

# Energy Densities of Liquid Fuels

All values are directly from the GREET 1.8b model or calculated from that model.

Liquid Fuels	Energy Density (MJ/kg)	Mass Density (kg/L) <sup>1</sup>
Liquid Hydrogen (H <sub>2</sub> )	120.1	0.071
Liquefied Natural Gas (CH <sub>4</sub> )	48.63	0.428
Liquefied Petroleum Gas (propane+butane) (C <sub>3</sub> H <sub>8</sub> +C <sub>4</sub> H <sub>10</sub> )	46.61	0.508
Liquid Propane (C <sub>3</sub> H <sub>8</sub> )	46.30	0.507 <sup>2</sup>
Conventional Gasoline (C <sub>8</sub> -C <sub>12</sub> chains)	43.45	0.745
Fischer-Tropsch Diesel	43.25	0.797
US Conventional Diesel	42.79	0.837
Low-Sulfur Diesel	42.61	0.847
E10 (10% ethanol by volume)	41.68	0.750
Biodiesel (Methyl Ester)	37.53	0.888
n-Butanol (C <sub>4</sub> H <sub>10</sub> O)	34.37	0.804
Isobutanol (C <sub>4</sub> H <sub>10</sub> O)	32.96	0.802
E85 (85% ethanol by volume)	29.31	0.783
Ethanol (C <sub>2</sub> H <sub>6</sub> O)	26.95	0.790
Methanol (CH <sub>4</sub> O)	20.10	0.794
ALMS E10	41.68	0.750
ALMS GTL Diesel	42.19	0.835
ALMS Cellulosic E85	32.58	0.785

<sup>1</sup> Unless noted, densities are given at 25 °C and 100 kBar pressure

<sup>2</sup> 1.013 bar/-42.1 °C