

**West Coast Diesel Emissions Reductions Collaborative
Federal Network for Sustainability**

Federal Agency Biodiesel Collaborative Project Proposal

Submitted by:

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Problem Statement:

The current use of biodiesel is not widely adopted by consumers and businesses. Three issues may be the reason for the lack of adoption of biodiesel:

- (1) cost, and
- (2) potential increase in nitrogen oxides (NOx) emission, and
- (3) toxicity, corrosiveness, and workers health issues with using methanol .

Proposed Actions:

- (1) Reduce costs by developing more efficient/cost effective methods such as a continuous biodiesel production technology and using low cost raw materials (waste to fuel conversion).
- (2) Remove any nitrogen compounds before they get into the process stream instead of expensive post production solutions such as adjusting fuel injection timing, adding additives, and retrofitting with NOx control technologies.
- (3) Using ethanol instead of methanol creates a safer work environment for personnel, and unlike methanol, ethanol is derived from renewable sources.

Partnering Agencies/Groups:

University of Nevada-Reno
Washoe County Department of Health-Air Quality Management Division
Applied Research Initiative
Nevada State Department of Agriculture

Benefits/Measurements of Success for the Project

- X Potential Fossil Fuel Reductions (three years) Gallons: 10K (Research)**
Big potential for reductions if converted from pilot to full production mode.
- X Potential for Market Transformation**
- X Other Benefits: Substitution of toxic methanol w/ loss toxic, renewable ethanol.**

Estimated Costs, with other Possible Funding Sources

\$90K

What Is the Project Timeframe:

Medium (FY05): In conjunction with Innovative Work Group project at UN-R

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