492h Catalytic Conversion of Ethanol to Commodity Chemicals and Diesel Fuel Additives

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By switching from conventional gasoline to electric hybrid diesel engine technology available today, the U.S. could reduce light-duty vehicle fuel consumption by up to 50%. This would translate to major reductions in oil imports, the U.S. trade deficit, wealth transfer to unfriendly entities, and carbon dioxide emissions, but what would it mean for the ethanol industry? This presentation will describe catalytic technologies for conversion of ethanol to chemical intermediates and high-cetane diesel fuel additives. Because the technologies are moderate-temperature, continuous-process, and solid acid-catalyzed, they represent product diversification opportunities for incorporation into existing and new corn- and lignocellulosic feedstock-based ethanol plants. The presentation will include data and information on process configurations, yields, and preliminary economics, and fuel property and performance impacts of diesel fuel additive products.