



Illinois Environmental Protection Agency
Bureau of Air, Permit Section
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In Illinois gasification permit applications:

- Secure Energy (“small” SNG) – issued
- Taylorville Energy Center (a.k.a. Christian County Generation (IGCC) – issued
- Steelhead Energy (IGCC & SNG) – project on hold/inactive
- Rentech (fertilizer/CTL) – under final review but future uncertain as CTL component shifts to MS
- Power Holdings of Illinois (SNG) – under review
- Raven Energy (“small” SNG) – under review

More are on their way...

IGCC Applications vs. Typical Power Plant Applications

- Feedstock vs. Fuel
- Gasification is a process
- Operation is more complex, e.g., startup & shutdown of units
- More emission points in IGCC
- Combustion comes “last”

Footnote on SO₂ – Don't just focus on the turbine's emissions!

Best Resources to Learn From:

(Specifics are proprietary but general knowledge okay)

- Internet – there's a lot of general info out there
- Refinery expertise
- Other permit applications
(www.excelsiorenergy.com)
- Books
 - Higman; *Gasification*
 - Rezaiyan & Cheremisinoff; *Gasification Technologies*
- Workshops, of course!!

Where are the Environmental Groups on IGCC*?

- Environmental Groups want IGCC over coal fired boilers but want wind & efficiency over IGCC.
- Clean Air Task Force
- Sierra Club & NRDC want CO₂ sequestered

* Illinois Experience

USEPA and IGCC

- USEPA wants nationwide consistency on SCR/Selexol
- During the CCG permit appeal, USEPA weighed in on CO₂ issue
- On our “Coal Calls”, USEPA has been “observing from a distance”

CO₂ Issues on CCG

- Sierra club appealed on CO₂ only
 - CO₂ is “subject to regulation”, i.e., subject to BACT
 - Collateral impacts analysis of CO₂
- Sierra Club later removed the collateral impacts argument
- EAB tossed out appeal on procedural grounds because these issues were raised only after Supreme Court ruling

Advice to Regulators

- Be prepared for delays, downtime and detours
 - Mid-course corrections
 - Revised applications
 - FOIAs (documents, emails, everything)
- Avoid piecemeal applications and modeling
- Encourage use of CDs (for FOIAs)
- Sulfur balance calculations
- If required, initiate ESA early
- If applicant cannot address future sequestration,expect problems!!