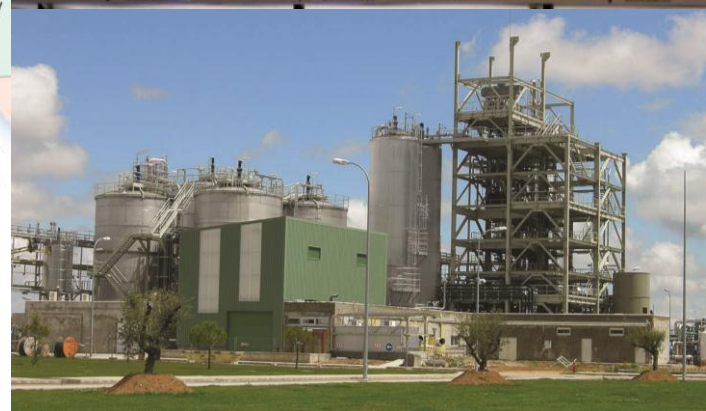


DOE Perspectives on Advanced Hydrocarbon-based Biofuels

U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy



U.S. Department of Energy
Office of Biomass Program
November 15, 2012

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- Objective:** Production of hydrocarbon fuels at pilot or demonstration scale facilities that meet military specifications for JP-5 (jet fuel primarily for the Navy), JP-8 (jet fuel primarily for the Air Force), or F-76 (diesel). Two topic areas:
 - Algal biofuels production (micro, macro, cyanobacteria, heterotrophic)
 - Technologies that utilize other renewable and waste feedstocks
- Value:** These topic areas support the Navy/DOE/USDA MOU by funding technologies that are ready for pilot/demonstration scale testing. Projects will allow DOE, developers, and investors to obtain accurate data on cost of production.
- Scale:** 1 to 50 dry tons/day biomass feedstock input to produce 3,500 to 400,000 gallons/year of hydrocarbon fuels
- TARGET AUDIENCE:** Private industry, national laboratories and universities

Scale	Feed in (dry tons/day)	Yield (gallons/dry ton)*	On-stream Time (days/year)	Production (million gallons/year)
Pilot	1	35	100	0.0035
Demonstration	50	40	200	0.4
Commercial	500	45	350	8

- \$20 million in FY12 (of which \$10 million will be for algae technologies) and \$20 million in FY13 (requested)
- Industry cost share requirement would be minimum 1:1
- FOA will allow funding of:
 - New pilot/demonstration scale facility construction and operation
 - Retrofit of existing pilot/demonstration scale facility and operation
 - Operation of existing pilot/demonstration scale facility
- Eligible feedstocks
 - Lignocellulosic biomass (agricultural residues, forestry residues, urban wood waste/mill residues, organic fraction of separated municipal solid waste, energy crops)
 - Algae (micro, macro, cyanobacteria, heterotrophic)
 - Systems making use of CO₂ from any source including fossil sources (e.g. flue gas to cyanobacteria to fuel or products)