STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47600 • Olympia, WA 98504-7600 • 360-407-6000
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SEPA DETERMINATION OF NONSIGNIFICANCE

WAC 197-11-970

Description of proposal:
Ecology proposes to adopt a new rule – Clean Air Rule, Chapter 173-442 WAC – and amend an existing rule – Reporting of Emissions of Greenhouse Gases, Chapter 173-441 WAC – as necessary to coordinate with the new rule. The Clean Air Rule establishes greenhouse gas (GHG) emission standards for certain stationary sources, petroleum product producers or importers, and distributors of natural gas in Washington.

Proponent: Department of Ecology

Location of proposal, including street address, if any: The proposed rule applies statewide.

Lead agency: Department of Ecology

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030 (2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request.

☐ There is no comment period for this DNS.

☐ This DNS is issued after using the optional DNS process in WAC 197-11-355. There is no further comment period on the DNS.

☒ This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for 14 days from the date below.

Comments must be submitted by July 22, 2016.

Responsible official:	Stu Clark
Position/title:	Air Quality Program Manager
Phone:	360-407-6880
Address:	P.O. Box 47600, Olympia, WA 98504-7600

Date: 5/31/16 **Signature:** _____

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ADDENDUM TO SEPA DETERMINATION OF NONSIGNIFICANCE

Clean Air Rule and Reporting of Emissions of Greenhouse Gases

Project Description:
This document is an addendum to the environmental checklist for the existing Determination of Nonsignificance (DNS) issued for adopting a new rule – Clean Air Rule, Chapter 173-442 WAC – and amending an existing rule – Reporting of Emissions of Greenhouse Gases, Chapter 173-441 WAC.

This addendum is being provided consistent with WAC 197-11-600(4)(c) and WAC 197-11-625. The addendum process is being used due to changes in the original analysis. Ecology determined that this new information does not result in any new significant adverse impacts in the existing environmental documents. The original SEPA documents related to this proposal are available on the agency's website at http://www.ecy.wa.gov/programs/air/rules/wac173442/1510docs.html. A description of the proposed changes are included in this addendum.

Location: The proposed rule applies statewide.

Proponent: Department of Ecology

Responsible official: Stuart A. Clark, Air Quality Program Manager, Department of Ecology, P.O. Box 47600, Olympia, WA 98504-7600

Comment period: There is no comment period.

Date: 9/9/16 **Signature:** SAClark

Clean Air Rule – Appendix B. SEPA Addendum

Ecology is providing this table in response to requests for further information. The table offers a list of possible projects that may be used to comply with the Clean Air Rule. The Clean Air Rule provides multiple pathways and a wide array of options for compliance. Ecology can not predict whether any of these projects will be undertaken.

The summary of compliance options and effects associated with compliance options should not be construed as a complete analysis. Further SEPA and NEPA may be required for specific projects.

In the absence of specific plans for future actions, SEPA does not require consideration of every remote and speculative consequence of an action.

PROJECT		IMPACTS			RULE
Compliance option	**Example project**	**GHG emissions**	**Other air pollutant emissions**	**Water or waste effects**	**Rule section addressed**
Cogeneration added to an existing industrial process instead of building a new generating source	• Add bottoming cycle cogeneration to a cement kiln. • Add a steam turbine generator to produce electricity to a wood products plant with excess boiler capacity	Eliminates additional emissions from the power plant that wasn't built.	• No change from the facility developing the cogeneration • Reduced emissions from the fossil power plant that wasn't built	No additional wastewaters or solid wastes from the power plant that wasn't built	150 and 160 (4), (10)
Anaerobic digester	Anaerobic digestion of food wastes, animal wastes, biological industrial wastes to produce methane for other uses	Depends on how the biomethane is used • If a replacement for existing natural gas, GHGs will be unchanged (unless classed as GHG neutral). • If used as a motor vehicle fuel, GHGs	Depends on use of methane produced. Anaerobic digestion could be a new source of odors from raw and digested waste handling. • Biomethane to replace natural gas use would have	• New stormwater runoff from digester sites (more if paved than unpaved) Stormwater could be contaminated with wastes, if wastes are stored outdoors prior to	150 and 160 (7), (10)

PROJECT		IMPACTS			RULE
Compliance option	**Example project**	**GHG emissions**	**Other air pollutant emissions**	**Water or waste effects**	**Rule section addressed**
		go down since methane has a lower CO_2 emission rate than gasoline or diesel (assumes biomethane is considered GHG neutral).	unchanged emissions • Biomethane cleaned for injection into natural gas pipeline would result in unchanged emissions by end user • Biomethane cleaned and compressed to provide motor vehicle fuel would reduce most vehicle emissions, but tend to increase some products of incomplete combustion	digestion (not common due to odor potential) • Diverting food wastes from the MSW system will tend to reduce potential methane production from landfills • Solid waste from digestion must be properly handled for disposal • Gas cleaning can produce a solid waste, the nature of which varies based on how H_2S and other reduced sulfur compounds in gas are reduced	
Animal waste digester	Dairy manure digestion with or without co-feeding with pre-consumer food wastes	Methane from manure lagoon(s) and other manure handling operations reduced and converted to CO_2	• Biomethane used on-site to produce electricity via engine will produce combustion emissions, including SO_2. SO_2 emitted at higher rates than a natural gas fired	Potential water discharges from improper handling of pre-consumer food wastes	150 and 160 (7), (10)

PROJECT		IMPACTS			RULE
Compliance option	**Example project**	**GHG emissions**	**Other air pollutant emissions**	**Water or waste effects**	**Rule section addressed**
			engine unless digester gas cleaned to that level first • Biomethane cleaned for use as CNG vehicle fuel – see above • Biomethane cleaned for pipeline injection – see above • Projects could reduce odor issues for communities		
Co-fire a fossil fuel-fired boiler/heater with biofuel	Adding wood pellet fuel to existing coal fired boiler	GHGs go down as quantity of coal reduced. Also depends on whether the wood fuel is considered GHG neutral.	No change	• Increased ash to dispose of • With additional fuel storage, stormwater runoff may increase depending on how fuel is stored	150 and 160 (7), (10)
Collect landfill gas	Adding gas collection to landfill not required by federal or state rule to include this system (I.e., landfill is smaller than threshold in 40 CFR	CO_2e goes down as fugitive methane emissions collected and combusted to CO_2	• Fugitive volatile organic chemicals (aka NMOC) and other chemicals such as vinyl chloride reduced as gas collected and combusted	No changes expected	150 and 160 (7), (10)

PROJECT		IMPACTS			RULE
Compliance option	**Example project**	**GHG emissions**	**Other air pollutant emissions**	**Water or waste effects**	**Rule section addressed**
	Part 60 Subpart WWW)		• Combusted landfill gas may contain SO_2, and HCl plus products of incomplete combustion • Methane management projects can reduce odor issues for communities		
Convert fuel from fossil fuel to electricity	Natural gas or oil used to heat water or air for space heating converts to electrical resistive heating	Reduced GHG emissions at the facility, depending on electricity source. In WA, mostly hydropower and wind energy	Reduced emissions to 0 from converted units	• Reduced sediment discharges and ash disposal if conversion is from coal • Increased discharges and ash disposal if electricity produced at a coal- or wood-fired power plant	150 and 160 (10)
Convert fuel to a biofuel (i.e., woodwaste or biogas)	• Convert a coal-fired boiler to solid biomass (wood) • Convert a natural gas-fired boiler to biogas (produced via onsite anaerobic digester(s) or piping	Depends on whether or which biofuels are considered renewable sources that do not contribute to climate change	• For a coal to wood conversion, no change, except toxic metals found in coal that are missing from biomass (Hg, Se). Wood combustion could increase	• Depends on source of biofuel • Converting waste wood may add truck traffic from forest to processing/site of use	150 and 160 (7), (10)

PROJECT		IMPACTS			RULE
Compliance option	**Example project**	**GHG emissions**	**Other air pollutant emissions**	**Water or waste effects**	**Rule section addressed**
	gas from a nearby landfill)		emissions of particles and chlorinated dioxins. • For a natural gas to biogas conversion, no change	• Increased ash with conversion to wood fuels compared to most coal • Site-specific changes depending on source of biogas	
Convert fuel to a lower GHG fossil fuel	Convert a coal-fired boiler to natural gas	Reduced GHG emissions	Reduced all air pollutants, except possibly some products of incomplete combustion (aldehydes (formaldehyde, acrolein, acetaldehyde, etc)	No change	150 and 160 (10)
Develop waste-to-fuel project	Wood or agricultural waste based vehicle fuels. E.g., wood to methane/ methanol via biological conversion; wood to furfurals via chemical conversion or bioconversion via digestion.[1]	Unknown effects. Depends on whether the produced fuel is GHG neutral and amount of GHGs produced during processing and refining steps.	New emissions from processing the wood or agricultural waste prior to fuel conversion process.	Project dependent. I.e., what and how raw materials are collected and stored for processing, nature of the wastes produced, water consumption requirements, etc.	150 and 160 (10)

[1] Could be from 'wood oils' produced during pyrolysis or torrification of wood or agricultural waste. This oil can be used directly as a boiler fuel or can be chemically altered to resemble gasoline. Or could be from the wood to jet airplane fuel projects.

PROJECT		IMPACTS			RULE
Compliance option	**Example project**	**GHG emissions**	**Other air pollutant emissions**	**Water or waste effects**	**Rule section addressed**
Electric vehicles	• Build electric vehicle charging stations • Subsidize electric vehicle purchase	• No GHGs from vehicle • Emissions moved to electric generation facilities	Reduced gasoline or diesel engine emissions	Battery recycling /disposal at end of battery pack life	150 and 160 (3)
Energy efficiency	Convert lighting from incandescent or mercury to LED	• Reduce GHGs unless electricity came from a renewable resource • Replace generation from a fossil resource with electricity from the renewable resource	• Reduces need for electricity to provide lighting • Commercial refrigeration: reduces refrigeration load caused by heat generated in older lighting systems • Residential or commercial operation: may increase need to operate space heating systems to make up for heat previously supplied by lighting system	Disposal of mercury lighting will produce a toxic solid waste unless properly recycled	150 and 160 (5)
Fuel conversion	• Convert residential oil heating to natural gas or electricity • Includes conversion to air-to-air and	• GHG reductions at the residence • GHG may increase at the electric generator if fossil fueled	• Reduces all emissions associated with the residential heating system • May increase emissions at power	• No change • Temporary increase from disposal of fuel-fired heating equipment	150 and 160 (5)

PROJECT		IMPACTS			RULE
Compliance option	**Example project**	**GHG emissions**	**Other air pollutant emissions**	**Water or waste effects**	**Rule section addressed**
	ground-to air heat pumps		plants to serve the new electrical load		
Fuel conversion gasoline to natural gas/biomethane	• Convert gasoline or diesel vehicles to CNG or LNG fuel • Convert diesel bus and port drayage diesel engine to CNG or LNG	Reduced emissions	• Reduced emissions due to fuel change • May increase products of incomplete combustion of methane	No anticipated effects	150 and 160 (3)
Improve boiler/heater efficiency	Add economizers, air preheaters, feed water heating, and combustion system modifications	Depends on reduction in fuel consumption resulting from changes	Small reductions in quantity of fuel needed results in small emission reductions	No change	150
Mass transit	• Increased bus network to reduce motor vehicle use • Development of expanded light rail and heavy rail transit systems	Reduced emissions	Reduced motor vehicle emissions as transit ridership increases	Potential for reduced oily stormwater due to fewer vehicles on roads.	150 and 160 (3)
Replace a stand-alone heating system with cogeneration heat provided by an adjacent or nearby thermal power plant	Operation with a standalone fossil heating system located near a power plant replaces fuel burning equipment with waste heat (steam turbine exhaust for example) from the power plant	GHGs go down depending on the size of the heating system replaced.	• Reduced emissions due to non-use of fossil fueled heating system • Thermal power plant may be able to increase output if the heat provided allows reduced use of its cooling	No change	150 and 160 (4), (10)

PROJECT		IMPACTS			RULE
Compliance option	**Example project**	**GHG emissions**	**Other air pollutant emissions**	**Water or waste effects**	**Rule section addressed**
	to provide heat for its use. (i.e., greenhouse heating, steam heated condominium or apartment building)		system - reduced water discharge from cooling system		
Replace metal heating/melting via natural gas with electric induction	Natural gas fired smelters at an aluminum rolling mill convert to electric induction	GHGs from natural gas combustion goes to zero	• All air emissions reduce, except possibly particles and VOC which may not change • Both would come from the metal sow/pig or other metal charged to the melting furnace	Potential changes related to source of electricity	150 and 160 (10)
Weatherization	• Insulate walls and ceilings of un- or under insulated residential and commercial buildings • Replace old single pane windows (wood or aluminum framed) with modern double or triple pane windows	GHG emissions go down due to reduced load on heating systems.	Other emissions reduced due to reduced operation of fuel based heating equipment.	• Waste effects if projects include disposal of wastes • Potential waste from window replacements in lead contaminated paint	150 and 160 (5)

Each project may have the potential to cause other direct or indirect effects in the following areas:

- Traditional cultural places, historic cultural resources
- Effects to transportation, public utilities
- Federal and state listed species, critical habitat
- Wetlands, critical areas
- Land use, protected areas
- Water use, water resources
- Energy resources
- Noise

Some of the compliance options listed above in the Addendum can result in site-specific effects. If a compliance option has any environmental effect not examined under this review, the lead SEPA agency over that project-specific activity will conduct additional permitting and SEPA-related environmental review as necessary. Determining project-level environmental effects for compliance options is not feasible at this time.

Additions to the Bibliography

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