

# International Congress and Expo on **Biofuels & Bioenergy**

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### **Producing advantageous biofuels for heavy duty and jet engines**

The world desires both higher efficiency engines and lower greenhouse gas (GHG) emitting biofuels. To achieve these goals a large number of countries have passed provisions that require higher efficiency engines and lower GHG fuels. Unfortunately, these provisions have largely been developed independent of each other and can conflict with each other. For example the requirement to blend in ethanol at the 10% level into gasoline in the US decreases the distance traveled per volume basis (km/l) in current spark ignition engine powered cars due to the lower energy content of ethanol. A better approach would be to develop biofuels that as a minimum maintain status quo with current gasoline, diesel and jet fuels but ideally allow for higher engine and thus vehicle efficiencies. This talk will discuss some possibilities for producing biofuels that look promising for being superior to current gasoline, diesel and jet fuels for use in the next generation of higher efficiency heavy duty engines.

### **Biography**

Thomas D Foust is the Director of the National Renewable Energy Laboratory's Bioenergy and Biofuels Center. He has over 25 years of experience in the biofuels field. His areas of expertise include feedstock production, biomass conversion technologies to fuels and products, and environmental and societal sustainability issues associated with biofuels. He has over 100 publications in the biomass field covering all aspects of biofuels technology. He has done PhD in Mechanical Engineering, MS in Mechanical Engineering from the Johns Hopkins University, and BS in Mechanical Engineering from the Pennsylvania State University. He is a licensed Professional Engineer.

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