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A BROAD OVERVIEW OF THE STATUS OF BIODIESEL IN THE US

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Biodiesel is a fuel blending component produced from fats, vegetable oils, and waste cooking oils by transesterification to form fatty acid esters. These are typically fatty acid methyl esters of FAME if methanol is used as the reactant alcohol. Biodiesel production in the United States has grown approximately ten-fold since the introduction of a blender's tax credit for in January 2005, perhaps reaching 300 million gallons in 2006. The tax credit provides \$1/gal for agri-biodiesel (animal fat or vegetable oil-based) and \$0.5/gal for biodiesel from waste oils. However, a number of unresolved technical issues are limiting growth.

These include:

- Lack of quality specifications (ASTM standards) for biodiesel blends. Blend specifications have not yet passed ASTM because of poor understanding of how biodiesel affects blend stability and low temperature performance, among other issues.
- Poor understanding of how biodiesel blends impact engine durability, operational costs, and maintenance practices. A key issue being the effects of biodiesel on water separator performance.
- A need for more representative data on the effects of biodiesel blends on pollutant emissions.
- Little data on the performance of advanced emission control technologies such as diesel particle filters and NO_x reduction catalysts, including impact on filter/catalyst durability.

This presentation will provide an update on the status of each of these issues, including new data, and more in depth description of U.S. biodiesel markets.