

A CITIZEN'S GUIDE

The North Carolina Renewable
Energy and Energy Efficiency
Portfolio Standard



NCSEA

Produced by the North Carolina Sustainable Energy Association

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North Carolina Sustainable Energy Association

Created in 1978, The NC Sustainable Energy Association is a 501(c)(3) non-profit membership organization of individuals and businesses working to ensure a sustainable future by promoting renewable energy and energy efficiency in North Carolina through education, public policy and economic development.

NCSEA is the only non-profit in North Carolina devoted to leading change public policy and drive market development in ways that will create green jobs in a new energy economy.

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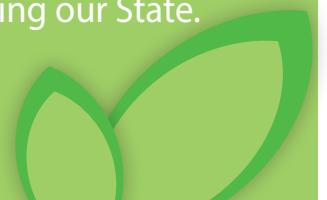
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INTRODUCTION

In 2007, North Carolina took an important first step toward adopting policies that will allow the development of a sustainable energy economy, which has resulted in the creation of thousands of jobs and increased investment, opportunity and innovation in communities across our state.

In a historic stroke of the pen on August 20, 2007, then Governor Mike Easley signed Session Law 2007-397 (Senate Bill 3). In doing so, North Carolina became the 25th state in the nation – and the first in the Southeast – to enact a mandatory renewable energy and energy efficiency portfolio standard. This law – known as the “REPS” – requires the electric power providers in the state of North Carolina to provide a portion of our electricity needs with renewable energy generation and/or energy savings through more efficient electricity use in the years to come.

The second edition of *“A Citizen’s Guide: The North Carolina Renewable Energy and Energy Efficiency Portfolio Standard”*, is designed to update everyone in our state, by summarizing the REPS law and its implications for North Carolina citizens and our government. The guide also provides an overview of the rules that the North Carolina Utilities Commission has developed and is currently implementing and ways for citizens to participate in making the REPS a success. This guide is brought to you by the North Carolina Sustainable Energy Association (NCSEA), a non-profit organization with over three decades of experience serving our State.



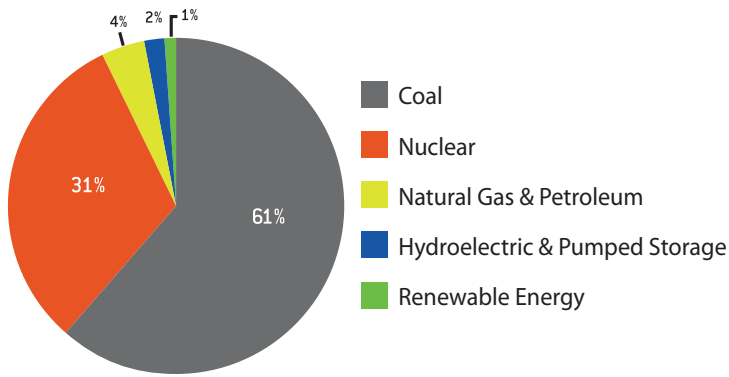
WHAT IS THE REPS?

For the first time in our state’s history, Session Law 2007-397 – or NC’s REPS – expanded North Carolina’s energy policy to include the promotion and development of renewable energy and energy efficiency, which is the foundation of our state’s sustainable energy economy and our growing opportunity to create green jobs.

Under the REPS law, investor-owned utilities in North Carolina are required to meet up to 12.5% of their energy needs through renewable energy resources or energy efficiency measures. Rural electric cooperatives and municipal electric suppliers are subject to a 10% REPS requirement.

North Carolina’s REPS will: (1) diversify the resources used to reliably meet the energy needs of consumers in the State, (2) provide greater energy security through the use of indigenous energy resources within the State, (3) encourage private investment in renewable energy and energy efficiency, and (4)

Graph 1: North Carolina's Electricity Generation Portfolio, 2007 Without REPS



provide improved air quality and other benefits to energy consumers and citizens of the State.

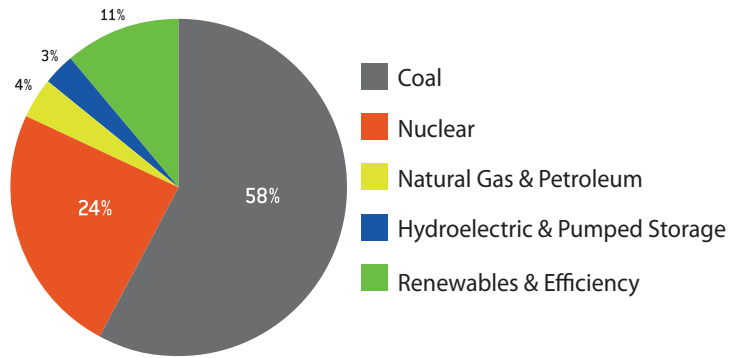
North Carolina's leaders adopted the REPS law because they learned that using renewable energy resources inside North Carolina and finding more ways to save energy would cost our citizens less than simply building more coal, nuclear and natural gas power plants to meet our growing electricity needs.

The REPS will achieve these goals by promoting energy efficiency measures while incorporating renewable energy resources into the fuel mix used for generating the electricity we use. Currently, over 95% of the fuel used to generate electricity in North Carolina comes from fossil fuels (primarily coal) and uranium (see Graph 1). With the adoption of the REPS, the proportional amount of electricity generated from fossil fuels and uranium will decrease by at least 10% by 2020 (see Graph 2).

Furthermore, with passage of the REPS, the North Carolina Utilities Commission (NCUC) was required to create rules to govern the implementation of the REPS and to monitor compliance with the requirements. The NCUC, our legislature and all state government agencies also now have a larger mission of removing government's regulatory barriers to growing our state's green economy, keeping future energy costs as low as possible, and creating green jobs. However, more energy policy changes are needed for North Carolina to realize these enormous economic opportunities, and thus become a true leader in the Southeast's emerging new energy economy.

Because North Carolina's REPS is the first in the Southeast, it positions the State to be a competitive leader in the region in this new era of sustainable

Graph 2: North Carolina's Electricity Generation Portfolio, 2020 With REPS



energy development. The legislation also considers the impact of a federally required Renewable Energy Standard (ES). Should the US Congress enact a federal renewable energy standard (ES), Session Law 2007-397 says our leaders must implement whichever law is stronger – either the state law or a new federal law.

DETAILS OF NC'S REPS

Under the REPS law, investor-owned utilities in North Carolina are required and agreed to meet up to 12.5% of their energy needs through using renewable energy resources or energy efficiency measures – mostly right here in our State so we will get the most benefit. Rural electric cooperatives and municipal electric suppliers agreed to meet a 10% REPS requirement.

Although the REPS and the associated rules contain a number of specific details, all of these electric power suppliers are able to comply with the REPS through a variety of methods, including purchasing power from new renewable energy facilities, using renewable energy resources to generate power at existing generation facilities, purchasing renewable energy certificates (RECs), or implementing energy efficiency measures to reduce electricity demand.

Renewable Energy

The REPS defines what resources qualify as renewable energy. This includes solar electric (known as "photovoltaic" or "PV"), solar thermal hot water, wind, geothermal, tidal energy and biomass resources. Eligible biomass resources include agricultural waste, animal waste, wood waste, energy crops and landfill methane.

Additional eligible renewable resources include hydrogen derived from a renewable energy resource, hydroelectric power facilities with a generation capacity of 10 megawatts or less, and waste heat derived from a renewable energy resource that is used to produce electricity or thermal energy at an electric utility customer's facility. Fossil fuels (oil, natural gas, coal), peat and nuclear energy are not renewable resources.

Also, particular renewable energy resources are singled out within the REPS law to meet specified requirements, known as the "carve-out" requirements.

Why Did NC Approve the REPS?

In January 2006, the legislative Environmental Review Commission asked the NC Utilities Commission to study the costs and benefits of an REPS law. Under the NCUC's oversight, the study was produced by La Capra Associates and GDS Associates, and delivered 12 months later to the Legislature.

Referred to as the "La Capra Study," the final report is online at:
<http://www.ncuc.net/reps/reps.htm>

The "La Capra Study" found:

- NC has a technical potential for 13,000 megawatts (MW) of new renewable energy generation with a practical potential of at least 3,400 MW (this number does not include solar power, which would more than double this amount).
- NC's electricity needs could be reduced by 14% by 2017 using energy efficiency measures with a per lifetime kilowatt hour cost of less than five cents, nearly half what residential customers pay today.
- By combining energy efficiency and renewable energy, NC would experience a maximum potential electricity rate increase of less than 1%, a reduction in the average consumer's electricity bill due to lower overall electricity usage. The REPS would be about \$500 million cheaper than using new coal and natural gas or new nuclear power.

Specific Resource ("Carve-Out") Requirements

Compliance with North Carolina's REPS also requires a minimum amount of electricity to be generated from three specific renewable resources: solar, swine waste, and poultry waste. These requirements are the same for investor-owned utilities, electric cooperatives, and municipal electric suppliers.

For the solar "carve-out," at least 0.2% of North Carolina's electricity needs in 2018 must be supplied through a combination of new solar electric and solar thermal facilities.

Session Law 2007-397 requires that at least 0.2% of North Carolina's total electricity needs in 2018 must be supplied from swine waste resources and at least 900,000 megawatt hours of electric power must come from poultry waste resources.

Energy Efficiency

To satisfy the REPS requirement, an eligible "energy efficiency measure" must result in a measurable and verifiable reduction in energy consumed by a utility customer. The REPS defines an "energy efficiency measure" as equipment or a program change that results in less energy used to perform the same function.¹

Controlling electricity costs was a critical concern in enacting the REPS. For this reason, the REPS law included energy efficiency because energy efficiency has been proven to be a low-cost method for reliably reducing electricity demand. In fact, many energy efficiency measures, if implemented by businesses independent of regulated utilities, can be cheaper than current retail electricity rates. However, current rules implemented by the NCUC only allow energy efficiency implemented by regulated utilities, to count toward REPS compliance, even when a third party could implement the efficiency measure more cost effectively.



¹ Energy efficiency does not include activities, programs or initiatives that shift the timing of electricity consumption from peak to non-peak demand periods. For example, installing an Energy Star washer and dryer would be deemed an energy efficiency measure while doing laundry late at night would be considered shifting usage periods or what the REPS Law defines as "demand-side management".



REPS REQUIREMENTS FOR UTILITIES & COOPERATIVES

Investor-Owned Utilities

The REPS requires North Carolina’s three investor-owned utilities – Duke Energy Carolinas, Progress Energy Carolinas and Dominion North Carolina Power – to generate at least 12.5% of their electricity from renewable energy and energy saved through efficiency by 2021. The first overall REPS compliance year is in 2012 and every year thereafter, calculated on the basis of the prior year’s retail sales. The requirements increase at an incremental rate from 2012 until 2021 (see [Table 1](#)).

Table 1: REPS Schedule for Investor-Owned Utilities

Calendar Years	REPS Requirements
2012-2014	3% of prior year’s NC retail
2015-2017	6% of prior year’s NC retail
2018-2020	10% of prior year’s NC retail
after 2020	12.5% of prior year’s NC retail

A utility may meet the REPS requirements by generating its own renewable energy, by purchasing electric power from another renewable energy facility, or by purchasing renewable energy certificates (RECs) generated from renewable energy resources. A REC is a tradable financial certificate, much like a stock certificate, but represents the market premium for a unit of renewable energy over a unit of electricity generated by a non-renewable fuel facility, such as coal, nuclear, natural gas or petroleum.

An investor-owned utility may also meet the REPS requirement by reducing energy consumption through energy efficiency measures. In the early years of the standard – years 2012 through 2018 – electric utilities have the option to meet up to 25% percent of the REPS requirement through measurable energy efficiency programs. Beginning in calendar year 2021, electric utilities may meet up to 40% of the of the REPS requirement through energy saved as a result of energy efficiency programs.

In 2007, the average NC residential customer used 1150 kWh per month.
(Source: U.S. Department of Energy)

What is a Renewable Energy Certificate, or REC?

A Renewable Energy Certificate or REC is a tradable financial certificate, which represents proof that 1 megawatt-hour (MWh) of renewable electricity was generated from an eligible renewable energy source or a utility-sponsored energy efficiency measure.

1 REC = 1 MWh or 1,000 kWh

To comply with the REPS law, utilities acquire RECs from renewable energy resources either by generating their own renewable energy, implementing energy efficiency measures or purchasing RECs from a renewable energy generator. Then the utilities “retire” the RECs for compliance. The NCUC tracks each utility’s purchase of RECs to verify their compliance with the REPS law. By the letter of the law, the utility must purchase at least 75% of these RECs from renewable energy generated inside North Carolina or energy efficiency, to ensure intended job creation and economic and environmental benefits occur in our State.

Electric Cooperatives and Municipal Utilities

The REPS requires North Carolina’s 26 electric cooperatives and its many municipal utilities to generate at least 10% of their electricity from renewable energy, energy efficiency or programs to shift electricity usage from peak to non-peak usage periods by 2018.

Similar to the investor-owned utilities, the electric cooperatives and municipalities must abide by a similar step-ladder schedule over the next decade and meet “carve out” requirements (see [Table 2](#)). While energy savings can satisfy the full REPS, 75% of either RECs from renewable energy generation or energy efficiency must come from within North Carolina.

Table 2: REPS Schedule for Electric Cooperatives and Municipal Utilities

Calendar Years	REPS Requirements
2012-2014	3% of prior year's NC retail
2015-2017	6% of prior year's NC retail
after 2017	10% of prior year's NC retail

Electric membership cooperatives and municipal utilities may meet the REPS requirements by generating or purchasing electric power from a renewable energy facility or by purchasing RECs generated from renewable energy sources. They can also employ energy savings from energy efficiency measures and demand side management. Unlike the investor-owned utilities, electric membership cooperatives and municipal electric utilities are not subject to a cap on energy saved through demand side management to meet the requirement of the REPS.

Twenty-three of the electric cooperatives have come together to form a non-profit organization, GreenCo Solutions, Inc., to ensure their REPS requirements are met. GreenCo Solutions has taken the lead in securing low cost RECs and delivering high-performing energy efficiency programs for its member cooperatives.

NC'S REPS = GREEN JOBS

North Carolina is the first Southeast state to enact an REPS law, opening the state and region to a new era of sustainable energy development, economic opportunity, and the creation of thousands of green jobs. As a result of this new law, North Carolina is a leader in solar energy and currently ranks 7th among US states in the amount of required solar energy generation.

More specifically, the REPS will produce unprecedented economic benefits to North Carolina, enabling the state to:

- Avoid nearly \$500 million in costs for new coal, natural gas and nuclear power by investing in North Carolina renewable sources and efficiency
- Realize more than \$2.5 billion in new renewable energy investments by 2018 and \$350 million in energy efficiency investments by 2021
- Make it more transparent to connect a renewable energy system to the electricity grid

- Eliminate the need for at least 1,800 megawatts of coal and nuclear power plants
- Employ more than 4,000 North Carolinians at good wages due to sufficient in-state renewable resources and unutilized energy efficiency potential
- Reduce cumulative greenhouse gas emissions by approximately 125 million metric tons between 2007 and 2020
- Result in roughly 300 megawatts of new solar power installations by 2018
- Create the first RECs market in the Southeast that could be efficiently managed by a self-financed online compliance tracking system and exchange for buying and selling RECs

The retention and creation of thousands of green jobs across North Carolina is one of the largest benefits of the REPS. According to the 2008 Renewable Energy & Energy Efficiency Industry Census, which was conducted and released by NCSEA, North Carolina was home to approximately 500 businesses focusing on renewable energy and energy efficiency and over 6,470 jobs. Since conducting this census in Summer 2008, North Carolina's sustainable energy economy has grown rapidly. In preparation for the 2009 Industry Census, NCSEA has found the number of renewable energy and energy efficiency companies in the state has increased by 125% and employs approximately 10,000 North Carolinians.

Furthermore, La Capra Associates conducted an

Learn more about the 2008 Renewable Energy & Energy Efficiency Industry Census and other "Green Jobs" reports at www.energync.org/greenjobs

economic impact analysis of the REPS Law in 2008, which concludes the REPS law alone will result in employment from over 4,000 direct, indirect, and induced jobs by the year 2021, with most jobs occurring in the biomass industry.



Cost Controls

Session Law 2007-397 limits the cost of the REPS to consumers by assigning a cost cap for each class of electricity customers: residential; commercial; and industrial. This was a significant concern in the formulation of the REPS. The cost controls on the REPS are split into two types of costs – (1) renewable energy and (2) energy efficiency. At a minimum, the charge for the renewable energy portion of the REPS will appear as a line item on customer's monthly bills.

Renewable Energy Charges Capped

The costs to ratepayers of meeting the renewable energy portion of the REPS are straightforward and limited. The REPS assigns an annual cost cap for each class of electricity customer (see Table 3).

The cost cap for residential consumers limits REPS costs to a maximum increase of \$10 per year during the initial phase (2008-2011), a maximum increase of \$12 per year during the middle phase (2012-2014), and a maximum increase of \$34 per year in the final phase (2015 and thereafter).

Table 3: Annual per Account Cost Caps for the Renewable Energy Portion of the REPS

Customer Class	'08-11	'12-14	≥2015
Residential	\$10	\$12	\$34
Commercial	\$50	\$150	\$150
Industrial	\$500	\$1,000	\$1,000

Energy Efficiency Charges

The costs associated with utility-sponsored programs for both energy efficiency and to shift electricity consumption from higher-use times of day to lower-

²The NCUC approves the programs and costs for the investor-owned utilities operating in the state – Progress Energy, Duke Energy, and Dominion Power. For customers receiving electric service from an electric cooperatives or a municipal supplier, programs and costs are approved by their individual governing bodies. The NCUC does not regulate rates charged by these utilities but is charged with determining compliance with the REPS requirements. Because their customers are also their owners, these utilities have ample incentives to control the costs of complying with the REPS. However, Progress Energy, Duke Energy and Dominion Power must manage the competing interests of their customers and their shareholders, so they do not have the same incentive to control their REPS costs.

use times of the day – called “peak shifting” – are not included under the cost caps associated with renewable energy. Instead, the NCUC approves each energy efficiency and peak shifting program and the associated costs to ensure that the ratepayers' monies are used prudently and yield verifiable reductions in energy consumption.² This is because The La Capra Study found that our electric utilities could implement three times more energy efficiency over the next ten years than the REPS law currently allows (5 percent of projected utility electricity sales in 2021), and do so at a lower cost than what utility customers currently pay for electricity.

Long-term bill impacts of the REPS

North Carolina's electricity consumers will see rising costs as long as the population and per capita energy use continue to increase, primarily because of the need to build more power plants.

Since the utilities started buying RECs to comply with the REPS law in 2008, North Carolina regulators have learned that the La Capra Study:

- Over-estimated the cost of renewable energy in many instances, and
- Underestimated the cost of new nuclear and coal power in all instances.

Therefore, if properly managed by the electric utilities and regulators, the cost of the REPS to consumers should be far less than the cost controls noted in the table above. During the last three years, utilities have asked the NCUC to allow them to raise electricity rates to pay for the rising cost of fuel – primarily coal. Each of these utilities requests to increase customer rates have been much larger than the entire expected impact of the REPS law on customers' rates through 2021.

While the cost of all energy will increase over time, studies indicate that after the first several years, customers will pay less under the REPS than they would when compared to Duke Energy and Progress Energy's current business model – which proposes building new coal and nuclear power plants at a higher cost to utility customers than the REPS.

If the utilities comply with the REPS law, our needed electricity will cost less because the widespread use of energy efficiency measures will eliminate the State's need for one or more additional coal or nuclear power plants – resulting in fewer increases to electricity bills. However, this may not happen because Section

4 of the REPS law allows electric utilities to be paid a variety of financial incentives for reducing their sales of electricity at the discretion of the NCUC. Therefore, it could cost North Carolina more to realize the same energy efficiency results than other states, due to a higher than national average cost of kilowatts saved through energy efficiency measures. If this occurs, it will be because of North Carolina regulatory practice – not the REPS law.

PARTICIPATING IN THE REPS

Public Participation in the Process

The NCUC issued a general set of rules to implement the REPS at the end of February 2008. However, rulemaking by the NCUC continues on sections of the REPS law which need further interpretation. The public can participate in the rulemaking process by writing letters to the NC Utilities Commission at 4325 Mail Service Center, Raleigh, NC 27699-4325. The three most important issues to stress in personal correspondence to the NCUC are:

- **Transparency** New markets thrive on information and ratepayers have a right to know what they are paying for – be it renewable energy or new coal or nuclear energy. To develop sufficient renewable energy to satisfy the REPS requirements as cheaply as possible, competition needs to exist. This competition will only happen with transparency in renewable energy markets and limits on how much renewable energy is owned and operated by regulated utilities.
- **Energy Efficiency** in the adopted rules, only the utilities can produce energy efficiency RECs. There is no competition allowed among North Carolina's hundreds of energy efficiency companies to meet the REPS requirement through energy efficiency programs.
- **Ensuring Compliance** The passage of the REPs in 2007, RE & EE Requirement are now the law in North Carolina.

When communicating with the NCUC about the REPS, indicate your comments are in regard to Docket No. E-100, Sub 113. Find more information at www.ncuc.net.



Connecting to the Electricity Grid

Interconnection standards and net metering are important to the development of renewable energy resources. North Carolina's market for renewable energy cannot thrive without a functional and usable interconnection standard and net metering.

An interconnection standard is the technical rules for customers to connect their renewable energy system to the electric grid.

Net metering is a billing arrangement that allows the owner of a renewable energy system to offset their electricity consumption and sell or be forced to contribute the excess electricity to the electric grid for the utility to sell to other customers – in essence, allowing the owner's electric meter to roll backwards. The billing arrangement lets your excess electricity roll over (like your cell phone minutes) for one year.

The REPS law required the NCUC to establish an interconnection standard for renewable energy facilities up to 10 MW in size. A revised interconnection standard was issued in June 2008, which was a favorable combination of the prior existing North Carolina specific rules for interconnection and Federal rules for the "small generation interconnection process." This interconnection standard, however, only applies to investor-owned utilities in the state. Electric cooperatives and municipal electric suppliers are in the process of developing their own interconnection standards.

Therefore, if you are served by an electric membership cooperative or a municipal electric power supplier, before beginning any project check with your service provider to determine if they have an interconnection standard in place and what their approval process entails.

The REPS law also directed the NCUC to consider expanding the generation unit size eligible for the net metering billing arrangement. The new net metering rules, which were issued in March 2009, are still not as favorable as they need to be for customer-sited renewable energy generation but does raise the eligible unit size to one megawatt. Also, like interconnection standards, the NCUC's net metering rules do not apply to electric cooperatives or municipal electric suppliers. Again, net metering arrangements offered by these providers vary on a provider-to-provider basis.

Additional Financing Options

A common question is how the legislation will interact with NC GreenPower, which is a non-profit organization that accepts voluntary contributions through utility bills to develop renewable energy resources in the state.

The primary difference - North Carolina's REPS is a mandatory requirement and NC GreenPower is a voluntary program. Citizens interested in supporting renewable energy above and beyond the REPS law can contribute to the voluntary NC GreenPower program or directly purchase RECs when they become available; however, this program lacks sufficient donations to meet market demand.

Also, the REPS law declares a REC generated from a renewable resource cannot be counted by both programs – it may be applied to either the REPS or to NC GreenPower, but not to both.

Federal and North Carolina renewable energy tax credits also exist to make your renewable energy system purchase more affordable. Find information on available federal and state tax credits on NCSEA's website at www.energync.org/resources/taxcredits/.

NC'S FUTURE ENERGY NEEDS: COSTS & POLICY

While renewable energy is costing less than originally anticipated, coal and nuclear costs now exceed their

original utility cost estimates and continue to rise. North Carolina does not have an adequate process for comparing the cost-effectiveness, reliability, and economic and environmental benefits of all options for meeting the State's future electricity needs.

The current long-term planning process of the NCUC is inadequate to look at future costs of our state's entire utility portfolio, and as such, only evaluates utilities on past costs and narrowly considers the cost of new power plants on a case-by-case basis as new power plants are proposed. Historically, the State's electric utilities have been consistently slow to publicly reveal the full cost of new power plant proposals.

In an effort to provide electric ratepayers with cost-effective electricity well into the future, Session Law 2007-397 requires utilities seeking approval for a new coal or nuclear power plant to prove to the NCUC that the proposal to build and operate conventional generation is more cost-effective than any combination of energy efficiency, renewable energy, and combined heat and power systems. This measure is a step toward ensuring new power plants will be cost-effective.

However, the pollution costs and carbon created by a coal-fired power plant or the de-commissioning costs of a nuclear plant are not required to be factored into the cost of a proposed new coal or nuclear power plant. Therefore, because the total costs of these plants are not required to be included in the analysis presented to the NCUC, traditional fossil fueled plants may appear less expensive.

Yet, since the La Capra Study was conducted in 2006, the actual cost of new nuclear power plants in the Southeast and globally has been proven to be almost triple the utility cost estimates provided to La Capra Associates in 2006 and the cost of coal power has also risen far above 2005 industry estimates used by La Capra Associates.

Policymakers must go beyond Session Law 2007-397 to evaluate our state's future energy portfolio and set policy for state regulators that will result in the lowest cost and reliable mix of energy resources for North Carolina that also deliver the greatest job creation, investment, economic development and environmental benefits possible. By satisfying the REPS and passage of additional sustainable energy policies, North Carolina is likely to become the Southeast economic leader in the green energy economy and maintain a high quality of life for North Carolina citizens for generations to come.

ADDITIONAL RESOURCES

North Carolina Sustainable Energy Association:

www.energync.org

2008 Renewable Energy & Energy Efficiency Industry Census and other recent Green Jobs reports:

www.energync.org/greenjobs

North Carolina General Assembly:

www.ncleg.net
Session Law 2007-397 (REPS)

North Carolina Utilities Commission:

www.ncuc.net
REPS Rulemaking: Docket No. E-100, Sub 113
Interconnection Standards: Docket No. E-100, Sub 101
Net Metering: Docket No. E-100, Sub 83
RECs Tracking System: Docket No. E-100, Sub 121

NC State Solar Center, Database of State Incentives for Renewables and Efficiency (DSIRE):

www.dsireusa.org

NC State Solar Center, DSIRE Solar:

<http://www.dsireusa.org/solar/index.cfm?ee=1&RE=1&spf=1&st=1>

NC GreenPower:

www.ncgreenpower.org

Duke Energy Interconnection Process, Checklist and Forms:

<http://www.duke-energy.com/customer-owned-generation/nc-interconnection-information.asp>

Progress Energy Interconnection Process and Forms:

<http://www.progress-energy.com/environment/ras/interconnectionprocedures.asp>

NCSEA MISSION STATEMENT:

The North Carolina Sustainable Energy Association works to ensure a sustainable future by promoting renewable energy and energy efficiency in North Carolina through public policy, education and economic development.





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