Note: DEQ is proposing to make the current, temporary rules (included below) permanent. Therefore, no rule changes are indicated.

DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION 253

OREGON CLEAN FUELS PROGRAM

Table 1 — Oregon Clean Fuel Standard for Gasoline and Gasoline Substitutes

Oregon Department of Environmental Quality Table 1 – 340-253-8010 Oregon Clean Fuel Standard for Gasoline and Gasoline Substitutes					
Calendar Year Oregon Clean Fuel Standard Percent Reduction (gCO2e per MJ)					
2015	None (Gasoline Ba	seline is 98.62)			
2016*	98.37	0.25 percent			
2017	98.13	0.50 percent			
2018	97.63	1.00 percent			
2019	97.14	1.50 percent			
2020	96.15	2.50 percent			
2021	95.17	3.50 percent			
2022	93.69	5.00 percent			
2023	92.21	6.50 percent			

Oregon Department of Environmental Quality Table 1 – 340-253-8010 Oregon Clean Fuel Standard for Gasoline and Gasoline Substitutes 2024 90.73 8.00 percent 2025 and beyond 88.76 10.0 ercent

[ED. NOTE: Tables referenced are not included in rule text. <u>Click here for PDF copy of table(s)</u>.]

Stat. Auth.: ORS 468.020 & 2009 OL Ch. 754 Sec. 6 (2011 Edition)

Stats. Implemented: 2009 OL Ch. 754 Sec. 6 (2011 Edition)

Hist.: DEQ 3-2015, f. 1-8-15, cert. ef. 2-1-15; DEQ 13-2015, f. 12-10-15, cert. ef. 1-1-

16; DEQ 5-2016(Temp), f. & cert. ef. 4-22-16 thru 9-1-16

Table 2 — Oregon Clean Fuel Standard for Diesel Fuel and Diesel Substitutes

State of Oregon Department of Environmental Quality				
Table 2 – 340-253-8020 Oregon Clean Fuel Standard for Diesel Fuel and Diesel Substitutes				
Oregon	bleath i del Standard for Dieser i del d	and Diesel Substitutes		
Calendar Year	Oregon Clean Fuel Standard (gCO2e per MJ)	Percent Reduction		
2015	None (Diesel Baseline is 99.64)			
2016*	99.39	0.25 percent		
2017	99.14	0.50 percent		
2018	98.64	1.00 percent		
2019	98.15	1.50 percent		

^{*}Initial compliance period is a two-year period for 2016 and 2017. The 2016 standard is to be used only to calculate deficits and credits in 2016 under OAR 340-253-2010.

State of Oregon Department of Environmental Quality Table 2 – 340-253-8020 Oregon Clean Fuel Standard for Diesel Fuel and Diesel Substitutes				
2020	97.15	2.50 percent		
2021	96.15	3.50 percent		
2022	94.66	5.00 percent		
2023	93.16	6.50 percent		
2024	91.67	8.00 percent		
2025 and beyond	89.68	10.00 percent		

^{*}Initial compliance period is a two-year period for 2016 and 2017. The 2016 standard is to be used only to calculate deficits and credits in 2016 under OAR 340-253-2010.

[ED. NOTE: Tables referenced are not included in rule text. <u>Click here for PDF copy of table(s)</u>.]

Stat. Auth.: ORS 468.020, 2009 OL Ch. 754 Sec. 6 (2011 Edition) & 2015 OL Ch. 4

Sec. 3

Stats. Implemented: 2009 OL Ch. 754 Sec. 6 (2011 Edition)

Hist.: DEQ 3-2015, f. 1-8-15, cert. ef. 2-1-15; DEQ 13-2015, f. 12-10-15, cert. ef. 1-1-

16; DEQ 5-2016(Temp), f. & cert. ef. 4-22-16 thru 9-1-16

Table 3 — Oregon Carbon Intensity Lookup Table for Gasoline and Gasoline Substitutes

Oregon Department of Environmental Quality						
	Table 3 – 340-253-8030					
Oregor	Oregon Carbon Intensity Lookup Table for Gasoline and Gasoline Substitutes					
			Carbon Inter	sity Values	(gCO2e/MJ)	
Fuel	Pathway Identifier	Pathway Description	Direct Lifecycle Emissions	Land Use or Other Indirect Effect	Total Emissions	

Table 3 – 340-253-8030

Oregon Carbon Intensity Lookup Table for Gasoline and Gasoline Substitutes

Gasoline	ORGAS001	Clear gasoline - based on a weighted average of gasoline supplied to Oregon	100.77	-	100.77
	ORGAS002	Blended gasoline (E10) - 90% clear gasoline & 10% corn ethanol based on Midwest average	98.54	-	98.54
Ethanol from Corn	ORETHC001	Midwest average - MW corn; Dry Mill; NG; MW production	62.29	7.60	69.89
	ORETHC002	Oregon average - MW corn; Dry Mill; NG; Oregon production	57.08	7.60	64.68

Table 3 - 340-253-8030

Oregon Carbon Intensity Lookup Table for Gasoline and Gasoline Substitutes

Ethanol from Sugarcane	ORETHS001	Brazilian sugarcane base case	39.24	11.80	51.04
Ethanol from Sorghum	ORETHG001	Sorghum; average	66.96	19.40	86.36
Ethanol from Molasses	ORETHM001	Molasses; average	41.03	11.80	52.83
	ORCNG001	North American NG delivered via pipeline; compressed in OR	79.93	-	79.93
Compressed Natural Gas	ORCNG002	Landfill gas (biomethane) cleaned up to pipeline quality NG; compressed in OR	50.26	-	50.26
Liquefied	ORLNG001	North American NG delivered via pipeline; liquefied in OR using liquefaction with 80% efficiency	94.46	-	94.46
Natural Gas	ORLNG002	Landfill Gas (biomethane) to LNG liquefied in OR using liquefaction with 80% efficiency	65.81	-	65.81
Liquefied Petroleum Gas	ORLPG001	Liquefied petroleum gas	83.05	-	83.05
Electricity	ORELC001	Oregon average electricity mix	31.85	-	31.85

NOTE: DEQ recognizes that indirect effects, including indirect land use change, are real. However the methodologies to quantify these effects are still in development. DEQ intends to monitor the science of indirect effect and will adjust carbon intensity values through future rulemaking as methodologies improve.

[ED. NOTE: Tables referenced are not included in rule text. <u>Click here for PDF copy of table(s)</u>.]

Stat. Auth.: ORS 468.020, 2009 OL Ch. 754 Sec. 6 (2011 Edition) & 2015 OL Ch. 4

Sec. 3

Stats. Implemented: 2009 OL Ch. 754 Sec. 6 (2011 Edition) & 2015 OL Ch. 4 Sec. 3

Hist.: DEQ 8-2012, f. & cert. ef. 12-11-12; DEQ 15-2013(Temp), f. 12-20-13, cert. ef. 1-1-14 thru 6-30-14; DEQ 8-2014, f. & cert. ef. 6-26-14; Renumbered from 340-253-3010 by DEQ 3-2015, f. 1-8-15, cert. ef. 2-1-15; DEQ 13-2015, f. 12-10-15, cert. ef. 1-1-16; DEQ 5-2016(Temp), f. & cert. ef. 4-22-16 thru 9-1-16

 $\begin{tabular}{ll} Table 4 --- Oregon \ Carbon \ Intensity \ Lookup \ Table for \ Diesel \ and \ Diesel \ Substitutes \end{tabular}$

Oregon Department of Environmental Quality							
	Table 4 – 340-253-8040						
Oregon	Carbon Intensit	y Lookup Table for					
			Carbon Int	ensity Values	(gCO2e/MJ)		
Fuel	Pathway Identifier	Pathway Description	Direct Lifecycle Emissions	Land Use or Other Indirect Effect	Total Emissions		
Diesel	ORULSD001	Clear diesel, based on a weighted average of diesel fuel supplied to Oregon	101.65	-	101.65		
	ORULSD002	Blended diesel (B5) - 95% clear diesel & 5% soybean biodiesel	99.64	-	99.64		
Biodiesel	ORBIOD001	Conversion of Midwest soybeans to biodiesel	29.15	29.10	58.25		

Table 4 – 340-253-8040

Oregon Carbon Intensity Lookup Table for Diesel and Diesel Substitutes

Oregon Carbon Intensity Lookup Table for Diesel and Diesel Substitutes					
	ORBIOD002	Conversion of Used Cooking Oil to biodiesel where "cooking" is required; NW UCO; Oregon production	18.12	-	18.12
	ORBIOD003	Conversion of tallow to biodiesel; MW tallow; MW production	37.93	-	37.93
	ORBIOD004	Conversion of canola oil to biodiesel	43.34	14.50	57.84
	ORBIOD005	Conversion of corn oil to biodiesel	36.89	-	36.89
Renewable Diesel	ORRNWD001	Conversion of soybeans to renewable diesel	23.15	29.10	52.25
	ORRNWD002	Conversion of Used Cooking Oil to renewable diesel	19.25	-	19.25
	ORRNWD003	Conversion of tallow to renewable diesel	29.96	-	29.96
	ORRNWD004	Conversion of canola oil to renewable diesel	35.48	14.50	49.98
	ORRNWD005	Conversion of corn oil to renewable diesel	33.64	-	33.64

Table 4 – 340-253-8040

Oregon Carbon Intensity Lookup Table for Diesel and Diesel Substitutes

Compressed Natural Gas	ORCNG001	North American NG delivered via pipeline; compressed in OR	79.93	-	79.93
	ORCNG002	Landfill gas (biomethane) cleaned up to pipeline quality NG; compressed in OR	50.26	-	50.26
Liquefied Natural Gas	ORLNG001	North American NG delivered via pipeline; liquefied in OR using liquefaction with 80% efficiency	94.46	-	94.46
	ORLNG002	Landfill Gas (biomethane) to LNG liquefied in OR using liquefaction with 80% efficiency	65.81	1	65.81
Liquefied Petroleum Gas	ORLPG001	Liquefied petroleum gas, crude and natural gas mix	83.05	-	83.05

[ED. NOTE: Tables referenced are not included in rule text. <u>Click here for PDF copy of table(s)</u>.]

Stat. Auth.: ORS 468.020, 2009 OL Ch. 754 Sec. 6 (2011 Edition) & 2015 OL Ch. 4 Sec. 3

Stats. Implemented: 2009 OL Ch. 754 Sec. 6 (2011 Edition) & 2015 OL Ch. 4 Sec. 3 Hist.: DEQ 8-2012, f. & cert. ef. 12-11-12; DEQ 15-2013(Temp), f. 12-20-13, cert. ef. 1-1-14 thru 6-30-14; DEQ 8-2014, f. & cert. ef. 6-26-14; Renumbered from 340-253-3020 by DEQ 3-2015, f. 1-8-15, cert. ef. 2-1-155; DEQ 13-2015, f. 12-10-15, cert. ef. 1-1-16; DEQ 5-2016(Temp), f. & cert. ef. 4-22-16 thru 9-1-16