

ATTACHMENT C: Biogas Specification

Biogas Fuel Specification*

Gross Heating Value (dry)	Minimum:	1,000 Btu/SCF
	Maximum:	1,150 Btu/SCF
Wobbe Index	Minimum:	1,200
	Maximum:	1,400
Components	Minimum Methane (C1) content:	84 MOL %
	Minimum Methane Number (MN):	80
	Maximum Ethane (C2) content:	11 MOL %
	Maximum Propane (C3) content:	3.5 MOL %
	Maximum Butanes (C4) content:	2 MOL %
	Maximum Pentanes + (C5+) content:	0.15 MOL %
	Maximum Nitrogen (N2) content:	1.0 MOL %
	Maximum Hydrogen Sulfide:	0.25 grains per 100 SCF
Total Sulfur:	1.3 grains per 100 SCF	

* The specifications for biogas represent the minimum fuel requirements necessary. If any proposal(s) for biogas is determined to be potentially feasible, Hawaiian Electric would engage in further discussions with the bidder to ensure that the fuel quality is acceptable