#### State of Oregon

Department of Environmental Quality Memorandum

**Date:** November 14, 2011

**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** | Because of recent changes to the Heat Smart rules for residential and commercial wood heating, small-scale process boilers that burn biomass or other solid fuel must also meet Heat Smart certification requirements. Unless certified, these boilers cannot be sold in Oregon. 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 proposed rule amendments fix this problem by exempting boilers from the Heat Smart rules if the boilers are subject to federal air toxics regulations, and if the owner or operator files a notice of construction and registers the boiler with DEQ. These rule changes are needed to enable the future sale of these boilers in Oregon. These proposed rules 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 revised the Heat Smart rules that require small solid fuel burning devices 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 adopting those revisions to the Heat Smart rules, it came to DEQ’s attention that the applicability of those rules needs to be further revised. The Heat Smart rules are designed to address residential wood heating devices, including outdoor wood-fired boilers (hydronic heaters) and small-scale commercial space heating systems that use wood as a primary fuel. However, several small-scale commercial and institutional wood-fired space heating and process boilers were unintentionally affected by the Heat Smart regulations. Small and mid-size commercial and institutional 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 subject to existing state and federal air quality standards, including federal air toxics 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 currently be used to “certify” small-scale commercial, industrial, and institutional biomass boilers, these devices are not allowed to be sold or installed in Oregon. However, under this proposed rule change, small-scale commercial and institutional solid fuel boilers that are subject to National Emission Standards for Hazardous Air Pollutants, and which obtain construction approval from DEQ, would be exempt from Heat Smart and could be sold in Oregon. 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 future registration of mid-sized solid fuel burning devices (those with maximum heat input 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 input 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.  |
| **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, and have obtained construction approval from DEQ. Boilers that are exempted from the Heat Smart rule would also be required to register with DEQ in order to verify compliance with state and federal emission standards. Under the proposed rule changes, DEQ could also require future registration for biomass boilers and other solid fuel burning devices with heat inputs below 10 million Btu/hr that are located at unpermitted facilities upon written request. For boilers located at an existing facility with an air quality permit, compliance with applicable emissions standards would be demonstrated through permitting. 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 grain loading 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** |

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| The commission has authority to take this action under ORS 468, ORS 468A, ORS 468.020, ORS 468A.025, ORS 468A.035, ORS 468A.050, ORS 468A.055, ORS 468A.070, ORS 468A.460 to 468A.515, and ORS 468A.310.  |

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| **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) in 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 written comment from one commenter 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. DEQ is also developing a simple, web-based, construction approval and registration process for boilers affected by these rules. For more information, the Technical Assistance Implementation Plan is available upon request. |
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| **Attachments** | Proposed rules (redline)Rulemaking AnnouncementPublic comment and agency responsesRelationship to Federal Requirements questionsStatement of Need and Fiscal and Economic ImpactLand use evaluation statement |
| **Available upon request** | Technical Assistance Implementation PlanTemporary Rulemaking documentsEPA Area Source MACT Rules |
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 Approved:

 Division: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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