Below are ten projects relevant to the development of biorefinery technologies that have been awarded by the U.S. Department of Energy.

Section: BIOREFINERIES
Active U.S. Department of Energy Biorefinery Projects as of September 2011

Project name	Lead Partner/ Project Period	Project cost	Project Description and Status
Integrated Biorefinery for Conversion of Biomass to Ethanol, Power and Heat	Abengoa Bioenergy	N/A	Construction of a 1,200 tons per day commercial biorefinery producing cellulosic ethanol and also power and heat to operate the facility. Agricultural residues would be converted via enzymatic hydrolysis to sugars and fermented into cellulosic ethanol. Agricultural residues along with ethanol plant residual solids and waste water treatment biogas, will be used to generate the necessary heat and power to make the facility energy self-sufficient. Current Status: Award Date: September 2007. Record of Decision was issued January 2011 and supplementary analysis issued July 2011.
Design, construct, build and operate a commercial processing plant as part of an integrated biorefinery to produce lignocellulosic ethanol primarily from corn cobs.	POET Project Liberty	N/A	Demonstration of the benefits of integrating an innovative lignocellulose-to-ethanol biochemical process into an existing dry-grind corn processing infrastructure on a commercial scale. 700 dry metric tonnes per day of lignocellulose, primarily from corn cobs, will be processed to produce 25 million gallons of lignocellulosic ethanol per year. Up to 80% of the corn dry mill's existing natural gas use will be displaced through renewable, alternative energy. Current Status: Award Date: September 2008.
A commercial-scale biorefinery converting biomass into biofuels and power.	Range Fuels	N/A	Plant uses a thermo-chemical process to combine pressure, heat, steam and biomass to produce synthesis gas, or syngas, a mixture ofhydrogen and oxygen that can be converted to a wide range of products. Current Status: Award Date: November 2007.
Demonstration Plant - Biomass to Fischer-Tropsch Green Diesel	Flambeau River Biofuels	N/A	Construction and operation of a thermal gasification and gas-to-liquids plant ingegrated into the Park Falls Mill to produce green diesel for transportation fuel, waxes, and heat and power that replaces natural gas. The plant will produce 1,190 barrels per day of clean, zero sulfur renewable biofuels, waxes, and heat and power that replaces existing natural gas use from forest biomass. Current Status: Award Date: September 2008
Integrated Biorefinery Demonstration Plant producing Cellulosic Ethanol and Biochemicals from woody biomass.	Lignol Innovations, Inc	N/A	Plant for the continuous production of cellulosic ethanol, high purity lignin and furfural from hardwoods. Plant will process 100 tpd of woody biomass, initially local hardwood which is plentiful, and in future test campaigns, softwood and agricultural residues. Current Status: Award Date: TBD
Mascoma Frontier Biorefinery Project	Mascoma Corp.	N/A	Project would initially produce up to 40 million gallons per year of denatured enthanol from approximately 1,300 dry metric tonnes per day of cellulosic materials consisting primarily of wood wastes. Current Status: Award Date: February 2009
NewPage: Project Independence	NewPage Corp.	N/A	Construct & operate a thermal gasification and gas-to-liquids plant integrated into Wisconsic Rapids Mills to replace natural gas use and produce liquid biofuels that will be converted into renewable diesel. Current Status: Award 1 Sept. 2008; Award 2 TBD.
Pacific Ethanol	Pacific Ethanol Inc.	N/A	Design, construct and operate a feedstock flexible demonstration facility producing cellulosic ethanol. Capacity of 2.7 mill gallons of ethanol per year. Current Status: Operational 2009
Red Shield Acquisition	Red Shield Acquisition	N/A	Construct integrated biorefinery that will extract hemicelluloses from wood chips to make biofuel and other specialty chemicals at existing pulp mill. Cellulose & lignin will be maintained in the pulp manufacturing process. Facility will produce 1.5 million gallons per year of Current Status: Award Date: January 2010
Verenium: Jennings 1.4 MGY Demonstration Plant	Verenium Corp.	N/A	Project is operating the demonstration facility to validate findings from the pilot plant operation in the production of cellulosic ethanol from purpose-grown energy crops and agricultural residuals. This demonstration facility is fully integrated from feedstock pretreatment to recovery and distillation of the biofuel product. Current Status: Award Date: September 2008

Source:
U. S. Department of Energy, Energy Efficiency and Renewable Energy, Biomass Program, September 2011,
http://www1.eere.energy.gov/biomass/factsheets.html
Websites of all companies serving as project leaders or key partners on the DOE funded projects.