

Table 1. Temporary Pathways for Fuels with Indeterminate CIs

<i>Fuel</i>	<i>Feedstock</i>	<i>Process Energy</i>	<i>CI (gCO₂e/MJ)</i>
Ethanol	Corn	Grid electricity/solar and wind electricity and natural gas	90
Ethanol	Grain Sorghum	Grid electricity/solar and wind electricity and natural gas	95
Ethanol	Any Sugar Feedstock	Bagasse and straw only; no grid electricity	60
Ethanol	Grain fiber and bagasse	Grid electricity/solar and wind electricity and natural gas	50
Biomass-based Diesel (HEFA fuels and Biodiesel)	Fats/Oils/Grease Residues	Grid electricity/solar and wind electricity and natural gas	50
Biomass-based Diesel (HEFA fuels and Biodiesel)	Any feedstock derived from plant oils (excluding palm oil and palm derivatives, as a sole feedstock or blended with other feedstocks, and distiller's corn oil)	Grid electricity/solar and wind electricity and natural gas	70
Biomass-based Diesel (HEFA fuels and Biodiesel)	Distiller's Corn Oil	Grid electricity/solar and wind electricity and natural gas	60
Biomass-based Diesel (HEFA fuels and Biodiesel)	Any other feedstock	Grid electricity/solar and wind electricity and natural gas	Baseline (2010) CI value for ULSD
Renewable Propane	Fats/Oils/Grease Residues	Grid electricity/solar and wind electricity and natural gas	50
Renewable Propane	Any feedstock derived from plant oils (excluding palm oil and palm derivatives, as a sole feedstock or blended with other feedstocks, and distiller's corn oil)	Grid electricity/solar and wind electricity and natural gas	70
Renewable Propane	Distiller's Corn Oil	Grid electricity/solar and wind electricity and natural gas	60
Renewable Propane	Any other feedstock	Grid electricity/solar and wind electricity and natural gas	Baseline (2010) CI value for USLD

Fuel	Feedstock	Process Energy	CI (gCO₂e/MJ)
Renewable Naphtha and Renewable Gasoline Blendstock	Fats/Oils/Grease Residues	Grid electricity/solar and wind electricity and natural gas	50
Renewable Naphtha and Renewable Gasoline Blendstock	Any feedstock derived from plant oils (excluding palm oil and palm derivatives, as a sole feedstock or blended with other feedstocks, and distiller's corn oil)	Grid electricity/solar and wind electricity and natural gas	70
Renewable Naphtha and Renewable Gasoline Blendstock	Distiller's Corn Oil	Grid electricity/solar and wind electricity and natural gas	60
Renewable Naphtha and Renewable Gasoline Blendstock	Any other feedstock	Grid electricity/solar and wind electricity and natural gas	Baseline (2010) CI value for CaRFG
Alternative Jet Fuel	Fats/Oils/Grease Residues	Grid electricity/solar and wind electricity and natural gas	55
Alternative Jet Fuel	Any feedstock derived from plant oils (excluding palm oil and palm derivatives, as a sole feedstock or blended with other feedstocks, and distiller's corn oil)	Grid electricity/solar and wind electricity and natural gas	75
Alternative Jet Fuel	Distiller's Corn Oil	Grid electricity/solar and wind electricity and natural gas	65
Alternative Jet Fuel	Any other feedstock	Grid electricity/solar and wind electricity and natural gas	Baseline (2010) CI value for Fossil Jet Fuel
Fossil LNG	Petroleum Natural Gas	N/A	95
Fossil L-CNG	Petroleum Natural Gas	N/A	100
Biomethane CNG	Landfill gas or Municipal Wastewater Sludge	Grid electricity/solar and wind electricity, natural gas, and/or parasitic load	65
Biomethane LNG	Landfill gas or Municipal Wastewater Sludge	Grid electricity/solar and wind electricity, natural gas, and/or parasitic load	80

Fuel	Feedstock	Process Energy	CI (gCO₂e/MJ)
Biomethane L-CNG	Landfill gas or Municipal Wastewater Sludge	Grid electricity/solar and wind electricity, natural gas, and/or parasitic load	85
Biomethane CNG	Food Scraps, Urban Landscaping Waste, or Other Organic Waste	Grid electricity/solar and wind electricity, natural gas, and/or parasitic load	45
Biomethane LNG	Food Scraps, Urban Landscaping Waste, or Other Organic Waste	Grid electricity/solar and wind electricity, natural gas, and/or parasitic load	60
Biomethane L-CNG	Food Scraps, Urban Landscaping Waste, or Other Organic Waste	Grid electricity/solar and wind electricity, natural gas, and/or parasitic load	65
Biomethane CNG, LNG or L-CNG	Dairy Manure and Swine Manure	Grid electricity/solar and wind electricity, natural gas, and/or parasitic load	-150
Hydrogen (compressed or liquefied)	Natural gas	Grid electricity/solar and wind electricity, and natural gas with gaseous hydrogen transport distance of less than 500 miles or liquid hydrogen transport distance of less than 2,000 miles	195
Hydrogen (compressed or liquefied)	Biomethane from Dairy and Swine Manure Source	Grid electricity/solar and wind electricity and natural gas with gaseous hydrogen transport distance of less than 500 miles or liquid hydrogen transport distance of less than 2,000 miles	-40
Hydrogen (compressed or liquefied)	Biomethane from Non-Dairy and Swine Manure Source	Grid electricity/solar and wind electricity and natural gas with gaseous hydrogen transport distance of less than 500 miles or liquid hydrogen transport distance of less than 2,000 miles	175
Hydrogen (compressed or liquefied)	Electrolysis of Water using Zero-CI or Negative-CI Electricity	Gaseous hydrogen transport distance of less than 500 miles or liquid hydrogen transport distance of less than 2,000 miles	55
Low-CI electricity produced by fuel cell	Biomethane from Dairy and Swine Manure Source	N/A	-300

<i>Fuel</i>	<i>Feedstock</i>	<i>Process Energy</i>	<i>CI (gCO₂e/MJ)</i>
Any gasoline substitute feedstock-fuel combination not identified above	Any	Any	Baseline (2010) CI value for CaRFG
Any diesel substitute feedstock-fuel combination not identified above	Any	Any	Baseline (2010) CI value for ULSD