



## Biomass Ethanol + Plug-in Hybrids = 95% less emissions?

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In this week's NY Times City section there is an [interesting editorial](#) written by David Morris, Vice President of the Institute for Local Self-Reliance and author of "Driving Our Way to Energy Independence" that makes these extraordinary claims about the benefits of plug-in hybrids that charge over night and use ethanol as a back-up fuel for longer trips between charging.

Can this be true? I need your help debunking this one, TOD readers...

The emerging market in biomass is another opportunity for New York. Soon, we will make ethanol from cellulose contained in fast-growing trees and grasses, many of which can be cultivated in New York. Indeed, the State University of New York College of Environmental Science and Forestry, in Syracuse, is already a leader in research on using willow trees as a biofuel stock. **An increase in annual biofuels consumption from today's five billion gallons to the projected 80 billion gallons needed to provide backup engine fuel for all the cars on American roads today**, could spur the construction of over 2,000 biorefineries in the United States, many of them in New York.

New York City and its suburbs are an ideal proving ground for plug-in hybrids. The city is already encouraging the introduction of hybrid vehicles into its fleet of 13,000 taxis in order to reduce emissions. **But plug-in hybrids with alcohol-fueled engines can reduce tailpipe emissions even more -- by as much as 95 percent.**

Can this be true? 80 Billion gallons of ethanol? 95% less emissions?

I need your help TOD readers. First, are these calculations correct? Second, if these numbers are correct, and plug-ins plus ethanol can be scaled do reduce emissions by this much, how would this be ramped up?

These seem wildly optimistic assumptions to me on the face of it, but I'm open minded. Is ethanol that scaleable to 80 Billion gallons? Can we increase electricity generation (even during off peak times) to satisfy the demand for plug-ins? What's the current range of plug-ins and how much gas / ethanol would they require for back-up for the average person? What about the emissions fuel used to create the electricity? That's not counted in the "tail-pipe emissions, but it matters for Global Warming.

Please submit your ideas, thoughts and comments here and I will invite Mr. Morris to respond. Together, I would like to be able to separate fact from fiction and see if there is general agreement on some policy options for NYC and the rest of the country concerning ethanol and plug-ins.



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