City of Farmington & Enchant Energy Corporation

The Future of San Juan Generating Station

New Mexico Legislature Water and Natural Resources Committee

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Presenters

Nate Duckett

Mayor City of Farmington

Hank Adair Electric Utility Director Farmington Electric Utility System

> **Cindy Crane** Chief Executive Officer Enchant Energy

> Peter Mandelstam Chief Operating Officer Enchant Energy



San Juan Carbon Capture – Project Update

- Enchant Energy plans to invest \$1.5b into the carbon capture facility, sequestration infrastructure and generating units to ensure a low carbon, reliable and competitive power source for New Mexico
- Carbon capture will reduce the power plant's CO2 intensity from 2200 lbs./MWh to below 250 lbs./MWh
- Enchant's co-founders have continued to invest the capital to advance the project and Enchant is currently in discussions with several investors for both near-term and long-term investment in the project
- Enchant hired CohnReznick who has confirmed the economic viability and finance ability of the project, including direct discussions with Tax Equity investors
- Farmington/Enchant will operate the power plant with a nationally recognized management firm upon ownership transfer July 1, 2022 – December 31, 2024 (pre-decarbonization) and a minimum of 12 years (2025 – 2037) after decarbonization – avoiding workforce layoffs at both the plant and the mine
- Enchant is active in Federal legislative efforts to further enhance Section 45Q Carbon Capture Tax Credits (lengthening 45Q duration, and 45Q value per metric tonne) which would enable operating the plant beyond 2037, possibly to 2045
- Enchant has committed to union labor at the plant and for the 2 million + construction hours of the carbon capture facility



San Juan Carbon Capture – Project Update

- \$9.4m Front-End Engineering and Design (FEED) Study progressing well (S&L, MHIA, with Kiewit coordination)
 - Design basis completed (refinements/enhancements from other FEED studies incorporated)
 - Stack testing completed
 - Equipment listing/costing received ongoing work on long lead items
 - Balance of plant engineering finished by 12/31/21
 - Costing & Engineering, Procurement & Construction Contract finished by 3/31/22
- \$19m Geologic Sequestration Project progressing well (DOE CarbonSAFE III with NM Tech)
 - Geologic modeling developed
 - Location for stratigraphic test well identified to be drilled this summer
 - EPA Class VI injection well permit applications in progress
- Coal supply negotiations progressing well (bridge & long-term)
- Power offtake progressing well (short and long-term contracts)
- CO2 connector pipeline (~21 miles) BLM permit application filed 12/31/20
- CO2 storage service contract late-stage negotiations
- BOR/Navajo/Gallup water project progressing well finalizing this summer
- Plant ownership transfer negotiations are continuing



Project is Win For Farmington Electric Utility System

- Successful completion of the carbon capture project will support the continuation of our rates being some of the lowest in the region.
- It would allow us to use the \$25M in undepreciated assets the city has already invested to the station.
- The need for baseload dispatchable resources in the utility portfolio has never been more needed either to protect against pricing volatility, energy emergencies, and the need for resource adequacy.

	Resid	Residential General 500kWh Bill		ate Per kWh	% Higher than FEUS
La Plata Electric Co-op	\$	89.10	\$	0.1782	44%
Continental Divide Co-op	\$	77.68	\$	0.1554	26%
Kit Carson Co-op.	\$	77.25	\$	0.1545	25%
APS (Ave. Win/Sum)	\$	71.79	\$	0.1436	16%
City of Aztec	\$	70.58	\$	0.1412	14%
SRP (Ave. Win/Sum)	\$	70.50	\$	0.1410	14%
*PNM (Ave. Win/Sum)	\$	66.79	\$	0.1336	8%
Jemez Mountains Co-op	\$	64.70	\$	0.1294	5%
**SPS (Ave. Win/Sum)	\$	59.85	\$	0.1197	-3%
*FEUS		\$61.80	\$	0.1236	
* Alith DCA adjuster auto					

*With PCA adjustments

**SPS Requested 27% Rate Increase



\$960/MWhr

NEWS RELEASE

Brazos Electric Power Cooperative, Inc. Files for Chapter 11 Financial Restructuring

Brazos Electric acts to protect its Member cooperatives and their retail members from unaffordable electric bills



Project is Win for Workers and Community

- Preserve ~1,500 direct and indirect jobs, and more than \$53 million in state and annual local tax revenues (from NM independent assessment). CCUS will extend the life of the plant which would otherwise close given New Mexico Energy Transition Act
- Carbon capture job creation and economic development validated with release of DOE report on October 5, 2020
- CCUS will create new construction jobs exceeding 2 million worker-hours for the ~\$1.4 billion Carbon Capture construction
- CCUS will additionally provide new construction jobs performing the ~\$139 million in SJGS deferred maintenance; City of Farmington has submitted request to U.S. Congress for community project funding for this deferred maintenance
- CCUS will construct ~21-mile carbon dioxide pipeline from SJGS to Cortez Pipeline and the direct sequestration field and wells, resulting in additional high-paying construction jobs
- New Mexico becomes a national pioneer in Carbon Capture and develops workforce to apply Carbon Capture technology in other high CO₂ emitting plants in New Mexico and across the United States
- With the closure of Navajo Generating Station, and the announced closures of Four Corners as well as Escalante, and others in the region, finding a way to avoid extreme economic impact to the Four Corners region is even more important



Pore Space Proposed Legislation - Overview

- Obstacles to building a Carbon Capture industry in New Mexico:
 - 1. Pore Space Ownership
 - 2. Long-term carbon dioxide Custody and Liability
 - 3. Regulatory jurisdiction
- Proposed 2022 legislation defines Pore Space as "any subsurface space, cavity, or void, whether naturally occurring or artificially created, that can be used as storage space for fluid substances"
- Declares title to be vested in the surface estate
- Clarifies that conveyance or reservation of the surface, presumptively includes the pore space
- Maintains traditional dominance of a mineral estate over the surface state
- Gives effect to prior transfers of pore space
- Industry is supportive of reasonable injection fee payable to New Mexico General Fund of say 10 cents per metric tonne of CO₂
- Annual regulatory fee and application fees determined by OCD
- CO₂ Storage projects would also generally be subject to existing state property and income taxes



Pore Space Custody & Liability Concerns

- Because carbon storage in Pore Space is intended to be permanent, it is highly
 improbable any private entity could be made responsible for long-term liabilities, such as:
 - Monitoring, reporting, and verification (MRV) which is the responsibility of injector of record such as Enchant for likely 17 years, under IRS rules, until New Mexico assumes long term liability.
 - Mitigation costs
 - Tort liability
- Following the model adopted by other states, proposed legislation permits a private operator to seek a certificate from OCD "closing" the facility and transferring custody and liability to the state
 - 5-10 years after the end of IRS 45Q injection period of 12 years
 - Must be in full legal compliance with EPA Class VI permits and storage regulations
 - No pending claims
 - Pore space facility must be stable and reasonably expected to retain the carbon
 - Must be in good mechanical condition
 - All required reclamation work must be completed



Pore Space Regulatory Jurisdiction

- OCD currently has authority to regulate:
 - CO2 injection for EOR. NMSA 70-2-6 & -11
 - Prevention of waste of CO2. NMSA 70-2-6 & -11
 - 12/1/2007 A Blueprint for the Regulation of Geologic Sequestration of Carbon Dioxide in New Mexico:
 - Identifying numerous areas where rulemaking may be appropriate
- Proposed legislation grants jurisdiction and authority to OCD:
 - Enables rulemaking
 - Precludes redundant permitting requirements
 - Incorporates existing procedures



Energy, Minerals and Natural Resources Department





Contact Information

Nate Duckett

Mayor City of Farmington hadair@fmtn.org

Hank Adair Electric Utility Director Farmington Electric Utility System hadair@fmtn.org

Cindy Crane Chief Executive Officer Enchant Energy <u>ccrane@enchantenergy.com</u>

Peter Mandelstam Chief Operating Officer Enchant Energy peterm@enchantenergy.com





Thank You