

Technical Luncheon Series - EDMONTON
Tuesday February 16, 2010
11:45 a.m. to 1:00 p.m.

Edmonton Petroleum Club
11110 – 108 Street NW
Rainbow Room

TECHNICAL LUNCHEON SERIES

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Title: Meeting the Mandate: Technical Issues with Biodiesel Implementation

Speaker: Kelly Maher, Assistant Director and part of the Biorefining Conversions Network

The Alberta Government has announced a renewable fuel standard (RFS) to be implemented in 2010 mandating 2% renewable content in the distillate pool. Currently, the only renewable diesel available in commercial quantities is biodiesel and recent forecasts indicate biodiesel will remain the predominant renewable diesel through at least the next five years. Biodiesel is produced through a chemical transesterification reaction using oil and fat feedstock. Structurally, biodiesel is a fatty acid methyl ester (FAME) containing approximately 10 wt. % oxygen. It is recognized as a suitable, cleaner burning replacement to petroleum diesel, however there are compatibility concerns with conventional diesel and infrastructure. In this presentation, biodiesel properties and how they relate to storage, handling and blending will be discussed and technical questions regarding cold flow properties, particulates and other common issues such as moisture, microbial contamination and food versus fuel will be addressed. Alternatives to biodiesel, including green diesel and other second generation renewable fuels, will also be summarized briefly.

Kelly Maher is the Associate Director of the Biorefining Conversions Network. She has a B.Sc. in Chemical Engineering from the University of Alberta and gained work experience in oil and gas, thermal heavy oil extraction, food and pharmaceutical production, steel production and quality assurance, and engineering design industries through the co-op program. After working for Alberta Agriculture and Rural Development at the Center for Agri-Industrial Technology (now called the Bioindustrial Technologies Division) on a project investigating the potential of extracting bioactive compounds from red clover, she returned to the University of Alberta and obtained an M.Sc. in Bioresource Engineering. Her thesis focused on high temperature conversion of lipid feedstock for the production of hydrocarbon based biofuels and other platform chemicals. From 2007-2008 Kelly worked as the Assistant Director of Engineering for Canadian Bioenergy where she was responsible for managing all aspects of the development of a global scale biodiesel production facility. Kelly returned to Alberta in 2009 Alberta to work with Dr. David Bressler in the Bressler Biorefining Conversion and Fermentation Laboratory before accepting the position of Assistant Director for the Biorefining Conversions Network. Her responsibilities include strategic, extension and political management of the Network, identification of research and development funding opportunities, and preparation of collaborative agreements and proposals.

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