

# SENATE BILL REPORT

## SB 6121

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As Reported by Senate Committee On:  
Environment, Energy & Technology, January 30, 2024

**Title:** An act relating to biochar production from agricultural and forestry biomass.

**Brief Description:** Concerning biochar production from agricultural and forestry biomass. [  
**Revised for 1st Substitute:** Concerning agricultural and forestry biomass.]

**Sponsors:** Senators Van De Wege, Nobles and Randall.

**Brief History:**

**Committee Activity:** Environment, Energy & Technology: 1/19/24, 1/30/24 [DPS-WM, w/oRec].

**Brief Summary of First Substitute Bill**

- Defines flame cap kiln in the Washington Clean Air Act (Act) as an outdoor container used for the combustion of natural vegetation from silvicultural or agricultural activities meeting certain structural and size requirements.
- Includes the combustion of natural vegetation in portable flame cap kilns as an activity for which certain agencies may permit agricultural or silvicultural burning under the Act, subject to certain limitations.

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### SENATE COMMITTEE ON ENVIRONMENT, ENERGY & TECHNOLOGY

**Majority Report:** That Substitute Senate Bill No. 6121 be substituted therefor, and the substitute bill do pass and be referred to Committee on Ways & Means.

Signed by Senators Nguyen, Chair; Lovelett, Vice Chair; MacEwen, Ranking Member; Lovick, Short, Trudeau and Wellman.

**Minority Report:** That it be referred without recommendation.

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

Signed by Senator Boehnke.

**Staff:** Matt Shepard-Koningsor (786-7627)

**Background:** Washington Clean Air Act. Under the Washington Clean Air Act (Act), outdoor burning is generally prohibited in any area of the state where federal or state air quality standards are exceeded for pollutants from outdoor burning, in urban growth areas, or in certain large cities threatening to exceed state or federal air quality standards. Outdoor burning means the burning of material in an open fire or an outdoor container without controlling the fire or emissions.

Restrictions on outdoor burning do not apply to silvicultural burning to improve or maintain fire-dependent ecosystems for rare plants or animals. Outdoor burning may be allowed in the following instances:

- for the exclusive purpose of managing storm- or flood-related debris; and
- when normal, necessary, and customary to ongoing agricultural activities if:
  1. the burn is not conducted during air quality episodes and an impaired air quality determination; and
  2. the agricultural activities preceded the designation as an urban growth area.

Outdoor Burning Permits. The Department of Natural Resources (DNR), the Department of Ecology (Ecology), and certain political subdivisions such as counties, conservation districts, fire protection authorities, and local air authorities, may issue permits under the Act for a variety of outdoor burning activities in their respective jurisdictions, including agricultural burning and silvicultural burning. In general, permit fees for agricultural burning are set by the permitting agency, in consultation with a task force, subject to certain maximum fees for field and pile burning.

DNR is responsible for issuing and regulating permits and associated fees for certain burning activities on lands under its fire protection authority to: (1) abate and prevent fire hazards; (2) facilitate forest firefighting instruction; and (3) enable burning operations to improve fire-dependent ecosystems and otherwise improve state forestlands. DNR must encourage more intense utilization in logging and alternative silviculture practices to reduce the need for burning, and encourage landowners to develop and use alternative acceptable disposal methods subject to the following priorities:

- slash production minimization;
- slash utilization;
- nonburning disposal; and
- silvicultural burning.

**Summary of Bill (First Substitute):** Definitions. Flame cap kiln means an outdoor container used for the combustion of natural vegetation from silvicultural or agricultural activities that meets the following requirements:

- has a solid or sealed bottom including, but not limited to, mineral soils, so that all air

- for combustion comes from above;
- is completely open on top with no restrictions;
- is a shallow container where the width is greater than the height; and
- has a volume of 10 cubic meters or less.

Silvicultural burning includes combustion of natural vegetation from silvicultural activities.

Outdoor Burning Permits. For the purposes of agricultural burning permits, agricultural burning includes the combustion of natural vegetation from agricultural activities in portable flame cap kilns, provided that the biomass does not contain any prohibited materials, such as garbage, dead animals, petroleum products, or other specified substances.

DNR may assess permit fees for combustion of natural vegetation from silvicultural activities in portable flame cap kilns.

The use of portable flame cap kilns is added to the list of priorities under which DNR must encourage landowners to develop and use in logging and alternative silviculture practices to reduce the need for burning.

Other. Legislative intent language is provided.

**EFFECT OF CHANGES MADE BY ENVIRONMENT, ENERGY & TECHNOLOGY COMMITTEE (First Substitute):**

- Removes the definitions of biochar, biochar micro unit, biochar mini unit, and clean cellulosic biomass from the Act and instead, defines "flame cap kiln" as an outdoor container for the combustion of natural vegetation from silvicultural or agricultural activities meeting certain requirements.
- Amends the definition of silvicultural burning to include combustion of natural vegetation from silvicultural activities.
- Provides that, for the purposes of agricultural burning permits, agricultural burning includes the combustion of natural vegetation from agricultural activities in portable flame cap kilns, provided the biomass does not contain certain materials prohibited under outdoor burning laws.
- Removes the provision setting a maximum biochar production fee of \$1.00 per ton of agricultural waste consumed.
- Includes combustion of natural vegetation from silvicultural activities as an activity for which DNR may assess permit fees.
- Replaces producing biochar with using flame cap kilns on the list of priorities related to reducing the need for burning in logging and silvicultural operations.
- Amends the legal title and legislative intent language to reference, in part, portable flame cap kilns rather than biochar micro and mini units.

**Appropriation:** None.

**Fiscal Note:** Available. New fiscal note requested on January 31, 2024.

**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 on Original Bill:** *The committee recommended a different version of the bill than what was heard.* PRO: This is an important bill because there is a lot of forest biomass that needs to be removed and it is often burned with no benefit. This provides value to a lot of logging slash, and value that helps the environment. Biochar is an emerging technology and it is promising. Ecology is lagging a bit in permitting these biochar units. The biochar kilns we use are not burn barrels, but Ecology defines them as such. Burning slash in biochar units prevents catastrophic wildfires. The ring of fire kiln is essentially a wind screen around a kiln. It is a micro kiln emitting much less particulate matter than an open burn. Biochar is the future in sustainability. It takes a byproduct and creates an economic use. This is scientific and complicated, but if we can figure it out, it is a big win for our forests. It is easier to do a prescribed burn than to get a biochar unit permitted.

OTHER: We do not have a position on the bill but want to provide technical information about what is happening in Oregon. Air curtain incinerators show decreased emissions reductions relative to open burning. We have significant concerns because biochar production releases fine particulate matter and toxic pollutants. To comply with existing state and federal law, biochar production requires submittal of a new source permit application to Ecology or a local air agency. Biochar units using pyrolysis or an air curtain incinerator require an air quality permit under federal rules. DNR does not have delegated authority from the EPA or expertise to permit these units. We have concerns and questions with the definitions in the bill.

**Persons Testifying:** PRO: Senator Kevin Van De Wege, Prime Sponsor; Kelpie Wilson, Wilson Biochar, LLC.; Jill Silver, 10,000 Years Institute; Jake Dailey, U.S. Rake Force; Tony Craven; Jason Callahan, Green Diamond Resource Company.

OTHER: Kathy Taylor, Washington Dept. of Ecology; Jeff Johnston, Olympic Regional Clean Air Agency; Margaret Miller, Oregon Forestry Resources Institute.

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