



# CHESAPEAKE BAY FOUNDATION

---

## *Saving a National Treasure*

**Testimony of  
Matthew J Ehrhart, Pennsylvania Executive Director  
Chesapeake Bay Foundation**

**Before the Senate Environmental Resources & Energy Committee  
Senate of Pennsylvania  
19 September 2007**

Thank you Senator White, Senator Musto, and members of the Committee for the opportunity to speak this morning. On behalf of the Chesapeake Bay Foundation (CBF), its 190,000 members, and particularly the 12,000 Pennsylvania members, I express our gratitude for the opportunity to discuss our perspective on the issue of biofuels and Governor Rendell's proposed initiatives.

The Chesapeake Bay Foundation ardently supports the development of alternative fuels. Cleaner alternative liquid fuels not only address energy independence and carbon issues, but promise less pollutants that impact our water and air quality. Of particular interest to CBF are nitrogen compounds, which are significant contributors to the Chesapeake Bay's impairment.

As with many issues, decisions on biofuels do not exist in a vacuum. Our decisions on this issue interact with federal decisions and impact local decisions. The transition to alternative fuels will impact air quality, water quality, economic drivers and outcomes for numerous Pennsylvania business sectors, and the State's competitive position in the future. We must do our best to fully understand the costs and benefits of each technology and to develop the best long term strategy possible, using transitional components to the best advantage. It behooves us to make informed thoughtful decisions as we move forward.

At this point in the biofuels discussion, it is extremely important for states to play an active role in the federal discussion. The new Federal Farm Bill is currently under negotiation – hundreds of millions of dollars will be spent on agriculturally related bioenergy initiatives. Pennsylvania must clearly communicate its priorities to its federal delegation, and lobby hard to get outcomes that benefit Pennsylvania. There will be a host of initiatives and policies over the next 5-10 years that PA must be engaged in.

As we look at liquid fuels we must remain aware of longer term transportation options which may be fundamentally different. While many have pushed expectations of hydrogen vehicles into the next decade, existing hybrid vehicle technology is being

**INFORMING • ENGAGING • EMPOWERING**

adapted to plug-in capability right now. It may be feasible in the very near future to charge plug-in hybrids using our off-peak electric generation capacity. This system would establish very cost effective travel for the most of the public's commuting radius. These types of opportunities must influence the long term strategies and transitions that we put in place.

While I will not claim to be an expert on biofuels, CBF has been actively engaged in the national discussion on ethanol and biodiesel from a water quality perspective and a vested interest in keeping well managed agriculture viable on Pennsylvania's landscape. First, I think it's important to note the potential biofuel holds for the agricultural sector. The opportunity to grow crops with a significant profit margin would be a welcome reprieve from years of marginal income. However, as has often been noted, higher prices for corn due to an ethanol market will increase feed prices, impacting the livestock industry. While I certainly can't predict the balance, it will be important to address the variety of perspectives that exist.

### **Ethanol: Opportunities and Concerns**

The United States Department of Agriculture estimates that Pennsylvania has an additional 100,000 acres of corn this year – ostensibly, most of this in the expectation of ethanol driven high corn prices. While corn tends to be a relatively inefficient user of nitrogen, we do know that we can grow corn in a manner that is protective of water quality. We just don't have a very good estimate of how that new 100,000 acres will be grown. Will it be grown on marginal or sloped land that was previously out of production? Will higher fertilizer application rates be utilized as individuals seek to maximize production and profit? A lot of questions have been raised. Reports recently published by the Chesapeake Bay Commission (CBC) and the Mid- Atlantic Regional Water Quality Water Program document many of the potential problems associated with increased corn production for ethanol. The reports also document many of the solutions to those concerns, including new and well established best management practices and strategies.

Corn grain ethanol production also creates a byproduct known as distillers grains, the material left after the fermentation process is complete. If ethanol plants are sited in Pennsylvania, the relatively low price of distillers grains and the relatively high corn prices may drive livestock producers to feed a ration with excess nitrogen and/or phosphorous. Farms required to implement nutrient management plans will have to balance the cost of feed inputs with the cost of disposing of manure with higher nitrogen and or phosphorous concentrations. Smaller farms, which are not required to follow nutrient management plans may be much more likely to select the lowest cost feed option and use higher nutrient load manure on the same land base – potentially increasing the excess manure applied to their fields. The issues I've noted are not insurmountable, but we must recognize they exist and address them in our strategies.

The much anticipated, next generation of ethanol, cellulosic ethanol, is still not quite ready for prime time. The opportunities for all involved dramatically increase as the

technology for cellulosic ethanol becomes mainstream. The CBC document *Biofuels and the Bay: Getting It Right to Benefit Farms, Forests and the Chesapeake* documents that a broad variety of crops can be grown for biomass to produce cellulosic ethanol, broadening the opportunities for participation and reducing the risk of excess nutrients. The ability to utilize wood chips in this process opens the opportunities for the forest products industry as well. Groups such as Penn State University and the Pennsylvania Environmental Council are already exploring how to efficiently grow biomass crops on abandoned minelands, restoring the abandoned mines and generating alternative energy opportunities. I think “win-win” may be one of the most overused and abused phrases in policy discussions today – but this is a true example of the ideal.

### **BioDiesel: Fuel for Industry and the Public**

Outside of Pennsylvania, Biodiesel has been the stepchild of the biofuels discussion. While a number of entrepreneurs, PA Department of Environmental Protection and many in the legislature have been supporters of PA Biodiesel. The national conversation and media coverage has been almost solely focused on ethanol. With next generation automotive diesels on the horizon that can achieve 35-45 mpg, a large trucking industry, and heavy equipment in the construction, agricultural and industrial sectors, biodiesel makes a lot of sense for Pennsylvania. While forward thinking PA businesses are marketing B20 biodiesel right now, Penn State University is piloting CNH tractors which run on 100% biodiesel. Obviously, some of the same concerns that apply to growing corn in a manner that protects water quality also apply to soybeans and other oil crops. The CBC report also documents a number of crops that can be utilized for biodiesel production.

While thermochemical conversion technology has been slow to develop from the lab to pilot and commercial scale, it may hold the greatest technology potential for bioenergy. Pyrolysis, one such conversion, is the subject of ongoing work by Virginia Tech and the Virginia Waste Solutions Forum. Pyrolysis is the thermal breakdown of organic materials – anything from slaughterhouse waste to manure – in the absence of oxygen. The process yields a complex bio oil that can be burned or refined. Virginia Tech is constructing a truck mounted reactor that can be taken from farm to farm, converting manure to combustible oil. Gasification, the thermal decomposition of organic materials in a limited oxygen environment, produces combustible gasses or “syngas” and heat and may be used on a variety of waste organic materials. *Biofuels and Water Quality, Meeting the Challenge and Protecting the Environment*, the report recently published by Mid- Atlantic Regional Water Quality Water Program, provides more documentation and information on these processes.

### **BioFuels: Positioning Pennsylvania for the Future**

The landscape on the biofuels issues will keep evolving over the next decade. Pennsylvania should do everything possible to position the state well in this transition period and to establish a trajectory that will serve the Commonwealth well in the long run. We can establish ourselves as a leader in bioenergy production while we improve

9/18/2007

Page 4

our air and water quality and secure a well-managed, economically viable agricultural economy. Pennsylvania is uniquely positioned as a significant provider of a variety of biofuels in proximity to large population centers. There are certainly challenges as we try to integrate a number of goals and objectives, but the people of Pennsylvania have repeatedly shown our capacity to lead the way with new technology.

Those in the production and processing industry may be better suited than I to comment on the specifics of the goals and timetables set forth in Senate Bill 789. The relationship between specific targets and current federal initiatives and the capacity and strategy of the biofuel industry at this moment must be considered. I urge the committee to set bold goals and provide the incentives and leadership necessary to place Pennsylvania in the forefront of biofuels research and production while safeguarding natural resources of the Commonwealth.