitable Coal Transition*, RMI (Mar. 4, 2021), <https://rmi.org/securitization-in-action-how-us-states-are-shaping-an-equitable-coal-transition/>.

²⁷ *Id.*

The impetus for securitization originates in the fundamental utility-state compact: the state protects the utility from competition, and, in exchange, the utility agrees to let the state determine energy rates and approve certain features of system planning.²⁸ An important facet of this shared governance scheme requires that utilities can only charge customers for costs related to capital investments if the public utilities commission first approves the investment and incorporates the expenditure into the rate base.²⁹ Once a public utilities commission (such as the NCUC) approves the investment and adds it to the utility's rate base, the utility is generally allowed to recover the full amount of the investment over time through customer rate payments.³⁰ Therefore, utilities are naturally incentivized to keep capital investments in operation as long as is required to recoup their full costs and begin profiting.

Securitization becomes important when changes in markets and technologies, whether foreseeable or not, make a utility's physical investment non-economic before the utility has been able to recover its costs.³¹ Such is the case with coal-fired power plants. The combination of cheap natural gas and affordable renewable energy sources has made coal a more expensive resource by comparison.³² Facilities which rely on coal for power generation, therefore, are bound to operate inefficiently because they use material inputs that have cheaper alternatives on the market. Such non-economic operation has downstream consequences: it forces consumers to pay higher prices than they otherwise would on the open market, resulting in market inefficiency

²⁸ J.C. Kibbey, *Utility Accountability 101: How Do Utilities Make Money?*, NRDC (January 20, 2021), <https://www.nrdc.org/experts/jc-kibbey/utility-accountability-101-how-do-utilities-make-money>.

²⁹ Rate base is "the utility's total stock of non-depreciated capital." Seth Blumsack, *Introduction to Electricity Markets: Rate of Return Regulation*, JOHN A. DUTTON E-EDUC. INSTIT. AT PENN. STATE UNIV., <https://www.e-education.psu.edu/ebf483/node/624> (last accessed Dec. 2021).

³⁰ *Id.*

³¹ Mardell, *supra* note 26.

³² *North Carolina State Energy Profile*, U.S. ENERGY INFO. ADMIN. (Nov. 18, 2021), <https://www.eia.gov/state/print.php?sid=NC>.

and public burden.³³ Securitization prevents these consequences by allowing a utility to take non-economic investments out of operation and still recover some or all of the costs of investment.³⁴

What are the mechanics of securitization?

The securitization process begins when a utility that plans to retire a plant early issues a bond in the utility's name.³⁵ The state must have first passed legislation to ensure that bonds receive a high credit rating.³⁶ Ratepayers pay off the bond as a dedicated line-item on their energy bills over several years.³⁷ These payments have the effect of repaying the utility's investment costs.³⁸

Because the bond is a form of low-interest debt that does not carry return on equity costs, consumers end up paying less than they would have if the utility continued operating the facility.³⁹ A utility in this position might disfavor securitization since "its regulated return on equity, one determinant of its profitability, would be higher if its coal plants remained a part of its rate base rather than being securitized and retired."⁴⁰ However, the utility can use the immediate and long-term savings generated from securitization to reinvest in cheaper, clean energy or into other costs of transition.⁴¹ Therefore, securitization is a net benefit to consumers,

³³ Herman K. Trabish, *Possible hundreds of billions in US power sector securitizations spur ratepayer protection debate*, Utility Dive (Feb. 22, 2021), <https://www.utilitydive.com/news/possible-hundreds-of-billions-in-us-power-plant-securitizations-spur-ratepa/595089/>.

³⁴ Mardell, *supra* note 26.

³⁵ Graham, *supra* note 25.

³⁶ Mardell, *supra* note 26.

³⁷ Graham, *supra* note 25.

³⁸ *Id.*

³⁹ Trabish, *supra* note 34.

⁴⁰ Daniel Tait, *North Carolina HB 951 could mean windfall for Duke large rate increases for customers*, Energy and Policy Institute (June 17, 2021), <https://www.energyandpolicy.org/duke-energy-windfall-hb-951/>.

⁴¹ Mardell, *supra* note 26.

utilities, and society (so long as we maintain the assumption that utilities should recoup all investment costs, one way or the other, no matter the acuity of their investment).⁴²

Securitization under HB 951

HB 951 specifically authorizes North Carolina utilities to securitize 50 percent of the costs associated with retiring subcritical coal plants.⁴³ HB 951's securitization provision is important because it provides North Carolina's utilities with adequate incentive to retire non-economic coal plants without unduly burdening customers. According to the North Carolina Sustainable Energy Association, HB 951 will result in the securitization of estimated \$1 billion in un-depreciated coal.⁴⁴ In other words, an amount of coal valued at \$1 billion—which utilities would have otherwise burned to produce energy—will be removed from the supply chain.⁴⁵

However, beyond these details, HB 951 is relatively sparse and leaves it to the NCUC to determine securitization rules.⁴⁶ The statute does not, for example, explicitly include measures for transition assistance or replacement resources, giving the NCUC discretion as to which energy sources will fill the void left by coal.⁴⁷ Notably, earlier versions of HB 951 included provisions that outlined how specific plants would be retired and replaced, with at least one retirement implicitly requiring natural gas as its replacement, but these provisions were removed before final adoption.⁴⁸ It is therefore the responsibility of the NCUC to determine what investments utilities should make in order to provide affordable energy to all North Carolinians and meet HB 951's two-pronged carbon reduction goals.

⁴² *Id.*

⁴³ Energy Solutions for North Carolina, H.B. 951, 2021 N.C. Sess. Laws 165.

⁴⁴ Sarah McQuillan, *Unpacking HB951*, NC Sustainable Energy Association (October 15, 2021), <https://energync.org/unpacking-hb951/>.

⁴⁵ *Id.*

⁴⁶ Energy Solutions for North Carolina, H.B. 951, 2021 N.C. Sess. Laws 165.

⁴⁷ Tait, *supra* note 40.

⁴⁸ *Id.*

In considering these goals, some experts have noted that heavy near-term investment in natural gas, for example, may allow the state to achieve a 70% reduction carbon by 2030, but such investment would likely burden the state’s attempt to reach carbon neutrality by 2050.⁴⁹ This is because investing heavily in natural gas now and still achieving carbon neutrality by 2050 would require either 1) equipping the natural gas facilities with expensive carbon scrubbing technologies, or 2) retiring the plants early and securitizing the costs.⁵⁰ The NCUC has the authority to weigh such considerations as it determines the state’s optimal resource-mix in light of HB 951’s carbon reduction goals and the obligation to pursue the least-cost pathway.⁵¹

Other Provisions for Clean Energy Transition

Additional provisions of HB 951 require that the NCUC weigh in on “standby service charges, net metering rates, an on-bill finance program for energy efficiency improvements, and a renewable energy credit purchase program for different customer classes.”⁵² These provisions, whose details are beyond the scope of this paper, affect the availability and affordability of renewable energy and energy efficiency investment.⁵³

Furthermore, while HB 951 specifically authorizes investments in renewable energy, it excludes much of that development from competition and reserves it for Duke Energy.⁵⁴ The statute gives Duke complete ownership of all stand-alone storage and onshore and offshore wind resources to be developed.⁵⁵ Starting in 2023, Duke will maintain 55% ownership of all solar and solar-plus-storage systems to be developed, with the other 45% going to independent power

⁴⁹ Monast, *supra* note 9.

⁵⁰ *Id.*

⁵¹ Energy Solutions for North Carolina, H.B. 951, 2021 N.C. Sess. Laws 165.

⁵² Leyline Renewable Capital, *HB 951 Sets the Path for North Carolina’s Energy Future*, <https://leylinecapital.com/news/hb-951-sets-the-path-for-north-carolinas-energy-future> (last visited Dec.17, 2021).

⁵³ *Id.*

⁵⁴ Tait, *supra* note 40.

⁵⁵ Leyline Capital, *supra* note 52.

producers.⁵⁶ These provisions may have the overall effect of hindering the transition to clean energy because developing renewable energy absent competition will make the energy more expensive and therefore less available to the greatest possible number of customers.⁵⁷

C. HB 951 establishes performance-based regulation as the new paradigm for regulating North Carolina utilities and allows rate hikes of up to 4% in the second and third years of the new multiyear rate plan.

HB 951 modifies North Carolina’s long-standing regulatory scheme by establishing performance-based regulation (PBR) and the use of multiyear rate plans to determine customer rates.⁵⁸ HB 951 defines PBR as “an alternative rate-making approach that includes decoupling, one or more performance incentive mechanisms, and a multiyear rate plan, including an earnings sharing mechanism, or such other alternative regulatory mechanisms as may be proposed by an electric public utility.”⁵⁹ In simpler terms, PBR is a “form of utility regulation that seeks to align the utility’s performance with customer rates.”⁶⁰

Here, HB 951 broadly authorizes PBR, including multiyear rate plans and performance incentive mechanisms, but again leans on the NCUC to determine how the framework will be applied in North Carolina.⁶¹ This section focuses on the PBR provision of HB 951 that establishes multiyear rate plans.

How does ratemaking work?

⁵⁶ *Id.*

⁵⁷ *Id.*

⁵⁸ Energy Solutions for North Carolina, H.B. 951, 2021 N.C. Sess. Laws 165.

⁵⁹ *Id.*

⁶⁰ Sarah McQuillan, *What’s the Deal with Performance-based Rulemaking?*, NC Sustainable Energy Association (November 19, 2021), <https://energync.org/whats-the-deal-with-performance-based-regulation-pbr-rulemaking/>.

⁶¹ Energy Solutions for North Carolina, H.B. 951, 2021 N.C. Sess. Laws 165.

Traditionally, utilities in North Carolina set their rates by making an annual “rate case” in front of the NCUC.⁶² Utilities determine their rate case by looking backwards and estimating: (1) how much energy customers will need in the next year; (2) the cost of making investments or providing services to supply that amount of energy for the given year; and (3) the rate the utility should charge to recover its costs and offer a reasonable rate of return to shareholders.⁶³

Multiyear rate plans, on the other hand, allow a utility to seek one-time approval for base rates that span a multiyear period.⁶⁴ The base rates may include authorized periodic changes, eliminating the need for the utility to file a subsequent rate case.⁶⁵ To determine the base rates beyond the first year, the utility may apply “a formula or index, or detailed forecasts for allowable rate changes over the duration of the plan.”⁶⁶

One benefit of multiyear ratemaking is that it reduces the frequency with which utilities must come before regulators to seek rate approvals.⁶⁷ This lowers costs of regulation for utilities and stakeholders alike.⁶⁸ Another benefit is that multiyear ratemaking may incentivize the utility to be more cost-efficient, since under certain forms of multiyear ratemaking the utility can profit by the extent to which it beats its forecasted costs.⁶⁹ Finally, multiyear rate plans can also increase cost predictability for customers, so long as the range of authorized rate change within the period does not introduce too much variability.⁷⁰

⁶² See Ken Costello, *Multiyear Rate Plans and the Public Interest*, National Regulatory Research Institute (October 2016), <https://pubs.naruc.org/pub/FA86999D-D03F-2858-7228-A6353560E5B9>.

⁶³ David Roberts, *Utilities vs. rooftop solar: What the fight is about*, Grist.org, <https://grist.org/climate-energy/utilities-vs-rooftop-solar-what-the-fight-is-about/>.

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ *Id.*

Opponents of multiyear ratemaking note that, among other critiques, the practice of forecasting is inherently dubious.⁷¹ Compared to regulators, utilities possess greater expertise and greater access to information about what a reasonable forecast may be for their business, giving the utilities a strategic advantage in arguing for rate cases.⁷² Utilities also possess a natural incentive to overstate costs and understate revenues when making forecasts.⁷³ These factors combined suggest that utilities will inevitably present biased forecasts and regulators will be ill-equipped to snuff out biased forecasts.⁷⁴ As a result, forecasting for the sake of single-year ratemaking is already imperfect, opponents argue. To then apply the same imperfect approach to determining multiple years' rates would seem to only multiply the opportunity for utilities to elude regulators with biased forecasts.

What rates does HB 951 establish?

HB 951 establishes a multiyear rate plan over a three-year period, with rate increases of up to 4% in year two and year three.⁷⁵ This means that whichever rate the NCUC approves (upon filing by the utility), the utilities are allowed to increase the rate after the first year by up to 4% annually without having to go before the NCUC for approval.⁷⁶ Rate increases can be justified for a number of reasons, including the costs associated with project capital investments to be used during the period and “depreciation of rate base associated with the capital investments.”⁷⁷

Critics have noted that this structure may incentivize Duke Energy to overspend on capital investments in order to raise rates and increase profits at consumers' expense.⁷⁸ Notably,

⁷¹ *Id.*

⁷² *Id.*

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ Energy Solutions for North Carolina, H.B. 951, 2021 N.C. Sess. Laws 165.

⁷⁶ *Id.*

⁷⁷ *Id.*

⁷⁸ Tait, *supra* note 40.

HB 951 allows Duke Energy to recover costs if the company falls short of its revenue requirements.⁷⁹

III. Conclusion

HB 951 is a major piece of legislation that sets decarbonization goals for an electric sector that is facing inefficient, aging infrastructure. Amid significant changes to the way energy rates are determined, HB 951 endows the NCUC with the important task of guiding the state's transition to cleaner energy while bearing in mind the relative effect on utilities, ratepayers, and other stakeholders.

⁷⁹ Lisa Sorg, *Once on the fast track, super-secret energy bill derailed over costs, nukes, and unproven claims*, NC Policy Watch (June 18, 2021), <https://ncpolicywatch.com/2021/06/18/once-on-the-fast-track-super-secret-energy-bill-derailed-over-costs-nukes-and-unproven-claims/>.