

Bio-Energy & Ethanol Projects as of October 12, 2011

Note: Highlands Ethanol (Vercipia), Number 3 below, recently received an extension of their Air Construction Permit until December 31, 2014.

Projects for which final permits have been issued.

1. FB Energy –Biomass to Energy
 - a. Fuel: Waste Wood and Energy Crops
 - b. Process: Fluidized Bed Boiler
 - c. Power: 60 MW
 - d. Location: Manatee County
 - e. Link 1: www.dep.state.fl.us/Air/emission/bioenergy/port_manatee.htm
2. ADAGE – Bio-Energy Production
 - a. Fuel: Woody Biomass
 - b. Process: Fluidized Bed Boilers
 - c. Power Production: 55.5 MW
 - d. Location: Hamilton County
 - e. Link: www.dep.state.fl.us/Air/emission/bioenergy/adage.htm
3. Highlands Ethanol – Ethanol Production
 - a. Feedstock: Energy Cane and Other Crops
 - b. Fuel: Stillage from Feedstock Processing & Natural Gas (Startup & Stabilization)
 - c. Process: Grate Boilers
 - d. Commercial Product: Cellulosic Ethanol (~40 Million Gallons per Year)
 - e. Location: Highlands County
 - f. Link: www.dep.state.fl.us/Air/emission/bioenergy/highlands.htm
4. St. Lucie County – Renewable Energy Project
 - a. Fuel: Municipal Solid Waste (MSW)
 - b. Process: Plasma Arc Gasification
 - c. Power Production: 18 MW
 - d. Location: St. Lucie County
 - e. Link: www.dep.state.fl.us/Air/emission/construction/geoplasma.htm
5. University of Florida/Buckeye/Myriant – Research and Demonstration Plant
 - a. Status: Exempted from Permitting
 - b. Feedstock: Cellulosic Biomass
 - c. Products: Cellulosic Ethanol and derivative products
 - d. Location: Taylor County at Buckeye Pulp and Paper Plant
 - e. <http://news.ifas.ufl.edu/2009/06/16/ufifas-buckeye-technologies-and-myriant-announce-next-generation-cellulosic-ethanol-research-and-demonstration-plant/>

6. American Renewables/Gainesville Renewable Energy Center – Bio-Energy Production
 - a. Contract with Gainesville Regional Utilities (GRU)
 - b. Fuel: Woody Biomass
 - c. Process: Fluidized Bed Boilers
 - d. Power Production: 100 MW
 - e. Location: GRU Deerhaven Generation Station
 - f. Link 1: www.dep.state.fl.us/Air/emission/bioenergy/gainesville.htm
 - g. Link 2: www.amrenewables.com/our-projects/gainesville-renewable-energy-center.php
7. INEOS BioEnergy – Ethanol Production & Energy Generation
 - a. Feedstock: Vegetative Waste and Construction and Demolition Debris
 - b. Process: Gasification and Syngas Digestion
 - c. Power Production: Approximately 5 MW (2 MW Net to Grid)
 - d. Commercial Product: Ethanol
 - e. Location: Indian River County
 - f. Link 1: www.dep.state.fl.us/Air/emission/bioenergy/indian_river.htm
 - g. Link 2: www.ineosbio.com
8. Southeast Renewable Fuels – Ethanol Production & Energy Generation
 - a. Feedstock: Sweet Sorghum
 - b. Process: Distillation and Fermentation with Boiler Providing Heat and Power
 - c. Power Production: Up to 30 MW (Net to Grid)
 - d. Commercial Product: Ethanol(~22 Million Gallons per Year)
 - e. Location: Hendry County
 - f. Link 1: www.dep.state.fl.us/Air/emission/bioenergy/southern_renewables.htm
 - g. Link 2: www.serenewablefuels.com/
9. Highland's EnviroFuels, LLC - Riverview – Ethanol Production & Energy Generation
 - a. Feedstock: Sweet Sorghum and Sugar Cane
 - b. Process: Distillation and Fermentation with Boiler Providing Heat and Power
 - c. Power Production: Up to 30 MW (Net to Grid)
 - d. Commercial Product: Ethanol(~36 Million Gallons per Year)
 - e. Location: Highlands County
 - f. Link 1: www.dep.state.fl.us/air/emission/bioenergy/highlands_envirofuels_llc.htm
 - g. Link 2: www.usenvirofuels.com/Plans/default.asp
10. Palm Beach Renewal Energy Facility Number 2
 - a. Feedstock: Municipal Solid Waste (3,000 tons per day)
 - b. Power Production: 90 to 100 MW
 - c. Location: Palm Beach County
 - d. Link: www.dep.state.fl.us/Air/emission/bioenergy/palm_beach.htm

11. Northwest Florida Regional Energy Center (NWFREC) – Woody Biomass to Energy
 - a. Fuel: Woody Biomass and/or Fuel Crops
 - b. Process: Gasification in fluidized bed
 - c. Power: ~ 55 MW
 - d. Location: Gulf County (Port St. Joe)
 - e. Link 1: www.dep.state.fl.us/air/emission/bioenergy/northwest_renewable.htm
 - f. Link 2: www.biggreenenergy.com/Default.aspx?tabid=4314

Projects for which applications have been received

12. Sunshine Way Ethanol Plant Project
 - a. Status: Application Under Review by Environmental Protection Commission of Hillsborough County
 - b. Feedstock: Corn
 - c. Process: Distillation and Fermentation with Natural Gas Boiler Providing Heat and Power
 - d. Commercial Product: Ethanol(200 Million Gallons per Year)
 - e. Location: Hillsborough County
13. Central Power & Lime Biomass Project
 - a. Status: Application Under Review (Application Received on September 26, 2011)
 - b. Fuel: Clean Woody Biomass
 - c. Process: Re-Powering of Coal-Fired Boiler to Biomass Fired-Boiler
 - d. Power: Derated from 125 MW to 70 to 80 MW as a Result of this Project
 - e. Location: Brooksville, Hernando County
 - f. Link: www.dep.state.fl.us/air/emission/bioenergy/central_power.htm

Projects for which applications have been received and then withdrawn.

14. ADAGE – Bio-Energy Production
 - a. Status: Application Withdrawn on March 19, 2010
 - b. Fuel: Woody Biomass
 - c. Process: Fluidized Bed Boilers
 - d. Power Production: 55.5 MW
 - e. Location: Gadsden County
 - f. Link 1: www.dep.state.fl.us/Air/emission/bioenergy/adage_gadsden.htm
 - g. Link 2: www.adagebiopower.com/florida/gadsden/

Other projects the Department is aware of.

15. Vision FLI, LLC – Sweet Sorghum Ethanol Production
 - a. Status: Pre-application discussions with Department
 - b. Feedstock: Sweet Sorghum
 - c. Fuel: Sweet Sorghum Bagasse
 - d. Process: Steam Production from Boilers and Fermentation
 - e. Power Production: 40 MW
 - f. Commercial Product: Ethanol (70 MGY)

- g. Location: Osceola County (Latt Maxcy Property)
 - h. Web link: www.visionpowersystems.com/
16. United States Envirofuels, LLC – Sugar to Ethanol
- a. Fuel: Sweet Sorghum, Sugar Cane and Byproducts
 - b. Process: Fermentation
 - c. Power: 5 MW
 - d. Products: Ethanol, CO2 and Bio-Fertilizer
 - e. Location: Highlands County (Venus)
 - f. Web link: www.usenvirofuels.com/Plans/default.asp
17. Agri-Source Fuels, LLC – Biodiesel Production
- a. Feedstocks: Animal Fats & Vegetable Oils
 - b. Process: Transesterification
 - c. Product: Biodiesel
 - d. Location: Escambia County (Pensacola)
 - e. Web link: www.asfuels.com/
18. BRI Energy – Ethanol Production
- a. Fuels: Cellulous Material
 - b. Process: Gasification
 - c. Power: 24 MW
 - d. Product: Ethanol
 - e. Location: Leon County (Tallahassee)
 - f. Web link: www.brienergy.com/
19. Green Power Systems, LLC – Waste to Energy
- a. Fuels: Municipal Solid Waste
 - b. Process: Plasma Arc
 - c. Power: 20 MW
 - d. Location: Leon County (Tallahassee)
 - e. Web link: www.greenpowersystems.com/index.htm
20. Gulf Coast Energy of Walton, LLC – Ethanol & Biodiesel Production
- a. Fuel: Wood Waste (Ethanol) & Chicken Fat and Soybean Oil (Biodiesel)
 - b. Processes: Gasification (Ethanol) & Transesterification (Biodiesel)
 - c. Products: Ethanol, Biodiesel, Methanol, Glycerin, Propanol & Butanol
 - d. Location: Walton County (Mossy Head)
 - e. Web link: www.gulfcoastenergy.net/
21. LS9 Renewable Petroleum
- a. Status: Purchased BPT site with permitted boilers in Okeechobee County
 - b. Process: Possibly fermentation transformation sugar cane and other feed stocks to biodiesel
 - c. Link 1: www.LS9.com
 - d. Link 2: www.dep.state.fl.us/air/emission/aces/ACES_facility.asp?txtFacID=6767