#### State of Oregon

Department of Environmental Quality Memorandum

**Date:** Day xx, 20xx

**To:** Environmental Quality Commission

**From:** Dick Pedersen, Director

**Subject:** Agenda item E, Rulemaking: Small and mid-size boiler rule amendments

December 15-16, 2011, EQC meeting

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| **Why this is important** | The recent changes to the Heat Smart rules for residential and commercial wood heating created an unnecessary requirement for small-scale process boilers that burn biomass or other solid fuel, to meet Heat Smart certification conditions. This was not the intent of the Heat Smart program, as these types of boilers are already covered by other state and federal air regulations. The solve this problem by Clarifying the applicability of the Heat Smart rules in the proposed rule amendments solves the problem of applying different regulations to the same type of boilers. The proposed rule amendments also establish a pathway for the sale of uncertified small-scale commercial, industrial and institutional biomass boilers in Oregon that are able to meet existing state and federal air quality standards. Permanent rule changes are needed to enable the future sale of such devices in Oregon. Clarifying the applicable requirements will also help facilitate several small-scale biomass boiler projects currently under development as part of Oregon’s biomass initiative.  DEQ proposes the following rule amendments to replace the temporary rules for small biomass boilers as adopted by the EQC on June 17, 2011. The temporary rules will expire on December 19, 2011. |
| **DEQ recommendation and EQC motion** | DEQ recommends that the EQC adopt the proposed revisions to Oregon Administrative Rules, Chapter 340, divisions 200, 210, 212, 228 and 262 as presented in attachment A. DEQ also recommends that the commission amend the Oregon Clean Air Act State Implementation Plan, and that the commission authorize DEQ to submit these revisions to the U.S. Environmental Protection Agency for approval as revisions to Oregon’s Clean Air Act State Implementation Plan. |
| **Background and need for rulemaking** | In February 2011, the EQC adopted the Heat Smart rules that require small solid fuel burning devices, those with maximum heat output capacities below 1 million Btu per hour, to meet U.S. EPA New Source Performance Standards for Residential Wood Heating Appliances at 40 CFR Part 60, Subpart AAA in order to be sold in Oregon. After adoption of the Heat Smart rules, DEQ realized the applicability of those rules need further clarification. The Heat Smart rules are designed to address residential wood heating devices, including residential outdoor wood-fired boilers, such ashydronic heaters, as well as small-scale commercial space heating systems that use wood as a primary fuel. Some small commercial and institutional wood-fired space heating and process boilers were unintentionally affected by the Heat Smart regulations sincesmall and mid-size biomass boilers are typically process boilers used in a different type of application than those used for residential or small-scale commercial space heating. Typically these boilers are used for wood drying applications at a biomass campus and for heating much larger spaces, such as schools or hospitals.  These types of small boilers are already subject to other state and federal air quality standards, but the sale of these units in Oregon is being unintentionally restricted by the Heat Smart rule.  The EPA is developing an emissions performance certification program for residential and small-scale commercial biomass boilers, similar to its woodstove certification program. Since EPA’s program is still in development and cannot be used to “certify” small-scale commercial, industrial, and institutional biomass boilers in Oregon, small-scale biomass boilers would not be allowed in Oregon under the current rules. EPA has not yet established acceptable emission standards and testing procedures for these types of boilers. . However, under this proposed rule change, small-scale biomass boilers that are subject to National Emission Standards for Hazardous Air Pollutants would be exempt from Heat Smart and could be sold in Oregon upon receiving construction approval from DEQ.  The proposed rule amendments also require the owner or operator to register exempted boilers with DEQ. Registration indicates that the solid fuel burning device is in compliance with applicable National Emissions Standards for Hazardous Air Pollutants as well as state standards for opacity and particulate grain loading.  In addition to creating a pathway for the sale and installation of small-scale solid fuel burning devices, the proposed rule amendments would also allow DEQ to require registration for mid-sized solid fuel burning devices with maximum heat outputs below 10 million Btu per hour. Boilers in this size range are generally too small to be covered by a conventional DEQ air quality permit. Larger boilers, those with maximum heat output capacities greater than 10 million BTU per hour, are typically associated with major industrial facilities and are covered under the facility’s air quality operating permit issued by DEQ. DEQ is developing a simple, web-based registration process to identify and track boiler compliance with federal and state emission standards. |
| **Effect of rule** | As proposed, this rulemaking would replace the temporary rules currently in effect for small biomass boilers. If adopted, the proposed rule amendments would allow the sale of solid fuel boilers subject to National Emission Standards for Hazardous Air Pollutants with heat outputs less than 1 million Btu per hour, that are, registered with DEQ and have obtained construction approval from DEQ. Boilers that are exempted from the Heat Smart rule would be required to register with DEQ in order to verify compliance with state and federal emission standards. DEQ could also require registration for biomass boilers and other solid fuel burning devices with heat outputs between 1 and 10 million Btu/hr that are located at unpermitted facilities upon written request. This rulemaking is not intended for boilers located at an existing facility with an air quality permit as compliance with applicable emissions standards is demonstrated through the permitting process.  As part of the registration process, the owner or operator would be required to confirm that a boiler meets all applicable emission standards that apply to the boiler’s operation. These standards include a limit of 0.1 grain per dry standard cubic feet (OAR 340-22-0210), an opacity limit of 20% except for 3 minutes per hour (OAR 340-208-0110), and biennial tune-ups as required by the National Emissions Standards for Hazardous Air Pollutants (40 CFR Part 63, subpart JJJJJJ). There would be no fee for the registration, but there could be costs associated with source testing in order to demonstrate compliance with the grain loading standard.  In order to confirm compliance with applicable emissions standards, owners or operators of affected boilers could choose to either have a source test conducted or request source testing results documentation from the boiler manufacturer. Manufacturers would be required to hire an independent, third-party tester to provide verification that a boiler meets applicable emissions standards using test conditions representative of normal operating parameters.  This rulemaking will amend the State of Oregon Clean Air Act State Implementation Plan. |
| **Commission authority** | |  | | --- | | The commission has authority to take this action under ORS 468, ORS 468.020, ORS 468A, ORS 468.050, 468.310 | |
| **Key issues** | Several small-scale commercial, industrial and institutional biomass boiler projects are under development across the state as part of Oregon’s biomass initiative. These projects are relying on Congressional and Oregon Department of Energy Funding, and there are project timelines critical to the successful outcome of these efforts. Projects that involve the purchase and installation of biomass boilers or other solid fuel burning devices with maximum heat outputs below 1 MMBtu/hr may be at risk if the Commission does not revise the unintended applicability of the Heat Smart rules that prevent the sale of these biomass boilers. |
| **Public outreach** | DEQ held one stakeholder meeting at the DEQ Headquarters Office (Air Quality Division, Conference Room 11) on June, 2011 to hear concerns and answer questions from stakeholders. DEQ’s formal public comment period was open from July 15 to August 25, 2011. DEQ also held a public hearing to receive public comment on August 18, 2011. No one from the public attended the hearing. DEQ received one written comment during the comment period and DEQ’s response to public comment can be found in Attachment C. |
| **Next steps** | If adopted, the proposed permanent rule amendments would become effective upon filing with the Secretary of State. DEQ Air Quality Division will provide technical assistance to owners and operators of biomass boilers and other solid fuel burning devices that will be required to register under the new rules. Outreach activities will be coordinated and implemented through DEQ’s Small Business Assistance Program. For more information, the Technical Assistance Implementation Plan is available upon request. |
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| **Attachments** | Proposed rules (redline)  Rulemaking Announcement  Public comment and agency responses  Relationship to Federal Requirements questions  Statement of Need and Fiscal and Economic Impact  Land use evaluation statement |
| **Available upon request** | Technical Assistance Implementation Plan  Temporary Rulemaking documents  EPA Area Source MACT Rules |
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Approved:

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