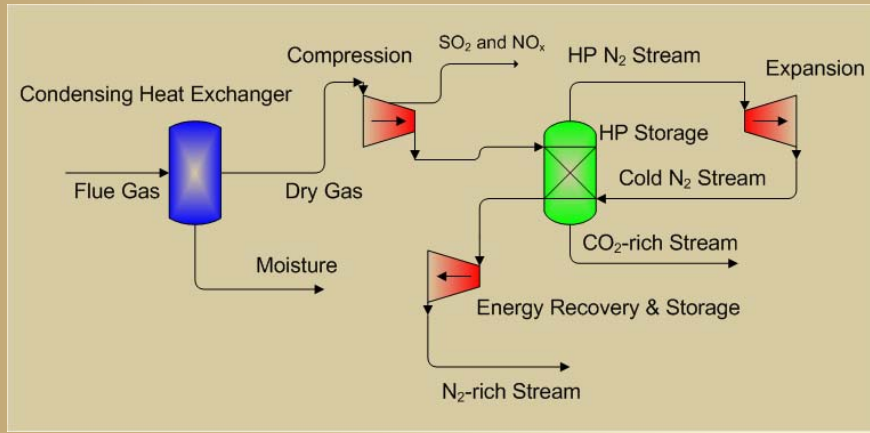


Practical CO₂ Capture and Energy Storage from Power Plants

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Brigham Young University
Sustainable Energy Solutions LLC



- Near-term process technology promises to separate CO₂ and prepare it for storage 25-40% cheaper than alternatives and with several major plant integration advantages.

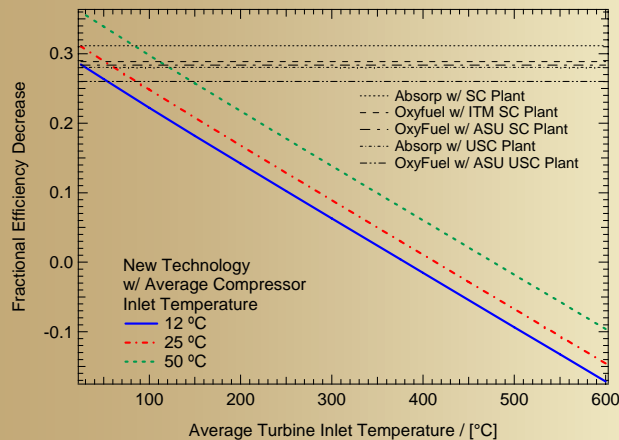
- Replaces/reduces SO₂ and NO_x treatments (additional 25-30 % capital and non-fuel operating cost reduction)

- Stores and regenerates energy (minimizes or avoids new plant construction)

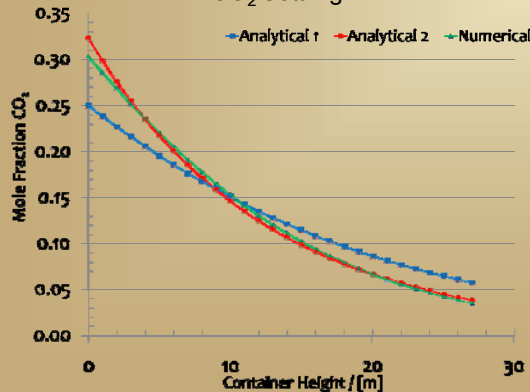
- Retrofits existing systems with minimal boiler modification (possibly reduces new permitting and leverages legacy boiler investments)

- Provides inherent low temperature stream (decreases turbine outlet temperature for better efficiency and reduces cooling water requirements)

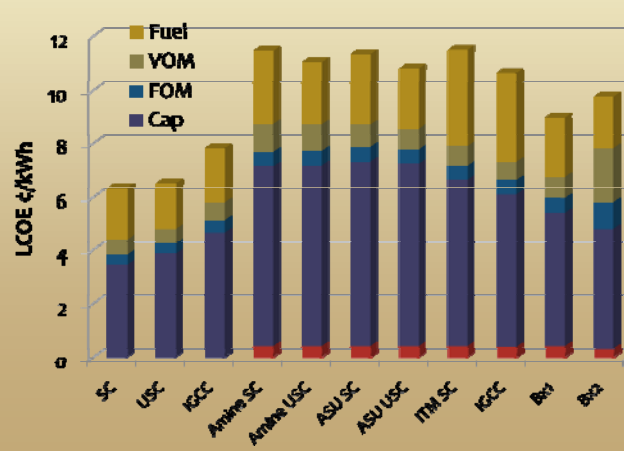
Process Efficiency Temperature Dependence



CO₂ Settling



Levelized Cost of Energy



Cost per Avoided Ton of CO₂

