SENATE BILL REPORT
SB 6435

As of January 22, 2020

Title: An act relating to promoting the development of the Washington state bioeconomy.

Brief Description: Promoting the development of the Washington state bioeconomy.

Sponsors: Senators Frockt, Nguyen, Brown, Das and Hasegawa.

Brief History:
Committee Activity: Environment, Energy & Technology: 1/22/20.

Brief Summary of Bill

- Directs the University of Washington to conduct a study identifying opportunities to further develop Washington State's bioeconomy.

SENATE COMMITTEE ON ENVIRONMENT, ENERGY & TECHNOLOGY

Staff: Greg Vogel (786-7413)

Background: Waste residue from making products such as lumber, furniture, pallets, and paper can be utilizing as different forms of biomass energy. Wood can be burned in a boiler to heat water and produce steam, which can be used to power machines or heat buildings. Using high heat and pressure, gasification can produce syngas, and similar to the methods described above, anaerobic decomposition of wood waste can produce biogas for electrical generation.

Liquid fuel and biochar, produced from pyrolysis—the thermochemical conversion of biomass into liquid fuel and biochar; cellulosic ethanol from the fermentation of wood, grass, or crop residues; and methanol, generated from anaerobic decomposition or secondary conversion of syngas, can also be utilized as energy sources.

Under the Washington Clean Energy Transformation Act, a standard is set for each utility to meet 100 percent of its retail electric load using non-emitting and renewable resources by January 1, 2045. Renewable resources include water; solar energy; geothermal energy; renewable natural gas; renewable hydrogen; wave, ocean, or tidal power; biodiesel fuel that

---

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.

is not derived from crops raised on land cleared from old growth or first growth forests; or biomass energy. Biomass energy includes:

- organic by-products of pulping and the wood manufacturing process;
- animal manure;
- solid organic fuels from wood;
- forest or field residues;
- untreated wooden demolition or construction debris;
- food waste and food processing residuals;
- liquors derived from algae;
- dedicated energy crops; and
- yard waste.

Private businesses purchase roughly 610 million board feet of timber harvested from Department of Natural Resources (DNR) managed state trust lands each year. A by-product of these timber harvests is forest biomass, which includes the limbs and small pieces of wood left on a site after its timber is harvested. DNR conducts public auctions periodically to sell the rights to harvest this forest biomass from specific sites. Forest biomass marked by DNR does not include wood from old growth forests, wood protected as habitat under the commitments of DNR's 1997 Trust Lands Habitat Conservation Plan, or any required to be left onsite under the state forest practice rules. Biomass also does not include any wood treated with creosote, pentachlorophenol, copper-chrome-arsenic or other chemical preservatives.

Under state law, there is a reduced business and occupation tax rate for manufacturing of wood biomass fuel. The rate of the tax is equal to the value of wood biomass fuel manufactured, multiplied by the rate of 0.138 percent. The manufacturing B&O tax rate is 0.484 percent of gross receipts. There is also a sales and tax exemption on machinery and equipment used to generate electricity using fuel cells, sun, wind, biomass energy, tidal and wave energy, geothermal resources, and technology that converts otherwise lost energy from exhaust.

In the 2019-21 biennial operating budget, $300,000 was provided for a study of the feasibility of constructing a biorefinery in southwest Washington. The study must:

- assess the supply of biomass, including poplar feedstock grown in low-value lands and hardwood sawmill residuals;
- assess the potential for using poplar simultaneously for water treatment and as a biorefinery feedstock;
- assess southwest Washington landowner interest in growing poplar feedstock;
- evaluate options for locating a biorefinery in southwest Washington that considers potential for integration of future biorefineries with existing facilities such as power plants and pulp mills; and
- result in a comprehensive technical and economic evaluation for southwest Washington biorefineries to be used by biorefinery technology companies to develop their business plans and to attract potential investors.

Summary of Bill: The University of Washington must conduct a study identifying opportunities to further develop Washington State's bioeconomy to expand the use of

renewable biological resources in the production of fuels, chemicals, and other materials. The study must:

- develop new processes that use biomass resources to produce high value chemicals, high value products, and high volume fuels in Washington, including the development of processes to fractionate feedstocks, such as woody biomass;
- develop biomass production systems that provide effective water treatments in Washington, with an emphasis on cleaning municipal treatment wastewater and roadway stormwater;
- identify and assess optimal locations throughout Washington State to site a biorefinery factory; and
- identify and analyze policy options that can promote the further development of a circular bioeconomy in Washington.

By July 1, 2023, the results of the study must be submitted in a report to the appropriate committees of the Legislature.

Appropriation: None.

Fiscal Note: Requested on January 16, 2020.

Creates Committee/Commission/Task Force that includes Legislative members: No.

Effective Date: Ninety days after adjournment of session in which bill is passed.

Staff Summary of Public Testimony: PRO: This bill flows from a trip that many have taken on a bipartisan basis, to Denmark, to take a deep dive into that country's bioeconomy. They are utilizing natural resources and waste products to energize entire communities in a transformational way. Washington is an ideal state for a vigorous bioeconomy. Efforts are ongoing to expand the bioeconomy in the sectors of fuels, chemicals, and new materials. The benefits of a bioeconomy can be seen in jobs, low carbon fuels, revitalization of agricultural land, remediation of contaminated soils, and clean up of wastewater.

Persons Testifying: PRO: Senator David Frockt, Prime Sponsor; Richard Gustafson, University of Washington.

Persons Signed In To Testify But Not Testifying: No one.