

# STANDARD GASEOUS FUEL SPECIFICATIONS FOR TEGS

## Gaseous fuels provided to Gentherm Global Power Technologies' (GPT) Thermoelectric Generators: <sup>(1)</sup>

1. Shall not contain any particulates larger than 30  $\mu\text{m}$  diameter, including but not limited to sand, dust, gums, crude oil, and impurities.
2. Shall not have a hydrocarbon dew point in excess of 0 °C (32 °F) at 170 kPa<sub>g</sub> (25 psig).
3. Shall not contain more than 115 mg/Sm<sup>3</sup> <sup>(2)</sup> (approx. 170 ppm) of H<sub>2</sub>S. <sup>(3)</sup>
4. Shall not contain more than 60 mg/Sm<sup>3</sup> (approx. 88 ppm) of Mercaptan Sulphur.
5. Shall not contain more than 200 mg/Sm<sup>3</sup> (approx. 294 ppm) of total Sulphur.
6. Shall not contain more than 10 % [CO<sub>2</sub>] and/or [N<sub>2</sub>] by volume, nor vary more than +/- 1 % [CO<sub>2</sub>] and/or [N<sub>2</sub>] during operation.
7. Shall not contain more than 120 mg/Sm<sup>3</sup> of water vapor.
8. Shall not contain more than 1 % by volume of free oxygen.
9. Shall have a nominal higher heating value (HHV) of:

Natural Gas:	37 MJ/m <sup>3</sup> (1000 BTU/cu.ft.) <sup>(1)</sup>
Propane/LPG:	93 MJ/m <sup>3</sup> (2500 BTU/ cu.ft.) <sup>(1)</sup>
Butane:	122 MJ/m <sup>3</sup> (3300 BTU/ cu.ft.) <sup>(1)</sup>
10. Shall not exceed 60 °C (140 °F) in temperature.

### Notes:

- (1) – For gaseous fuels outside of these specifications, please contact GPT.
- (2) – At 1 atm and 15 °C.
- (3) – Contact local representative or GPT if the H<sub>2</sub>S concentration is greater than 170ppm.