

DOWNSTREAM INDUSTRY FUEL GAS CHART

Downstream off-gas H₂ content can vary greatly depending on the plant operations. The composition samples showed in the table demonstrate the versatility of our gas turbines in this environment along with pure ethane fired capability.

	GAS A	GAS B	GAS C	GAS D	GAS E	GAS F
Component	% mol	% mol	% mol	% mol	% mol	% mol
Hydrogen (H ₂)	84	58.2	48.7	37.7	68.0	
Methane (CH ₄)	7.5	9.3	19.4	16.0	16.0	
Ethane (C ₂ H ₆)	9	7.8	8.8	12.1		100.0
Propane (C ₃ H ₈)	0.1	12.7	9.9	15.9		
I-Butane (C ₄ H ₁₀)		5.0	2.8	2.3		
N-Butane (C ₄ H ₁₀)		6.6	3.5	4.8		
I-Pentane (C ₅ H ₁₂)		0.3	0.7			
N-Pentane (C ₅ H ₁₂)		0.2	0.5	2.6		
N-Hexane (C ₆ H ₁₄)			0.2			
Ethylene (C ₂ H ₄)				1.5		
Propylene (C ₃ H ₆)				2.3		
I-Butene (C ₄ H ₈)				0.9		
1,3-Butadiene (C ₄ H ₆)				0.0		
Nitrogen (N ₂)			5.7	1.7	16.0	
Oxygen (O ₂)				0.1		
Carbon Monoxide (CO)			0.0	2.0		
Carbon Dioxide (CO ₂)				0.0		
Hydrogen Sulfide (H ₂ S)				0.0		
Water (H ₂ O)	0.3					
LHV (BTU/lb)	29,810	22,104	20,131	20,289	14,953	20,418
LHV (BTU/scf)	440	1030	917	1228	332	1618
LHV (kJ/kg)	69,338	51,414	46,825	47,192	34,781	47,492
LHV (kJ/Nm ³)	17,323	40,550	36,102	48,346	13,071	63,700
Wobbe (BTU/scf)	1000	1318	1187	1379	615	1588
Wobbe (kJ/Nm ³)	39,369	51,889	46,731	54,290	24,212	62,519