

## **CONCEPTUAL PROPOSED ACTION**

### **Dry Piney Deep Project Description**

QEP Energy Company (QEP) proposes to develop an industrial project in the Dry Piney Creek area about 10 to 12 miles northwest of LaBarge, Wyoming. The proposed action consists of constructing a gas-processing plant for the production of helium (He), methane (CH<sub>4</sub>), and carbon dioxide (CO<sub>2</sub>). The project would include up to 10 gas production wells; associated access roads and buried gathering pipelines; a methane gas product pipeline; a CO<sub>2</sub> pipeline leading to four CO<sub>2</sub> injection wells – 2 injection wells located in the S/2SW/4 of Section 14-T28N-R112W and 2 injection wells located in N/2NW/4 Section 23-T28N-R112W; an approximately 13-mile 230 kV overhead electrical transmission line; one water supply well; one water disposal well; and one sour-gas disposal well located adjacent to the plant. The CO<sub>2</sub> injection wells would inject into the Madison formation; the sour gas injection well would inject into the Big Horn formation; and the produced water disposal well would inject into the Nugget formation. All facilities and supporting features would be constructed on a mix of Bureau of Land Management (BLM)-administered surface and mineral estate, on lands where the surface and mineral estate are owned by the State of Wyoming (state lands), and private surface lands in Sublette County, Wyoming. Please see attached map for feature locations. The proposed schedule for the project development would include two- to three-year construction duration (2017-2019) with an anticipated mid-2019 in-service date. Currently, the project is in its conceptual design phase; details for the project will be presented as they develop. The expected life of the facilities is approximately 50 years.

Approximately nine large-diameter gas production wells (one vertical well per pad) would be located on BLM-administered lands, and one production well would be located on state lands. At this stage of the project development, QEP is evaluating 160-acre block sites to determine the optimal location of the single well pad to be placed within each block. The 160-acre sites with flexible well pad locations are depicted on the enclosed map. Each production well would be drilled over a 4-month duration to a finished depth of approximately 17,000 feet in the Madison formations, and could produce up to 50 million cubic feet per day (MMcf/d) of gas. Presently, no hydraulic fracturing is anticipated to complete these gas production wells. Temporary disturbance would encompass seven to eight acres per well pad, with long-term disturbance to include access roads and about two acres per well pad after initiation of interim reclamation.

Sub-surface gathering pipelines and CO<sub>2</sub> disposal pipelines would be located in part on BLM-administered lands requiring ROW acquisition. A proposed alignment of the CO<sub>2</sub> pipeline corridor is shown on the map. QEP proposes to transport CO<sub>2</sub> from the gas plant to the CO<sub>2</sub> injection wells, where it would either be injected as waste or sold if marketable. To facilitate delivery of marketable CO<sub>2</sub> to prospective buyer(s), QEP will work with a third party to identify a route and expects to establish a pipeline delivery/interconnect point with a regional pipeline operator near the location of the CO<sub>2</sub> injection wells. If an agreement for the sale of CO<sub>2</sub> occurs, the purchaser would be responsible for transporting the product from the CO<sub>2</sub> injection site to the final point of delivery. Gathering pipeline routes would follow access roads where practical, and would be reclaimed during interim reclamation, thus avoiding long-term surface disturbance. Specifications for buried gathering, sour gas, and CO<sub>2</sub> disposal pipelines (e.g., pipeline size and type) are pending. A buried, methane gas pipeline would transport this product from the processing plant to the existing Chevron Birch Creek Compressor Station as depicted on the map.

## ***Proposed Project Summary***

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In consultation with QEP, Rocky Mountain Power (RMP) proposes an approximately 13-mile, 230-kilovolt (kV) overhead electrical transmission line for construction within a 150-foot permanent right-of-way (ROW) corridor. Most of the corridor would occur on BLM-administered lands. The map depicts alternative routes currently being considered; and would run generally northwest from RMP's existing Chappel Creek Substation, proceeding along the east side of Hogsback Ridge for connection to the processing plant. The transmission line will support a maximum load of 98 megawatt (MW) and a sustained load of 70-75 MW. Transmission structures would typically consist of wood-pole H-frames with steel trusses (having typically 800- to 1,000-foot spans between structures); steel monopoles may be needed in some locations having longer spans.

The key component of this project, a large-capacity gas processing plant, would be located on about 355 acres of private surface overlying federal mineral estate adjacent to the production well field; see attached map. The processing plant would be almost entirely electrified via the RMP transmission line to minimize air emissions during operation. QEP will apply to the Wyoming Department of Environmental Quality for an air emissions permit. The plant would process about 400 MMcf/d of gas by separating raw feed gas into refined helium and marketable CO<sub>2</sub>/methane streams. Refined helium product would be delivered to sale markets by commercial truck. Excess nitrogen would be vented to the atmosphere. Waste streams of H<sub>2</sub>S would be injected into the sour gas disposal well currently planned to be drilled close to the plant.

Temporary and permanent access for construction, reclamation, operations and maintenance would occur on state and BLM-administered lands by use of existing access roads, planned upgrades, or new road construction. Specifications for the access roads will include construction of a 50-foot wide temporary ROW; long-term disturbance assumes a 14- to 18-foot wide running surface for resource roads, and a 20- to 24-foot wide running surface for collector roads. For definitions of these roads, see *Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development*, a.k.a "The Gold Book", pg. 24).

The workforce for the project could include up to 400 workers for the well drilling and construction phase of the gas processing plant over a two-year period, and a permanent workforce estimated to be up to 50 employees for long-term operations. Heavy commercial truck and light vehicle trips would occur during project construction and facility operation on BLM-administered lands, private surface and state lands.

Production facility maintenance includes general repairs and upkeep for safe and efficient operation of the processing plant; transmission line ground inspections, air patrol, line and structure repair, and vegetation management. Anticipated public health concerns may include hydrogen sulfide leak detection and monitoring. Pipeline maintenance would include daily 24-hour remote monitoring, inspection and leak detection. In addition, portions of the pipelines would be visually inspected on a daily basis. Due to the nature of the project, all components – including all well pads and the plant itself – will be monitored on a 24-hour, 365-day basis to ensure safe and efficient operations.

Access road maintenance would include surface area upgrade (blading, ditching, surfacing), snow removal, drainage structure (culvert) cleanout, and dust control. Reclamation on BLM land surface would include BLM-approved topsoil management, contouring, seeding, and monitoring of interim reclamation until final reclamation is completed. Onsite hazardous materials would be managed in compliance with all federal and state regulations and requirements, such as reporting of material type and quantity being used, produced, stored, or transported in association with project construction, operations, and maintenance. Reporting would also disclose the management, transportation, and location of disposal site(s) for hazardous wastes generated at the facility.