

Investing in Texas: Energy

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Goals of the Project

- Provide Economic Insights on Emergent Energy Sectors
- Consider Elements of Comparative Advantage in Texas
- Evaluate Fiscal Prospects of Emergent Energy

Focus on 3 Examples

- Carbon Capture, Use, and/or Sequestration (CCUS)
- Hydrogen
- Geothermal

CCUS: Developing a Market

- Fiscal incentives: 45Q tax credit (federal-level)
 - Current: \$50/ton geologically sequestered, \$35/ton injected for EOR
 - BBB: would raise to \$85/\$60, expand timeline—a powerful incentive
 - The larger the credit, the more industries in which CCUS is viable
- Texas policy: encourage federal expansion
- Regulatory and legal issues to overcome (Medlock and Miller, 2021)

CCUS: Comparative Advantage

- About one-quarter of U.S. energy-related industrial CO₂ emissions produced in Texas (Medlock and Miller, 2021)
- Also, about one-eighth of U.S. power-generation CO₂ emissions
- Highly concentrated along the Gulf Coast
- Ideal geological environment
- Shared hubs can reduce costs by up to 20%

Hydrogen: Blue and Green Potential

- More than half of U.S., one-third of the world's hydrogen pipeline in TX
- Blue: Hydrogen from natural gas + Carbon Capture
 - 95% of commercial hydrogen is already produced from natural gas
 - Salt caverns ideal for both carbon storage and hydrogen storage
- Green: Hydrogen from water produced by renewable energy
 - Potential for wind energy along Gulf Coast
 - April 28: Announcement of \$6 billion HIF facility in Bay City

Hydrogen: Demand Potential

- Transportation
 - Trucking: Daimler, Volvo, Toyota
 - Aviation: Airbus, United Airlines
- Space Industry
 - Blue Origin, SpaceX
 - NASA
- Grid reliability

Geothermal Energy

- Workforce and resource availability
- Location of availability closer to population density
- Stability in energy production
- Grid reliability

Texas Advantages

- Highly specialized workforce
- Research institutions
- Geological formations
- Competitive fiscal environment

Thank you!