



DOGWOOD ALLIANCE

Our Forests. Our Strength.

[\(L\)Donate](#) [\(/donate\)](#)

[Menu](#)

COMPANY PROFILES

In both the United States and Europe, electric utilities are moving forward with plans to burn forest biomass in power plants. The assumption is that since trees grow back, burning biomass does not increase carbon emissions. However, over the past two years, significant advances in the science examining the carbon emissions of different types of forest biomass have clarified that burning certain forms of biomass—in particular whole trees—to produce electricity increases carbon emissions compared with fossil fuels for decades. And it destroys ecosystems that can never be replaced.

Nonetheless, to meet the explosive growth in demand for biomass, a new and rapidly growing industry of manufacturing facilities has emerged across the Southeast to supply wood fuel for utility-scale electricity generation, particularly in Europe. These manufacturers clear forests, grind the trees into wood chips and “wood pellets” and ship them from ports in the Southeast to ports in Western Europe.

According to the North American Wood Fiber Review, rapid expansion of wood pellet production in both the Southern U.S. and British Columbia has dramatically increased pellet exports from North America to Europe over the past year. In the 2012, total shipments from Southern ports skyrocketed 70 percent from the previous year to 860,000 tons. This growth is expected to continue with numerous plans for adding capacity, particularly in the U.S. Southeast—now the world’s largest exporter of wood pellets in the world.

- Several large utilities and energy corporations have plans to expand their use of wood as a fuel source. But no company – utility or pellet manufacturer – has announced a long-term corporate policy to reject whole trees in their biomass operations.
- Three companies—Enviva LP, Drax Group and Dominion Power—are leaders in the biopower industry. Virginia-based Dominion Power has recently launched several biomass operations that could well rely on whole trees in the near future; Drax Group, based in the United Kingdom is importing millions of tons of wood pellets to burn, and leads the pack in Europe. And supplying them both is the South’s largest wood pellet manufacturer, Enviva.
- Biomass burners will likely start by using residuals, exhaust that resource and then move to whole trees. Enviva, for example, claims to rely on residues, however, there is evidence that the company is already using large quantities of whole tree trunks for its pellets.

In the Southeast, the massive fuel needs of energy companies could double logging rates and increase carbon emissions significantly—contributing to climate change at a time when we need to be rapidly cutting our carbon pollution. It is imperative that companies using biomass or producing wood pellets for utilities establish adequate policies to protect our climate and forests, before expanding their use of biomass.

Dominion Resources

Richmond, Virginia-based Dominion Resources generates electricity for both regulated utility sale in its Virginia and North Carolina markets, and also for a merchant fleet in other markets in the Northeast and Midwest United States.[1] Electricity generation is the largest unit of Dominion’s operations. The company generates approximately 27,700 megawatts (MW) of electric power each year, with another 4,730 MW planned and under construction.[2]

Dominion’s power stations primarily burn coal to generate electricity. However, Dominion is rapidly expanding capacity to burn biomass. Today, Dominion has among the largest investments in biomass generated power in the Southeast region of the United States.

Rapid expansion of biomass energy

In the United States, Dominion has outpaced its competitors in developing biomass energy projects. The company is currently burning biomass in its 83 MW plant in Pittsylvania, Virginia—one of the largest biomass power stations on the East Coast.[3] In 2011, Dominion also announced plans to convert three existing peak power coal-fired power stations into full-time biomass-burning facilities. Slated to come online in the second and third quarters of 2013, these projects in Altavista, Hopewell, and Southampton County will each have a generation capacity of roughly 51 MW of electricity.[4] At the same time, Dominion also plans to co-fire up to 117 MW of biomass at the 585 MW Virginia City Hybrid Energy Center. In total, the company is now poised to have a generation capacity of approximately 350 MW of electricity from burning biomass with potential for more in the future.[5]

Dominion has also announced retirements of multiple coal plants[6]. In the absence of investments in clean energy and efficiency this could result in more conversions of coal plants to biomass incinerators to replace the lost generation capacity.

There are huge unknowns surrounding the company's future sourcing for these operations and **Dominion has no long-term sourcing policy that rejects whole trees**. As a result, any number of scenarios could unfold with devastating consequences for carbon dioxide emissions and air pollution and degrading forests and water resources in the Southeast. Consider these red flags:

Dominion's current biomass sourcing appears to rely predominantly on residuals, which are currently cheaper than whole trees. Should the economics change, or the supply of residuals become limited, Dominion's operations could become dominated by whole trees.

To power its existing facilities, Dominion relies on two problematic wood suppliers for its "residues" (treetops and branches)—Enviva[7] and Meadwestvaco[8]. Enviva manufactures wood pellets and other processed woody biomass primarily for export, and relies heavily on whole trees. MeadWestvaco is a known laggard on sustainable wood sourcing in the Southern forest industry, relying on the weak Sustainable Forestry Initiative (SFI) certification. Many companies pursue SFI chain of custody certification in an attempt to greenwash their operations. However, SFI certification allows some of the worst forest management practices to occur, such as large-scale clearcutting, logging of endangered forests, and the conversion of biologically diverse natural forests to plantations.

Dominion claims to currently source wood in the form of logging residuals (tops and limbs). But excessive removal of tops and limbs from the forest can have significant ecological impacts too. Dominion has no policies in place to ensure that its current wood sourcing is not making already bad logging practices even worse.

Dominion recently announced that it will support legislation that would effectively repeal Virginia's Renewable Portfolio Standard, the state's main policy to support the deployment of clean energy, by removing incentives available to utilities for using renewable energy.[9]

[1] Dominion Overview: <https://www.dom.com/about/environment/report/our-company.jsp> (<https://www.dom.com/about/environment/report/our-company.jsp>)

[2] SNL Financial Dominion Resources Plant Portfolio Summary. Subscription required, PDF available upon request.

[3] SNL Financial Pittsylvania Power Station Power Plant Profile. Subscription requires, PDF available upon request.

[4] Dominion Resources, Inc. 2011 Summary Annual Report: <https://www.dom.com/investors/annual2011/domannual.pdf> (<https://www.dom.com/investors/annual2011/domannual.pdf>)

[5] Dominion website: <https://www.dom.com/about/environment/report/renewable-energy-and-green-power.jsp> (<https://www.dom.com/about/environment/report/renewable-energy-and-green-power.jsp>)

[6] Edison Electric Institute Coal Fleet Announcements, January 22, 2013: http://www.eei.org/meetings/Meeting%20Documents/Coal%20Fleet_Environmental%20Reg%20Update.pdf (http://www.eei.org/meetings/Meeting%20Documents/Coal%20Fleet_Environmental%20Reg%20Update.pdf)

[7] "Enviva Executes Agreement with Dominion Virginia Power for Biomass Supply": <http://www.envivabiomass.com/featured/enviva-executes-agreement-with-dominion-virginia-power-for-biomass-supply/> (<http://www.envivabiomass.com/featured/enviva-executes-agreement-with-dominion-virginia-power-for-biomass-supply/>)

[8] Dominion has named MeadWestVaco as the source for its Pittsylvania and Altavista facilities. Based on "Dominion's Planned Conversions from Coal to Biomass Power", a presentation given by Emil Avram, Director of Business Development; November 1-3, 2011. Dominion's contract with MeadWestVaco is also noted in the Public (Redacted) Version of the *Post-Hearing Brief of Virginia Electric and Power Company* dated February 15, 2012.

[9] Va. lawmakers to consider utility regulation: <http://www.wjia.com/articles/2013/01/va-lawmakers-to-consider-utility-regulation-84197.html> (<http://www.wjia.com/articles/2013/01/va-lawmakers-to-consider-utility-regulation-84197.html>)[/wpex]

Drax Power [wpex learn more] British utility Drax Power operates the United Kingdom's largest coal-fired power plant, producing approximately 7-8 percent of the country's electricity. The company recently shifted focus from co-firing biomass in coal power plants to full conversion of its largest plant to biomass.[1]

Rather than contract with American wood pellet manufacturers for fuel, Drax has begun building pellet mills directly through its wholly owned subsidiary Drax Biomass. In December, 2012 Drax announced it will build Amite BioEnergy pellet mill in Gloster, Mississippi and Morehouse BioEnergy in Bastrop, Louisiana to supply wood pellets for use in its power plants, with production set to begin in 2014. In November, 2012 the Port of Greater Baton Rouge approved a lease with a Drax unit that will build three storage domes plus unloading conveyors on 10 acres of port property. Drax will send pellets manufactured at these mills by rail from Bastrop and by truck from Gloster to the port to load onto ships for export to Europe^[2].

Rapid expansion of biomass energy

Drax has begun a rapid effort to wholly convert its coal-fired power plant to bioenergy. In its February 19, 2013 report, both Drax's Chairman and CEO stated that the company has now moved firmly into execution of plans to transform the Drax Power Station into a predominately biomass-fueled generator.^[3] In 2011-2012, Drax burned nearly 1,220,000 tonnes of biomass, of which 80 percent was wood. The company imported biomass from the U.S., Canada, South Africa, Russia, Portugal and New Zealand.^[4]

The company plans to spend as much as £700 million (\$1.13 billion) through 2017 upgrading its boilers at its power station in Selby, northern England, ordering millions of additional tons of biomass from around the world and building giant silos to store the fuel. The company plans to have three of their six boiler units converted to biomass by 2017.^[5]

Consider the magnitude of Drax's planned biomass demand:

- Drax has announced that it will spend \$1 billion to turn the U.K.'s biggest coal-fired power plant into western Europe's largest biomass plant. The company plans to convert one of the site's six units to burn wood pellets by June, 2013, with a second unit conversion planned for 2014, and a third by 2017. Each unit will burn about 2.3 million tons of biomass annually, meaning the company will need to source 7.5 million tons of biomass by 2017. Once these investments are completed, Drax will require quantities of woody biomass equivalent to harvesting a forest four times the size of Rhode Island each year^[6] or more than the total wood harvest from all UK forests, which is equivalent to about 5 million tonnes of oven-dried biomass per year.
- Drax's current generating capacity is about 4,000 megawatts. If the conversion of half that yields 2,000 megawatts of biomass capacity, it would place Drax on a par with the biggest hydropower plants in the European Union, and larger than any existing biomass plant, wind farm or solar park.^[7]
- The company has announced that production at its Mississippi and Louisiana pellet mills will have a combined capacity to produce 900,000 metric tons of wood pellets per year.^[8] This is far short of the 2.3 million tonnes needed for the first biomass-fired Drax power plant, which suggests that more announcements of contracts or of other owned plants are yet to come. Drax has stated that it plans to invest in a port facility in Louisiana with an export capacity of 3 million tonnes a year and is finalizing construction arrangements.^[9]
- In a February, 2013 report, Drax states that it has made good progress towards securing sufficient biomass to run two converted units and is now in advanced negotiations for a large proportion of the biomass necessary to fuel a third unit. The company identifies Enviva, Green Circle, Pinnacle and Plum Creek as amongst the North American biomass suppliers with whom it has entered into term contracts for the supply of wood pellets and sustainable forest fibre.^[10]
- Though Drax Biomass states that is committed to being a long-term purchaser of sustainably managed wood fiber, the company has signed a 10-year fiber supply contract with U.S.-based Plum Creek Timber Company to deliver up to 770,000 tonnes annually of wood fiber to its two planned mills. Plum Creek, one of the largest landowners in the U.S., utilizes the Sustainable Forestry Initiative (SFI) to certify its forestry operations.^[11] SFI certification lacks sufficient safeguards for responsible forest management, including allowing practices such as the conversion of natural forests.^[12]
- Drax claims that all its biomass is procured against its own robust sustainability criteria, including greenhouse gas emissions reduction requirements and habitat and biodiversity protection. However, the company has not provided any assurances that it will not source whole trees in its operations and is sourcing wood pellets from large manufacturers like Enviva, despite evidence that they are using whole trees in their mills.^[13]

[1] Bloomberg: "Biggest English Polluter Spends \$1 Billion to Burn Wood", September 26, 2012. See: <http://www.bloomberg.com/news/2012-09-25/biggest-english-polluter-spends-1-billion-to-burn-wood-energy.html>

[2] Biomass Magazine: "Drax Biomass announces pellet projects, port facility", December 17, 2012. See: <http://www.biomassmagazine.com/articles/8422/drax-biomass-announces-pellet-projects-port-facility>

[3] DRAX GROUP PLC PRELIMINARY RESULTS FOR THE YEAR ENDED 31 DECEMBER 2012; "Biomass transformation well underway"; February 19, 2013.

[4] Based on data from the Office of the Gas and Electricity Markets, 2011-2012 Annual Sustainability Report Dataset. See: <http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=366&refer=Sustainability/Environment/RenewablObl/FuelledStations/ro-sustainability>

docid=366&refer=Sustainability/Environment/RenewablObl/FuelledStations/ro-sustainability .

[5] Bloomberg: "Biggest English Polluter Spends \$1 Billion to Burn Wood", September 26, 2012. See: <http://www.bloomberg.com/news/2012-09-25/biggest-english-polluter-spends-1-billion-to-burn-wood-energy.html>

[6] Ibid.

[7] Ibid.

[8] Biomass Magazine: "Drax Biomass announces pellet projects, port facility", December 17, 2012. See: <http://www.biomassmagazine.com/articles/8422/drax-biomass-announces-pellet-projects-port-facility>

[9] DRAX GROUP PLC PRELIMINARY RESULTS FOR THE YEAR ENDED 31 DECEMBER 2012; "Biomass transformation well underway"; February 19, 2013.

[10] Ibid.

[11] Haven Power. "Drax continues progress towards biomass conversion", January 23, 2013. See: <http://www.havenpower.com/news.asp?id=1219>

[12] Jim Ford and Anna Jenkins; Climate for Ideas, et. al. On The Ground 2011; The controversies of PEFC and SFI, September, 2011.

[13] DRAX GROUP PLC PRELIMINARY RESULTS FOR THE YEAR ENDED 31 DECEMBER 2012; "Biomass transformation well underway"; February 19, 2013.

[wpex]

Duke Energy [wpex learn more]Duke Energy is the largest electric power holding company in the United States. In 2012, Duke Energy completed its merger with Progress Energy, worth \$32 billion, creating a combined entity with approximately \$49 billion in market capitalization and total assets of more than \$100 billion. Duke Energy is headquartered in Charlotte, North Carolina.

The new Duke Energy serves approximately 7.2 million electric customers located in North Carolina, South Carolina, Florida, Ohio, Indiana and Kentucky. Its commercial power and international business segments own and operate diverse power generation assets in North America and Latin America. Worldwide, the company's power stations utilize coal, natural gas, oil and other petroleum products, hydro, wind, solar and biomass have a total generating capacity of 64,121 megawatts with another 10,400 megawatts planned or under construction[1].

Expanding biomass generation and risky sourcing practices

Duke Energy is currently operating approximately 300 MW of capacity from biomass power plants in North and South Carolina and Florida. [2]. In 2011, Florida state regulators also approved a 29.5 year Power Purchase Agreement between Duke Energy Progress and U.S. EcoGen[3], which operates a portfolio of biomass-fueled electrical generating facilities, timber plantations and wood pellet mills in the U.S. and abroad. Under the agreement, Duke Energy Progress Florida will purchase 60 MW of power from a planned EcoGen biomass plant in Polk County, Florida[4].

- Duke Energy has no policies in place to reject whole trees for its biomass energy.
- Through its sourcing of wood pellets from EcoGen, Duke Energy is supporting the industrial-scale planting of non-native eucalyptus tree energy crops to fuel its new biomass generation[5]. Eucalyptus plantations pose a significant threat to the South's native forests and water resources. Eucalyptus trees are not native to the Southern U.S., and could quickly become invasive, taking over natural ecosystems.

[1] 2011 SNL Financial, Operating Nameplate Capacity. Subscription required, PDF available upon request.

[2]Duke Energy website. See: <http://www.duke-energy.com/environment/biopower.asp>

[3]<http://www.usecogen.com/news/> (<http://www.usecogen.com/news/>)

[4]Citrus County Chronicle, "Progress Energy gets approval to buy power from biomass plant", September, 23, 2011. (<http://www.usecogen.com/news/>)(<http://www.chronicleonline.com/content/progress-energy-gets-approval-buy-power-biomass-plant>) (<http://www.chronicleonline.com/content/progress-energy-gets-approval-buy-power-biomass-plant>) (<http://www.usecogen.com/news/>)

[5]<http://www.usecogen.com/> (<http://www.usecogen.com/>)[wpex]

E.ON [wpex learn more]Based in Dusseldorf, Germany, E.ON is one of the world's largest investor-owned power companies. With facilities across Europe, Russia, and North America, in 2012 E.ON sold 740 billion kilowatt hours of electricity worldwide.[1] E.ON has a total generation capacity of nearly 68 GW and a generation portfolio that includes coal, gas, oil, biomass, nuclear, hydroelectric, wind, and solar facilities.[2]

Expanding investment in biomass energy

In 2011, E.ON generated 241 gigawatt hours of electricity at biomass facilities.[3] The company has aggressive plans to scale up biomass capacity and is making major investments in biomass projects, especially in the United Kingdom. E.ON is currently operating the largest biomass power generation facility in Scotland, a 43 MW plant at Steven's Croft near Lockerbie and construction is underway for a 30 MW facility at Blackburn Meadows in Sheffield.[4] Additionally, E.ON has announced plans to build a new 150 MW dedicated biomass power station at Royal Portbury Dock in the Port of Bristol.[5] In March of 2012, E.ON announced further plans to build the largest biomass plant in France, a 150 MW facility that will replace the existing coal-fired Provence 4 station in Meyreuil, Provence.[6]

E.ON's largest biomass investments are in converting existing coal plants to burn biomass. Work is underway to convert two 500 MW coal units at Ironbridge in the UK to burn up to 100% wood pellets with a total capacity of 760MW. The company is planning to invest in converting 2 to 4 existing coal plants to burn exclusively biomass, and co-fire wood pellets with coal at several plants across Europe. E.ON plans to focus development of biomass projects in the UK, France, Italy, and Belgium.[7]

- E.ON plans to source much of the wood pellets for biomass facilities from forests abroad, including the southeastern United States. The 150 MW facility at Meyreuil alone will burn 720,000 metric tons of wood pellets per year, half of which are to be imported.[8]
- In 2012, E.ON announced a new contract with North Carolina based Enviva to purchase 240,000 metric ton of wood pellets per year for export to Europe, to begin in 2013.[9] [Enviva's large-scale reliance on whole trees](#)—some of which appear to be from hardwood wetland forests—is having a profound ecological impact on forest habitat across its operations in the Southeast.[10] Nonetheless, the company has not committed to a long-term policy to reject whole tree sourcing for its pellet mills.
- In 2010, E.ON partnered with GDF Suez, RWE, Vattenfall, Drax Plc, and DONG to form the Initiative Wood Pellet Buyers group to facilitate trading of wood pellet supplies.[11]

[1] <http://www.eon.com/en/about-us/profile/facts-and-figures.html>

[2] <http://www.eon.com/en/business-areas/power-generation/energy-mix.html>

[3] <http://www.eon.com/content/dam/eon-com/%C3%9Cber%20Uns/Globale-Einheiten/ECR%20Company%20Presentation%202012-Q2.pdf> (p.34)

[4] <http://www.eon.com/content/dam/eon-com/%C3%9Cber%20Uns/Globale-Einheiten/ECR%20Company%20Presentation%202012-Q2.pdf> (p.34)

[5] <http://www.eon-uk.com/generation/1541.aspx>

[6] <http://www.argusmedia.com/pages/NewsBody.aspx?id=789217&menu=yes>

[7] <http://www.eon.com/content/dam/eon-com/%C3%9Cber%20Uns/Globale-Einheiten/ECR%20Company%20Presentation%202012-Q2.pdf> (p.34)

[8] <http://www.argusmedia.com/pages/NewsBody.aspx?id=789217&menu=yes>

[9] <http://www.envivabiomass.com/featured/enviva-e-on-sign-multi-year-biomass-supply-contract/>

[10] <http://www.dogwoodalliance.org/wp-content/uploads/2012/11/Whole-Tree-Wood-Pellet-Production-Report.pdf>

[11] <http://www.laborelec.be/ENG/initiative-wood-pellet-buyers-iwpb/>[/wpex]

Electrabel and GDF Suez [wpex learn more]Electrabel, based in Brussels, Belgium, is a subsidiary of GDF Suez, the world's largest electric utility. Based in France, GDF Suez has a total world-wide installed generating capacity of 117.3 GW with a goal of reaching 150 GW in 2016. [1] GDF Suez operates in North America, South America, Europe, Africa, Asia and the Pacific with employees in nearly 70 countries worldwide[2], and has an electric generation portfolio that includes coal, natural gas, oil, and biomass combustion, as well as nuclear, wind, solar, and hydroelectric production.[3]

Expanding investment in biomass energy

Through Electrobel, GDF Suez has made major investments in biomass energy. Their flagship facility is the 190 MW burner at the Rodenhuize power station in Belgium.[4] Rodenhuize was originally built as a coal-fired facility, but was converted in 2010 and reopened in 2011 as a 100 percent wood pellet burner.[5] Rodenhuize now burns up to 850,000 metric tons of wood pellets each year.

Electrabel has also converted another coal burner to 100 percent wood pellets at the Awirs facility in Belgium. Awirs has a capacity of 80 MW and burns up to 400,000 metric tons of wood pellets per year. In addition, Electrabel is co-firing up to 500,000 metric tons of wood pellets per year at the Gelderland facility in the Netherlands with a total capacity of 138 MW generated from biomass. Electrabel is also co-firing up to 305 metric tons per year of wood chips, dust, and other debris at the Ruien facility in Belgium for a total of 60 MW of capacity.[6]

GDF Suez's investments in biomass are not limited to Electrabel.[7] Worldwide, with over 50 sites in the United States, Europe, and Brazil, GDF Suez consumes more than 2,000,000 metric tons of biomass from a variety of sources each year.[8] The company operates a 100 percent biomass burner at their facility in Polaniec, Poland with a capacity of 205 MW.[9] The facility burns 222,000 metric tons of agricultural waste and 890,000 metric tons of wood chips each year.[10] Another GDF Suez subsidiary, Cofely, is currently developing five cogeneration biomass facilities in France that will burn a combined 900,000 metric tons of wood per year, mostly pellets.[11]

- In 2010, Electrabel announced a contract with Enviva to supply 480,000 metric tons of wood pellets per year from Enviva's facilities in Mississippi, Virginia, and North Carolina to Electrabel's biomass burners in Belgium.[12] [Enviva is relying on whole trees](#) for wood pellet production, some of which appear to be from hardwood wetland forests that provide critical habitat for many endangered species in the South. Furthermore, Enviva is sourcing from areas where industrial logging is having a profound ecological impact on forest habitat in the Southeast.[13] Nonetheless, the company has not committed to a long-term policy to reject whole tree sourcing for its pellet mills.
- GDF Suez announced a partnership with Pacific BioEnergy in 2010 to invest \$24 million in expansions of Pacific BioEnergy's existing pellet manufacturing facilities in Prince George, British Columbia, Canada. Additionally, GDF Suez has agreed to purchase 2.5 million metric tons of wood pellets from Pacific BioEnergy over 10 years to supply biomass facilities in Europe.[14] According to Pacific BioEnergy's website, whole trees are used to manufacture pellets.[15]
- GDF Suez is also leading industry efforts to standardize wood pellets commodification and enable global trading and in 2010 launched the Initiative Wood Pellet Buyers group, recruiting other European utilities [RWE](#), [E.ON](#), [Vattenfall](#), [Drax PLC](#), and [Dong](#) as partners in the effort.[16]

[1] http://www.gdfsuez.com/wp-content/uploads/2012/05/GDFSUEZ_RDD_2011_GB1.pdf (p.4)

[2] <http://www.gdfsuez.com/en/group/summary/>

[3] <http://www.gdfsuez.com/en/businesses/electricity/>

[4] http://www.ieabcc.nl/workshops/task32_2012_Copenhagen/Ryckmans.pdf (p.5)

[5] <http://www.power-technology.com/projects/rodenhuize-power-station/>

[6] http://www.ieabcc.nl/workshops/task32_2012_Copenhagen/Ryckmans.pdf (p.5)

[7] <http://www.suezenergy.com/whoweare/documents/BEEIAtaGlancebrochureJuly2011.pdf>

[8] <http://www.gdfsuez.com/en/businesses/electricity/biomass/>

[9] <http://www.gdfsuez.com/en/journalists/news-flash/gdf-suez-implements-the-worlds-biggest-100-biomass-fired-energy-unit-in-poland/>

[10] <http://www.power-technology.com/projects/polaniec-biomass-power-plant-poland/>

[11] http://www.gdfsuez.com/wp-content/uploads/2012/05/GDFSUEZ_RDD_2011_GB1.pdf (p.41)

[12] <http://biomassmagazine.com/articles/4040/enviva-signs-supply-agreement-with-electrabel>

[13] <http://www.dogwoodalliance.org/wp-content/uploads/2012/11/Whole-Tree-Wood-Pellet-Production-Report.pdf>

[14] http://www.pacificbioenergy.ca/releases/100215_release.html

[15] http://www.pacificbioenergy.ca/product_pellets1.html

[16] <http://www.laborelec.be/ENG/initiative-wood-pellet-buyers-iwbp/>

[/wpex]

Enova [\[wpex learn more\]](#)Atlanta-based Enova Energy Group has plans to build three new wood pellet facilities in the Southern U.S., one in South Carolina and two in Georgia.[1] Each facility will produce 450,000 tons of pellets annually for a total annual capacity of 1.3 million tons that will be exported to Europe from the Port of Savannah.[2] The company's first wood pellet project will be located in Warrenton, Georgia and will have an annual production capacity of 450,000 tons.[3]

The company claims to have long term contracts with various public and private utilities in the EU.[4]

[1] <http://chronicle.augusta.com/news/metro/2012-09-24/atlanta-firm-plans-wood-pellet-mill-edgefield-county-sc?v=1348489719>

[2] "Enova Energy Group Announces Wood Pellet Projects," September 18, 2012, <http://www.marketwatch.com/story/enova-energy-group-announces-wood-pellet-projects-2012-09-18> (last accessed 2.22.2013)

[3] <http://www.enovaenergygroup.com/projects-ewpg.html>

[4] "Enova Energy Group Announces Wood Pellet Projects," September 18, 2012, <http://www.marketwatch.com/story/enova-energy-group-announces-wood-pellet-projects-2012-09-18> (last accessed 2.22.2013)

[/wpex]

Enviva [wpex learn more]Maryland-based Enviva is one of the largest manufacturers of wood pellets in the United States. Together with four other large-scale pellet producers, the company dominates the market in North American pellet exports to Europe in addition to supplying domestic utility customers. Enviva operates wood pellet manufacturing facilities in Belgium, as well as five manufacturing and partner facilities in Mississippi, North Carolina, and Virginia. Wood pellets from these facilities are shipped to Europe out of the company's deepwater port facility in Chesapeake, Virginia, which has the capacity to receive and store up to three million tons of woody biomass annually.

Enviva produces wood pellets for power plant customers in both the U.S. and Europe. The company has a multi-year contract with E.ON for the purchase of 240,000 tonnes per year of wood pellets from facilities in the Southern U.S., and exports of 480,000 tonnes per year in exports to Belgian utility Electrabel.[1] According to the U.S. customs service, Enviva is also selling wood pellets to English utility Drax.[2] In 2011, Enviva announced a domestic contract with Virginia-based Dominion Power to supply two 50-megawatt biomass power plants Southampton and Hopewell, Virginia.[3] The company is also in partnership with oil company ConocoPhillips to produce torrefied wood pellets, in a plant scheduled to be operational in 2013.[4]

Rapid expansion of biomass energy

Enviva has plans to nearly triple its production capacity. The company has mills operating in Wiggins, Mississippi (150,000 tons per year), Amory, Mississippi (90,000 tons per year), and Ahsokie, North Carolina (350,000 tons per year), as well as a mill under construction in Southampton, Virginia (500,000 tons per year). In May of 2013, Enviva officially opened a new 500,000 ton per year wood pellet production facility in North Carolina, with pellets to be exported through the company's Port of Chesapeake export terminal in Virginia to utility customers in Europe. When all its mills are completed, the company's operational capacity will exceed 1.5 million tons per year.[5]

To supply its pellet mills, Enviva claims to rely on residues, such as tree tops, branches, and other forestry debris remaining after trees have been harvested from the forest and downplays the quality of any whole trees it sources. However, consider this evidence that Enviva is using whole trees:

[_https://www.dogwoodalliance.org/wp-content/uploads/2012/10/Enviva_Ahoskie-NC_2012_credit-Dogwood-Alliance-Southwings-c-e1349809413427.jpg](https://www.dogwoodalliance.org/wp-content/uploads/2012/10/Enviva_Ahoskie-NC_2012_credit-Dogwood-Alliance-Southwings-c-e1349809413427.jpg)

Aerial image of Enviva's facility in Ahsokie, North Carolina, taken by Dogwood Alliance, 2012.

- Photos of Enviva's facility in Ahsokie, North Carolina show that the company is using large quantities of whole tree trunks for its pellets.
- There is also evidence that Enviva is sourcing wood, including whole trees, from areas where industrial logging is having profound negative ecological impacts. Photographs taken from nearby the Ahsokie facility show piles of whole tree trunks visible from the public road. Many of the trunks have swollen bases and appear to have been sourced from hardwood wetland forests. Wetland forests provide critical habitat for many endangered species throughout the South.

- The company's existing forestry management certifications are insufficient to ensure protection for important ecosystems and associated species and water



[_https://www.dogwoodalliance.org/wp-content/uploads/2013/04/Enviva_Ahoskie_SEL_C.jpg](https://www.dogwoodalliance.org/wp-content/uploads/2013/04/Enviva_Ahoskie_SEL_C.jpg)

Photograph from nearby Enviva Ahsokie, North Carolina facility, taken by Southern Environmental Law Center.

resources. The company has obtained Sustainable Forestry Initiative (SFI), Programme for the Endorsement of Forest Certification (PEFC) and Forest Stewardship Council (FSC) chain of custody certification in order to claim that their pellets are sustainably produced.[6] However, SFI and PEFC certification both allow some of the worst forest management practices to occur, such as large-scale clearcutting, logging of endangered forests, and the conversion of biologically diverse natural forests to plantations. While the FSC has rigorous forest management standards, there is no guarantee that Enviva will actually source from FSC certified forestry operations. Furthermore, the FSC has no requirements in place to ensure carbon emission reductions occur where wood is burned to produce energy.

[1] <http://www.envivabiomass.com/featured/enviva-e-on-sign-multi-year-biomass-supply-contract/>

[2] Based on analysis conducted by the Borealis Centre, using vessel bills of lading data from TradeIntelligence/UBM Global Trade, 2011.

[3] Enviva (2011x). Press release: Dominion selects Enviva to provide woody biomass fuel to two 50-megawatt power plants. Press release, 19 Oct. 2011. <http://www.envivabiomass.com/featured/enviva-executes-agreement-with-dominion-virginia-power-for-biomass-supply>

[4] Enviva (2011z). Press release: ConocoPhillips, Enviva LP Partner to Develop Torrefied Wood Pellet Business. 21 Nov. 2011. <http://www.envivabiomass.com/featured/conocophillips-enviva-lp-partner-to-develop-torrefied-wood-pellet-business/>

[5] Enviva website; Manufacturing Operations. See: <http://www.envivabiomass.com/manufacturing-operations/>

[6] Green Circle Bio Energy Website – <http://www.greencirclebio.com/products.php> (last accessed 2.22.2013)

[/wpex]

Florida Power & Light [wpex learn more]Florida Power & Light Company Profile

Juno Beach, Florida-based Florida Power & Light (FP&L), the flagship subsidiary of NextEra Energy, is the largest regulated electric utility in Florida and also operates in Georgia. It has the third highest number of customers of any utility in the United States. The company generates approximately 26,700 megawatts of electric power each year with another 6,500 megawatts planned or under construction[1].

FP&L's power stations utilize natural gas, petroleum, and nuclear to generate electricity. The company had plans to increase solar generated electricity and, up until recently, avoided biomass.[2] Their direction has changed with the company's recent announcement to dramatically increase the use of biomass derived electricity generation from EcoGen. (<http://www.palmbeachpost.com/news/business/fpl-seeks-approval-for-biomass-contract/nThKx/>)[3]

Rapidly Bringing New Biomass Online

At the end of 2012, FP&L asked Florida state regulators to allow them to buy from three new planned biomass facilities owned by U.S. EcoGen in Clay, Martin and Okeechobee counties. These facilities will have a combined generation capacity of approximately 180 MW, meaning FP&L will rapidly go from 0 to approximately 180 megawatts of biomass derived electricity beginning by 2019. This will make the company one of the largest biomass utilizing utilities in the United States[4].

- Florida Power & Light's parent company NextEra Energy has been a leader on solar power development. Unfortunately, FP&L appears to be headed in the wrong direction by making significant investments in biomass generation.
- The company has no public policies in place to reject whole trees for its biomass energy. It is imperative that FP&L establish adequate policies to protect our climate and forests, before its rapid expansion of biomass generating capacity.
- Florida Power and Light through its purchase of power from EcoGen is supporting the industrial-scale planting of non-native eucalyptus tree energy crops to fuel its new biomass generation. Eucalyptus plantations pose a significant threat to the South's native forests and water resources.[5] Eucalyptus trees could quickly become invasive, taking over natural ecosystems.[6]

[1] SNL Financial Florida Power & Light Company Portfolio Summary. Subscription required, PDF available upon request.

[2] SNL Financial Florida Power & Light Company Portfolio Summary. Subscription required, PDF available upon request.

[3] <http://www.palmbeachpost.com/news/business/fpl-seeks-approval-for-biomass-contract/nThKx/>

[4] "FPL Seeks Approval for Biomass Contract," by Susan Salisbury, Palm Beach Post, <http://www.palmbeachpost.com/news/business/fpl-seeks-approval-for-biomass-contract/nThKx/> (last accessed 2.22.13)

[5] <http://globaljusticeecology.org/files/April,%202010%20Final%20EA.pdf> (section starts in p.59)

[6] http://www.biologicaldiversity.org/programs/public_lands/forests/pdfs/FL_Exotic_Pest_Plant_Council_comments.pdf

[/wpex]

Fram Renewable Fuels [wpex learn more]Fram Renewable Fuels LLC is based in Richmond Hill, Georgia and operates two wood pellet facilities in Baxley, Georgia and Lumber City, Georgia with a third proposed in Hazelhurst, Georgia. The Baxley facility produces 230,000 tons of wood pellets per year, Lumber City produces 120,000 tons per year[1] and the Hazelhurst facility is expected to produce 500,000 tons of pellets made from sawmill residuals and pine logs per year.[2] The Hazelhurst wood pellets will be shipped to the Port of Brunswick (GA) for export to Europe.

According to U.S. Customs data the company is shipping to customers in Belgium and Sweden.[3]

[1] "Local businessman testifies before members of congress," Baxley News Banner, February 20, 2013 – <http://www.baxleynewsbanner.com/archives/4383-Local-businessman-testifies-before-members-of-Congress.html> (last accessed 2.22.2013)

[2] "US industrial Wood Pellet Industry Announcements," Suz-Anne Kinney, Forest2Market website – <http://www.forest2market.com/blog/US-Industrial-Wood-Pellet-Industry-Announcements> (last accessed 2.22.2013)

[3] Based on analysis conducted by the Borealis Centre, using vessel bills of lading data from TradeIntelligence/UBM Global Trade, 2011.

[/wpex]

General Biofuels [wpex learn more]In 2012, California-based General Biofuels announced plans to build a 440,000 ton per year capacity wood pellet facility in Sanderson, GA that is expected to begin production in early 2014. The company will ship the wood pellets by train to the Port of Savannah.[1] The wood pellets will be produced from Georgia timberlands.[2]

The company claims to already have a long term contract with a major utility in the E.U.[3]

[1] "Deal: General Biofuels Georgia to locate in Sandersville, Investing \$60 Million," September 19, 2012, <http://www.equities.com/news/headline-story?dt=2012-09-19&val=492162&cat=material> (last accessed 2.22.2013)

[2] Ibid

[3] Ibid

[/wpex]

Georgia Biomass [wpex learn more]Georgia Biomass is a wholly owned subsidiary of RWE Innogy, a German company with offices in the United Kingdom. Georgia Biomass currently operates the world's largest wood pellet manufacturing facility in Waycross, Georgia, with a capacity to produce 750,000 tons of wood pellets per year for export to Europe.[1] The wood pellets are transported by train to the company's port facility in Savannah, Georgia.[2]

A vast majority of the wood pellets are used to co-fire coal power plants owned by RWE subsidiaries in Belgium, the Netherlands and the United Kingdom. These include the RWE Tillbury in the United Kingdom[3] and Essent in the Netherlands.[4]

Georgia Biomass Wood Supply

Georgia Biomass' Waycross facility is prepared to buy around 250 truckloads of logs every day and requires approximately 1 million metric tons of logs every year to operate at capacity.[5]

The company is relying on whole trees[6] from forests within their sourcing area and has acquired Sustainable Forestry Initiative (SFI) chain of custody certification in order to claim that their pellets are sustainably produced.[7] However, SFI certification allows some of the worst forest management practices to occur, such as large-scale clearcutting, logging of endangered forests, and the conversion of biologically diverse natural forests to plantations.

The sourcing area for Georgia Biomass includes many unique and endangered forest ecosystems including the Okefenokee Swamp, the largest blackwater swamp in North America, and intact tracks of the endangered longleaf pine. These places are home to a variety of rare plants and wildlife, including carnivorous plants, birds, and the threatened Florida Black Bear.

[1] Georgia Biomass website, <http://www.gabiomass.com/news/item/12> (last accessed 2.22.2013)

[2] <http://www.caes.uga.edu/extension/camden/anr/documents/GBLLCandSustainableForestry3-22-12.pdf> (p.4)

[3] <http://www.rwe.com/web/cms/en/1714906/rwe-npower/about-us/our-businesses/power-generation/tillbury/sustainability/>

[4] <http://biomassmagazine.com/articles/5459/pellet-pitfalls>

[5] "Largest Pellet Plant Opens at Waycross," Wood Bioenergy Magazine, May 2011, <http://woodbioenergymagazine.com/blog/2011/largest-pellet-plant-opens-at-waycross/> (last accessed 2.22.2013)

[6] <http://www.caes.uga.edu/extension/camden/anr/documents/GBLLCandSustainableForestry3-22-12.pdf> (p. 12)

[7] Georgia Biomass website – <http://www.gabiomass.com/news/item/14> (last accessed 2.22.2013)

[/wpex]

Green Circle Bio Energy [wpex learn more]Green Circle Bio Energy is a wholly owned subsidiary of the JCE Group AB of Sweden (http://www.jcegroup.se/the_jce_story/green_circle_bio_energy.aspx). Until the construction of the Georgia Biomass facility, it was the world's largest wood pellet manufacturing facility operating in Cottdale, Florida with a production capacity of 560,000 tons per year. The pellets are shipped by train to the deep water port in Panama City, Florida for export to Europe.[1]

The company has several long-term contracts with utility customers in Europe primarily for use in co-firing coal plants where wood pellets are used to replace coal, with some combined heat and power applications.[2]

Green Circle Bio Energy Wood Supply

Green Circle Bio Energy is reliant on whole trees and round wood[3] for its pellet production. Green Circle has obtained Sustainable Forest Initiative (SFI) chain of custody certification in order to claim that their pellets are sustainably produced.[4] However, SFI certification allows some of the worst forest management practices to occur, such as large-scale clearcutting, logging of endangered forests, and the conversion of biologically diverse natural forests to plantations.

The sourcing area for Green Circle Energy includes the southeastern conifer forests of north Florida[5], one of the most biologically rich ecoregions in North America. These forests contain one of the last strongholds of the endangered longleaf pine forest and threatened and endangered species such as the red-cockaded woodpecker, and gopher tortoise.[6]

[1] <http://www.greencirclebio.com/plant.php>

[2] http://www.jcegroup.se/the_jce_story/green_circle_bio_energy.aspx

[3] <http://www.greencirclebio.com/gallery.php>

[4] Green Circle Bio Energy Website, <http://www.greencirclebio.com/products.php> (last accessed 2.22.2013)

[5] <http://www.greencirclebio.com/plant.php>

[6] Southeastern Conifer Forests from WWF ecoregion website, <http://worldwildlife.org/ecoregions/na0529> (last accessed 2.22.2013)

[/wpex]

RWE [wpex learn more]RWE is one of Europe's five leading electricity and gas companies and is the top power producer in Germany, second largest power producer in the Netherlands, and third largest power producer in the United Kingdom. In 2012, RWE generated 227.1 terrawatt hours of electricity with more than 16 million customers and €53 billion in revenue.[1] RWE operates a generation portfolio that includes coal, natural gas, oil, and biomass fired facilities as well as nuclear, hydroelectric, and wind generation.[2]

Expanding investment in biomass energy

RWE is a major investor in biomass generation and owns several major biomass-fueled facilities. The largest is the company's Tilbury B Power Station in Essex on the River Thames in the UK. Tilbury was originally opened in 1969 as a coal-fired power station and operated until 2011 with a generating capacity of 1,131 MW.[3] In 2011, RWE converted Tilbury to burn 100% biomass with a total capacity of 750 MW.[4] Tilbury was scheduled to be shut down in mid-2013 under the European Union's Large Combustion Plant Directive, designed to gradually eliminate the worst polluting power plants. However, RWE is currently seeking permission to make further modifications to the facility, which, if approved, will allow it to continue burning biomass at Tilbury for another 10 to 12 years.[5]

RWE's subsidiary Essent operates a large biomass and lignite co-firing burner at Armer facility in the Netherlands with an electric generation capacity of 1,245 MW and a heat generating capacity of 600 MW.[6] Essent boasts that this facility burns more biomass than any other power plant in Europe.[7] In addition, RWE is building a large coal-biomass co-firing facility in the Netherlands[8], co-firing biomass at the Mátra lignite-fired power station in Hungary[9], and constructing new smaller scale biomass facilities in Germany[10], Italy[11], and the United Kingdom.[12]

In 2010, RWE established Georgia Biomass, a wholly owned subsidiary in Waycross, Georgia to produce wood pellets from Southern forests for export to burn in RWE's European power plants.

- Georgia Biomass is currently operating the largest wood pellet mill in the world[13] and exporting 750,000 metric tons of wood pellets to Europe each year, a process which requires 1.5 metric million tons of wood[14] Georgia Biomass is using whole trees to produce its pellets and its sourcing area includes many unique southern forest ecosystems.[15] In addition, RWE is also sourcing pellets from three major pellet producers in British Columbia, Canada, Pacific Bioenergy, Pinnacle Renewable Energy, and Premium Pellet.[16]
- RWE is also a member of the Initiative Wood Pellet Buyers group (IWPB) along with E.ON, Vattenfall, Drax PLC, and Dong. The IWPB was formed in 2010 in order to enable further commodification and global trading of wood pellets.[17]

[1] <http://www.rwe.com/web/cms/mediablob/en/1838516/data/110822/11/rwe/investor-relations/reports/RWE-Annual-Report-2012.pdf>

[2] <http://www.rwe.com/web/cms/en/1722638/rwe-generation-se/about-us/energy-mix/>

[3] <http://www.rwe.com/web/cms/en/97606/rwe-npower/about-us/our-businesses/power-generation/tilbury/>

[4] <http://www.airqualitynews.com/2013/02/15/thurrock-biomass-plant-extension-angers-campaigners/>

[5] <http://www.rwe.com/web/cms/en/1295424/rwe-npower/about-us/our-businesses/power-generation/tilbury/tilbury-biomass-conversion/>

[6] <http://www.rwe.com/web/cms/en/1771654/rwe-generation-se/locations/netherlands/amer-power-plant/>

[7] http://www.essent.eu/content/about_essent/our_activities/energy_generation/biomass/index.html

[8] <http://www.rwe.com/web/cms/en/1754834/rwe-generation-se/about-us/energy-mix/biomass/>

[9] <http://www.rwe.com/web/cms/en/113648/rwe/press-news/press-release/?pmid=4001416>

[10] <http://www.rwe.com/web/cms/en/522160/rwe-innogy/sites/power-from-biomass/germany/>

[11] <http://www.rwe.com/web/cms/en/522366/rwe-innogy/sites/power-from-biomass/italy/enna-sicily/>

[12] <http://www.rwe.com/web/cms/en/522412/rwe-innogy/sites/power-from-biomass/united-kingdom/>

[13] <http://www.gabiomass.com/about/>

[14] <http://www.rwe.com/web/cms/en/522380/rwe-innogy/technologies/biomass/procurement-international/waycross-georgia/>

[15] <http://www.caes.uga.edu/extension/camden/anr/documents/GBLLCandSustainableForestry3-22-12.pdf>

[16] <ftp://ftp.for.gov.bc.ca/HET/external/publish/Web/climate/RWE%20npower%20February%202012%20Report%20on%20Sustainability%20of%20Canadian%20Pellets.pdf> (p. 23)

[17] <http://www.laborelec.be/ENG/initiative-wood-pellet-buyers-iwpb/>

[wpex]

Southern Company [wpex learn more]Atlanta, Georgia based Southern Company is one of the largest producers of electricity in the U.S. and the largest wholesale electricity provider in the Southeast. Southern serves 4.4 million customers in the Southeast, with more than 43,000 MW of generating capacity from more than 280 coal, oil, gas and hydro generating units at 73 power plants. Southern Company Generation, a business unit of Southern Company, manages the operation of 73 fossil fuel and hydroelectric plants for Southern Company's retail customers spanning most of Alabama and Georgia, southeastern Mississippi and the Florida panhandle.[1]

Expanding use of biomass energy

Southern Company is currently burning biomass at its 100MW Nacogdoches Generating Facility in Sacul, Texas — one of the nation's largest biomass plants — and has co-fired biomass at Plant Gadsden in Alabama.[2] The company's planned fossil to biomass conversion of a 155MW unit at Plant Mitchell in Georgia is still under consideration.[3] Southern Company has also completed fossil to biomass conversion studies in Alabama, Georgia, Mississippi, and Florida. Specific facilities include: Plant Barry in Alabama; Plant Scholz in Florida; and Plant Sweatt in Mississippi.[4] Southern Company also contracts to buy biomass-generated electricity from various generators, including 7.5 MW from the Westervelt Company in Alabama.[5]

- Southern Company built the Nacogdoches Generating Facility to serve Austin, Texas, and, according to the company, its operating subsidiaries are also evaluating opportunities to convert existing fossil units to biomass over the next decade and that decisions on individual projects will depend on costs, regulatory/legislative requirements, biomass fuel availability and other site-specific factors. Southern Company is also conducting research at multiple locations into co-firing coal with different forms of biomass, including wood chips, wood pellets.[6]
- However, the company has not committed to a long-term policy to reject whole trees for its biomass energy facilities and has not provided any assurances that they will not burn whole trees in the future. Expert analyses warn that biomass burners will likely start with residuals, exhaust that limited resource and then move to whole trees. It is imperative that Southern establish adequate policies to protect our climate and forests, expanding its biomass generating capacity.

[1] Southern Company Generation: <http://www.southerncompany.com/generation/index.aspx>

[2] <http://www.southerncompany.com/corporate-responsibility/energy-innovation/building.aspx>

[3] <http://www.georgiapower.com/about-energy/advancements.cshhtml>

[4] <http://www.southerncompany.com/planetpower/pdfs/2010smartEnergy.pdf>

[5] <http://www.southerncompany.com/corporate-responsibility/energy-innovation/building.aspx>

[6] Southern Company website: <http://www.southerncompany.com/corporate-responsibility/energy-innovation/building.aspx>

[/wpex]

TVA [wpex learn more]Knoxville, Tennessee-based Tennessee Valley Authority (TVA) provides electricity to 9 million customers in parts of seven southeastern states: Alabama, Georgia, Kentucky, Mississippi, North Carolina, Tennessee and Virginia. The U.S. government-owned corporation currently has a total generating capacity of more than 39,789 megawatts (MW), utilizing coal, nuclear, hydroelectric, solar, wind, and landfill gas, with an additional 3,190 MW currently planned or under construction. It sells electricity to 155 local power companies and 57 directly served industries and federal facilities.[1]

Experimenting with biomass energy

TVA is considered a pioneer in biomass co-firing, with pilot projects dating back to the early 1990's at three of its coal-fired stations: Kingston, Tennessee, Allen, Tennessee, and Colbert, Alabama. In the late 1990s, TVA began commercial operations with biomass at the Colbert plant, which began using 3 percent biomass.[2] Today, TVA co-fires a small amount of biomass at its small 3 MW Colbert Fossil and Allen plants and purchases 70MW of wood waste generation. According to the company's website, it is investing the use of biomass for direct generation of electricity.[3] In 2010, TVA announced it would convert two units at its 80 MW coal facility in Shawnee, Kentucky to biomass by 2017.[4]

TVA included up to 490 MW of biomass generation and landfill gas generation as resource options to be evaluated in the 2011 Integrated Resource Plan (IRP). Most but not all of this biomass is generated through Power Purchasing Agreement. The company also included the conversion of existing coal-fired units to biomass fired units and co-firing biomass with coal at existing coal-fired units as IRP resource options to be evaluated. According to the IRP, TVA is currently performing biomass fuel availability surveys in the region, and a comprehensive study is underway to assess the feasibility of converting one or more coal-fired units to biomass fuel.[5]

[1] SNL Financial; Tennessee Valley Authority Plant Portfolio Summary, Current Capacity Summary. Subscription required, PDF available upon request.

[2] American Public Power Association, "Making the Most of Biomass"; June 2011 issue: <http://www.publicpower.org/Media/magazine/ArticleDetail.cfm?ItemNumber=32175>.

[3] Tennessee Valley Authority; Technology Research Area: Biomass Direct Generation: http://www.tva.com/environment/technology/biomass_direct.htm

[4] Tennessee Valley Authority: <http://www.tva.com/sites/shawnee.htm>

[5] Integrated Resource Plan; TVA's Environmental & Energy Future, March 2011: http://www.tva.com/environment/reports/irp/pdf/Final_IRP_complete.pdf

[/wpex]

Westervelt Renewable Energy [wpex learn more]Westervelt Renewable Energy LLC is an operating unit of Tuscaloosa, Alabama-based Westervelt Company. The company broke ground on a new wood pellet facility near Aliceville, Alabama with an expected initial production capacity of 280,000 tons per year with plans to double to 560,000 tons per year in phase 2.[1] The pellets will be sent by barge down the Tennessee-Tombigbee Waterway to the Port of Mobile for export to Europe.[2]

The company claims to already have long term contracts in the works with utilities in the European Union, including with German utility E.ON. [3]

[1] <http://www.westervelt.com/westervelt-newsroom/news.cfm/pellet-production-facility-names-engineering-partner> (last accessed 2.22.2013)

[2] <http://www.tuscaloosaneews.com/article/20111026/NEWS/111029822/1007?p=2&tc=pg> (last accessed 2.22.2013)

[3] Ibid

› [Forests & Climate](https://www.dogwoodalliance.org/our-work/forests-climate/) (https://www.dogwoodalliance.org/our-work/forests-climate/).

✓ [Our Forests Aren't Fuel](https://www.dogwoodalliance.org/our-work/our-forests-arent-fuel/) (https://www.dogwoodalliance.org/our-work/our-forests-arent-fuel/).

[Platform & Endorsers](https://www.dogwoodalliance.org/our-work/our-forests-arent-fuel/biomass-platform-and-endorsers/) (https://www.dogwoodalliance.org/our-work/our-forests-arent-fuel/biomass-platform-and-endorsers/).

[Company Profiles](https://www.dogwoodalliance.org/our-work/our-forests-arent-fuel/company-profiles/) (https://www.dogwoodalliance.org/our-work/our-forests-arent-fuel/company-profiles/).

› [Wetland Forests](https://www.dogwoodalliance.org/our-work/wetland-forests-initiative/) (https://www.dogwoodalliance.org/our-work/wetland-forests-initiative/).

› [Environmental & Social Justice](https://www.dogwoodalliance.org/our-work/environmental-justice/) (https://www.dogwoodalliance.org/our-work/environmental-justice/).

[Paper Campaign](https://www.dogwoodalliance.org/our-work/paper-campaign/) (https://www.dogwoodalliance.org/our-work/paper-campaign/).

[Join the Movement › \(/sign-up/\)](#)

[Donate Today › \(/donate/\)](#)