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CLIMATE CHANGE IMPACTS ON NORTH CAROLINA

WHAT IS CLIMATE CHANGE?

The earth's climate is changing because of excess carbon dioxide pollution in the atmosphere, generated when fossil fuels like coal, oil, and natural gas are burned. This extra carbon traps more heat, like a greenhouse, which explains why 2000 to 2009 was the hottest decade ever recorded and there have been over 365 consecutive months with hotter-than-average global temperatures. Modern civilization developed in a stable climate and we have built our economy and way of life accordingly. Changes to our climate means that we are facing emerging hardships and vulnerabilities as the impacts of climate change unfold.

Some impacts from climate change include extreme storms, flooding from sea level rise, heat waves, and drought. These impacts have consequences for public health, safety, the economy, the environment, and our way of life.

Fortunately, we can protect against the worst impacts by limiting carbon pollution with energy efficiency and using clean renewable energy, like solar and wind.

North Carolina's most treasured landscapes, such as the Outer Banks, and Wilmington's historic riverfront are threatened by increased flooding from climate change.

HOW WILL CLIMATE CHANGE IMPACT NC?

It is difficult to link any one event directly to climate change, and it is important to recognize that most climate data is regional or even global in scope. However, decades of expert research and centuries of historical records can be compared with recent trends to illustrate how climate change is already impacting parts of the Southeastern United States. These impacts, combined with possible future impacts, are both cause for concern and the imperative for action.

- Sea level rise compromises some of North Carolina's most **treasured places**, including the Outer Banks and historic districts in coastal communities, like Wilmington's riverfront. Sea level rise also jeopardizes North Carolina's coastal tourism economy that generates over one billion dollars and supports 35,000 jobs annually. Seas are projected to rise by between 8 inches and 6.6 feet throughout the 21st century alone.
- **Heritage foods** of North Carolina are suffering because of carbon pollution and climate change. Some seafood, such as oysters and scallops, are directly harmed by the carbon pollution absorbed into the ocean, while some farmers are losing crops to unreliable winter weather, and late spring freezes, which are expected to become more frequent, along with heat and drought stress, in a warmer world. For example, the "Easter freeze" of 2007 caused statewide crop losses of 71% for apples and 82% for peaches, prompting almost half of the state's counties to be declared a natural disaster area, and the "polar vortex" of 2014 wiped out some farmers' entire spring collard crop.
- **Hurricanes** are getting more intense in a warmer world, tending more toward category 4 and 5 storms. Coupled with flooding from sea level rise, the liability to our coastal communities is great. Insurance will likely continue to get more expensive as more extreme weather disasters take place.

Over the last decade, NC coal-fired power plants produced an average of 71,600,000 tons of carbon pollution each year.

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IT'S TIME FOR SOLUTIONS!

PROMOTE CLEAN ENERGY

Clean energy, such as solar, wind, and energy efficiency, produces no pollution and provides jobs to our economy. Studies show that the United States could easily generate 80% of its power from clean sources by 2050. Energy efficiency can dramatically reduce the amount of power we use in our homes and businesses and lower our bills. In North Carolina, our offshore wind resource alone could produce more than 100% of the electricity we currently use each year. Solar power is unlimited energy from the sun, free for the taking if our state policies are used to level the playing field between solar and more traditional, polluting power sources like coal and nuclear.

OPPOSE HIGH RISK ENERGY

Some energy sources have greater risks associated with their use. Old, inefficient and dirty coal power plants must be retired to reduce levels of pollution that trigger asthma attacks and heart and lung disease, put mercury in our water, and cause climate change. Nuclear power plants emit less carbon than coal but are extremely expensive to build, require large amounts of water to operate, generate dangerous, highly radioactive waste and can have devastating consequences should an accident occur. Our coast is too precious to be compromised by spills from offshore drilling. Clean energy is a positive alternative to each of these risky energy sources.

TAKE ACTION TODAY!

Find & Contact Your Elected Officials
http://www.bit.ly/legislator-search

Support Our Work & Become a Member of SACE Today
www.cleanenergy.org/donate

Join the Southeast Coastal Climate Network
http://seccn.groupsite.com

CONTACT YOUR ELECTED OFFICIALS

National and state-level climate and energy policies are imperative to ensure protection from the worst impacts of climate change and to secure the benefits of clean energy. Contact your elected officials in Washington D.C. and Raleigh and tell them we must have climate and energy policies that:

- Invest in job-creating energy efficiency and clean energy
- Limit carbon pollution, such as the Clean Power Plan
- Preserve and strengthen the Clean Air Act
- Hold polluters accountable and end fossil-fuel subsidies

References and links available on the online version of this factsheet:
http://www.cleanenergy.org/nc-climate-impacts