

WIND POWER
in
SOUTH CAROLINA
Energy Cost Stabilization
and
Economic Opportunity



A Snapshot of energy costs today.

⌘ Residential	11.77 cents per kilowatt hour
⌘ Commercial	9.63 cents per kilowatt hour
⌘ Industrial	6.02 cents per kilowatt hour
⌘ <u>Average = 9.10 cents</u>	

⌘ Source http://www.eia.gov/electricity/data/state/avgprice_annual.xls

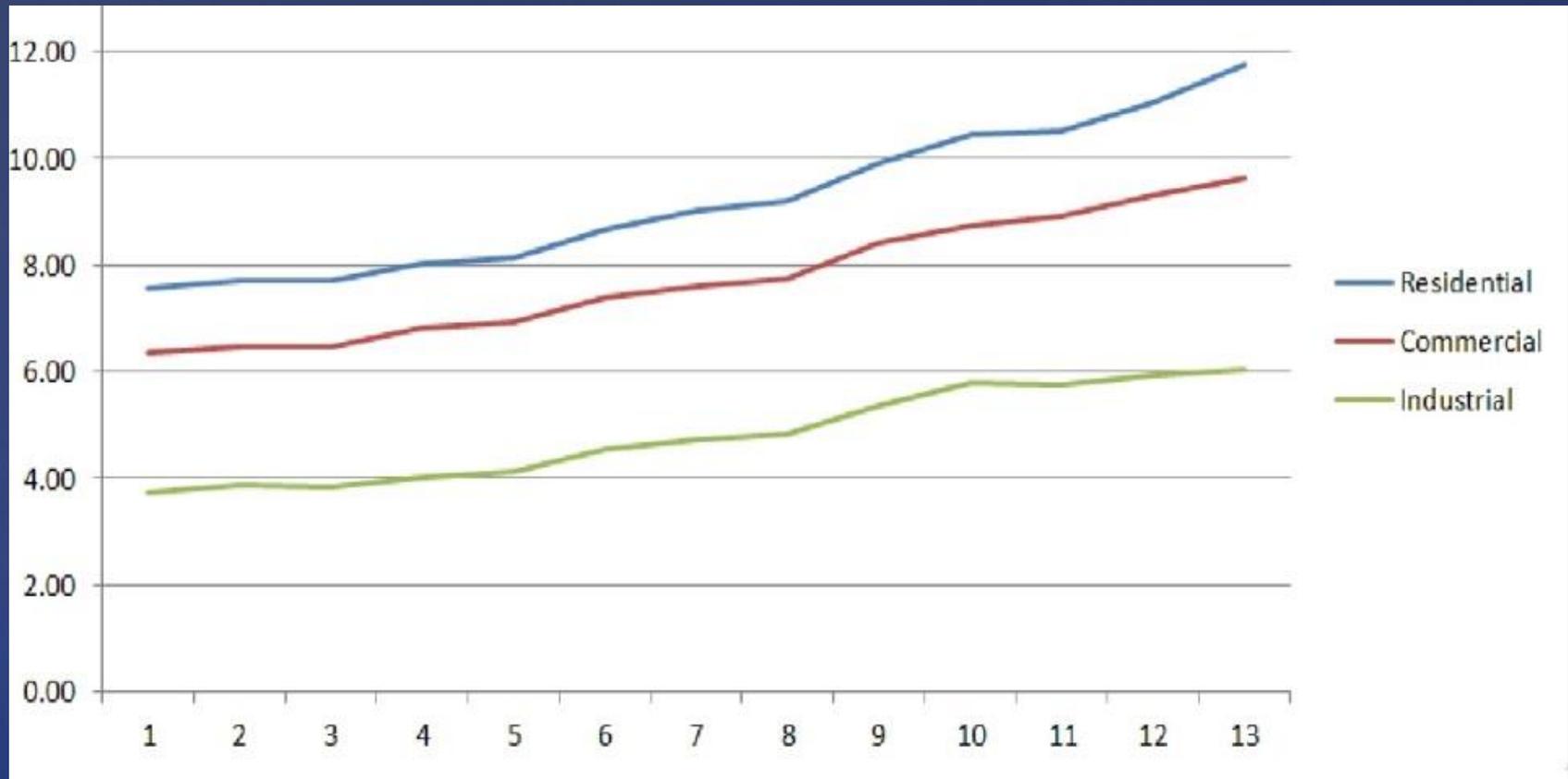
Wind?

16 + cents kwh !!

An electrical shock!!

Why would you bother
with wind?

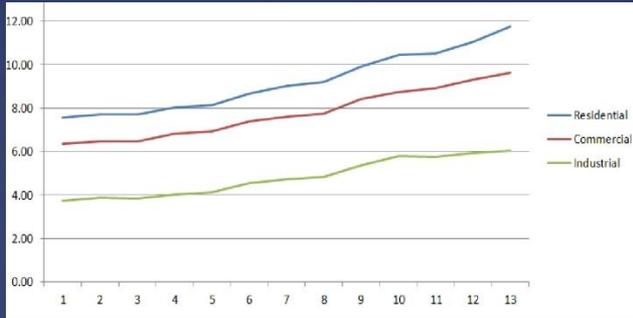
Because, our energy costs can not be viewed in a static snapshot.



Actual	2% Inflation
5.62	5.62
5.77	5.73
5.83	5.85
6.08	5.96
6.22	6.08
6.72	6.20
6.98	6.33
7.18	6.46
7.85	6.58
8.42	6.72
8.49	6.85
8.80	6.99
9.10	7.13
Gain	Gain
3.48	1.51
Gain greater than inflation?	
2.31	

Our electrical costs are gaining over 2 times the rate of inflation!

This is a symptom of a real South Carolina problem that is economic.



Why do costs rise
2.3 times inflation?

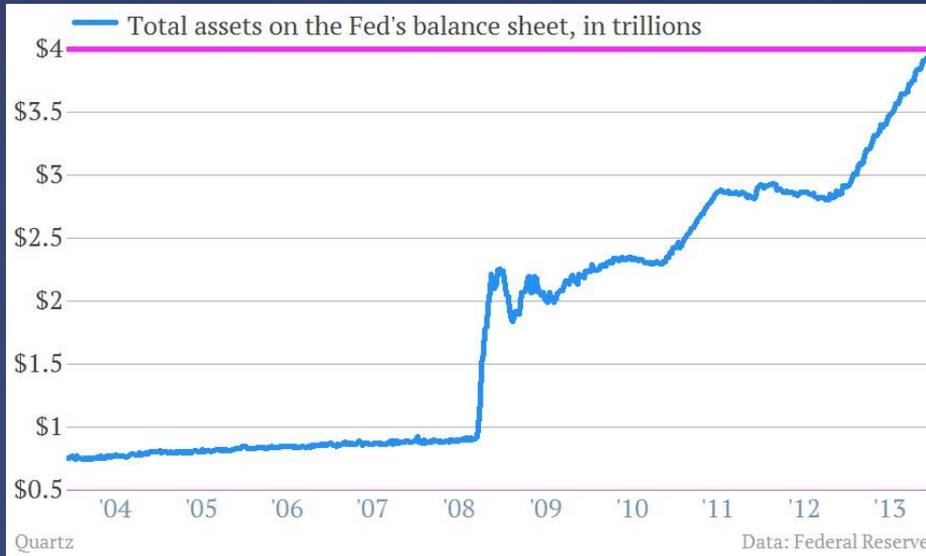
Because....

Simple Inflation

+

1. Environmental Regulation
2. Litigation
3. Environmental Mitigation

The Fed's Balance Sheet



Money
Supply
↑
4 x Times

This means INFLATION!

So,

Our energy sources will continue to rise at the rate of inflation.

Plus,

Because of before mentioned reasons.

Every time an environmental group speaks up in concern about an energy producer's activities, it will lead to a price increase.

Acquiescence to environmentalists = cost increases

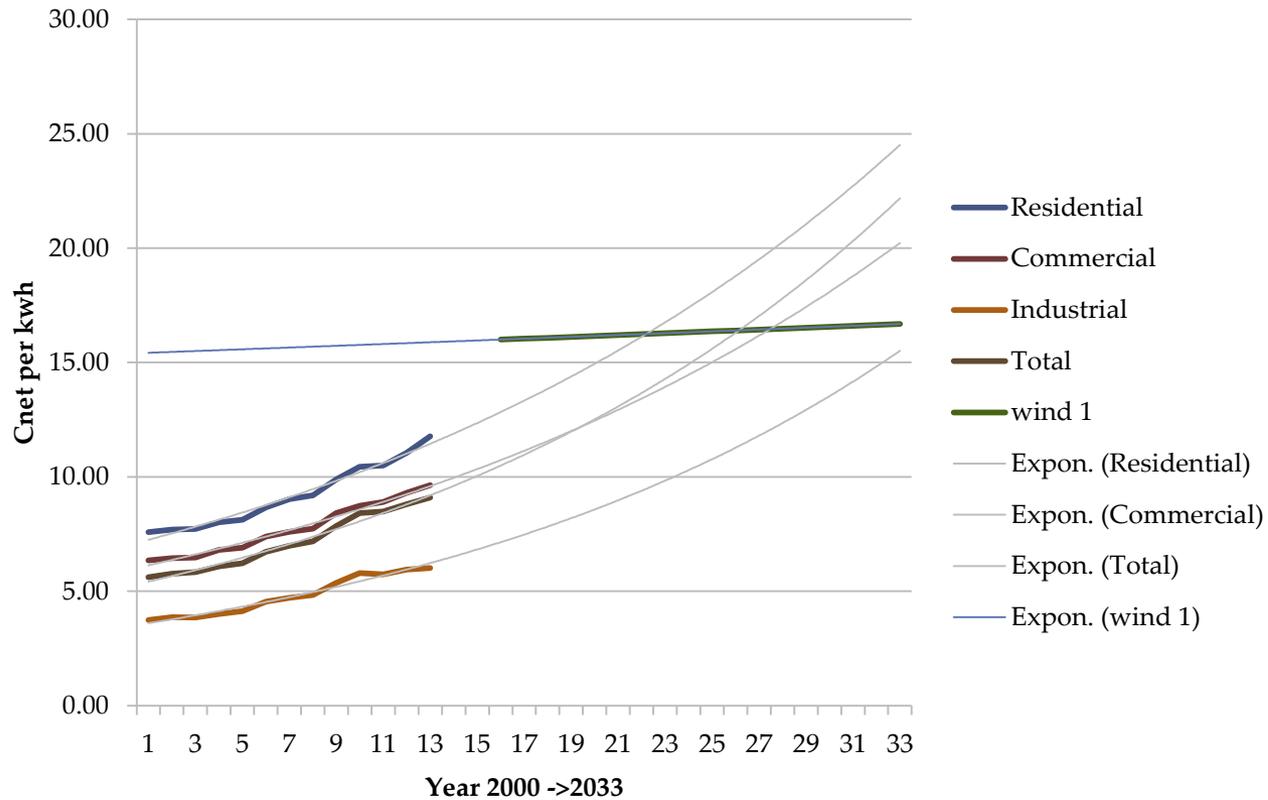
And

Battling environmentalist that will not go away = cost increases

How can Wind solve this?
It costs more, right?



Cost Projections



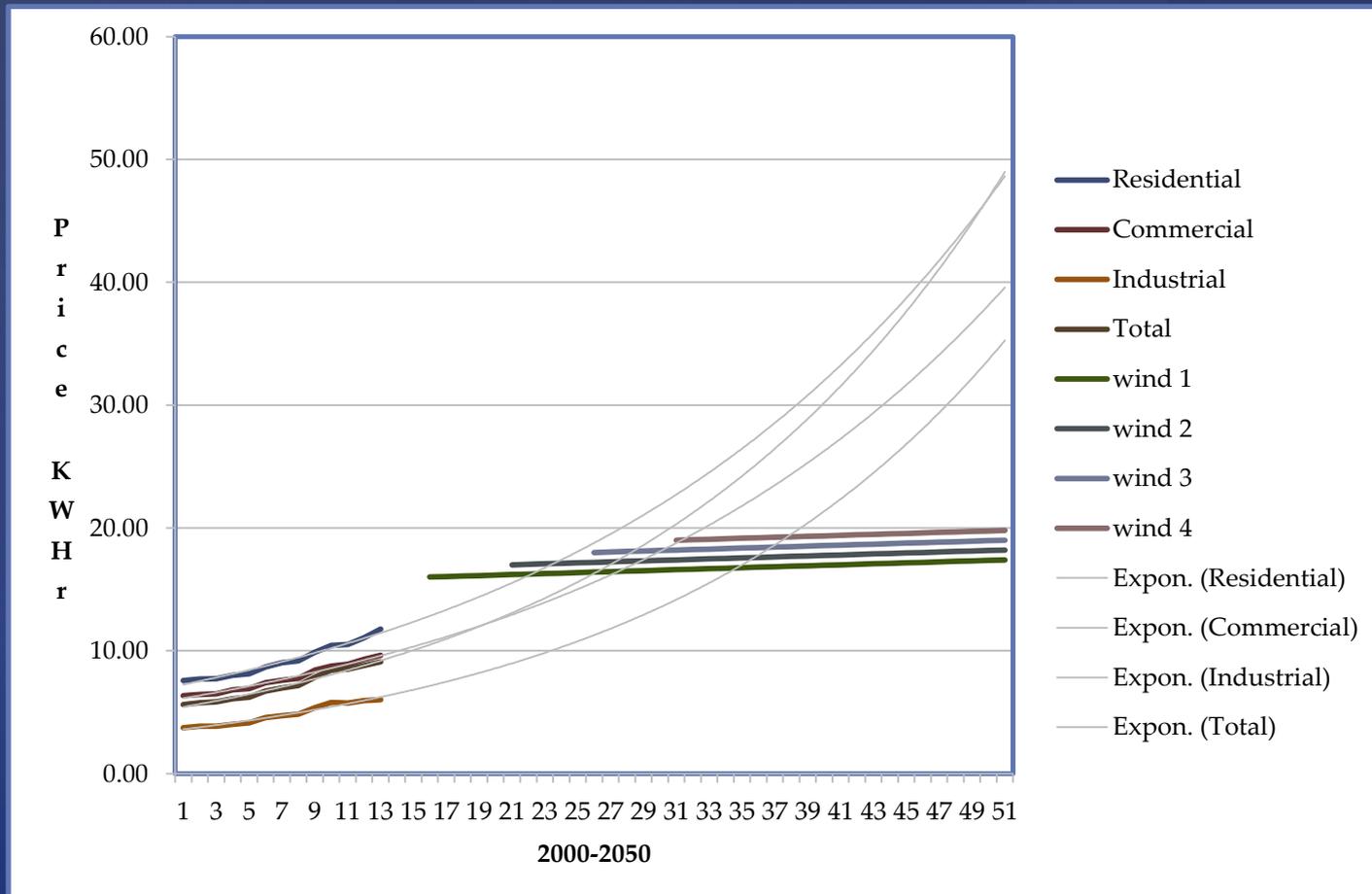
It costs more at installation,
but becomes cheaper very quickly.



The general price for wind energy locks in for the life of the project- 30 years

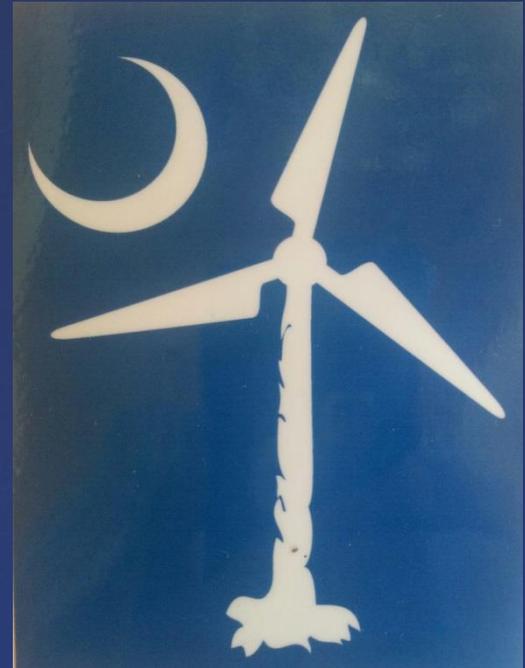
- The annual maintenance contract portion of the project is subject to inflation , est .02 per kwh.

Strategy:
Phase in Wind in small increments to
gradually build a base of price protected
energy supply.

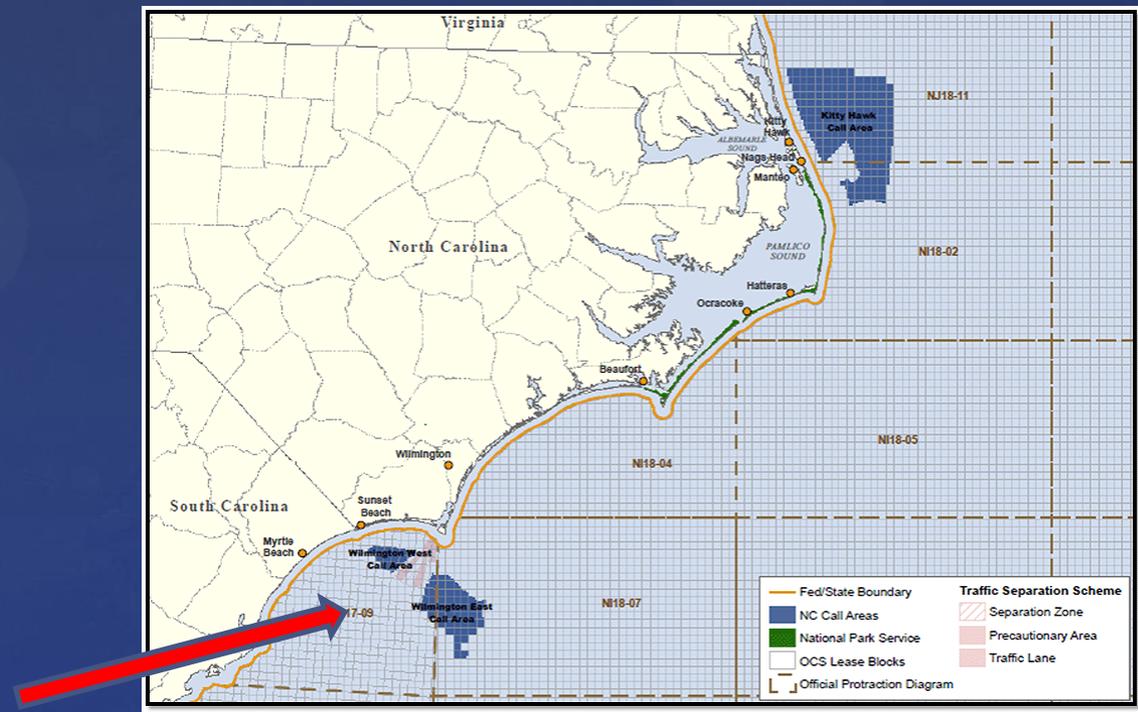


What assets
are in place?

What position
are we in to do
this?

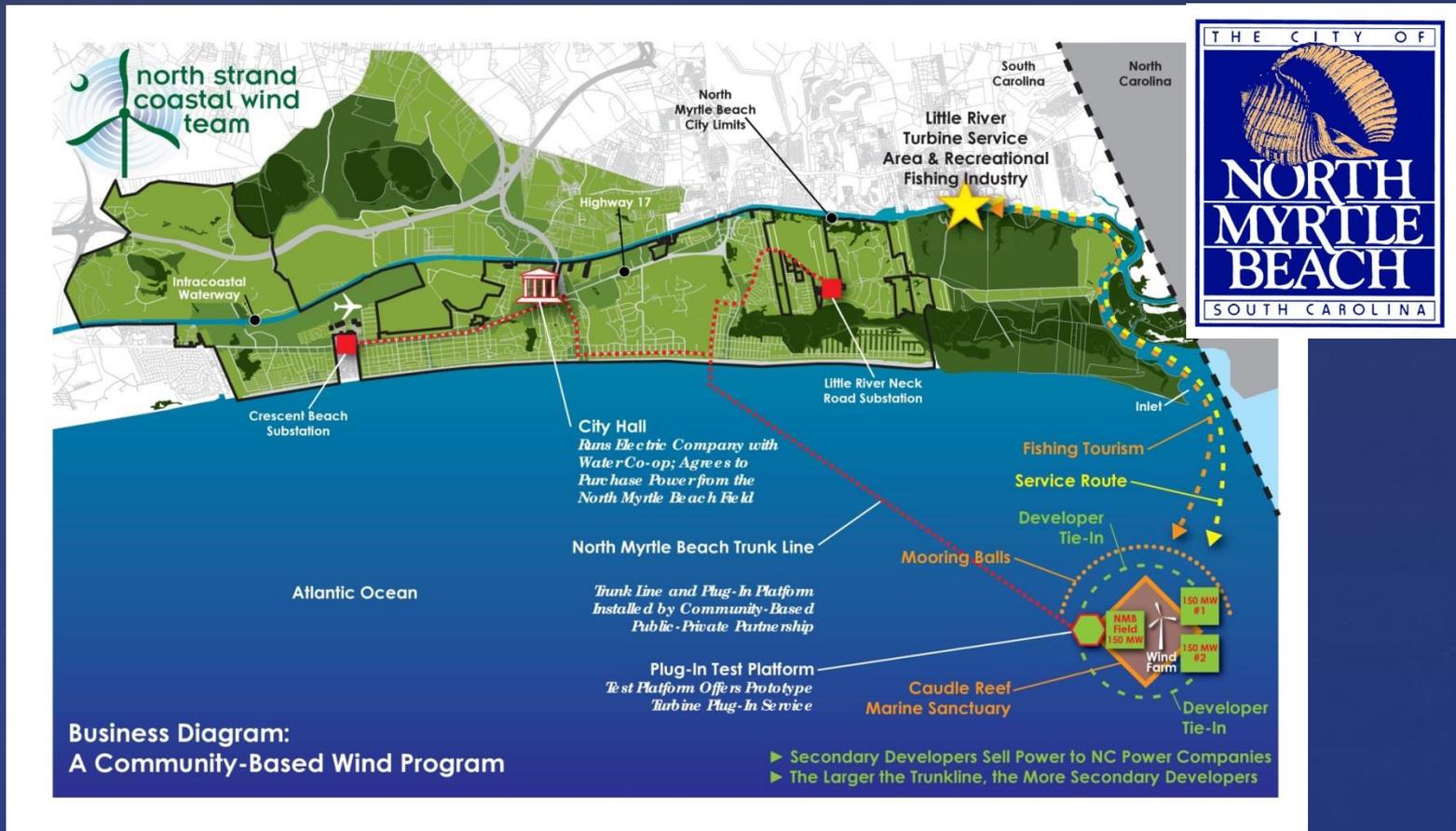


Federal Lease Blocks are established off NC. We anticipate additional blocks adjacent to the South.



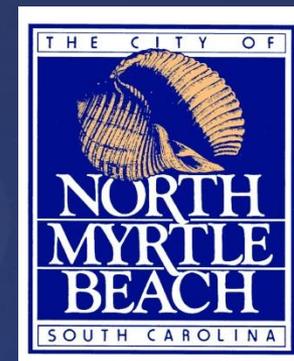
Next Federal Task Force Meeting to lay out lease blocks is in Charleston, May 16. Wind Turbine Drivetrain Test Facility.

North Myrtle Beach plans to host a cable to come ashore.



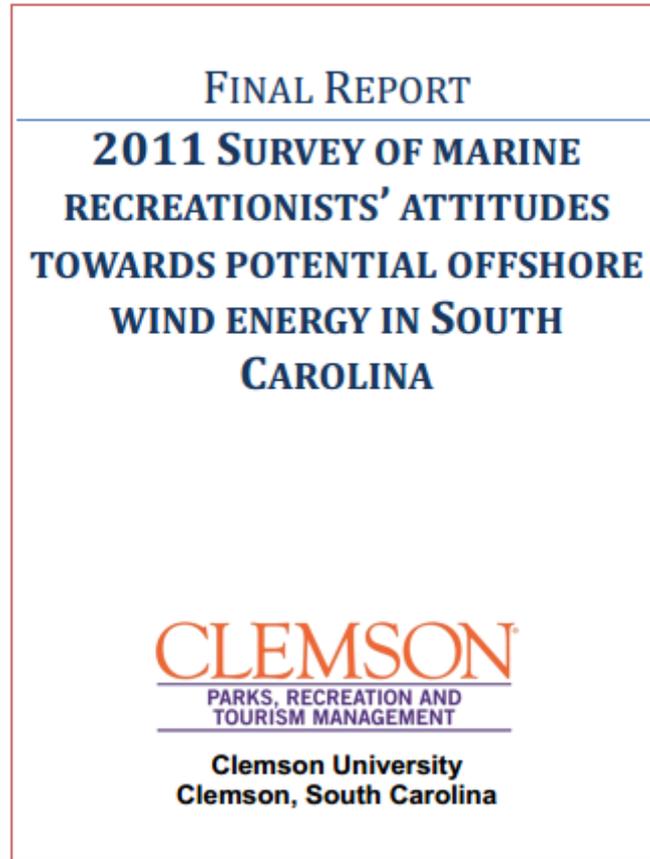
Link to a Resolution to adopt Wind Energy in North Myrtle Beach
<http://northstrandcoastalwindteam.org/city-of-north-myrtle-beach-offshore-wind-energy-resolution/>

- North Myrtle Beach made a commitment.
- South Carolina Regional Transmission Planning performed a study to inject 1000 and 2000 MW in and made recommendations for specific grid upgrade.
- SCRTP currently is performing a study to inject 300 MW.
- Our grid is robust because it is new. North Carolina Lease Blocks will likely come ashore at North Myrtle Beach.
- We have nearly full support from our community by conducting educational demonstrations over 5 years.



Stake holders were surveyed;
Residents were surveyed;
Businesses were surveyed;
Tourists were surveyed;
Marine recreationalists and business owners were surveyed.....

87% in North Myrtle Beach are not against the construction of an offshore wind farm.



<http://northstrandcoastalwindteam.org/wp-content/uploads/2010/07/FINAL-2011-SURVEY-TOWARDS-POTENTIAL-OFFSHORE-WIND-ENERGY-IN-SC.pdf>

Clemson has partnered with Coastal Carolina, a primary member of our working group, to provide support for development.



Memorandum of Understanding

Between

CLEMSON UNIVERSITY
Clemson, South Carolina
United States of America

And

COASTAL CAROLINA UNIVERSITY
Conway, South Carolina
United States of America

Clemson University in Clemson, South Carolina and Coastal Carolina University, Conway, South Carolina wishing to further relations between our two institutions in education, research, economic development, service, and other related activities, do hereby commit to mutual and reciprocal cooperation to achieve our shared goals.

Areas of cooperation may include any program of study, research, or other activity initiated by either institution which is felt to be desirable and feasible. Development of an agreement concerning cooperative relations.

mutual and reciprocal cooperation to achieve our shared goals for further economic development for South Carolina in renewable energy.

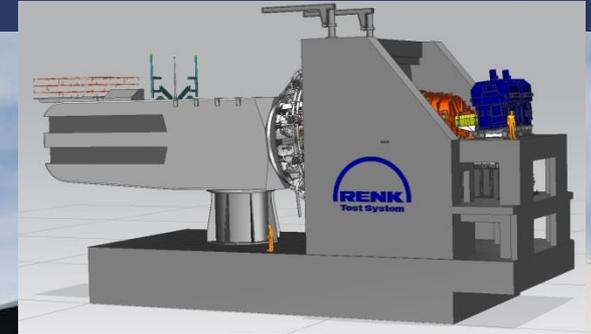
Clemson University and Coastal Carolina University intend to collaborate in these mutually agreed academic and research areas.

North Myrtle Beach Offshore Wind Farm Development
Intelligent River Remote Sensor Technology for the Coastal Savannah River Basin
Coastal Mapping
Economic Development Modeling for Wind Energy

The above-mentioned initiatives are an extension of the Palmetto Wind and other past cooperatives focused on:

- 1) Advancing the development and enhancement of marine renewable energy technology and industry

Clemson Drivetrain Test Facility... The largest in the World!



Clemson is moving forward...

South Carolina Wind Energy
Supply Chain Survey
and
Offshore Wind Economic Impact Study

CLEMSON
UNIVERSITY



RESTORATION
INSTITUTE



Elizabeth Colbert-Busch
Clemson University Restoration Institute
and

Robert T. Carey
Ellen Weeks Saltzman
Strom Thurmond Institute
Clemson University

Prepared for the
South Carolina Energy Office

July 2012

<http://northstrandcoastalwindteam.org/wp-content/uploads/2010/07/WindEnergyEconomicImpact7-2012FINAL.pdf>



Is there a particular economic opportunity for South Carolina?

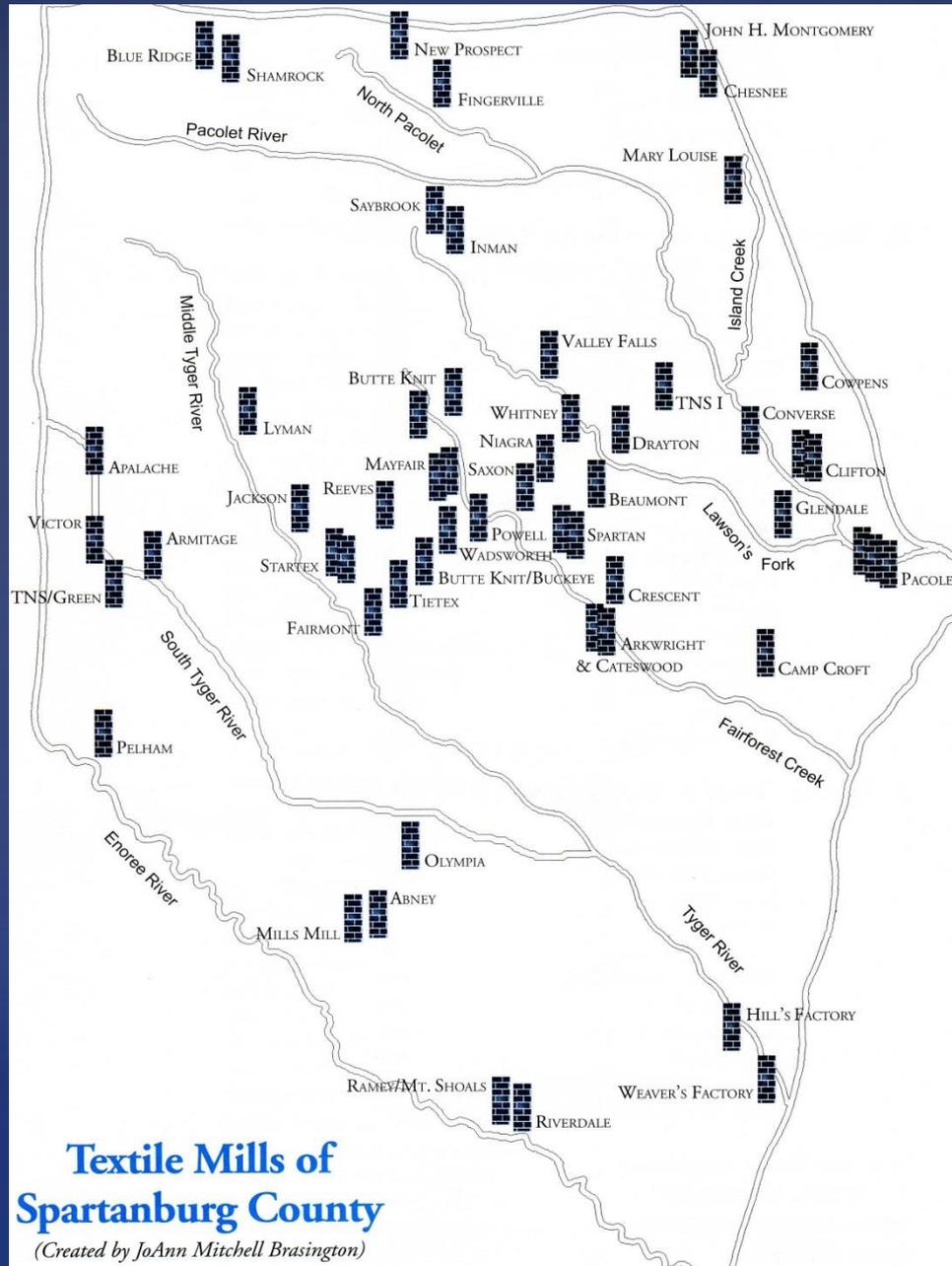
Why are companies adopting internal renewable energy standards?

They understand the vulnerability of fuel burning energy sources and want to lock – in their sources and rates to stabilize their future.

See the list of companies here...

<http://www.epa.gov/greenpower/toplists/top100.htm>

Would these companies be interested in abandoned textile mill sites being certified as wind powered?



[Home](#) > [Programs](#) > [Tax Incentives](#) > Textile Mill Incentive

South Carolina Textiles Communities Revitalization Act

The original law (Sections 6-32-20 to 6-32-50) went into effect on May 11, 2004, and the replacement law (Sections 12-65-10 to 12-65-45) went into effect June 12, 2008.

From early water-powered mills to large mills with their own self-contained villages, the manufacturing of textiles is an important chapter in the history of South Carolina. But technological and economic forces have put many of these facilities out of work, leaving communities today to struggle with the negative consequences of their abandonment. Putting these buildings back into productive use will benefit the communities and save a tangible part of our history.

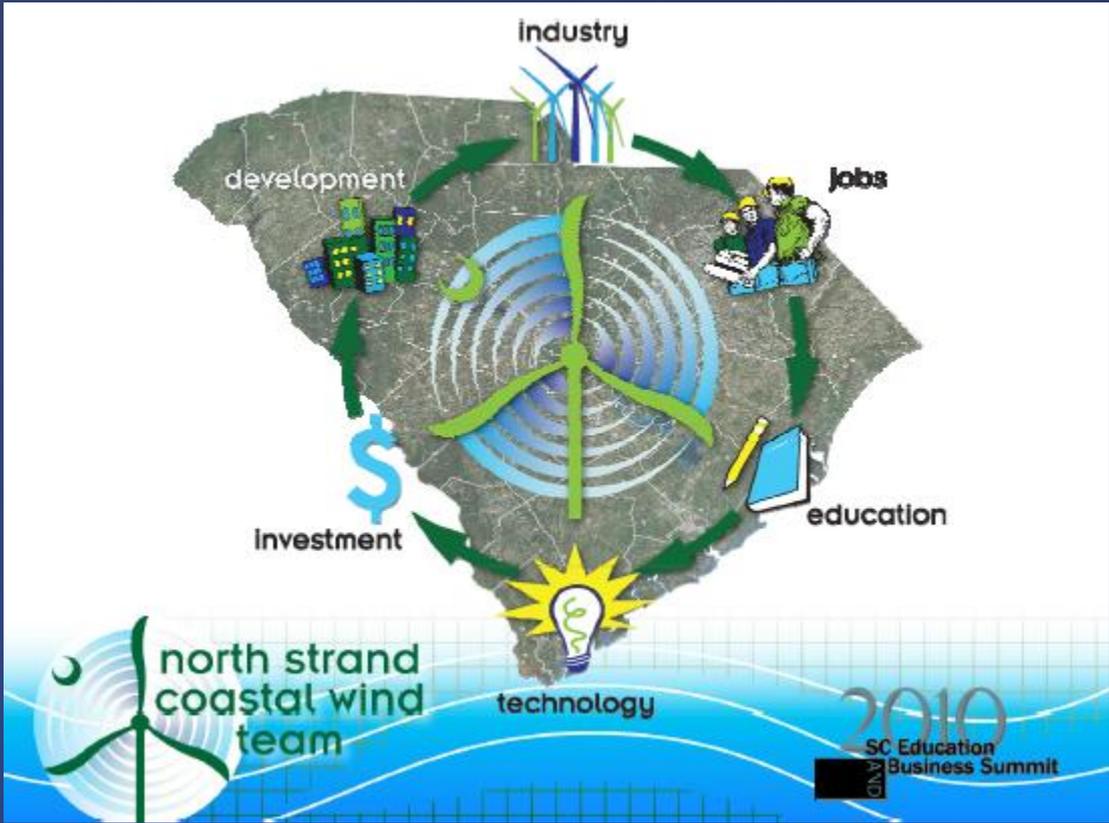
This law provides financial incentives for the "rehabilitation, renovation, and redevelopment of abandoned textile mill sites located in South Carolina." This information sheet is intended to highlight key provisions of the law; it is not tax advice. Taxpayers are urged to consult their tax advisor about how the law applies to their tax situation.

What properties are eligible?

The new law provides different provisions for properties purchased on or before

A closed mill in Spartanburg can be certified as wind powered. A portion of an offshore farm rated output would be contracted to this site through a power purchase agreement and wheeled from the coast to the location. This location's rates would be locked in for 30 years.





NSCWT Members

