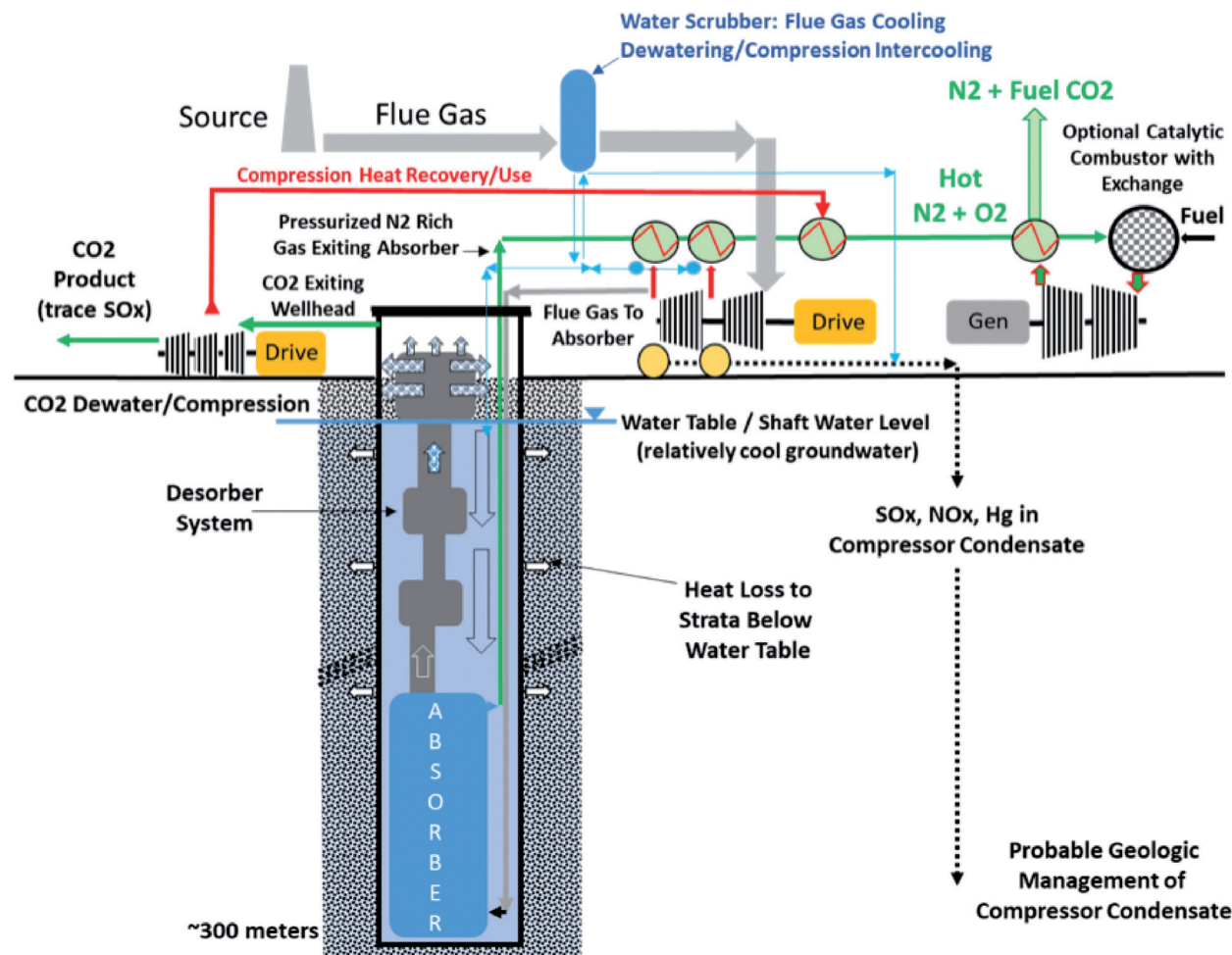


Pi-CO₂

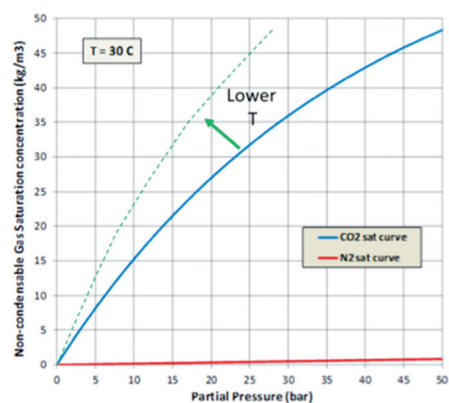
Aqueous CO₂ Capture Process

1

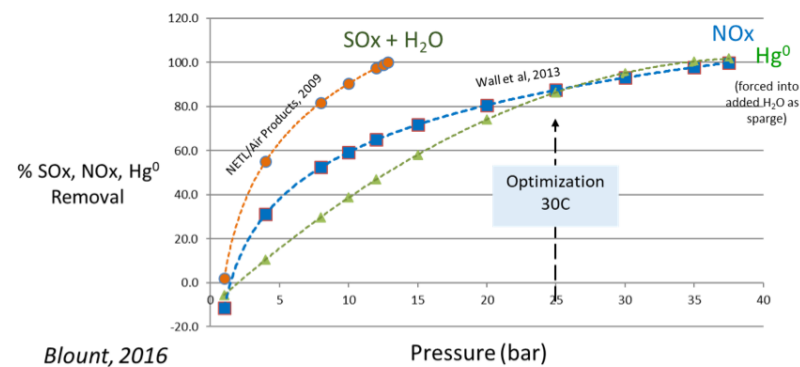


2

A • Increased solubility in water of CO₂ relative to N₂ under hydrostatic pressure and lower temperature

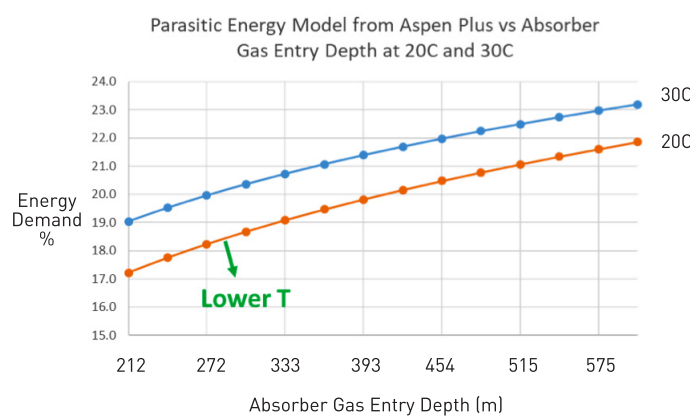


B • H₂O, SO_x, NO_x, Hg⁰ removal during compression



Blount, 2016
Data from: NETL/Air Products, 2009; Huckaby, 2009; Wall et al., 2013; compilation from Oxyfuel exhaust compression studies

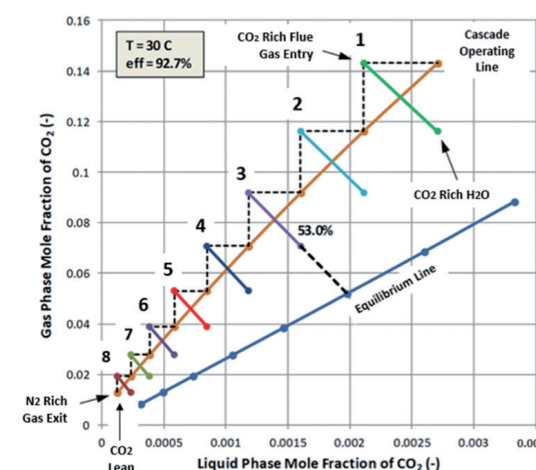
C • Energy recovery



1. Capture = ~0.20 MWe /metric ton CO₂
2. Capture + Product Compression = ~0.25 MWe /metric ton CO₂
3. With internal combustion of fuel with residual O₂ = ~0.10 MWe /metric ton CO₂

Example of a coal fired power plant for reference:
~1 MWe of electricity produced = ~1 metric ton of CO₂ emitted

D • 8 Stage Absorber



1. No moving parts; 2. Highly stable;
3. Fluid dynamics proven by bench-scale prototype.

E • Desorber: CO₂ enrichment and gas lift/density water pumping

