

A general process flow diagram for the chemical utilisation of steel mill gases to produce methanol is shown in **Figure 1**.

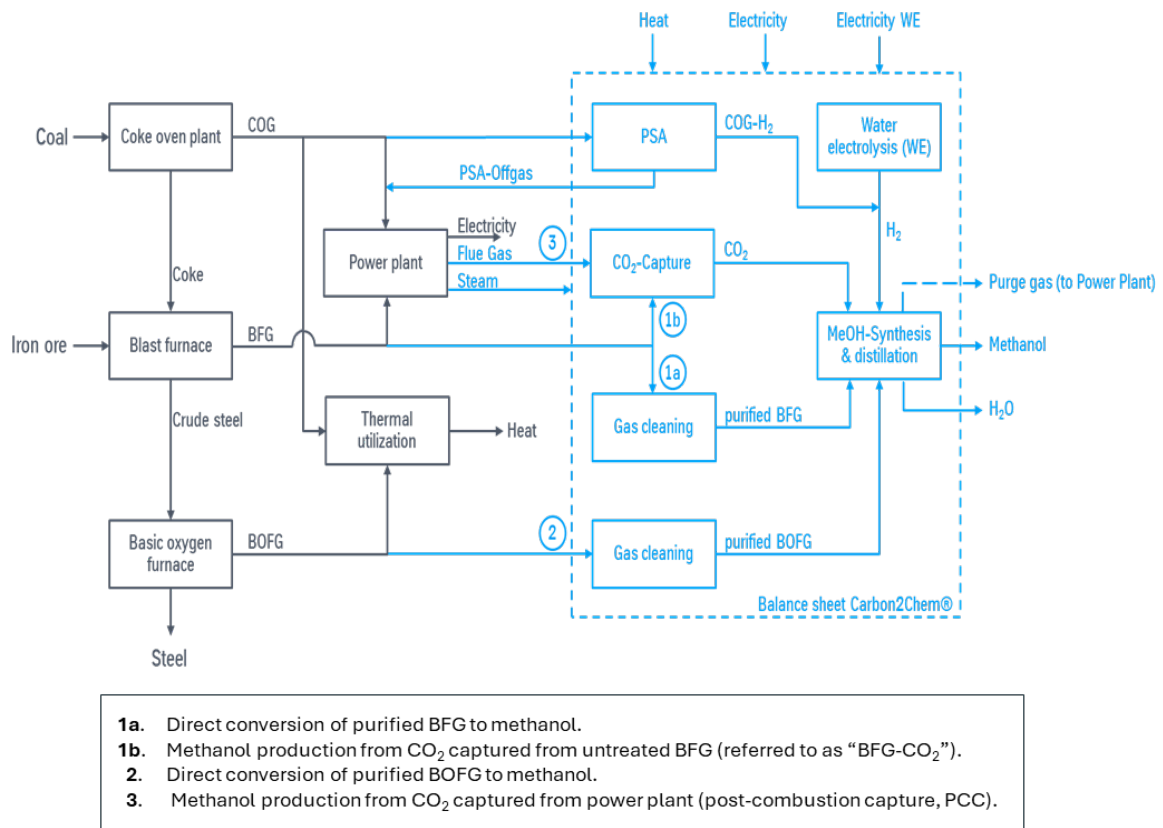


Figure 1: Process flow diagram for chemical utilisation of steel mill gases to produce methanol through the Carbon2Chem® technologies.

The specific energy consumption of the four different process concepts (previously described in Figure 1) are shown in **Figure 2** as a function of the fraction of electrolysis H₂ in relation to the total H₂ demand (sum of electrolysis H₂ and COG H₂).

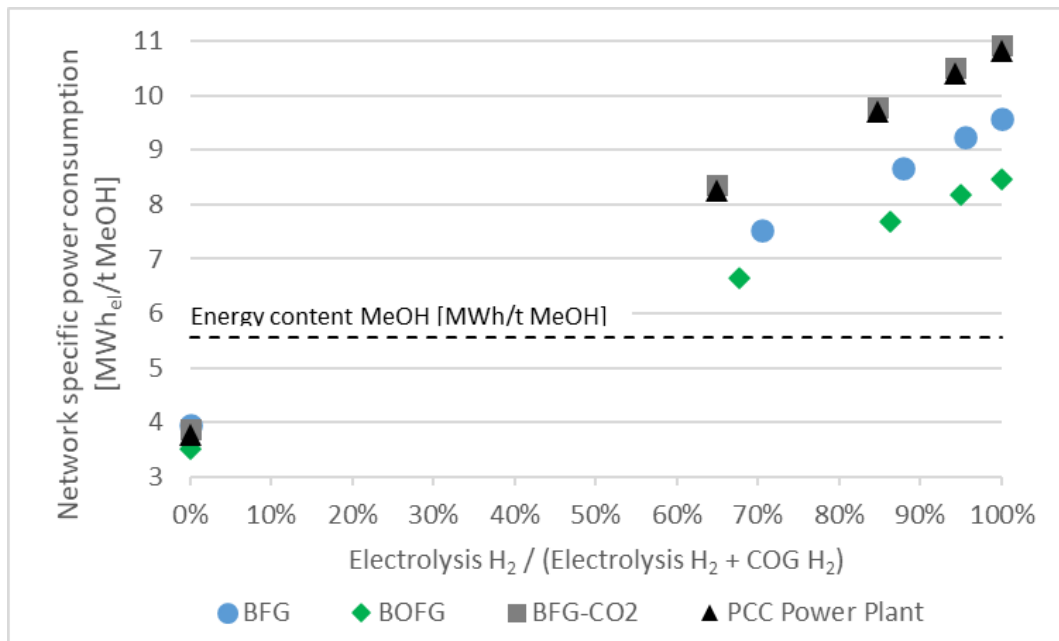


Figure 2: Energy consumption for methanol production from steel mill gases.

The calculated CAPEX, OPEX, simple pay-back period, levelized costs and methanol production capacity are summarised in the table below.

Economic evaluation (estimated data) for different process concept in the Carbon2Chem[®] approach.

Process concept	CAPEX (M€)	OPEX (M€/year)	Levelized cost (€ / ton MeOH)	Production capacity (10³ ton MeOH / year)	Simple payback period (years)
BFG	603	451	1042	511	4
BOFG	611	451	921	580	3
BFG-CO ₂	598	375	1116	409	5
PCC power plant	583	381	1127	409	5