

Description	Unit	Base case (air-fuel)	Hybrid/Boost Cases (oxy-fuel)		
			NG	70%NG+ 30%H ₂	100% H ₂
Total energy input	MMBtu/hr	21.00	21.6	22.00	22.12
Thermal Performance					
• Melting time	hr	4.1	3.0	3.0	2.8
• Fuel usage (SFC)	Btu/lb	1328	1053	1034	969
	% reduced compared to base case		20.7	22.2	27.1
• CO ₂ savings* (use of green H ₂ — ideal scenario)	compared to base case %		20.7%	45.0%	100%

*Real scenario CO₂ savings would depend on the hydrogen production route