West Coast Diesel Emissions Reductions Collaborative
Federal Network for Sustainability

Federal Agency Biodiesel Collaborative Project Proposal

Submitted by: US Army, Fort Lewis Public Works Department, Ft. Lewis, Washington

Problem Statement:

Motor vehicles are the primary source of air pollution in the central Puget Sound region. About 60 percent of the region's emissions of the greenhouse gases that accelerate global warming come from tailpipes, and about 70 percent of the toxic air pollution is from diesel emissions from trucks, buses, ships, and other sources.

Alternative fuels can replace diesel in heavy-duty vehicles, reducing toxics and diesel pollutant emissions. They also pose less threat to water quality (oil spills, gasoline additives). They can provide immediate reduction in greenhouse gas (GHG) emissions. These fuels can be extracted and produced domestically, reducing our dependence on a finite supply of imported oil.

The Air Quality team of Ft. Lewis has achieved success in reducing mobile emissions by employing the concept of alternative fuel vehicles. Fifteen Neighborhood Electric Vehicles, (zero emission vehicles that run on batteries) have been purchased and are used by soldiers and civilians on post. Alternative fuel revolution is currently very active on the post. Compressed Natural Gas (CNG), Ethanol (E85), and Biodiesel (B20) are now available for use by government vehicles only. Each is located at a different site on post. The B20 site tank replaced an existing diesel tank. Many workshops have been conducted regarding the usage of these stations and make the people aware of the various advantages. Usage of alternative fueled vehicles has significantly increased. *"Even though the purchase and use of alternative fueled vehicles is mandated, the installation site goes above and beyond mere compliance"*.

The usage of these fuels at these sites is limited to government vehicles only. However, a large Alternative Fuel Station comprising of various alternative fuels such as CNG, E85, Biodiesel, fuel cells and Electric Super Charge stations open to Fort Lewis personnel and General Public is the primary goal.

There are 891 government, non tactical, vehicles on the post. 576 of these vehicles are gasoline-fueled only vehicles, 91 vehicles are dual fueled CNG, 92 vehicles are bi-fueled E85 and 132 vehicles are diesel-fueled vehicles. The diesel fueled vehicles are using B20. The remaining 576 gasoline fueled vehicles through vehicle replacement can eventually be changed out to alternatively fueled vehicles or diesel vehicles using biodiesel.

Proposed Actions:

Creation of a multi-fuel, alternative fueled fueling station providing public access in the Ft. Lewis area.

Three locations have been recommended for this purpose. A vast area opposite to Ft. Lewis Golf Course is the primary option. The area by the Madigan Gate and one near the Cross-based highway are the other two options. The Golf Course, unlike other areas on the post, has access to Private personnel as well as the public. It is also near to the freeway (I-5). The idea is to make a number of different types of alternate fuels available at one fueling station. *Multiple fuel availability would allow fleet buyers more options in vehicle and fuel selection. No longer would fleet buyers be limited to only those fuels available nearby.*

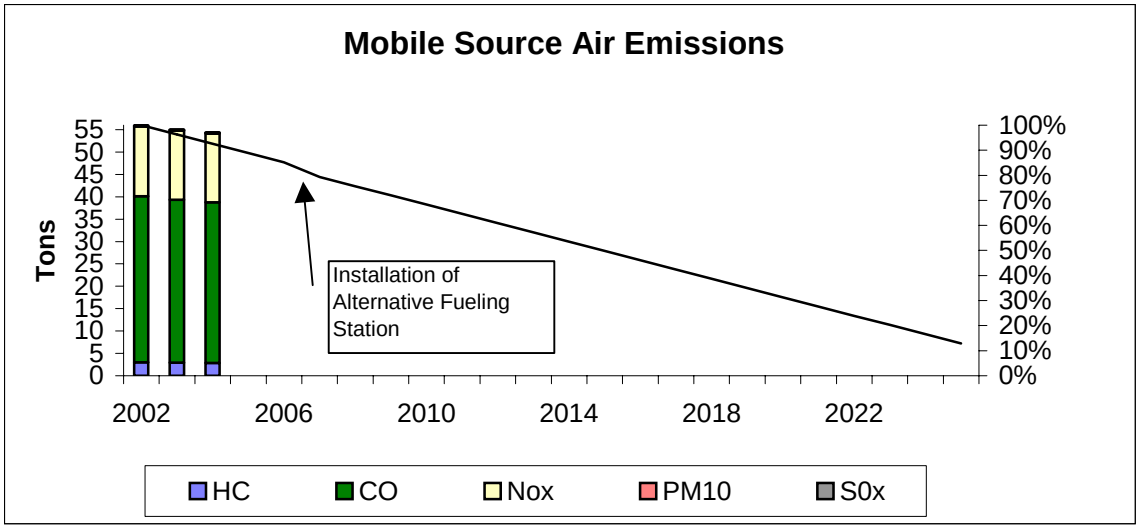
In the short term, funds would be used to develop a business plan outlining the feasibility, partnerships and the strategy of the Alternative Fuel station concept. Longer term would be design of the site and finally installation of the facility.

Partnering Agencies/Groups:

This station can serve the purpose of all other fleets in the area. Some of the local fleets potentially available to be committed to the use of alternate fuels are the on post school buses, McCord AFB, National Guard, the on post shuttle, and likely there are others.

Benefits/Measurements of Success for the Project

Fort Lewis has an aggressive Sustainability program. One of the twelve 25 year Sustainability Goals is to “Reduce traffic congestion and air emissions by 85% by 2025”. The increased usage of alternative fuels will depend upon an alternative fuel source larger than a one pump site and available to not only Fort Lewis but the surrounding community as well. By using more alternate vehicles the estimated reductions are 85% by 2025 as illustrated in the chart below.



- **O** **Potential Fossil Fuel Reductions (three years)** **Gallons _____**
  - Explanation of estimate
- **O** **Potential for Market Transformation**
- **O** **Other Savings**

Estimated Costs, with other Possible Funding Sources

The business plan will define other funding sources. Cost of the plan is anticipated at $100K

What Is the Project Timeframe:

Short (September Announcement)

Medium (FY05)

Long-term (> FY05)

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