
**Technology, Energy & Communications
Committee**

HB 1422

Brief Description: Authorizing a forest biomass to aviation fuel demonstration project.

Sponsors: Representatives Stanford, Orcutt, Chandler, Warnick, Van De Wege, Green, Smith, Jacks, Blake, Sullivan, McCoy, Kretz, Tharinger, Ryu, Short, Sells, Lytton, Lias, Frockt, Moscoso, Billig, Probst, Rolfes, Dunshee, Maxwell, Upthegrove and Kenney; by request of Commissioner of Public Lands.

Brief Summary of Bill

- Authorizes the Department of Natural Resources (DNR) to develop and implement a forest biomass to aviation fuel demonstration project.
- Authorizes the DNR to form forest biomass aviation fuel partnerships to develop and implement a forest biomass to aviation fuel demonstration project.
- Directs the DNR to create a strategy for developing a broad forest biomass to aviation biofuel sector in Washington.

Hearing Date: 2/1/11

Staff: Scott Richards (786-7156).

Background:

State Trust Lands.

The Department of Natural Resources (DNR) manages 5.6 million acres of forest, range, agricultural, aquatic, and commercial lands for the people of Washington. The DNR manages approximately 2.3 million acres of forested state trust lands.

Under a mix of authorities, including state law, the state Constitution, and the state's federal Enabling Act, these state trust lands are held by the state for specified trust beneficiaries. In total, there are 18 trust beneficiaries that derive some level of economic benefit from the

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management of these trust lands. The beneficiaries include common schools, the state universities, community colleges, counties, and the state's Capital Budget.

Biomass Energy Pilot Projects.

In 2009, the Legislature authorized the DNR to implement biomass energy pilot projects in eastern and western Washington. The purpose of the pilot projects are to demonstrate that removing biomass feedstock in ecologically sustainable ways to produce energy (liquid fuels or heat and electricity) may provide income for forest landowners while improving forest health; create rural jobs; reduce wildfires and greenhouse gas emissions; and aid in the production of renewable energy

In January 2010, the following four biomass projects were selected: (1) Parametrix (Bingen, Washington) is developing a transportable system that uses fast pyrolysis technology to rapidly convert forest biomass to liquid fuels and bio-char; (2) Borgford Bioenergy, LLC. (Colville, Washington) is installing a slow pyrolysis system to generate bio-char, bio-oil, and syngas; (3) Atlas Pellets (Omak, Washington) proposed to purchase, install, and operate off-the-shelf debarkers, grinders and chippers to produce fuel pellets from forest biomass; and (4) Nippon Paper (Port Angeles, Washington) is replacing an existing oil-fired boiler with a high-efficiency biomass boiler and turbine-generator unit at its paper mill, electricity generated will be sold to an electric utility as a renewable energy resources.

Long-term Biomass Supply Contracts.

In 2010, the Legislature authorized the DNR to enter into long-term contracts to supply forest biomass from DNR-managed lands. The DNR is authorized: (1) to conduct separate sales within valuable materials contracts; (2) to enter into long-term competitive contracts of five years which may be renewed up to three times; (3) to carry out direct sales contracts without public auction; (4) offer 15-year contract for entities making a qualifying capital investment of \$50 million; and (5) to lease state lands for the purpose of integrated biomass supply area and facility siting.

Forest Biomass Supply Assessment.

Before entering into long-term contracts for forest biomass from state managed lands, the DNR must first assess the available supply of biomass in the contract area. In 2010, the DNR received a grant from the U.S. Forest Service to perform a statewide forest biomass supply assessment. The DNR selected the University of Washington's School of Forestry to conduct the assessment.

The Forest Biomass Supply Assessment will assess forest biomass availability and sustainability throughout Washington State on all forest land ownerships, including state-owned lands. The forest biomass supply assessment will build on previous biomass supply analyses, refining and improving upon them by using finer-scale data and evaluating individual land managers' objectives, operational and economic factors for biomass availability, and environmental sustainability. A range of supply estimates will be developed encompassing all forestland owners statewide, and will further break down these estimates within a series of logical supply tributary areas. The Forest Biomass Supply Assessment is scheduled for completion by August 2011.

The President's Biofuels Interagency Working Group.

In 2009 President Obama, through a Presidential Directive, established the Biofuels Interagency Working Group (Working Group). The Working Group is co-chaired by the Secretaries of

Agriculture and Energy and the Administrator of the Environmental Protection Agency. The Working Group is responsible for (1) developing the nation's first comprehensive biofuel market development program, which shall use existing authorities and identify new policies to support the development of next-generation biofuels, increase flexible fuel vehicle use, and assist in retail marketing efforts; (2) coordinating infrastructure policies impacting the supply, secure transport, and distribution of biofuels; and (3) identifying new policy options to promote the environmental sustainability of biofuels feedstock production, taking into consideration land use, habitat conservation, crop management practices, water efficiency and water quality, as well as lifecycle assessments of greenhouse gas emissions.

"Forest biomass" means the by-products of prescribed or permitted forest management practices; forest protection treatments; or forest health treatments. "Forest biomass" does not include wood pieces that have been treated with chemical preservatives such as: Creosote, pentachlorophenol, or copper-chrome-arsenic; wood from old growth forests, except wood removed for forest health treatments, or municipal solid waste.

Summary of Bill:

Forest Biomass to Aviation Fuel Demonstration Project.

The Department of Natural Resources (DNR) is authorized to develop and implement a forest biomass to aviation fuel demonstration project.

The DNR must design a demonstration project to: (1) demonstrate opportunities for state lands to generate trust income through the development of aviation biofuel production capacity; (2) create green jobs; (3) avoid interfering with the current supply area for forest biomass collection surrounding an existing fixed location biomass energy production site; (4) be consistent with report findings from the University of Washington and the DNR concerning operationally and ecologically sustainable feedstocks and production processes; (4) comply with the state's existing energy efficiency goals.

In selecting a site for the demonstration project, the DNR must give preference to facilities that are already highly energy efficient or that will gain significant efficiency through the installation of a biofacility utilizing waste heat and energy.

Forest Biomass Aviation Fuel Partnerships.

The DNR is authorized to form forest biomass aviation fuel partnerships to develop and implement the forest biomass to aviation fuel demonstration project.

These partnerships are encouraged to: (1) be public-private partnerships focused on convening the entities necessary to grow, harvest, process, transport, and utilize forest biomass to generate sustainable aviation fuel; and (2) employ emerging technologies that emphasize efficient feedstock utilization (most energy/dry ton of product). Additionally, partnerships should strive to include representatives from, but not limited to: entrepreneurs or organizations developing and operating emerging forest biomass processing technologies; contractors capable of providing the local labor needed to collect, process, and transport feedstocks; tribes, federal land management agencies, county, city, and other local governments and other state agencies; workforce development organizations; accredited research institutions; aviation companies; ports; existing

biofuel production facilities; oil refining companies located in Washington; not-for-profit conservation organizations; private forest landowners; and forest product manufacturers.

Forest Biomass to Aviation Biofuel Strategy.

By December 2012, the DNR must report to the Legislature a strategy for developing a broad forest biomass to aviation biofuel sector in the state and provide an update on progress toward implementation of a demonstration biofacility in the state.

In producing the strategy, the DNR must collaborate with the Department of Commerce and research institutions and convene and conduct an expert panel. The expert panel must be comprised of, but not limited to, representatives from state agencies, local governments, natural resource industries, biofuel producers, oil refiners, utilities, infrastructure providers, transportation fuel markets, and environmental groups.

The forest biomass to aviation biofuel strategy report must:

- integrate forest biomass supply data being collected and report findings by the University of Washington in collaboration with the DNR to be used to estimate potential forest biomass supply and potential aviation production volumes;
- include a fully vetted supply chain strategy for forest biomass to aviation fuel;
- identify existing and potential sites where bioprocessing could be co-located, such as operating or closed pulp and paper installations and other existing industrial sites;
- identify state and other public resources that can be used to accelerate the supply chain development including, but not limited to: Education and work-force training needs; transportation and utility infrastructure; and biofuels and bioproduct purchase contracts by public agencies;
- identify opportunities to collaborate with other states and federal agencies;
- address and plan to ensure sustainability, leveraging existing safeguards such as the state's forest practices rules;
- include estimates on the number of jobs retained and created through the development of a forest biomass to aviation fuel sector;
- identify funding opportunities available for a forest biomass to aviation fuel demonstration project;
- identify any opportunities for legislative action that could further facilitate a biomass to aviation fuel industry; and
- identify and explore linkages with the President's Biofuels Interagency Working Group.

Appropriation: None.

Fiscal Note: Available.

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