

LCFS Diesel Compliance Options in Millions of Gallon Equivalents*

Year		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020											
Diesel Fuel Consumption ¹ (in millions)		3,354	3,449	3,544	3,639	3,829	3,934	4,039	4,143	4,248	4,353											
GHG Reduction Targets		0.25%	0.50%	1.00%	1.50%	2.50%	3.50%	5.00%	6.50%	8.00%	10.00%											
	CI	CI's Needed	CI's Needed	CI's Needed	CI's Needed	CI's Needed	CI's Needed	CI's Needed	CI's Needed	CI's Needed	CI's Needed											
Petroleum Diesel	94.71	794.14	1,633.27	3,356.52	5,169.75	9,066.11	13,039.96	19,124.79	25,507.39	32,187.76	41,227.26											
Fuels	Pathway Identifier	CI	% of Diesel	Mil Gal	% of Diesel	Mil Gal	% of Diesel	Mil Gal	% of Diesel	Mil Gal	% of Diesel	Mil Gal	% of Diesel	Mil Gal	% of Diesel	Mil Gal	% of Diesel	Mil Gal	% of Diesel	Mil Gal	% of Diesel	Mil Gal
Biodiesel																						
Soy	BIOD001	83.25	2.07%	69.30	4.13%	142.52	8.26%	292.89	12.40%	451.11	20.66%	791.11	28.93%	1137.87	41.32%	1668.83	53.72%	2225.78	66.12%	2808.71	82.64%	3597.49
Yellow Grease Cooking Required	BIOD002	15.84	0.30%	10.07	0.60%	20.71	1.20%	42.56	1.80%	65.55	3.00%	114.95	4.20%	165.33	6.00%	242.48	7.81%	323.41	9.61%	408.11	12.01%	522.72
Yellow Grease No Cooking Required	BIOD003	11.76	0.29%	9.57	0.57%	19.69	1.14%	40.46	1.71%	62.32	2.85%	109.30	4.00%	157.20	5.71%	230.56	7.42%	307.50	9.13%	388.04	11.42%	497.01
Yellow Grease Cooking Midwest	BIOD004	18.44	0.31%	10.41	0.62%	21.41	1.24%	44.01	1.86%	67.78	3.10%	118.87	4.35%	170.97	6.21%	250.75	8.07%	334.44	9.93%	422.02	12.42%	540.54
Yellow Grease no Cooking Midwest	BIOD005	13.53	0.29%	9.78	0.58%	20.12	1.17%	41.35	1.75%	63.68	2.92%	111.68	4.08%	160.63	5.83%	235.59	7.58%	314.21	9.33%	396.50	11.67%	507.85
DDG Cornoil	BIOD007	5.90	0.27%	8.94	0.53%	18.39	1.07%	37.79	1.60%	58.21	2.67%	102.08	3.73%	146.83	5.33%	215.35	6.93%	287.21	8.53%	362.43	10.66%	464.22
Renewable Diesel																						
Soy	RNWD001	82.16	1.89%	63.28	3.77%	130.14	7.55%	267.45	11.32%	411.93	18.87%	722.40	26.41%	1039.04	37.73%	1523.89	49.05%	2032.46	60.37%	2564.76	75.47%	3285.04
Tallow High Energy Rendering	RNWD002	39.33	0.43%	14.34	0.86%	29.49	1.71%	60.61	2.57%	93.35	4.28%	163.71	5.99%	235.46	8.55%	345.34	11.12%	460.59	13.68%	581.22	17.10%	744.44
Tallow Low Energy Rendering	RNWD003	19.63	0.32%	10.58	0.63%	21.75	1.26%	44.71	1.89%	68.86	3.15%	120.75	4.42%	173.68	6.31%	254.73	8.20%	339.74	10.09%	428.71	12.61%	549.11
CNG																						
CA NG	CNG001	67.70	0.88%	29.40	1.75%	60.47	3.51%	124.27	5.26%	191.40	8.77%	335.66	12.27%	482.78	17.53%	708.06	22.79%	944.37	28.05%	1191.70	35.06%	1526.37
North American NG	CNG002	68.00	0.89%	29.73	1.77%	61.15	3.55%	125.67	5.32%	193.55	8.86%	339.43	12.41%	488.21	17.73%	716.02	23.05%	954.98	28.37%	1205.08	35.46%	1543.51
Landfill Gas	CNG003	11.26	0.28%	9.52	0.57%	19.57	1.13%	40.22	1.70%	61.95	2.84%	108.64	3.97%	156.26	5.67%	229.18	7.38%	305.66	9.08%	385.71	11.35%	494.04
Dairy Biogas to CNG	CNG004	13.45	0.29%	9.77	0.58%	20.10	1.17%	41.31	1.75%	63.62	2.91%	111.57	4.08%	160.47	5.83%	235.35	7.58%	313.90	9.32%	396.11	11.66%	507.35
LNG																						
NA NG 80% efficiency	LNG001	83.13	2.04%	68.58	4.09%	141.04	8.18%	289.86	12.27%	446.44	20.45%	782.91	28.63%	1126.08	40.89%	1651.54	53.16%	2202.71	65.43%	2779.60	81.79%	3560.21
NA NG 90% efficiency	LNG002	72.38	1.06%	35.56	2.12%	73.14	4.24%	150.31	6.36%	231.52	10.60%	406.01	14.84%	583.97	21.21%	856.46	27.57%	1142.29	33.93%	1441.46	42.41%	1846.27
Overseas NG via Baja 80% eff.	LNG003	93.37	17.67%	592.64	35.34%	1218.86	70.68%	2504.87	106.02%	3858.02	176.70%	6765.76	247.38%	9731.31	353.40%	14272.23	459.41%	19035.37	565.43%	24020.72	706.79%	30766.61
Overseas NG via Baja 90% eff.	LNG004	82.62	1.96%	65.69	3.92%	135.09	7.83%	277.63	11.75%	427.61	19.58%	749.89	27.42%	1078.57	39.17%	1581.87	50.92%	2109.79	62.67%	2662.35	78.34%	3410.03
Overseas NG via Long Beach 80% eff.	LNG005	77.50	1.38%	46.14	2.75%	94.90	5.50%	195.03	8.25%	300.39	13.76%	526.79	19.26%	757.70	27.52%	1111.26	35.77%	1482.13	44.03%	1870.29	55.03%	2395.54
Landfill Gas 80% eff.	LNG006	26.31	0.35%	11.61	0.69%	23.88	1.38%	49.07	2.08%	75.58	3.46%	132.55	4.85%	190.64	6.92%	279.60	9.00%	372.92	11.08%	470.58	13.85%	602.74
Landfill Gas 90% eff.	LNG007	15.56	0.30%	10.03	0.60%	20.64	1.20%	42.41	1.79%	65.32	2.99%	114.54	4.19%	164.75	5.98%	241.63	7.78%	322.27	9.57%	406.67	11.97%	520.88
Dairy Biogas 80% eff.	LNG008	28.53	0.36%	12.00	0.72%	24.68	1.43%	50.72	2.15%	78.12	3.58%	136.99	5.01%	197.04	7.16%	288.98	9.30%	385.42	11.45%	486.37	14.31%	622.96
Dairy Biogas 90% eff.	LNG009	17.78	0.31%	10.32	0.62%	21.23	1.23%	43.63	1.85%	67.20	3.08%	117.85	4.31%	169.50	6.16%	248.60	8.00%	331.57	9.85%	418.40	12.31%	535.91
Hydrogen																						
Reforming w/ Renewables	HYGN005	76.10	1.27%	42.67	2.54%	87.76	5.09%	180.36	7.63%	277.79	12.72%	487.16	17.81%	700.70	25.45%	1027.66	33.08%	1370.63	40.71%	1729.59	50.89%	2215.33

*Pathways for Electricity and forms of Hydrogen that exceed the CI for Diesel are not included

1. 2009 Integrated Energy Policy Report

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