



## 2015 STATE UPDATES



### **Alabama**

Although Alabama does not have utility scale wind installed, the state is home to 16 companies and 18 facilities that are involved in the full value chain of the wind energy industry. Alabama Power has contracts in place to purchase 404 MW of wind energy from projects located in Kansas and Oklahoma. These contracts, put in place in 2011 and 2012, can provide power for up to 100,000 homes.

### **Arkansas**

Arkansas does not have wind development, but it is home to twelve wind manufacturing facilities and the Arkansas Electric Cooperative Corporation (AECC) has power purchase agreements for wind energy. AECC's three power purchase agreements total 309 MW of wind from projects in Oklahoma and Kansas. All three PPAs have been signed over the last few years: a 2012 agreement to purchase 51 MW from the Flat Ridge 2 South Wind Farm in Kansas, a 2013 agreement to purchase 150 MW from the Origin Wind Farm in Oklahoma, and a 2015 agreement to purchase 108 MW from the Drift Sand Wind Farm in Oklahoma.

### **Florida**

Florida is the headquarters to several major players in the wind energy industry and has a total of 50 facilities involved in the full value chain of the wind energy industry. NextEra Energy Resources, headquartered in Juno Beach, is the largest owner of wind power capacity in the United States and Siemens, a major wind turbine manufacturer, is headquartered in Orlando. Florida has been successful in attracting manufacturing investment for the wind industry. Market leader GE has a wind turbine assembly facility in Pensacola, several other wind energy manufacturers have Florida facilities and Siemens Energy opened a Wind Service Training Center in Orlando in September, 2013. Additionally, Gulf Power signed a power purchase agreement to bring wind power into Florida from Oklahoma's Kingfisher Wind Project. The power purchase agreement for 178 MW was approved by the Florida PSC in May 2015.

### **Georgia**

Georgia is home to over 32 companies and nearly 50 facilities that are involved in the full value chain of the wind energy industry. The Georgia Wind Working Group continues to advance the wind industry in the state by creating educational opportunities for all stakeholders. Close coordination with the GA Public Service Commission resulted in several opportunities for Commissioners to speak in support of wind energy activities within the state. The 2nd annual Georgia Tech Energy Expo in April 2015 brought together state and national energy experts for a comprehensive and interactive event with an enthusiastic public audience. The Georgia Wind Working Group utilized its network of professional affiliates to populate the discussion panels for this event. Georgia Public Service Commissioner Chuck Eaton broached the importance of energy diversity and employing a long-term outlook when planning the energy utility future of the state, while Commissioner Tim Echols moderated a panel on the infrastructure and workforce of state energy development while earnestly advocating the importance of renewables.

In 2014, Georgia Power signed a power purchase agreement to bring 250 MW of wind energy into their service territory from Oklahoma wind projects starting in 2016. Additionally, Southern Company has submitted an application to the Bureau of Ocean Energy Management for an Interim Policy lease that would allow for meteorological measurement activities offshore from Tybee Island.

### **Kentucky**

Kentucky is already home to 15 companies and 16 facilities that are involved in the full value chain of the wind energy industry, even though no wind farms exist in the state. Some notable examples include companies like Rotek and Muehlhan Wind Power. Recently, turbine manufacturers have designed taller towers and longer blades, improving energy output, especially at lower wind speed sites. In Kentucky, the wind potential with future turbine technology is estimated to be over 524.5 TWh/year.

### **Louisiana**

Louisiana has nine companies and 10 facilities that are involved in the full value chain of the wind energy industry, even though no wind farms exist in the state. Blade Dynamics manufactures wind turbine blades at their facility in New Orleans. The AEP Southwestern Electric Power Co. (SWEPCO) has power purchase agreements for 469 MW of wind energy. These contracts bring wind from several projects in Texas, Oklahoma and Kansas.

## **Mississippi**

Mississippi is home to 7 companies and 8 facilities that are involved in the full value chain of the wind energy industry. Though the state has no utility scale wind installed, the potential areas for wind development in the state are increasing due to technological advancements for taller turbines and longer blades.

## **North Carolina**

North Carolina will be home to the first large utility scale wind farm in the Southeast. The Amazon Wind Farm US East project by Iberdrola Renewables will include an initial phase of 208 MW of wind energy in Pasquotank County and Perquimans County in the northeastern part of North Carolina. During the project's groundbreaking ceremony in July, North Carolina Governor Pat McCrory expressed support for the project's economic development benefits. The turbines will be located on private land leased by Iberdrola and will result in millions in tax and landowner revenue over the 20-30 year lifetime of the project. The jobs and economic development generated by this project will build on the wind industry jobs already present in the state through the supply chain. There are over 25 facilities in North Carolina that supply component parts for the wind industry and building wind projects in the state can help to strengthen and build the local supply chain. The Amazon project will provide an opportunity for communities in the Southeast to see first-hand the benefits of utility scale wind. In coastal North Carolina, there are already several kilowatts of distributed wind, some of which are Wind for Schools turbines.

Despite these advancements, barriers to developing wind in North Carolina remain. The state has a weak RPS of 12.5% by 2021 and organized misinformation campaigns are underway to oppose projects. The North Carolina Clean Energy Technology Center at NCSU, as a part of SWERC, created fact sheets to address some of the key wind energy myths being spread regarding health impacts, economic impacts, environmental/wildlife impacts and grid/military impacts. After much review and input from various outside experts, the four fact sheets were released in April 2015. The fact sheets are available online at <http://nccleantech.ncsu.edu/technology/renewable-energy/wind-energy/>.

## **South Carolina**

South Carolina has a few kilowatts of wind power capacity installed as a result of Wind for Schools projects, as well as ongoing efforts for offshore wind in the state. The state's BOEM task force is refining the areas offshore from Horry County and Georgetown County that will be included in a Call for Information and potentially offered for lease. In 2014, the South Carolina General Assembly passed a resolution in support of wind energy in the state. The resolution acknowledges the state's wind manufacturing assets, offshore wind resource potential, supportive local governments and Clemson University's large-scale wind turbine drivetrain testing facility in Charleston. Several local governments in the state – Charleston, North Charleston and North Myrtle Beach have also expressed support for wind energy. Coastal Carolina University hosted a wind energy forum in late 2014 to engage industry experts, academics, and state & local leaders in a discussion about advancing offshore wind energy opportunities in South Carolina and the Southeast. The event included remarks from a number of state and local leaders, with Senator Greg Hembree outlining a bill that he introduced in 2015 to enable the investor owned utilities in the state to recover the costs of a small-scale demonstration project through their rates.

Clemson University's SCE&G Energy Innovation Center is a wind turbine drivetrain testing and grid simulator facility that completed construction in 2013. Testing performed at the EIC benefits the industry as a whole while also drawing attention to the Southeast. In addition to technical testing, the facility provides tours, offers education on the technical characteristics of wind turbines and creates opportunities for stakeholders to meet and learn.

## **Tennessee**

Tennessee is home to the Southeast's only utility scale wind farm – the 29 MW Buffalo Mountain project completed in 2004. The state also has 27 companies and over 30 facilities that are involved in the full value chain of the wind energy industry. The Tennessee Valley Authority has contracts for over 1500 MW of wind energy.

## **Virginia**

In 2014, James Madison University and AWEA hosted the Virginia Wind Energy Forum. The event brought together key stakeholders involved in advancing wind in Virginia. The state's proposed land-based wind projects are making progress in the planning stages and the state has expanded net metering, but much of the focus remains on solar energy. The state's offshore wind activities are moving forward with progress in the BOEM leasing process. Virginia Electric and Power Company was awarded a lease for the Virginia Wind Energy Area and Virginia's Department of Mines Minerals and Energy was awarded a research lease for the two turbine Virginia Offshore Wind Technology Advancement Project (VOWTAP). The VOWTAP project, designed to reduce costs and uncertainty for a future large scale project, is undertaking a stakeholder process to find a path forward for the project after initial cost estimates exceeded the conceptual estimate.