Carbon capture at commercial scale

- Achieved COD on Dec. 29, 2016

ON TIME AND ON BUDGET

- 240MW equivalent CO₂ scrubber on a 640MW coal-fired power plant

- Captures approximately 1.6 million tons per year of CO₂
  - To date, over 800,000 tons have been captured

- CO₂ is used to enhance oil production at the West Ranch Oilfield
  - To date, over 500,000 barrels of oil have been produced

- Sequestering 5,200 tons of CO₂ per day
Five Projects in One

1. **Diverting the flue gas** from an existing facility (Parish Unit 8)
2. **Processing flue gas** in a carbon capture system to strip out the CO₂
3. **Transport CO₂** to a nearby oil field.
4. **CO₂-EOR** operation to produce otherwise unrecoverable oil
5. **Transport and sell oil** – marketing, selling, and transporting the recovered oil

Oil revenues pay for the entire project

No impact on power plant or its costs
CCS Facility – Flue Gas Duct and Blower
CCS Facility – CO₂ Pipeline Delivery
CO2 Pipeline Route

- 81 Miles (Parish to West Ranch)
- 12" diameter
- .330 wall pipe (.406 on HDDs)
- 1,900 psi at inlet

- Private pipeline
- No condemnation power

Flat terrain and flat topography through agricultural area
Enhanced Oil Recovery Project

West Ranch Field Development

- Field is being flooded using a “5-spot” pattern (each injector surrounded by 4 producers)

- A comprehensive monitoring, verification, and accounting plan is in place to track the flow of CO2 and to insure that it is sequestered in the reservoir.

- University of Texas Bureau of Economic Geology developed the plan to sync with oilfield operations.
Petra Nova Parish Holdings LLC

- Petra Nova Power I LLC (COGEN facility)
- Petra Nova CCS I LLC (CCS facility)

Texas Coastal Ventures, LLC

- TCV Pipeline, LLC
- West Ranch Oil Field

Our Partners

- JX Holdings is a leading integrated energy, resources, and materials company
- NRG Energy, Inc. is the largest independent power company in the US
- Hilcorp Energy is one of the largest privately-held oil and natural gas E&P companies in the US
- JBIC and NEXI are wholly-owned by the Japanese government.
- US DOE awarded $190 MM grant funded through Clean Coal Power Initiative
Interest is high right now

2017

Numerous tours

Several speaking engagements

30+ articles written

When Petra Nova is operating, Parish Unit 8 has the same carbon intensity as a combined cycle.
Thank You!