
**Technology, Energy & Communications
Committee**

HB 1010

Brief Description: Modifying the definition of "biofuel" for chapter 19.112 RCW, the motor fuel quality act.

Sponsors: Representatives Morris, Chase and Moeller.

Brief Summary of Bill

- Modifies the definition of biodiesel to include renewable diesel derived from nonpetroleum renewable sources such as vegetable oils and animal fats.

Hearing Date: 2/2/09

Staff: Scott Richards (786-7156)

Background:

Minimum Renewable Fuel Content Requirement

In 2006, the Legislature enacted minimum renewable fuel content requirements for biodiesel and ethanol. Beginning on December 1, 2008, certain fuel licensees must provide evidence to the Department of Licensing that at least two percent of the total annual diesel and gasoline sold in Washington is biodiesel and ethanol.

Biodiesel Definition

State statute defines "biodiesel fuel" as the monoalkyl esters of long chain fatty acids derived from plant or animal matter that meet the registration requirements for fuels and fuel additives established by the federal Environmental Protection Agency (EPA) and standards established by the American Society of Testing and Materials (ASTM).

Renewable Diesel

This analysis was prepared by non-partisan legislative staff for the use of legislative members in their deliberations. This analysis is not a part of the legislation nor does it constitute a statement of legislative intent.

There is no universally accepted definition for renewable diesel. There are various technologies that produce products that have been called “renewable diesel” fuel. While some of these technologies are in commercial production, others are still in the research and development phase.

The three primary renewable diesel technologies include: (1) thermal hydrotreating; (2) biomass-to-liquid; and (3) pyrolysis/rapid thermal processing. None of these renewable diesel technologies are considered biodiesel as defined in Washington state law.

Thermal Hydrotreating

Traditionally, petroleum refineries have used thermal hydrotreating as a process to remove sulfur impurities from diesel fuel. Renewable diesel produced using the thermal hydrotreating process can be produced in a petroleum refinery where vegetable oils or animal fats are co-processed with diesel fuel derived from petroleum. The process produces a mixture of hydrocarbons that may meet motor vehicle fuel provisions under the federal Clean Air Act and the American Society of Testing and Materials standard for petroleum diesel (D 975). Existing infrastructure for blending and transporting petroleum fuels also may be used to produce renewable diesel through the thermal hydrotreating process.

Biomass-to-Liquid

The biomass-to-liquid process of making renewable diesel converts biomass (most often cellulosic material) through high-temperature gasification into synthetic gas, which is a gaseous mixture rich in hydrogen and carbon monoxide. The synthetic gas then goes through a Fischer-Tropsch process to catalytically convert the synthetic gas to liquid fuel. This technology has been applied to coal-to-liquids fuel and natural gas-to-liquids fuel processes.

Pyrolysis/Rapid Thermal Processing

The Pyrolysis/Rapid Thermal Processing technique for producing renewable diesel uses pyrolysis or other thermal conversion process to convert biomass or other carbon-containing material (e.g. municipal solid waste, plastics, industrial residue, etc.) to a bio-oil. This bio-oil is further refined into diesel-like fuel. Pyrolysis/Rapid Thermal Processing uses a thermal decomposition process with high heat transfer rates and a short residence time to convert the large polymers from cellulose, hemicellulose, lignin, and proteins of biomass or organic waste streams into smaller molecules. Under these conditions, organic vapors, pyrolysis gases, and charcoal are produced from biomass. The vapors are condensed to produce pyrolysis oil (often referred to as bio-oil).

United States Environmental Protection Agency

The United States Environmental Protection Agency (EPA) enforces the motor vehicle fuels provisions of Title II of the Clean Air Act, section 211, and regulations contained in 40 C.F.R. Parts 79 and 80. These provisions include certain requirements and prohibitions regarding the quality of motor vehicle fuels, and are designed to greatly reduce harmful emissions from all motor vehicles, including passenger cars, light trucks and heavy duty trucks.

American Society of Testing and Materials

The American Society of Testing and Materials, also known as ASTM International, is a voluntary standards development organization that develops technical standards for materials,

products, systems, and services. ASTM Specification D 975 covers seven grades of diesel fuel suitable for various types of diesel engines.

Summary of Bill:

The definition of "biodiesel fuel" is modified to include a diesel fuel substitute produced from nonpetroleum renewable sources, including vegetable oils and animal fats, that meets: (1) the registration requirements for fuels and fuel additives established by the federal Environmental Protection Agency in 40 C.F.R. Part 79 (2008); and (2) the requirements of American Society of Testing and Materials Specification D 975, as of January 1, 2009.

Appropriation: None.

Fiscal Note: Not requested.

Effective Date: The bill takes effect 90 days after adjournment of the session in which the bill is passed.