



Federal Energy Regulatory Commission
 Office of Energy Projects
 888 First Street, NE, Washington, DC 20426

FERC/DEIS-D0272

September 2016

Mountain Valley Project and Equitrans Expansion Project

Draft Environmental Impact Statement



Mountain Valley Pipeline, LLC and Equitrans, LP
 FERC Docket Nos.: CP16-10-000 and CP16-13-000

Cooperating Agencies:



U.S. Forest Service



U.S. Army Corps of Engineers



U.S. Bureau of Land Management



U.S. Environmental Protection Agency



Pipeline Hazardous Materials Safety Administration



West Virginia Department of Environmental Protection



West Virginia Division of Natural Resources

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

OFFICE OF ENERGY PROJECTS

In Reply Refer To:
OEP/DG2E/Gas 3
Mountain Valley Pipeline LLC
Docket No. CP16-10-000
Equitrans LP
Docket No. CP16-13-000

TO THE PARTY ADDRESSED:

The staff of the Federal Energy Regulatory Commission (FERC or Commission) has prepared a draft environmental impact statement (EIS) for the projects proposed by Mountain Valley Pipeline LLC (Mountain Valley) and Equitrans LP (Equitrans) in the above-referenced dockets. Mountain Valley requests authorization to construct and operate certain interstate natural gas facilities in West Virginia and Virginia, known as the Mountain Valley Project (MVP) in Docket Number CP16-10-000, designed to transport about 2 billion cubic feet per day (Bcf/d) of natural gas from production areas in the Appalachian Basin to markets in the Mid-Atlantic and Southeastern United States. Equitrans requests authorization to construct and operate certain natural gas facilities in Pennsylvania and West Virginia, known as the Equitrans Expansion Project (EEP) in Docket No. CP16-13-000, designed to transport about 0.4 Bcf/d of natural gas north-south on its system, to improve system flexibility and reliability, and serve markets in the Northeast, Mid-Atlantic, and Southeast, through interconnections with various other interstate systems, including the proposed MVP. Because the MVP and EEP are interrelated and connected actions, we are analyzing them both together in this single comprehensive EIS.

The draft EIS assesses the potential environmental effects of the construction and operation of the MVP and EEP in accordance with the requirements of the National Environmental Policy Act (NEPA). The FERC staff concludes that approval of the MVP and EEP would have some adverse environmental impacts; however, these impacts would be reduced with the implementation Mountain Valley's and Equitrans' proposed mitigation measures, and the additional measures recommended by the FERC staff in this EIS.

The United States (U.S.) Department of Agriculture Forest Service (FS), U.S. Army Corps of Engineers (COE), U.S. Environmental Protection Agency, U.S. Department of the Interior Bureau of Land Management (BLM), U.S. Department of Transportation, West Virginia Department of Environmental Protection; and West Virginia Division of Natural Resources participated as cooperating agencies in the preparation of the EIS. Cooperating agencies have jurisdiction by law or special expertise with respect to resources potentially affected by the proposals and participate in the NEPA analysis. The BLM, COE, and FS may adopt and use the EIS when they consider the issuance of a Right-of-Way Grant to Mountain Valley for the portion of the MVP that would cross federal lands. Further, the FS may use the EIS when it considers amendments to its Land and Resource Management Plan for the Jefferson National Forest to allow the MVP to cross the Forest. Although the cooperating agencies provided input to the conclusions and recommendations presented in the draft EIS, the agencies will present their own

conclusions and recommendations in their respective permit authorizations and Records of Decision for the projects.

The draft EIS addresses the potential environmental effects of the construction and operation of the proposed facilities. For the MVP those facilities include:

- about 301 miles of new 42-inch-diameter pipeline extending from the new Mobley Interconnect in Wetzel County, West Virginia to the existing Transcontinental Gas Pipe Line Company LLC (Transco) Station 165 in Pittsylvania County, Virginia;
- 3 new compressor stations (Bradshaw, Harris, Stallworth) in West Virginia totaling about 171,600 horsepower (hp);
- 4 new meter and regulation stations and interconnections (Mobley, Sherwood, WB, and Transco);
- 2 new taps (Webster and Roanoke);
- 5 pig¹ launchers and receivers; and
- 36 mainline block valves.

For the EEP those facilities include:

- about 8 miles total of new various diameter pipelines in six segments;
- new Redhook Compressor Station, in Greene County, Pennsylvania, with 31,300 hp of compression;
- 4 new taps (Mobley, H-148, H-302, H-306) and 1 new interconnection (Webster);
- 4 pig launchers and receivers; and
- decommissioning and abandonment of the existing 4,800 hp Pratt Compressor Station in Greene County, Pennsylvania

The FERC staff mailed copies of the draft EIS to federal, state, and local government representatives and agencies; elected officials; regional environmental groups and non-governmental organizations; potentially interested Native Americans and Indian tribes; affected landowners; local newspapers and libraries; parties to this proceeding; and members of the public who submitted comments about the projects. Paper copy versions of this draft EIS were mailed to those specifically requesting them; all others received a compact-disc version. In addition, the draft EIS is available for public viewing on the FERC's website (www.ferc.gov).² A limited number of copies are available for distribution and public inspection at:

Federal Energy Regulatory Commission
Public Reference Room
888 First Street NE, Room 2A
Washington, DC 20426
(202) 502-8371

¹ A "pig" is a device used to clean or inspect the interior of a pipeline.

² Go to "Documents & Filings," click on "eLibrary," use "General Search" and put in the Docket numbers (CP16-10 or CP16-13) and date of issuance (09/16/16).

Any person wishing to comment on the draft EIS may do so. To ensure consideration of your comments on the proposal in the final EIS, it is important that the Commission receive your comments on or before **December 22, 2016**.

For your convenience, there are four methods you can use to submit your comments to the Commission. The Commission will provide equal consideration to all comments received, whether filed in written form or provided verbally. The Commission encourages electronic filing of comments and has expert staff available to assist you at (202) 502-8258 or efiling@ferc.gov. Please carefully follow these instructions so that your comments are properly recorded.

- 1) You can file your comments electronically using the [eComment](#) feature on the Commission's website (www.ferc.gov) under the link to [Documents and Filings](#). This is an easy method for submitting brief, text-only comments on a project;
- 2) You can file your comments electronically by using the [eFiling](#) feature on the Commission's website (www.ferc.gov) under the link to [Documents and Filings](#). With eFiling, you can provide comments in a variety of formats by attaching them as a file with your submission. New eFiling users must first create an account by clicking on "[eRegister](#)." If you are filing a comment on a particular project, please select "Comment on a Filing" as the filing type; or
- 3) You can file a paper copy of your comments by mailing them to the following address. Be sure to reference the project docket number (CP16-10-000 or CP16-13-000) with your submission::

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

- 4) In lieu of sending written or electronic comments, the Commission invites you to attend one of the public comment session its staff will conduct in the project area to receive oral comments on the draft EIS. The dates, time, and locations of the public comment sessions will be released with the Notice of Availability for the draft EIS to be issued by the FERC on September 16, 2016, and mailed to our environmental list.

Any person seeking to become a party to the proceeding must file a motion to intervene pursuant to Rule 214 of the Commission's Rules of Practice and Procedures (18 CFR Part 385.214).³ Only intervenors have the right to seek rehearing of the Commission's decision. The Commission grants affected landowners and others with environmental concerns intervenor status upon showing good cause by stating that they have a clear and direct interest in this proceeding which no other party can adequately represent. **Simply filing environmental**

³ See the previous discussion on the methods for filing comments.

comments will not give you intervenor status, but you do not need intervenor status to have your comments considered.

Questions

Additional information about the projects is available from the Commission's Office of External Affairs, at **(866) 208-FERC**, or on the FERC website (www.ferc.gov) using the eLibrary link. For assistance, please contact FERC Online Support at FercOnlineSupport@ferc.gov or toll free at (866) 208-3676; for TTY, contact (202) 502-8659. The eLibrary link also provides access to the texts of formal documents issued by the Commission, such as orders, notices, and rulemakings.

In addition, the Commission offers a free service called eSubscription that allows you to keep track of all formal issuances and submittals in specific dockets. This can reduce the amount of time you spend researching proceedings by automatically providing you with notification of these filings, document summaries, and direct links to the documents. Go to www.ferc.gov/docs-filing/esubscription.asp.

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ACRONYMS AND ABBREVIATIONS

µg	micrograms
µg/l	micrograms per liter
µPa	micro Pascal
AADT	annual average daily traffic
ACE	Applied Cultural Ecology
ACEP	Agricultural Conservation Easement Program
ACHP	Advisory Council on Historic Preservation
ACP	Atlantic Coast Pipeline
AEP	American Electric Power
amsl	above mean sea level
ANST	Appalachian National Scenic Trail
APE	area of potential effect
Appalachian LLC	Appalachian Landscape Conservation Cooperative
AQCR	Air Quality Control Region
ATC	Appalachian Trail Conservancy
ATV	all-terrain vehicles
ATWS	additional temporary workspaces
B1	outstanding biodiversity ranking
B2	very high biodiversity ranking
B3	high significance biodiversity ranking
B4	moderate significance biodiversity ranking
B5	of general biodiversity significance
BA	biological assessment
BAT	best available technology
BCC	Birds of Conservation Concern
Bcf/d	billion cubic feet per day
BE	Biological Evaluation
BGEPA	Bald and Golden Eagle Protection Act
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BMP	best management practice
BO	Biological Opinion
BRP	Blue Ridge Parkway
CAA	Clean Air Act
CAT	Caterpillar
CATS	Eastern Region Community Assistance and Technical Services
Celanese	Celanese Acetate LLC
CEQ	Council on Environmental Quality
Certificate	Certificate of Public Convenience and Necessity
CFR	Code of Federal Regulations
CGV	Columbia Gas of Virginia
CH ₄	methane
CI	Chief Inspector

ACRONYMS AND ABBREVIATIONS (CONTINUED)

CI ICE	Compression Ignition Internal Combustion Engines
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ -eq	carbon dioxide equivalents
COE	U.S. Army Corps of Engineers
Columbia	Columbia Gas Transmission
Commission	Federal Energy Regulatory Commission
CR	County Road
CRED	Conversations for Responsible Economic Development
CRP	Conservation Reserve Program
CSR	Code of State Regulations
CWA	Clean Water Act
dB	unweighted decibel
dBA	decibels on the A weighted decibel scale
Discovery Plan	Plan for Unanticipated Historic Properties and Human Remains
DMME	Virginia Department of Mines, Minerals, and Energy
Dominion	Dominion Transmission Inc.
DOT	U.S. Department of Transportation
Dth/d	dekatherms per day
DWWM	Division of Water and Waste Management
East Tennessee	East Tennessee Natural Gas
ECA	Ecological Core Area
EEP	Equitrans Expansion Project
eGRID	EPA's Emissions & Generation Resource Integrated Database
EI	Environmental Inspector
EIR	environmental information request
EIS	Environmental Impact Statement
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EPAct	Energy Policy Act of 2005
Equitrans	Equitrans, L.P.
ESA	Endangered Species Act
ESD	emergency shutdown
ESRI	Environmental Systems Research Institute
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FERC Plan	<i>Upland Erosion Control, Revegetation and Maintenance Plan</i>
FERC Procedures	<i>Wetland and Waterbody Construction and Mitigation Procedures</i>
FHA	Federal Housing Administration
FHWA	Federal Highway Administration
FS	Forest Service
FSA	Farm Service Agency
FWS	U.S. Fish and Wildlife

ACRONYMS AND ABBREVIATIONS (CONTINUED)

g	force of gravity
GCSZ	Giles County Seismic Zone
GHG	greenhouse gas
GHGRP	Greenhouse Gas Reporting Program
GIS	Geographic Information System
gpm	gallons per minute
GWJeff	George Washington and Jefferson National Forests
GWP	global warming potential
HAER	Historic American Engineering Record
HAP	hazardous air pollutant
HCA	High Consequence Area
HCHO	Formaldehyde
HDD	horizontal directional drill
hp	horsepower
HPSA	Health Professional Shortage Areas
HUC	Hydrologic Unit Code
Hz	hertz
IBA	Important Bird Area
IMP	Integrity Management Plan
INGAA	Interstate Natural Gas Association of America
IPaC	Information for Planning and Conservation
IPCC	Intergovernmental Panel on Climate Change
IRA	Inventoried Roadless Area
IRR	Interga Reality Resources
ISO	International Organization for Standardization
JKA	James Kent Associates
KeyLog	KeyLog Economics
KOP	Key Observation Point
LDC	local distribution companies
L_{dn}	day-night sound level
$L_{eq(24)}$	24-hour equivalent sound level
L_{max}	maximum noise level
LNG	liquefied natural gas
LOD	Limit of Disturbance
LPG	liquefied petroleum gas
LRMP	Land and Resource Management Plan
M&R	meter and regulation
m/s	meters per second
m^3	cubic meters
MACT	Maximum Achievable Control Technology
MAOP	maximum allowable operating pressure
MBTA	Migratory Bird Treaty Act
mg	milligrams

ACRONYMS AND ABBREVIATIONS (CONTINUED)

mg/L	milligrams per liter
MGD	million gallons per day
MIS	management indicator species
MLV	mainline block valve
MMBtu/hr	million British thermal units per hour
MMcf/d	million cubic feet per day
MMI	Modified Mercalli Intensity
MOU	Memorandum of Understanding
Mountain Valley	Mountain Valley Pipeline, LLC
MP	milepost
MUA/P	Medically Underserved Areas/Populations
MUSYA	Multiple-Use Sustained-Yield Act of 1960
MVP	Mountain Valley Project
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NCHA	National Coal Heritage Area
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants for Source Categories
NFMA	National Forest Management Act of 1976
NFS	National Forest System
NGA	Natural Gas Act
NGO	non-governmental organizations
NHD	National Hydrography Dataset
NHPA	National Historic Preservation Act
NLCD	National Land Cover Database
NNSR	Nonattainment New Source Review
NO ₂	nitrogen dioxide
NOA	<i>Notice of Application</i>
NOI	<i>Notice of Intent to Prepare and Environmental Impact Statement for the Planned Mountain Valley Pipeline Project, Request for Comments on Environmental Issues, and Notice of Public Scoping Meetings</i>
NPDES	National Pollution Discharge Elimination System
NPS	National Park Service
NRC	New River Conservancy
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NRI	National Rivers Inventory
NSA	noise sensitive area
NSPS	New Source Performance Standards
NSR	New Source Review
NTSA	National Trails System Act
NWI	National Wetlands Inventory

ACRONYMS AND ABBREVIATIONS (CONTINUED)

O ₃	ozone
°F	degrees Fahrenheit
OFPP	Organic Farm Protection Plan
OHV	off-highway vehicle
OLS	Office of Lands and Streams
OTR	Ozone Transport Region
PAC	Pennsylvania Code
PADEP	Pennsylvania Department of Environmental Protection
Pb	lead
PBDB	Paleobiology Database
PCB	polychlorinated biphenyl
pCi/L	picoCuries/liter
PGA	peak horizontal ground acceleration
PHMSA	Pipeline and Hazardous Materials Safety Administration
PI	point of intersection
PILT	Payments in Lieu of Taxes
PIR	potential impact radius
PM ₁₀	particulate matter less than 10 microns
PM _{2.5}	particulate matter less than 2.5 microns
POD	Plan of Development
ppb	parts per billion
ppm	parts per million
PPUC	Pennsylvania Public Utility Commission
PSD	Prevention of Significant Deterioration
psig	pounds per square inch
PTE	potential-to-emit
RACR	Roadless Area Conservation Rule
RCNM	Roadway Construction Noise Model
RCRIS	Resource and Conservation Recovery Act Information System
RHA	River and Harbors Act of 1899
RICE	Reciprocating Internal Combustion Engines
RMP	risk management plan
Roanoke Gas	Roanoke Gas Company, LLC
ROD	Record of Decision
ROS	Recreation Opportunity Spectrum
RR	Resource Report
RV	recreational vehicle
Rx	prescription
Secretary	Secretary of the Commission
SFHA	Special Flood Hazard Areas
SHPO	State Historic Preservation Officer
SIO	Scenic Integrity Objectives
SIP	State Implementation Plan

ACRONYMS AND ABBREVIATIONS (CONTINUED)

SLM	Sound Level Meter
SMPE	South Mist Pipeline Extension
SO ₂	sulfur dioxide
SPCCP	Spill Prevention Controls and Countermeasures Plan
SPL	Sound Pressure Level
SR	State Route
SSA	sole source aquifer
SSURGO	Soil Survey Geographic Database
STC	Sound Transmission Class
SWDA	Safe Drinking Water Act
Tcf	trillion cubic feet
TEG	tri-ethylene glycol
Texas Eastern	Texas Eastern Transmission, LP
TNC	The Nature Conservancy
tpy	tons per year
Transco	Transcontinental Gas Pipe Line Company LLC
U.S.	United States
U.S.C.	United States Code
USDA	U.S. Department of Agriculture
USDOJ	U.S. Department of the Interior
USGCRP	U.S. Global Change Research Program
USGS	U.S. Geological Survey
VA	Veterans Administration
VAC	Virginia Administrative Code
VaNLA	Virginia Natural Landscape Assessment
VdB	velocity decibel
VDCR-DNH	Virginia Department of Conservation and Recreation, Division of Natural Heritage
VDEQ	Virginia Department of Environmental Quality
VOC	volatile organic compounds
VSAT	very small aperture terminal
WMA	Wildlife Management Area
WPCA	Water Pollution Control Act
WRS	Wildlife Resources Section
WVDEP	West Virginia Department of Environmental Protection
WVDHHR	West Virginia Department of Health and Human Resources
WVDNR	West Virginia Department of Natural Resources
WVGES	West Virginia Geological and Economic Survey
WVSPF	West Virginia State Park and Forest
yards	contractor and storage yards
ZCC	Zones of Critical Concern