

Office of Energy Projects

November 2017

**Rover Pipeline LLC** 

Docket No. CP17-464-000

# MAJORSVILLE COMPRESSOR STATION AMENDMENT

# **Environmental Assessment**

Washington, DC 20426

Cooperating Agency

Environmental Protection Agency



#### A. PROPOSED ACTION

On February 2, 2017, the Federal Energy Regulatory Commission (FERC or Commission) issued a Certificate of Public Convenience and Necessity (Certificate) authorizing the Rover Pipeline Project under Docket No. CP15-93-000. Shortly thereafter, Rover Pipeline LLC (Rover) began construction of the aforementioned project. The project involves construction of about 510 miles of pipeline rights-of-way, 10 compressor stations, and various ancillary facilities. Of those 10 compressor stations, Rover now proposes to expand the Majorsville Compressor Station in Marshall County, West Virginia. Project location and facility maps created by Rover are reproduced and presented in Section E, below.

As Certificated by the Commission, the Majorsville Compressor Station included a total of 7,100 horsepower (hp) of compression. After the issuance of the Commission's February 2, 2017 *Order Issuing Certificate*, one of Rover's customers identified it needed to reallocate a portion of its natural gas quantities (100,000 dekatherms per day) to a different receipt point at Majorsville due to changes in its upstream gas processing plants. In order to transport this increased capacity from the Majorsville Compressor Station, Rover determined it would need to increase the compression at this station, and thus, increase the overall delivery capacity of its project by 100,000 dekatherms per day.

On May 17, 2017 Rover filed a request for a variance under Environmental Condition 5 of its *Order Issuing Certificate* under Docket No. CP15-93-000 to expand the Majorsville Compressor Station. However, Commission staff determined that the proposal required an amendment to its Certificate. Therefore, on June 6, 2017, Commission staff issued a Notice of Amendment under Docket No. CP17-464-000. Rover proposes to install an additional compressor unit rated at 3,550 hp and expand the currently under construction compressor building from 75 feet by 114 feet to a slightly larger structure measuring 75 feet by 164 feet. Rover expects that the expansion would generally occur during the same time as that which was originally described in the final environmental impact statement (EIS) for the Rover Pipeline Project. Rover would complete the construction on its current construction schedule which operates 6 days a week, about 10 hours a day. The activities are expected to take 3 months to complete.

Rover sought and acquired applicable federal and state authorizations in its proceeding under CP15-93-000 which would generally not need revision for this proposal. On October 3, 2017, Rover received approval from the West Virginia Department of Environmental Protection to modify its Title V air permit to reflect the proposed increase in potential to emit related to the added compression. Rover would be responsible for seeking and acquiring all other applicable authorizations required for the current project.

The FERC is the lead federal agency responsible for authorizing natural gas transmission facilities under the Natural Gas Act (NGA), and is the lead federal agency for preparation of this Environmental Assessment (EA). We<sup>1</sup> prepared this EA in compliance with the requirements of the National Environmental Policy Act (NEPA) (Title 40 of the Code of Federal Regulations, parts 1500-1508 [40 CFR 1500-1508]), and the Commission's implementing regulations under 18 CFR 380. The U.S. Environmental Protection Agency (EPA) participated as a cooperating agency in the environmental review of this action. A cooperating agency is one that has jurisdiction by law or special expertise with respect to environmental impacts involved with a proposal and is involved in the analysis. The EPA also has jurisdictional authority to control air pollution under the Clean Air Act of 1970 (42 United States Code [USC] Chapter 85) by developing and enforcing rules and regulations for all entities that emit toxic substances into the air. Under this authority, the EPA has developed regulations for major sources of air pollution. The EPA has delegated the authority to implement these regulations to state and local agencies, who are also allowed to develop their own regulations for non-major sources. The EPA also establishes general conformity applicability thresholds, with which a federal agency can determine whether a specific action requires a general conformity assessment.

The assessment of environmental impacts is an important part of the Commission's decision on whether to issue Rover an order amending its Certificate. Our principal purposes for preparing this EA are to:

- identify and assess the potential impact on the natural and human environment that would result from the implementation of the proposed project;
- identify and recommend reasonable alternative and specific mitigation measures to avoid or minimize environmental impact; and
- facilitate public involvement in the environmental review process.

Under section 7(c) of the NGA, the Commission determines whether interstate natural gas transportation facilities are in the public convenience and necessity and, if so, grants a Certificate to construct and operate them. The Commission bases its decisions on technical competence, financing, rates, market demand, gas supply, environmental impact, long-term feasibility, and other issues concerning a proposed project. This EA will be used by the Commission in its decision-making process to determine whether to authorize Rover's proposal.

<sup>&</sup>lt;sup>1</sup> "We," "us," and "our" refer to the environmental staff of the FERC's Office of Energy Projects

### **B.** ENVIRONMENTAL ANALYSIS

Staff prepared a final EIS, issued on July 29, 2016, that analyzed and disclosed the full suite of impacts associated with the Rover Pipeline Project. With the exception of the project's impacts on forested lands, staff concluded that impacts would be reduced to less than significant levels. Because the current proposed action involves the expansion of an existing and currently under construction compressor station, we will not revisit all the environmental impacts associated with the Rover Pipeline Project; rather, we incorporate its analysis by reference.<sup>2</sup> This EA will only discuss reasonably foreseeable impacts associated with the Majorsville Compressor Station's expansion. As described above, because the expansion would occur within the compressor station's existing facility, we believe the proposed project would neither result in impact on, nor conflict with:

- geology and soils, because the expansion would occur at an existing, previously disturbed location;
- groundwater, because extensive excavation would not occur;
- wetland or waterbody (including fisheries) resources, because none are within the proposed areas of disturbance;
- vegetation, as clearing and site grading occurred in early 2017, and additional vegetation clearing would not be required for the amendment;
- wildlife, as project activity would occur within the boundaries of an active construction site currently under development where wildlife is not expected;
- federally listed threatened or endangered species, as FERC concluded formal and informal consultations required for the Rover Pipeline Project and no new impacts are anticipated related to the added horsepower;
- federally owned lands, national or state wild and scenic rivers, recreational areas, registered natural landmarks or nature preservers, or Native American reservations because none of these are within 0.25 mile of the proposed project area;
- cultural resources, as the site of the Majorsville Compressor Station was previously surveyed (no cultural resources were identified) and reviewed, in compliance with section 106 of the National Historic Preservation Act, for the Rover Pipeline Project; and
- reliability and safety, as Rover would construct and operate it facilities in accordance with established pipeline safety standards under 49 CFR 190-199, and as administered by the Pipeline and Hazardous Materials Safety Administration.

<sup>&</sup>lt;sup>2</sup> FERC, Final Environmental Impact Statement, Rover Pipeline, Rover Pipeline, Panhandle Backhaul, and Trunkline Backhaul Projects (Docket Nos. CP15-93-000, CP15-94-000 and CP15-96-000) July 29, 2016

#### Land Use and Visual Resources

We received comments from the EPA suggesting that we revisit or reassess impacts previously discussed in staff's final EIS. The proposed amendment does not serve to open the record for the entirety of Rover Pipeline Project, as approved by the Commission. The review conducted in the final EIS was thorough and complied with all applicable federal laws. Therefore, this EA focuses on those resources reasonably expected to be impacted by the proposed addition of compression and capacity.

To minimize potential impacts on the environment, Rover has committed to implement the mitigation measures included in our *Upland Erosion Control*, *Revegetation, and Maintenance Plan* (Plan). In addition, it has developed a Spill Prevention, Control, and Countermeasure Plan that outlines how it would reduce the risk of accidental spills of hazardous materials as well as clean up, remediate, and notify proper authorities should a spill occur. Rover indicated it would follow all approved plans currently in place for the Rover Pipeline Project.

Rover would limit the total ground disturbance associated with the expansion to the previously Certificated station boundaries (including both the construction and permanent boundaries, which would remain the same). Afterwards, Rover would maintain the Majorsville Compressor Station (e.g., seeding and/or graveling work areas as appropriate) as part of regular operations as more fully described in its original application and FERC's final EIS.

The expansion would result in temporary visual impact by the presence of construction equipment and activity consistent with Rover's original application; however, the expanded compressor building would result in minor increase in the permanent visual impact of the station, which would not be significant (an increase in the length of the already authorized building by 50 feet within an industrial-type station).

#### Air Quality and Noise

Construction-related noise and air emissions are not expected to increase in intensity, but may increase in duration due to the expansion of activities. The principal impact from the expansion would be an increase in operational noise and air emissions. Below, we have updated the original analyses presented in tables 4.11.1-5, 4.11.1-14, and 4.11.2-5 from the final EIS for the Rover Pipeline Project under Docket No. CP15-93-000 to reflect the increase in emissions and noise.

Updated values for TABLE 4.11.1-5 Potential Operating Emissions from the Majorsville Compressor Station (tpy)									
Emissions Source (number)	NOx	voc	со	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	Single HAP	Total HAPs	CO <sub>2</sub> e
Compressor Engines (3)	51.42	41.44	56.56	0.21	3.50	3.50	8.02	11.41	41,040
Emergency Generators (1)	1.47	0.01	0.15	1.47	0.01	0.01	< 0.01	< 0.01	128
Site Fugitives (all)	-	1.86	-	-	-	-	< 0.01	< 0.01	308
Water and Slop Tank Fugitives (all)	-	< 0.01	-	-	-	-	< 0.01	< 0.01	-
Truck Loading Fugitives (2)	-	< 0.01	-	-	-	-	< 0.01	< 0.01	-
CIG Flameless Gas Infrared Heater (all)	0.22	0.01	0.19	< 0.01	0.02	0.02	< 0.01	< 0.01	263
Compressor Blowdown Fugitives (all)	-	0.09	-	-	-	-	< 0.01	< 0.01	99
Engine Starter Vents (all)	-	0.12	-	-	-	-	< 0.01	< 0.01	130
Pigging Operation Fugitives	-	0.04	-	-	-	-	< 0.01	< 0.01	41
Unpaved Road Dust	-	-	-	-	0.72	0.72	-	-	-
Totals	53	46	57	2	4	4	8	11	44,258
Emission total estimates under CP15- 93-000	36	33	38	0.2	2.5	2.3	9	11	28,467

tpy = tons per year No<sub>x =</sub> Nitrogen oxides VOC = volatile organic compounds CO = carbon monoxide

 $SO_2 =$  sulfur dioxide PM<sub>10</sub> = particulate matter with an aerodynamic diameter less than or equal to 10 microns in diameter

PM<sub>2.5</sub> = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns in diameter

HAP = hazardous air pollutants

Updated values for TABLE 4.11.1-14 Air-dispersion Modeling Results for the Majorsville Compressor Station							
Pollutant	Averaging Period	Regional Background <sup>1</sup> (µg/m3)	Project Impact (µg/m3)	Project Impact + Background (µg/m3)	NAAQS (µg/m3)		
NO <sub>2</sub>	1-hour	72	105	177	188		
NO <sub>2</sub>	Annual	40	9	49	100		
PM <sub>2.5</sub>	24-hour	24	6	30	35		
PM <sub>2.5</sub>	Annual	11	1	12	12		
$PM_{10}$	24-hour	43	6	49	150		
СО	1-hour	1,074	136	1,210	40,000		
СО	8-hour	926	123	1,049	10,000		
SO <sub>2</sub>	1-hour	71	1	71	195		
SO <sub>2</sub>	3-hour	71	1	71	1,300		
1 for consistency, t $\mu g/m3 = microgram$	hese represent the re-	gional background valu	les presented originally	in the EIS			

The proposed new compressor engine would use an oxidation catalyst for control of formaldehyde, carbon monoxide, and volatile organic compounds. Minimization of

other pollutant emissions would be achieved with normal engine maintenance and the use of natural gas fuel. Modeled impacts from the combined emissions of all anticipated compressor engines at the Majorsville Station are below the National Ambient Air Quality Standards at the station fenceline. Therefore, we conclude there would not be a significant impact on air quality from the proposed project.

NSA <u>a</u> /	Distance and Direction to NSA (feet)	Calculated Ambient L <sub>dn</sub> (dBA)	Calculated Compressor Station Contribution L <sub>dn</sub> (dBA)	Calculated Compressor Project + Ambient L <sub>dn</sub> (dBA)	Potential Noise Increase (dBA)	
NSA #1	1,090 SE	49.8	38.9	50.1	0.3	
NSA #2	5,380 SE	56.3	12.2	56.3	0.0	
NSA #3	3,220 NW	69.6	40.7	69.6	0.0	
NSA #4	4,150 NE	54.9	32.7	54.9	0.0	

Due mainly to the fact that all but one of the nearest noise-sensitive areas (NSA) are over 0.5 mile from the compressor station, the estimated noise increase with the additional compression is essentially the same as it was without the additional compression. Mapping of the NSAs within the vicinity of the Majorsville Compressor Station were presented in the final EIS as in appendix R and are reproduced below. For three NSAs, there is no estimated increase in noise, and for NSA #1, the added compression results in an additional 0.1 dBA (decibels on the A weighted scale) (i.e., 0.3 dBA for the amended project compared to 0.2 dBA for the original iteration), which would not be perceptible. We also note that ambient noise levels at some NSAs near the Majorsville Compressor Station already experience noise above 55 dBA L<sub>dn</sub> (day-night average sound level). However, as shown in the updated table 4.11.2-5, noise level contributions from each compressor station are projected to be below the FERC criterion of 55 dBA L<sub>dn</sub>. Although we have estimated that noise level increases would be undetectable at NSAs, to ensure that the actual noise levels produced as a result of the Majorsville Compressor Station expansion are not significant, Rover must still conduct noise surveys at part of its original Certificate issued in Docket No. CP15-93-000, which staff clarifies must include the additional compressor engine subject to this analysis. Environmental Condition 43 of Rover's February 2, 2017 Order Issuing Certificate requires that:

"Rover shall file a noise survey with the Secretary **no later than 60 days** after placing each of the Rover Pipeline Project compressor stations in service. If a full load condition noise survey of the entire station is not possible, Rover shall instead file an interim survey at the maximum possible horsepower load and file the full load survey **within 6 months**. If the noise attributable to the operation of all of the equipment at any compressor station under interim or full horsepower load conditions exceeds 55 dBA L<sub>dn</sub> at any nearby NSAs, Rover shall file a report on what changes are needed and shall install the additional noise controls to meet the level **within 1 year** of the in-service date. Rover shall confirm compliance with the 55 dBA L<sub>dn</sub> requirement by filing a second noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls."

Based on the analysis of expected noise and adherence to the above-referenced condition, we conclude there would be no significant impacts on noise from the proposed project.

#### Cumulative Impacts and Climate Change

Staff evaluated the range of potential cumulative effects for the Rover Pipeline Project in the Commission's final EIS in detail. Appendix S of the final EIS listed projects that were considered to fall within in a defined "region of influence" which generally varied depending on the environmental resource in question. As a result the final EIS considered a range of projects including natural gas production, FERCjurisdictional natural gas facilities, non-jurisdictional facilities, electric transmission and generation projects, transportation and commercial/residential development projects, among others.

Given the scope of the activities proposed (expansion of an approved compressor station) the potential for additional cumulative impacts beyond those previously analyzed in the final EIS is limited. However as discussed above, the primary potential for impacts associated with the proposal would be air-quality related. In the context of reasonably foreseeable cumulative impacts, our analysis is here focused on greenhouse gas emissions (GHGs) due to the increase in project capacity by 100,000 dekatherms per day. As noted in the final EIS, GHG emissions are a primary cause of climate change (see final EIS, 4-292). Of the GHGs emitted, carbon dioxide (CO<sub>2</sub>) is the most prevalent, followed by methane (CH<sub>4</sub>).

We conservatively estimate that the downstream consumption end use of the 100,000 dekatherms per day could result in the emission of 1.8 million metric tons of carbon dioxide per year. This estimate represents an upper bound for the amount of end-use combustion that could result from the additional capacity created by this proposed amendment. This is because some of the gas may displace fuels (i.e., fuel oil and coal) which could result in lower total emissions. It may also displace gas that otherwise would be transported via different means, resulting in no change in emissions or be used as a feedstock. This estimate also assumes the maximum capacity is transported 365 days per year, which is rarely the case because many projects are designed for peak use.

As such, it is unlikely that this amount of GHG emissions would occur, and emissions are likely to be significantly lower than the above estimate. In addition, these estimates are generic in nature because no specific end uses have been identified. The gas transported by the Rover Pipeline Project would be transported to market hubs and we are unable to speculate on any of the potential end-uses with reasonable certainly. Therefore, we have assumed for the purposes of this analysis that all of the gas would be combusted fully.

In an effort to put these emissions in to context, we examined the national emissions of GHGs, given that the Rover Pipeline Project would transport gas to market hubs. As the ultimate end-use destination is likely to be wide and undetermined, we were unable to make a comparison to regional level emissions. Based on the 2016 level data from the U.S. Energy Information Administration,<sup>3</sup> the GHGs that could be emitted from end-use combustion of the 100,000 dekatherms per day of capacity would represent approximately 0.034 percent of the national carbon dioxide emissions.

The emissions would increase the atmospheric concentration of GHGs, in combination with past and future emissions from all other sources, and contribute incrementally to climate change. We conclude that this minor increase in emissions does not change our previous conclusions on cumulative impacts as presented in the final EIS for the Rover Pipeline Project.

#### Alternatives

In accordance with NEPA and Commission policy, we considered and evaluated alternatives to the proposed action, including the no-action alternative and system alternatives. These alternatives were evaluated using a specific set of criteria. The evaluation criteria applied to each alternative include a determination whether the alternative:

- meets the objectives of the proposed action (i.e., providing an additional 100,000 dekatherms per day of natural gas capacity to meet customer requirements for an alternate receipt point);
- is technically feasible and practical; and
- offers a significant environmental advantage over the proposed action.

Through environmental comparison and application of our professional judgment, each alternative is considered to a point where it becomes clear if the alternative could or could not meet the three evaluation criteria. To ensure a consistent environmental comparison and to normalize the comparison factors, we generally use desktop sources of

<sup>&</sup>lt;sup>3</sup> U.S. Energy Information Administration, U.S. Energy-Related Carbon Dioxide Emissions, 2016, 2017.

information (e.g., publicly available data, geographic information system data, aerial imagery). Where appropriate, we also use site-specific information (e.g., field surveys or detailed designs). Our environmental analysis and this evaluation consider quantitative data (e.g., acreage or mileage) and uses common comparative factors such as total length, amount of collocation, and land requirements.

In recognition of the competing interests and the different nature of impacts resulting from an alternative that sometimes exist (i.e. impacts on the natural environment versus impacts on the human environment), we also consider other factors that are relevant to a particular alternative and discount or eliminate factors that are not relevant or may have less weight or significance.

The alternatives were reviewed against the evaluation criteria in the sequence presented above. The first consideration for including an alternative in our analysis is whether or not it could satisfy the stated purpose of the project. An alternative that cannot achieve the purpose for the project cannot be considered as an acceptable replacement for the project.

Many alternatives are technically and economically feasible. Technically practical alternatives, with exceptions, would generally require the use of common construction methods. An alternative that would require the use of a new, unique or experimental construction method may not be technically practical because the required technology is not available or is unproven. Economically practical alternatives would result in an action that generally maintains the price competitive nature of the proposed action. Generally, we do not consider the cost of an alternative as a critical factor unless the added cost to design, permit, and construct the alternative would render the project economically impractical.

Alternatives that would not meet the project's objective or were not feasible were not brought forward to the next level of review (i.e., the third evaluation criterion). Determining if an alternative provides a significant environmental advantage requires a comparison of the impacts on each resource as well as an analysis of impacts on resources that are not common to the alternatives being considered. The determination must then balance the overall impacts and all other relevant considerations. In comparing the impact between resources, we also considered the degree of impact anticipated on each resource. Ultimately, an alternative that results in equal or minor advantages in terms of environmental impact would not compel us to shift the impacts from the current set of landowners to a new set of landowners.

In general we considered a limited range of alternatives for the proposed action as we did not receive comments objecting to the proposed addition of a turbine to the already approved and under construction Majorsville Compressor Station. Although a Commission decision to deny the proposed action would avoid the environmental impacts addressed in this EA, Rover's shippers would be unable to transport the 100,000 dekatherms per day they seek to place to market in the time frames they require, and would not allow for the creation of the additional capacity. Other natural gas projects could be implemented to provide a substitute to the facilities proposed by Rover. These substitute projects could require the construction of additional and/or new pipeline facilities in the same or other locations as the proposed project, which would result in their own set of specific environmental impacts that would likely be greater than those associated with the current proposal. Therefore, we conclude that the No-Action Alternative is not be preferable to the proposed action and we do not recommend it.

Rover's proposed action could also be met through a combination of modified pipeline facilities. The capacity could be transported by increasing the Majorsville Lateral from 24-inch-diameter pipeline to 30-inch-diameter pipeline. However, this pipe has already been acquired by Rover and partially installed. Removing the already installed pipe, acquiring 30-inch-diameter pipe and installing it would result in an increase in construction duration (potentially 6-12 months) and thus an increase the duration of soil disturbance, cost increases to the applicant, as well as a larger construction footprint by approximately 10 to 15 feet<sup>4</sup> (which would result in a disturbance 28.6 to 42.9 acres), and thus we do not recommend it. While cost and time considerations are generally do not weigh highly in our consideration, because the delay would not meet the project sponsor's objective, and because the alternative would not offer a significant environmental advantage, we do not consider it preferable to the proposed action.

In lieu of increasing the diameter of the Majorsville Lateral from 24 to 30 inches, the capacity could be achieved by installing an additional pipeline loop adjacent to the lateral currently under construction. In order to loop the entire Majorsville Lateral, Rover would be required install an additional 23.6 miles of pipeline. Assuming that Rover could offset the loop line 25 feet from the original pipeline, this would require approximately 72 additional acres of both temporary and permanent workspace to complete the installation. These would require impacting the same wetlands (approximately fourteen wetlands totaling 0.54 acre) and waterbodies (a total of seventy-five) as well as additional permanent tree clearing that were necessary for installation of the Majorsville Lateral (as more fully described in the final EIS). As such, and because the proposed expansion of the compressor station would have little to no impact on any environmental resources, we do not recommend looping the lateral.

In conclusion, we find that Rover's proposed action is the preferred alternative to meet the project objectives.

<sup>&</sup>lt;sup>4</sup> The INGAA Foundation, *Temporary Right-Of-Way Width Requirements for Pipeline Construction*, 1999.

## C. STAFF'S CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis in this EA and our review of Rover's proposal, we conclude that if Rover constructs and operates the facilities in accordance with its application and supplements, along with the conditions of its February 2, 2017 *Order Issuing Certificate* under Docket No. CP15-93-000, approval of this proposal would not constitute a major federal action significantly affecting the quality of the human environment. We recommend that the Commission Order contain a finding of no significant impact and include the following mitigation measure as a condition to any Order the Commission may issue to amend the Certificate.

Rover shall continue to comply with the Environmental Conditions set forth in Appendix B of the February 2, 2017 *Order Issuing Certificate* under Docket No. CP15-93-000.

# D. FIGURES AND MAPS







# E. LIST OF PREPARERS

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