Utility Perspective on the Environment and Sustainability

Alternative Energy: The Future of Louisiana's Energy Industry

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Entergy

Agenda

- Entergy Corporate Profile
- Sustainability proposition
- Greenhouse Gas Stabilization Commitment
  - The numbers
  - Environmental Initiatives Fund
  - Two projects
- Environmental R & D
- Summary

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Entergy Corporate Profile

- Entergy is an integrated energy company engaged in electric power production & retail distribution,
- Headquarters in New Orleans; operations in Gulf Coast (LA, MS, AR & TX) and Northeast (NY, MA, VT)
- $29 billion in assets; $10 billion in revenues
- 2.6 million retail customers; 14,000 employees
- 30,000 MW of generation; 14,500 miles of transmission; an expanding U.S. plant portfolio
- 5th largest U.S. electricity generator; 2nd largest nuclear generator

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Sustainability Value Proposition

- According to our CEO Wayne Leonard:
  - "Entergy will be recognized as an environmental leader and will demonstrate the advantage of environmental excellence in achieving financial results"
  - "We must be profitable, competitive and do what's right for future generations"
- To be sustainable, we must meet economic, environmental and social goals simultaneously

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Sustainability Value Proposition

- Entergy's major source of greenhouse gas emissions is carbon dioxide (CO_2) from fossil-fueled power plants
  - 50% of generation is from fossil fuels
  - Entergy's CO_2 emission rate is among the lowest of any US electric generating company
  - It is good and getting better
- Need for certainty (3P vs. 4P)
- Investors want to know the risk exposure to carbon constrained economy & how we're managing risk
- ETR wants to identify opportunities as we create a clean energy future

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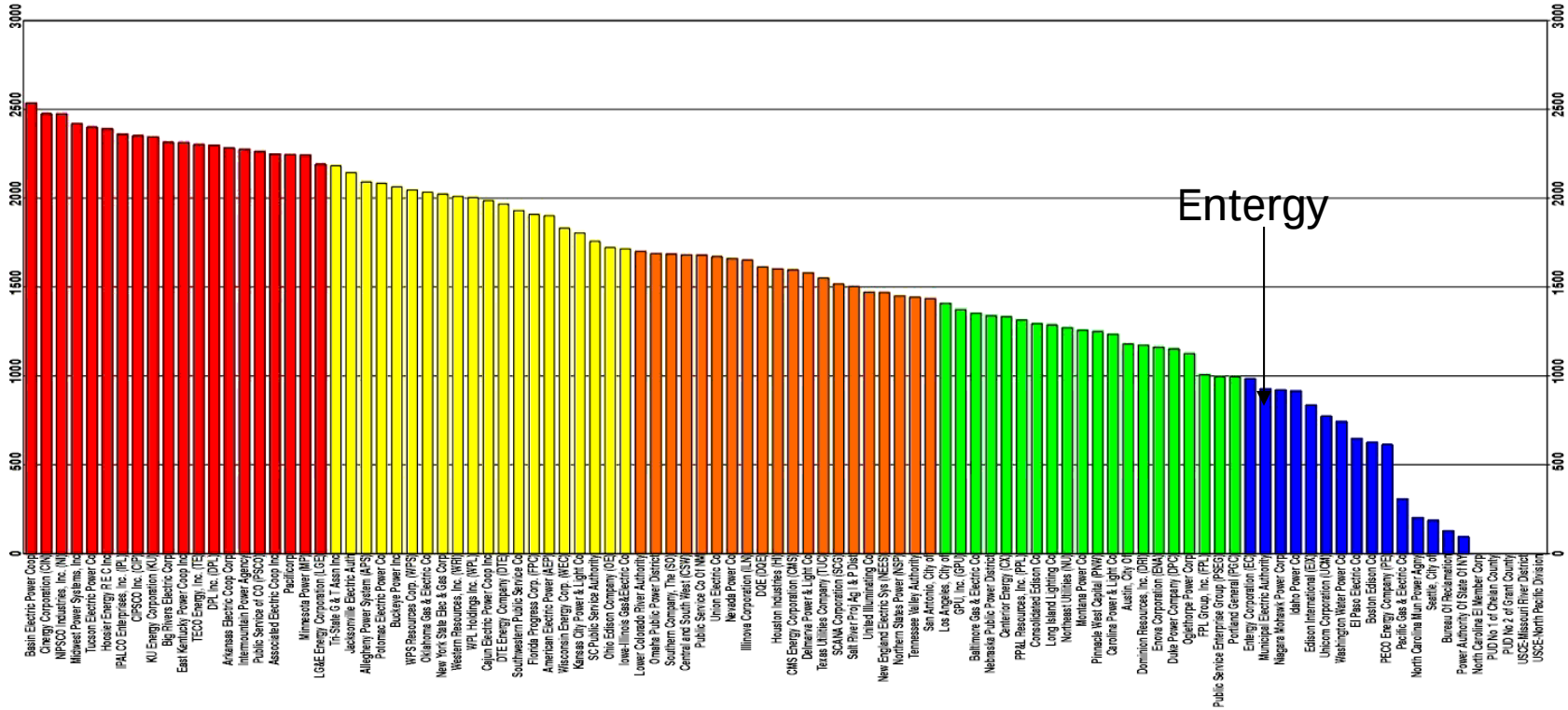
Entergy Emission Rate

Vs. Largest 100 U.S. Electric Companies* (Lbs. CO_2/MWh)



*Entergy is one of the "cleanest" companies in terms of CO_2 emitted per Mwh generated; however total CO_2 emissions increased during the 1990's due to demand growth.

Source: NRDC et al, 2002.

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Greenhouse Gas Stabilization

- In 2001, Entergy was the first U.S. utility to voluntarily commit to the stabilization of our greenhouse gas emissions
- GHG emissions had been growing at 4%/yr. through the 1990's
- Entergy committed to stabilize our emissions at the 2000 level (~53mil. Tons/Yr.) through 2005

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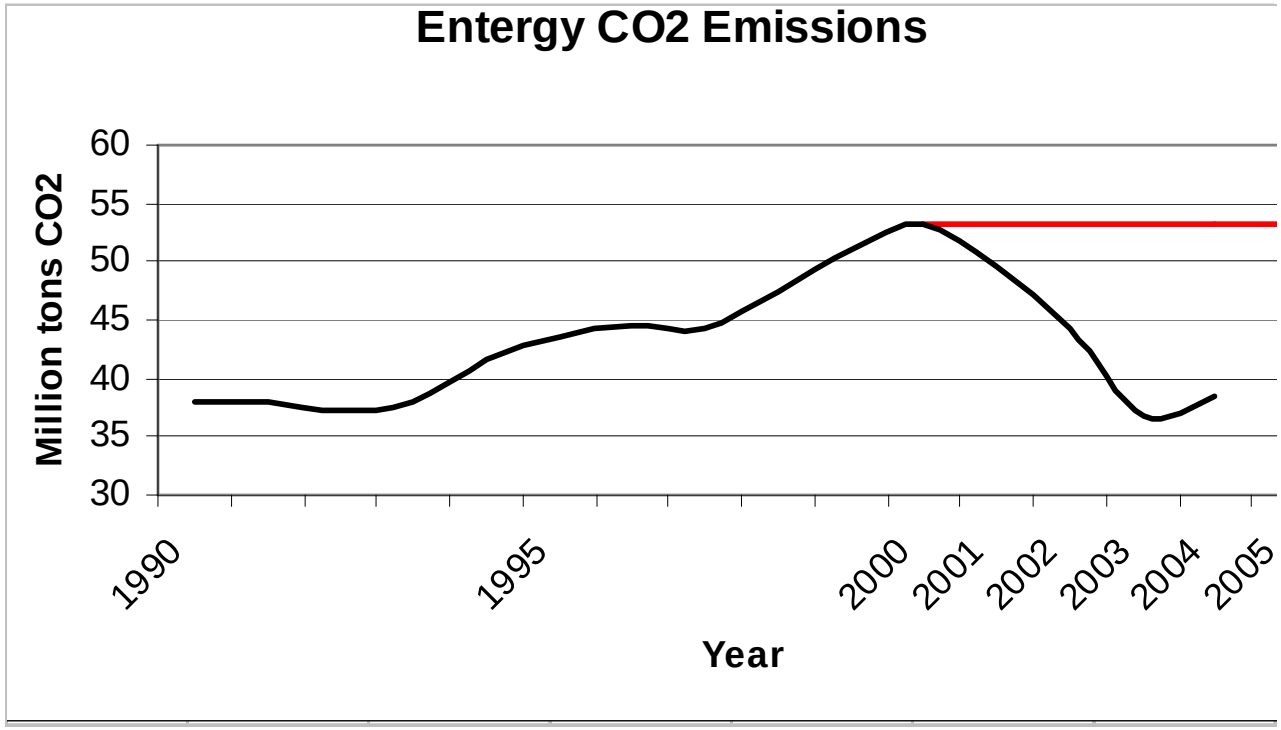
Greenhouse Gas Stabilization

(Progress vs Target 2001 – 04)



- **During the 1990's emissions grew about 4%/yr.**
- **Through 2004, exceeded goal by approximately 21%**

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Environmental Initiatives Fund

- As part of the ETR stabilization commitment, a $25 million ($5 mil/yr. 01- 05) was established
- Allocated for internal projects (80%) and external projects (20%)

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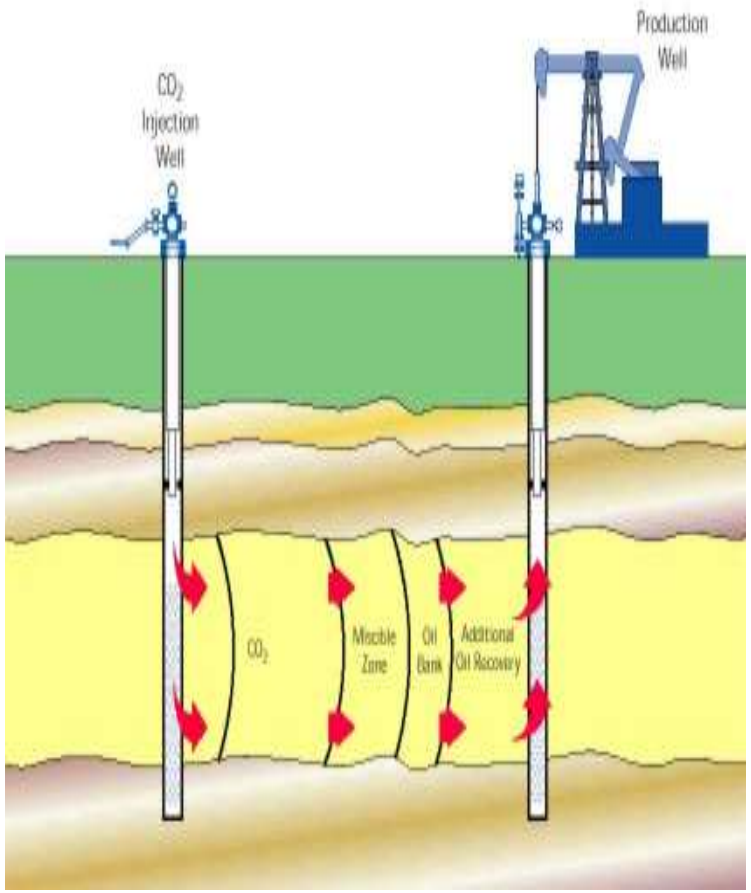
Geologic Sequestration – Enhance Oil Recovery Project



- Project with Denbury Oil near McComb, MS. We see similar opportunities for Louisiana
- CO_2 captured from stack gases and injected into nearby geologic formations for enhanced oil recovery and ultimate geologic sequestration
- Create viable, near term technologies for reducing CO_2 concentrations in the atmosphere
- Early demonstration of advanced technologies will drive down costs, improve performance and impact willingness of stakeholders to accept carbon caps
- Mandatory carbon caps with emissions trading and revenue neutral tax incentives are adopted that augment revenue streams for carbon capture & transport
- Create an actionable, near-term bridge to a clean energy future that helps us take meaningful action today to avoid damages from climate change
- Help energy security, increasing domestic supply
- Add jobs, royalties and tax revenues
- Win-win-win sustainable project

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EOR using CO_2 from Power Plants

- Current EOR projects inject CO_2 from geologically occurring deposits
- Better solution would be to capture and sequester CO_2 from power plants
- Flue Gas needs processing to meet buyers quality requirements
- EOR needs high purity 95%+ CO_2
- Flue Gas CO_2 Concentrations (Coal - 12%, Gas/Oil - 9%, Gas Turbine = 3%)
- Removal of SO_2, NOx, & Other impurities

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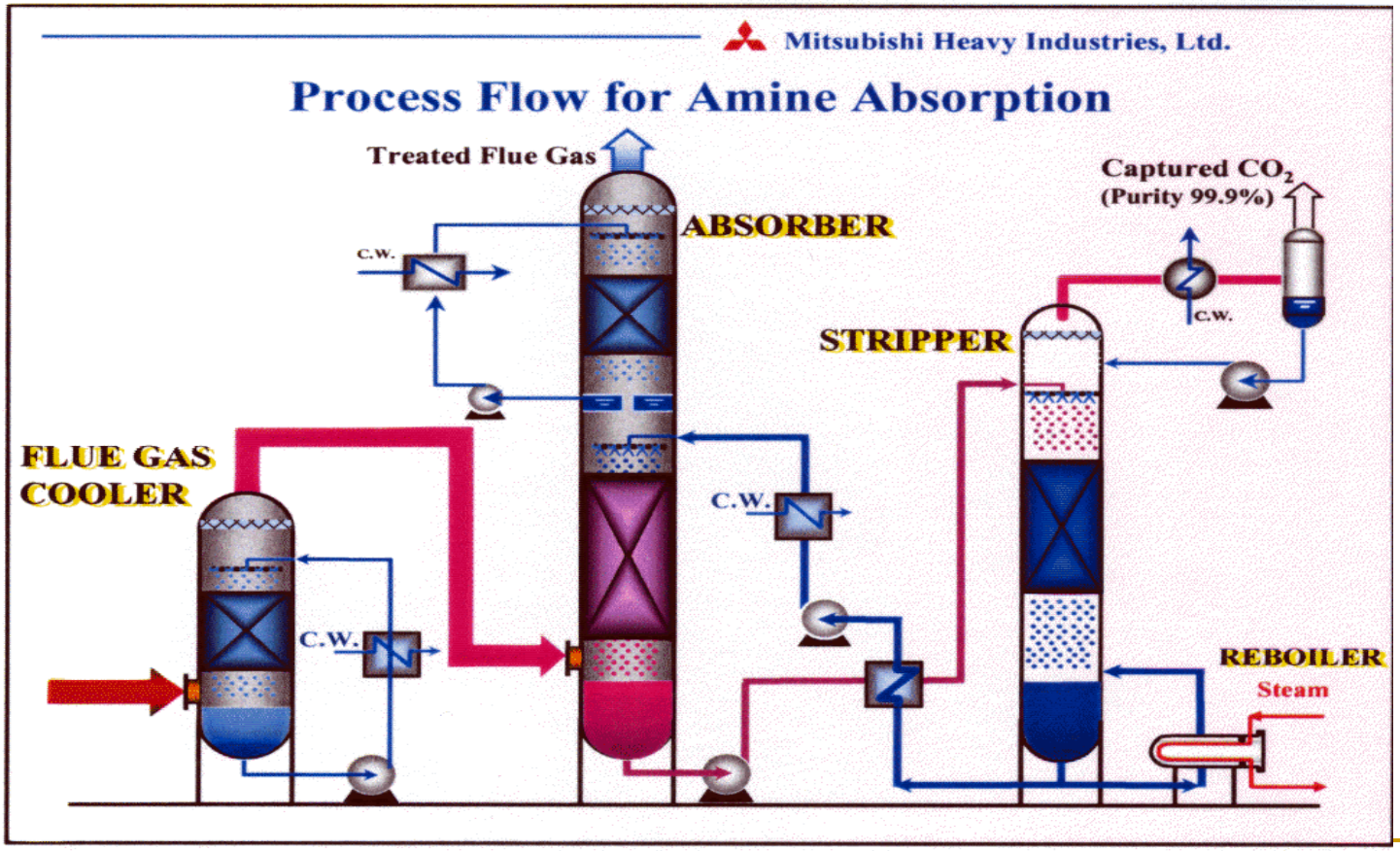
Collection and Purification of CO_2 from Power Plants



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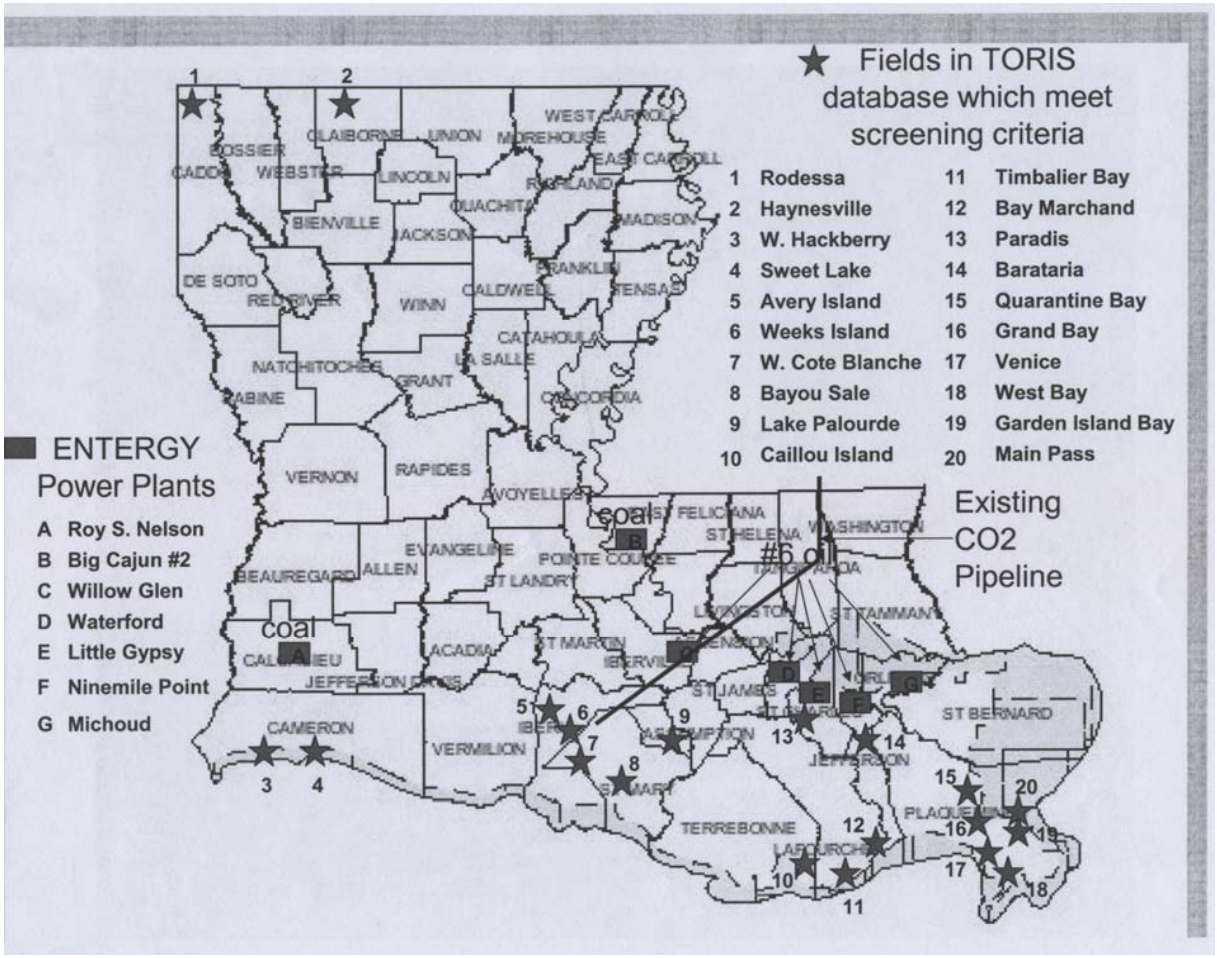
Match High Volume CO_2 Sources with Reservoirs



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Tensas River NWR Project

(near Tallulah, LA)

- Joint sponsorship with Trust for Public Land & Environmental Synergy Inc., Entergy restored 1,500 acres of marginal cropland to hardwoods using low income labor
- Donating high priority land to US FWS to expand Tensas NWR
- Trees will remove 600,000 tons CO_2 as they mature
- Enhances habitat for Louisiana Black Bear & neotropical songbirds
- Adds eco-tourism benefits for region
- Another win-win-win sustainable project

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Environmental R & D

- R&D Project Toxecon II - Joint sponsorship (Entergy, EPRI, ADA Environmental Services) DOE funding
- Independence Coal in Arkansas
- Targeted for low sulfur, Western Powder River Basin coal
- Reduce Hg from emissions, maintain fly ash recycling

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Summary

- Sustainable Development is the successful intersection among economic, environmental and social goals (win-win-win efforts)
- We believe there is sufficient scientific evidence that indicates the linkage between climate change and unrestrained combustion of fossil fuels
- Entergy was the first U.S. utility to voluntarily stabilize GHG emissions
- Environmental action demonstrate our commitment
  - Enhanced oil recovery via CO_2 flooding appears to have good potential for the U.S. in general and Louisiana in particular
  - Tensas NWR provides a public/private habitat restoration and terrestrial sequestration for CO_2
  - Toxecon II is a R&D project that seeks to reduce Hg and maintain fly ash recycling

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