Six rules for maximising the effectiveness of post combustion CO$_2$ capture systems
Jon Gibbins, Imperial College (GHGT7 paper, 2004)

1. Add heat to the steam cycle at as high a temperature as possible (i.e. be prepared to use best available steam conditions if commercially justified).

2. Reject heat from the steam cycle, in the steam extracted for solvent regeneration, at as low a temperature as possible.

3. Produce as much electricity as possible from any additional fuel used, consistent with rejecting heat at the required temperature for solvent regeneration.

4. Make use of waste heat from CO$_2$ capture and compression in the steam cycle.

5. Use the latest solvent developments.

6. Exploit the inherent flexibility of post-combustion capture.
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Part load steam extraction issues
Multiple steam tapping points?
Auxiliary turbines?

4. Make use of waste heat from CO$_2$ capture and compression in the steam cycle.

Feed water quality issues
Secondary heat recovery circuits?
Interaction with district heating

5. Use the latest solvent developments.

Capital costs plus flexibility, appropriate construction approach
Compatible upgraded solvents
Troubleshooting solvent additives – maintaining performance

6. Exploit the inherent flexibility of post-combustion capture.

Definite interest in this area now
Solvent storage
Compressor/pipeline interactions
Dynamic modelling including revenue optimisation