

Resource Report 13

Engineering and Design Material



Resource Report No. 13

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Central Mainline Corridor Expansion Project

FERC Docket No. CP26-___-000

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RESOURCE REPORT NO. 13 – ENGINEERING AND DESIGN MATERIAL SUMMARY OF FILING INFORMATION

MINIMUM REQUIREMENT	LOCATION ADDRESSED
Provide a detailed plot plan showing the location of all major components to be installed, including compression, pretreatment, liquefaction, storage, transfer piping, vaporization, truck loading/unloading, vent stacks, pumps, and auxiliary or appurtenant service facilities.	Not applicable
Provide a detailed layout of the fire protection system showing the location of fire water pumps, piping, hydrants, hose reels, dry chemical systems, high expansion foam systems, and auxiliary or appurtenant service facilities.	Not applicable
Provide a layout of the hazard detection system showing the location of combustible-gas detectors, fire detectors, heat detectors, smoke or combustion product detectors, and low temperature detectors. Identify those detectors that activate automatic shutdowns and the equipment that would shut down. Include all safety provisions incorporated in the plant design, including automatic and manually activated emergency shutdown systems.	Not applicable
Provide a detailed layout of the spill containment system showing the location of impoundments, sumps, subdikes, channels, and water removal systems.	Not applicable
Provide manufacturer's specifications, drawings, and literature on the fail-safe shut-off valve for each loading area at a marine terminal (if applicable).	Not applicable
Provide a detailed layout of the fuel gas system showing all taps with process components.	Not applicable
Provide copies of company, engineering firm, or consultant studies of a conceptual nature that show the engineering planning or design approach to the construction of new facilities or plants.	Not applicable
Provide engineering information on major process components related to the first six items above, which include (as applicable) function, capacity, type, manufacturer, drive system (horsepower, voltage), operating pressure, and temperature.	Not applicable
Provide manuals and construction drawings for LNG storage tank(s).	Not applicable
Provide up-to-date piping and instrumentation diagrams. Include a description of the instrumentation and control philosophy, type of instrumentation (pneumatic, electronic), use of computer technology, and control room display and operation. Also, provide an overall schematic diagram of the entire process flow system, including maps, materials, and energy balances.	Not applicable
Provide engineering information on the plant's electrical power generation system, distribution system, emergency power system, uninterruptible power system, and battery backup system.	Not applicable
Identify all codes and standards under which the plant (and marine terminal, if applicable) will be designed, and any special considerations or safety provisions that were applied to the design of plant components.	Not applicable
Provide a list of all permits or approvals from local, state, federal, or Native American groups or Indian agencies required prior to and during construction of the plant, and the status of each, including the date filed, the date issued, and any known obstacles to approval. Include a description of data records required for submission to such agencies and transcripts of any public hearings by such agencies. Also provide copies of any correspondence relating to the actions by all, or any, of these agencies regarding all required approvals.	Not applicable
Identify how each applicable requirement will comply with Title 49 Code of Federal Regulations (CFR) part 193 and the National Fire Protection Association 59A LNG Standards. For new facilities, the siting requirements of 49 CFR part 193, subpart B, must be given special attention. If applicable, vapor dispersion calculations from LNG spills over water should also be presented to ensure compliance with the U.S. Coast Guard's LNG regulations in 33 CFR part 127.	Not applicable

MINIMUM REQUIREMENT	LOCATION ADDRESSED
Provide seismic information specified in “Data Requirements for the Seismic Review of LNG Facilities” (National Bureau of Standards Information Report 84-2833, available from Federal Energy Regulatory Commission staff) for facilities that would be located in zone 2, 3, or 4 of the Uniform Building Code Seismic Map of the United States.	Not applicable

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Abbreviations and Acronyms

FERC	Federal Energy Regulatory Commission
Northern	Northern Natural Gas
NPPD	Nebraska Public Power District
Project	Central Mainline Corridor Expansion Project

13.0 RESOURCE REPORT 13 – ENGINEERING AND DESIGN MATERIAL

Northern owns and operates a natural gas transmission pipeline system, including pipeline and associated aboveground facilities, in Nebraska and Iowa. Northern is filing an application with FERC pursuant to Section 7(c) of the Natural Gas Act.

Northern owns and operates a natural gas transmission pipeline system and associated aboveground facilities, including pipelines and facilities in Iowa and Nebraska. Northern is proposing to construct the Project, which will consist of (1) install 9.03 miles of 20-inch-diameter Omaha 3rd branch line loop, (2) install 14.64 miles of 30-inch-diameter NPPD Princeton Road power station branch line, (3) install 2.48 miles extension of the 20-inch-diameter Des Moines C-line, (4) uprate of the 20-inch-diameter Des Moines C-line south loop, (5) install new compressor station near Clarion, Iowa, (6) modify five compressor stations in Iowa and Nebraska allowing bidirectional flow, (7) install NPPD Princeton Road power station meter station, (8) install aboveground facilities including a launcher, receiver, tie-in valve settings, and uprate ancillary equipment. All Project components are located in various counties in Nebraska and Iowa.

In accordance with 18 Code of Federal Regulations § 380.12(o), Resource Report 13 is not applicable because the Project does not involve construction of new, or recommissioning of existing, liquefied natural gas facilities.