ENVIRONMENTAL ENTREPRENEURS

www.e2.org

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E2 Comment on the Northeast/Mid-Atlantic Clean Fuel Standard Economic Analysis

Environmental Entrepreneurs (E2) (www.e2.org) stands in support of the Clean Fuels Standard (CFS) and the economic benefits that it would bring to our region. We strongly believe that this standard will improve our economy, spur innovative new industries, and give the region a competitive advantage in the emerging clean energy economy.

E2 represents a national community of over 800 independent business leaders, many in the Northeast and Mid-Atlantic (NE/MA) region, who believe in protecting the environment while building economic prosperity. E2 is widely recognized as a resource and an independent voice for understanding the business perspective on environmental issues. As a group of entrepreneurs, investors and professionals we collectively manage over $90 billion of venture capital and private equity, have started well over 1100 businesses, which in turn have created over 500,000 jobs.

The "Biofuels Future" Scenario is Possible

In 2011, E2 aggregated and analyzed the production estimates of advanced biofuel companies in the United States and Canada through 2015, as well as public and private investments in companies and production facilities. We looked for evidence that each company's projection was possible through significant investment, feedstock procurement contracts, facility construction plans, etc.

We found evidence that the combination of market forces and public policies has put the advanced biofuel industry on a path where it should be able to produce a significant amount of low-carbon fuel in the next few years, thereby making it possible to deliver sufficient fuel to meet the Northeast/Mid-Atlantic CFS.

Currently there are 240 active advanced biofuel companies in the United States and Canada, producing over 400 million gallons of low-carbon (24 g CO_2e/MJ or less) fuel in 2011. By 2015, these companies are showing evidence of producing over 3 billion gallons of fuel per year.

INDUSTRY PRODUCTION ESTIMATES (MGPY)		
Ethanol - Cellulosic	7.45	539.14
Biodiesel (Non-Soy)	350.00	575.00*
Diesel - Renewable	77.69	525.84
Gasoline - Renewable	0.13	157.83
Multiple Renewable (Gasoline, Diesel)	0.74	875.68
Other (Biobutanol, Biomethane, Syngas)	1.01	510.98
TOTAL	**437.03**	**3,184.47**

**Estimate based on RFS2 incremental increases*

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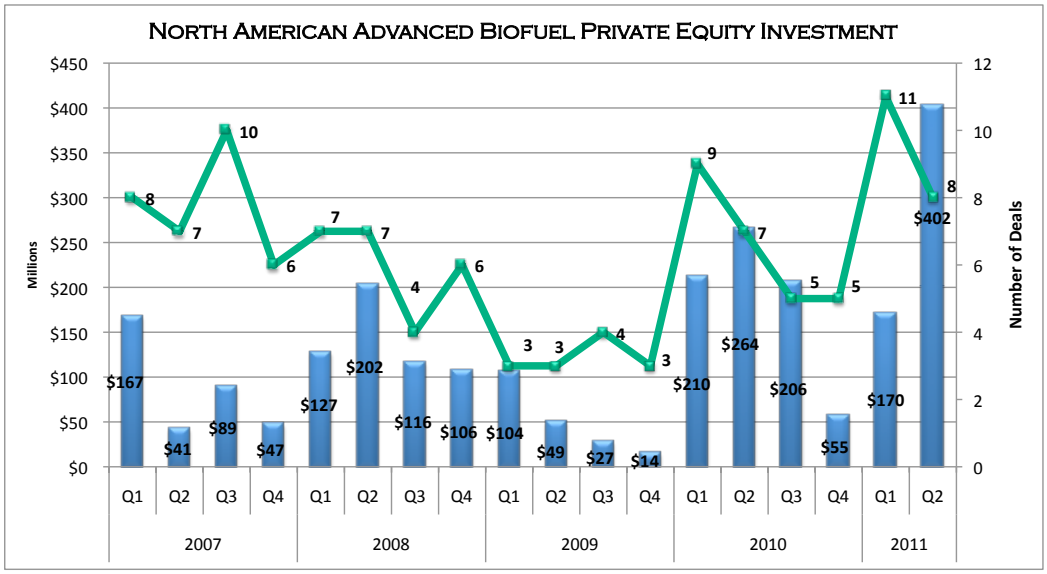
NESCAUM's "Biofuels Future" scenario requires 300 million gallons of additional ethanol and 300 million gallons of new biodiesel, above Renewable Fuels Standard (RFS2) requirements in 2015. For biodiesel production, the RFS2 requirement tends to dictate actual production. This demonstrates the importance of these regulations within the market. With the introduction of the CFS, there will be additional biodiesel demand, which producers can meet with the current capacity of their facilities. Ethanol production shows a true technological evolution in the marketplace. While our data shows that ethanol production may fall short of the CFS target, the increasing market share of renewable drop-in fuels will account for any differences. Given their lower CI value (24 g CO_2e/MJ or less), ease of integration into the existing infrastructure, and high energy content over ethanol, these fuels are of increasing interest to the fuel market and its investors. The total domestic renewable drop-in fuel production (renewable diesel, renewable gasoline and multi-fuel renewable) will eclipse that of both biodiesel and cellulosic ethanol by 2015 at 1.5 billion gallons. With the CFS, the Northeast and Mid-Atlantic can ensure its share of the 1.5 billion gallons.

While it is prudent for an organization such as NESCAUM to only track currently available fuels, one of the stated goals of the program is to spur innovation in fuel technologies, some of which are new to market. Our market analysis shows evidence that the CFS is meeting its stated goal, demonstrated by the significant scaling activities of these new fuels. A conservative economic analysis cannot count fuels that are not yet produced at scale, however E2's business expertise and research has shown that fuels such as renewable drop-in diesel and gasoline will comprise a significant portion of the low-carbon fuel mix by 2022.

The evidence of this production is in the Initial Public Offerings. In 2011 alone, there have been four successful IPOs from advanced biofuel producers, whose production projections comprise the majority of E2's renewable drop-in numbers. In each company's S-1, there is a clearly delineated plan for establishing facilities and scaling production.

Aside from the public offerings, the amount of investment in advanced biofuels provides further confirmation to the scaling potential of these fuels. Investors and companies commonly refer to policies such as the CFS and the federal RFS2 as factors that are increasingly pushing companies toward producing advanced biofuels with low CI values. Advanced biofuel companies access both private equity and public funding for financial support. Venture capitalists have invested at least $3.1 billion worldwide, or $2.4 billion in active North American companies from 2007 through the second quarter of 2011 and according to publicly available data. Domestic quarterly investments are summarized in the graph below, using data provided by the Cleantech Group.



Northeast/Mid-Atlantic Gross Regional Product

While domestic fuel production will help the CFS region reduce its greenhouse gas emissions and dependency on foreign oil, the economic analysis shows the region stands to benefit from local production of transportation fuels. Focusing on local production, there are 48 active biofuel companies headquartered in the Northeast/Mid-Atlantic region that are producing nearly 300 million gallons of fuel. These companies estimate that given appropriate policy and financing mechanisms, they could produce upwards of 450 million gallons per year by 2015. There are another 12 companies in the region whose primary business models support the production of advanced biofuels. Detail of the biofuel companies' production estimates is attached for your reference.

The adoption of a regional CFS will provide a unique opportunity to bolster these companies and create a market for new entrants. As the economic analysis demonstrates, local production contributes to a thriving local economy. E2 believes that instead of alternative approaches, the NE/MA should consider complementary programs to assure in-region production. One such example is an off-take agreement by any Northeast/Mid-Atlantic state fuel procurement agency.

Off-take agreements would involve a state fuel procurement agency soliciting bids for locally produced, low-carbon fuel. Such a program would provide: (1) economic advantages to the agencies; (2) stimulus to local farming and manufacturing operations and the jobs created by them; and (3) access to cleaner fuels in the NE/MA, helping to diversify off of petroleum fuels for transportation.

A low-carbon fuel RFP could solicit fuels produced from local sources at a certain carbon content, and guarantee a fixed price for a set term. The contracting agency would owe no money until the fuel is delivered, but such a purchase agreement would give a biofuel manufacturer access to new capital and an incentive to locate the facility in-region.

Upon release of the NE/MA CFS framework, E2 will explore additional market-based programs to complement the CFS to spur regional production of biofuels.

As the home to leading universities and colleges, significant venture capital, and robust feedstock sources, the Northeast/Mid Atlantic has all the building blocks to support a thriving clean fuels sector.

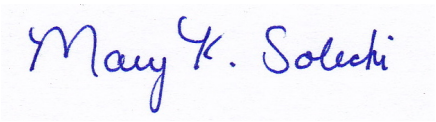
Leader or laggard?

In the next 50 years our transportation sector will almost certainly reduce its dependence on fossil fuels. The question is whether our nation, and in particular our region, will become an innovative leader in the new low carbon economy or continue to send our precious dollars abroad to buy fossil fuels or the advanced batteries and biofuels of the future. The Clean Fuels Standard can be a lynchpin of moving us into a leadership position.

Thank you for consideration of the E2 business perspective on this issue.

Sincerely,

Berl Hartman
Director, E2 New England



Mary Solecki
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Encl: Northeast/Mid-Atlantic Advanced Biofuel Producers list

Northeast/Mid-Atlantic Advanced Biofuel Producers						
Company	**State**	**Fuel Type**	**2011 Production (MGPY)**	**2015 Projected Capacity (MGPY)**	**Feedstock**	**Website**
Adirondack Biodiesel	NY	Biodiesel	1.5	1.5	Waste Oils	
American Biodiesel Energy	PA	Biodiesel	4.0	4.0	Multi Feedstock	www.americanbiodieselenergy.com
American Energy Independence	NH	Diesel-Renewable			biomass	http://www.amenico.com
Baker Commodities	MA	Biodiesel	25.0	25.0	Multi Feedstock	www.bakerscommodities.com
BARD	PA	Biodiesel			algae	www.bardllc.com
Batchelder Biodiesel Refineries Nashua	NH	Biodiesel			Waste Oils	http://www.bbr-llc.com
Baystate Biofuels	MA	Biodiesel			Waste Oils	www.baystatebiofuels.com
Biodiesel of Pennsylvania	PA	Biodiesel	1.5	1.5	Multi Feedstock	www.biodieselpa.com
BioDiesel One	CT	Biodiesel	4.0	4.0	Multi Feedstock	http://biodieseloneltd.com/
BioPur	CT	Biodiesel	1.0	1.0	Multi Feedstock	www.biopurinc.com
Buffalo Biodiesel	NY	Biodiesel			waste oils	www.buffalobiodiesel.com/
Butamax	DE	Other-Biobutanol		160.5	corn	www.butamax.com
Cape Cod BioFuels	MA	Biodiesel	0.5	0.5	Waste Oils	www.capecodbiofuels.com
CGF Clayton	DE`	Biodiesel	11.0	11.0	Multi Feedstock	www.cgfcorp.com
Garden State Ethanol	NJ	Ethanol			algae	
Greenleaf Biofuels	CT	Biodiesel			Waste Oils	www.greenleafbiofuels.com
Helios	PA	Ethanol	0.03	0.03	cellulose	
HERO BX	PA	Biodiesel	49.0	49.0	Multi Feedstock	www.herobx.com
Interstate Biofuels	NY	Biodiesel			Waste Oils	www.interstatebiofuels.com
Joule Biotechnologies	MA	Gas – Renewable	0.01	0.01	CO2	http://www.jouleunlimited.com/
Keystone BioFuels	PA	Biodiesel	60.0	60.0	Waste Oils	www.keystonebiofuels.com
Lake Erie Biofuels	PA	Biodiesel	45.0	45.0	Multi	www.lakeeriebiofuels.com
Lantic Green Energy	RI	Biodiesel	0.5	0.5	Waste Oils	
Maine Standard Biofuel	ME	Biodiesel	0.5	0.5	Yellow Grease	www.mainestandardbiofuel.com
Mascoma	NH	Ethanol	0.4	40.2	wood chips	www.mascoma.com
Mass Biofuel	MA	Biodiesel				www.massbiofuel.com
MBP Bioenergy	MA	Biodiesel	0.5	0.5	Waste Veg Oil	
Metro Fuel Oil Corp	NY	Biodiesel				www.metroenergy.com
Newport Biodiesel	RI	Biodiesel	0.5	0.5	Recycled Cooking Oil	www.newportbiodiesel.com

Northeast Biodiesel	MA	Biodiesel			Waste Oils	www.northeastbiodiesel.com/
Northern Biodiesel	NY	Biodiesel	20.0	20.0	Multi Feedstock	www.northernbiodiesel.com
Novogy	MA	Ethanol			Pulp waste	http://www.novogyinc.com/
Pennslyvania Biodiesel	PA	Biodiesel	25.0	25.0	Multi Feedstock	
Primus Green Energy	NJ	Gas - Renewable	0.02	0.02	cellulose	http://www.hclcleantech.com/technology.htm
Qteros	MA	Ethanol			Multi-feedstock	www.qteros.com
RECO Biodiesel	VA	Biodiesel	10.0	10.0	Multi Feedstock	www.recobio.com
Red Birch Energy	VA	Biodiesel	2.5	2.5	Multi Feedstock	www.redbirchenergy.com
Shenandoah Agricultural Products	VA	Biodiesel	0.3	0.3	Recycled Cooking Oil	
Simply Green Biofuels	NH	Biodiesel				www.seacoastbiofuels.com
Synergy Biofuels	VA	Biodiesel	3.0	3.0	Multi Feedstock	www.synergybiofuels.com
TMT Biofuels	NY	Biodiesel	0.3	0.3	Recycled Cooking Oil	
Trenton Fuel Works	NJ	Diesel-Renewable	0	3.87	mixed cellulose	http://www.trentonfuelworks.com/
Tri-State Biodiesel	NY	Biodiesel			Waste Oils	www.tristatebiodiesel.com
United Oil Company	PA	Biodiesel	5.0	5.0	Multi Feedstock	www.unitedb100.com
US Alternative Fuels Corp.	PA	Biodiesel				
Virginia Biodiesel Refinery	VA	Biodiesel	7.0	7.0	Multi Feedstock	www.virginiabiodiesel.com
White Mountain Biodiesel	NH	Biodiesel	5.5	5.5	Multi Feedstocks	www.whitemountainbiodiesel.com
Zeropoint	NY	Gas - Renewable			woodwaste	www.zeropointcleantech.com
TOTAL			**283.5**	**487.6**		