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USFS cites shortcomings in pipeline plan

By John Bruce • Staff Writer

MONTEREY --- Not so fast.

The U.S. Forest Service recently urged the Federal Energy Regulatory Commission to give a second thought to merging the proposed Atlantic Coast Pipeline and Mountain Valley Pipeline.

FERC had already nixed the idea, saying a merged system may be environmentally better, but would take longer to plan.

As proposed, the two separate interstate gas pipelines have spurred heated opposition in mountain communities. Together, the projects would develop roughly 23.4 miles of wilderness on National Forest lands and nearly 900 miles of private and state land. The ACP, proposed by Dominion in partnership with Duke and Southern Company, would run 600 miles. The MVP, proposed by EQT Midstream Partners, NextEra US Gas Assets, and Con Edison Transmission, would run about half that distance. Both routes would begin in northwest West Virginia and cross widely varying distances of federal land on the way to southern Virginia.

ACP would cross more than five times the distance through federal land as the MVP. The ACP would traverse 20 miles of Monongahela and George Washington National Forests, compared to 3.4 miles of Jefferson National Forest for Mountain Valley, which avoids the karst topography of Highland, Bath and Augusta counties entirely.

The USFS had asked FERC to consider either a 48-inch pipe — a merged system alternative — or collocating the two pipelines in the same path.

But in the draft Environmental Impact Statement for the ACP, FERC had said, "Construction and operation of a merged system alternative may hold an environmental advantage when compared to construction and operation of both (ACP) and (MVP) separately."

The forest service asked FERC to revisit the idea of a merged system in a 70-page response posted Thursday, April 6.

Besides alternative routes, the USFS response addressed concerns about water pollution, landslides, ridge removal, wildlife habitat, forcing the Forest Service to amend its publicly vetted plans and, most of all, the draft statement's implications if project approval as proposed is certain.

FERC, in its draft EIS, had said, "Pursuing this (merged system) alternative would require significant time for the planning and design, result in a significant delay to the delivery of ... natural gas to the proposed customers of both (ACP and MVP), and would limit the ability to provide additional gas to the projects' customers. When the environmental factors, technical feasibility, and ability to meet the purpose and need of the projects are cumulatively considered, we do not find that the merged system alternative holds a significant advantage over the proposed actions and have eliminated it from further consideration."

Hold on, the Forest Service implied. "This statement is not supported by the information presented. If the merged system is potentially environmentally advantageous, then it is possible that the merged system is preferable to the proposed actions," the USFS said.

Timing delays are not a factor in the project's stated purpose and need, USFS contended. "The technical issues mentioned ... for the 48-inch pipe do not seem to render that option infeasible, and there is nothing presented in this section that would indicate that the merged system would not meet the purpose and need (the purpose and need section does not address required timing of project completion). A detailed comparison of feasibility and environmental impacts is needed before the Merged Systems Alternative can be eliminated from consideration," the agency said.

The alternative — collocating the ACP and MVP — had also been rejected by FERC in the draft EIS as requiring more planning that would delay the project.

The Forest Service again argued the draft EIS "does not present any information that would allow comparison of environmental impacts or technical feasibility, nor does the section present any information to indicate that the alternative would not meet the purpose and need ... Such information should be provided, or the alternative should be carried forward for further consideration."

"Similar to routing south of the National Forests, we do not find that avoidance of the National Forests would provide a significant environmental advantage when compared to the shorter proposed pipeline route through the National Forests," FERC's draft EIS stated. "We also acknowledge that although the route would avoid designated National Forest lands, many of the same forest habitats and waterbodies would be crossed by the alternative, along with similar mountainous terrain. Therefore, we do not recommend that it be incorporated as part of the project."

The Forest Service pointed out that no one conducted an analysis of a National Forest Avoidance Alternative, as requested. "Environmental impacts of this alternative have not been considered or compared to the proposed action. Therefore, the Forest Service cannot support the recommendation that the National Forest Avoidance Alternative be dropped from consideration. In our scoping comments, we requested that all alternatives, including a National Forest Avoidance Alternative, be fully addressed in regard to their feasibility and environmental effects. We hereby reiterate that request."

The draft EIS noted Dominion had adopted the current GWNF6 route after the Forest Service would not approve the ACP's former route through the forest. FERC said, in its draft EIS, "When compared to Atlantic's originally proposed route, which included three HDD crossings that were designed to drill under sensitive species habitats, the GWNF6 route is generally 15 miles south of its former location through the National Forests."

But the USFS told FERC that description should note the reasons the route was rejected, which included "inconsistencies with forest plan direction and emphasis related to threatened species (Cheat Mountain salamander), Regional Forester's Sensitive Species (West Virginia northern flying squirrel and Cow Knob salamander), and red spruce ecosystem restoration. The proposed HDD crossings may have reduced, but would not have eliminated, the impacts to Cow Knob salamander."

In its draft EIS, FERC said it has received several comments suggesting the ACP's former route is preferable through the national forests. "While Atlantic's current route is 31.8 miles longer than the former route, and may inherently have more generalized environmental impacts than the former route (i.e., forest clearing, waterbody crossings, karst topography, steep slope construction, private landowners affected, and air emissions, among other factors), the Forest Service ... could not approve the former route. Therefore, we find that Atlantic's originally proposed route through the National Forests would not meet the project objective (essentially resulting in the no-action alternative), and we do not recommend that it be incorporated as part of the project."

Again, the USFS objected, saying the former route was rejected due to impacts on highly sensitive environmental resources, including threatened species.

The Forest Service cited gaps, errors, and contradictions indicating FERC relied far more heavily on Dominion's reports than those of citizen groups, individuals, and the Forest Service itself.

Under the separate topic of water quality, the draft EIS states, "In addition to bedrock removal, blasting of the bedrock could potentially damage nearby pipelines and other structures and could initiate landslides, karst activity, or ground subsidence over underground mines. Blasting of bedrock, particularly karst bedrock, could create fractures in the rock, temporarily affecting local groundwater flow patterns and groundwater yield of nearby wells and springs around the blast site, and affecting their water quality by a temporary increase in turbidity levels shortly after blasting."

Damage would endure instead of retreat, the Forest Service clarified. "Effects to local groundwater flow patterns from blasting in bedrock are likely to be permanent. Identification of existing pipelines, underground mines, karst, and nearby wells should have been previously known from surveys. This description of effects is not specific enough for the activities proposed. Site specific information for the entire right of way is available for National Forest lands, and that discussion should occur in the analysis in the form of a table by mile marker."

The Forest Service pointed out FERC's statement about slope hazards on National Forest lands: "Ten sites, five on (ACP) and five on (the related proposed supply header project in West Virginia), have been assigned a high potential slope instability hazard. Sixteen sites, eight on (ACP) and eight on (the header project), have been assigned a moderate potential slope instability hazard."

The Forest Service said high and medium hazard sites on National Forest land will require site specific "Best in Class" applications and will need to be outlined in the construction plan. "These site specific designs will need to show in an analysis that slope stability can be maintained. Documentation of the effectiveness of stabilization techniques must be provided," USFS said, adding Dominion has yet to define its "best-in-class" program despite multiple Forest Service requests.

"The project-induced landslide hazard of most concern is the potential for project-induced debris flows because debris flows can travel hundreds or thousands of feet downslope and pose a risk to public safety, resources, and infrastructure on (National Forest) lands and (private and state) lands," the Forest Service said, in correcting FERC's language.

Three project-induced debris flow hazards the USFS described are:

• During pipeline construction, the temporary spoils (excavated material) stored in the temporary right of way or in additional temporary workspace would be a short-term hazard for slope failures that could result in debris flows;

• A long-term debris flow hazard would be the spoils placed as fill to restore the original ground contour. The restoration fill slopes would have potential to fail down along the right of way corridor as well as at an angle or perpendicular to the right of way corridor. The restoration fill would be placed on cut slopes that in some circumstances may be a potential slip surface for failure of the fill slope and a resulting debris flow. The restored pipeline corridor would contain long fill slopes extending hundreds of feet downslope within the right of way corridor and would have a potential for fill slope failures triggered by rainstorms during the decades of pipeline operation and beyond. Some fill slope failures may result in debris flows with destructive paths down the right of way corridor as well as off the corridor and down hundreds or thousands of feet of national forest service lands, and in some cases, to non-national forest lands downslope; and

• The change of the surface and subsurface drainage in the areas of construction and in adjacent natural slopes along the corridor right of way that may create or contribute to a debris flow failure of the natural ground downslope from the right-of-way corridor.

To FERC's and Dominion's shared contention, "Ridgetops can provide a more stable foundation for the pipeline than side slopes," the Forest Service replied. "Ridgetops may be more stable for the pipe, but potential collateral impacts need to be considered. Depending on the width of the ridges, there will be locations that require excavation to provide a more level working space for equipment. Excavated material will be stockpiled at the edges of the workspace or in an additional temporary workspace. Many times these stockpiles will be near the tops of some very steep side slopes. This loose, unconsolidated material could become mobile if wetting and slippage occurs. The Forest Service will require construction narratives on steep slope construction plans to account for the placement and end point of all excavated material to minimize unstable slopes and project-induced debris flows/landslides."

The Forest service questioned this statement from FERC: "Construction-related impacts on soils would be temporary and localized to the construction workspace, except where erosion, sedimentation, landslides, and other forms of soil movement affect adjacent areas. Analyses are ongoing to determine whether impacts would be minimized through the use of the construction and restoration plans summarized above and discussed throughout this EIS."

The USFS said on its lands, dedicating the soil resource for the pipeline will result in an "irreversible commitment of resources and degradation of soil quality ... This commitment would exist the life of the pipeline and beyond if no ecological and soil restoration occurs post decommissioning any part of the pipeline. Analysis and conclusions of potential direct, indirect, and cumulative effects to aquatic resources cannot be considered complete and valid until deficiencies in the analysis of soil resources have been corrected and deemed acceptable," the USFS said.

Also, the draft EIS says impacts on water bodies could result from construction activities in stream channels and adjacent banks.

The USFS responded that such impacts are not confined to activities in the immediate vicinity of the water body or the immediate time of the construction activity.

"Impacts may result from construction activities upslope of the stream channels and that may be a considerable distance from the channel," the USFS said. "Additionally, depending upon how well and how fast revegetation occurs, impacts could occur at some time well after the construction occurred. Erosion and sedimentation control measures are expected to be implemented, but a significant storm event, either during construction or for an indefinite period afterward until adequate vegetation becomes established, could easily overwhelm these measures."

FERC states the impacts would be limited to the period of in-stream construction and would "return to normal shortly after stream restoration activities are completed."

"In reality," the Forest Service replied, "fine sediment that has entered the water body and settled on the bed can continue to impact the environment of aquatic organisms for a considerable time. Sources of potential effects other than crossings must be considered along with cumulative effects as part of the analysis and conclusions. Some sections in the (draft EIS) seem to do a better job than others in acknowledging this through words. However, there is little confidence that the potential effects which are mentioned somewhere in the (draft EIS) have been adequately considered in drawing analysis conclusions for aquatic resources." The draft EIS claimed, "Most mammal species are able to move away from disturbance, and many species avoid noise and vibrations; however, mortality from increased use of access roads, and from construction equipment on the right of way would be possible."

The Forest Service replied, "Adult small mammals, especially mice, shrews, moles, and voles have a harder time moving away from this kind of disturbance given their small size, nocturnal nature, underground roosting and nesting habitat, and small home ranges. The young of all of these species could be destroyed by construction activities, due to their limited ability to move from underground nests. This sentence needs to be changed to reflect this reality. In addition, blasting happens at a rate of speed that doesn't allow for movement of small mammals either above or below ground, and therefore would result in direct injury and death. The effects of blasting are not evaluated here and need to be."

FERC recommended that before construction, ACP should file a revised Migratory Bird Plan, and give the Forest Service a revised construction plan, that identify areas where ACP would construct during the migratory bird season, and identify conservation measures that to minimize impacts on nesting migratory birds in areas where construction during the active season cannot be avoided.

Not good enough, says the Forest Service. "Waiting until after the decision is made to identify the areas that (Dominion) would be clearing vegetation during the nesting season does not allow the (environmental impact statement) to fully disclose and analyze the effects of the proposed actions on migratory birds," the agency said. "Nor does this allow for a full development of conservation and mitigation measures to address impacts of the proposed actions on migratory birds.

"In addition, the seasonal restrictions identified for both migratory birds and bats for tree and other vegetation removal is in direct conflict with several Forest Plan standards to avoid steep slope stability, soil movement, and winter road use concerns, as well as seasonal restrictions on (threatened and endangered) aquatic species and other sensitive species. These conflicting recommendations by Fish and Wildlife and Forest Service regulations need to be addressed and resolved before the (final statement) is completed."

FERC continued its forgone-conclusion angle by noting 86 sensitive species on the Monongahela forest, and 53 in the George Washington National Forest may be affected by the ACP.

"Not having a completed ... sensitive species section in the (draft statement) prevents effective public comment on the full impacts of the proposed actions on the 139 species determined to be potentially impacted," the USFS said.

The Forest Service is required to ensure proposed activities do not cause a downward trend in populations that could result in Endangered Species Act listing, USFS continued. "Full disclosure of analysis of the significance of adverse effects on the populations and habitat ... is required ... Waiting until the (final statement) to provide impacts on state-listed and sensitive species does not allow the public to be able to comment on the full impacts of the proposed

actions. Mitigation measures should also be included in the types of measures (Dominion) should develop with the appropriate federal and state agencies."

FERC also concluded that implementing mitigation measures including Dominion's timber removal plan, open burning plan, and fire plan would minimize impacts on harvested forests.

Timber harvesting on slopes 40 percent or greater and winter logging would need to be done in a manner that ensures slope stability and complies with forest management standards, the Forest Service replied. "Options include helicopter logging, use of overland equipment that does not require skid road development, and other non-ground disturbing methods as approved by (Forest Service) personnel."

USFS also pointed out potential effects to aquatic resources from access roads have not been fully considered. "In general, information on roads proposed for use as access roads, both new and existing, is inconsistent" throughout the draft EIS.

Since construction will occur 24 hours a day, the potential impacts on sights and sounds for both day and night should be disclosed, and the Forest Service suggested establishing a decibel limit and stopping operations if the limit is exceeded. "These are legitimate potential impacts to the visitors' recreational pursuits during the construction phase," the Forest Service said.

Also, "Analysis for brook trout is incomplete," the Forest Service said, adding one section of the draft EIS correctly concludes that long-term impacts related to slope instability adjacent to streams has the potential to severely impact water quality and stream channel geometry.

Further, USFS added, "Natural landslides including debris flows are part of the natural disturbance regime ... The natural landslide hazards including debris flow hazards and risks to public safety, resources, and infrastructure ... are inherent in the steep mountainous geologic setting. The pipeline project would add an increment of human-induced landslide hazards and risks to other human-induced landslide hazards and risks in the area such as roads, timber harvesting, land development and the natural landslide hazards and risks in the area."

The draft EIS said construction and operation would result in short-term impacts on water resources, and that direct and indirect impacts, such as increased sediment transport to waterbodies and turbidity, should return to baseline levels over a period of days or weeks following construction.

"This is incongruent with the more likely and correct statement ... that long-term impacts related to slope instability adjacent to streams has the potential to severely impact water quality and stream channel geometry," USFS pointed out.

FERC stated it was unable to determine the number of wells and springs, "but it is apparent that (the proposed route) would cross near numerous wells and springs, some of which would be within 0.1 mile ... It is generally unlikely that pipeline activities would negatively affect groundwater supplies from wells, although springs may be more subject to disruption."

USFS questioned that conclusion also. "It is unclear and unsubstantiated how an effects determination can be made if the number and location of wells and springs is unknown ... The limited ability of (Atlantic) to significantly affect groundwater is stated as fact here, although information needed to help substantiate such a claim has not been produced or accepted at the time of this review."

FERC had said, "While the vegetation impacts of these projects and ACP and supply header project would not be inconsequential, the overall impact of these projects would be considered minor to moderate," FERC said.

But that statement, USFS said, is in direct contradiction to an earlier statement that says, "... projected impacts on forested vegetation and habitat ... due to the number of treed acres cleared, fragmentation of interior forests, and time required to recover this vegetation/habitat type, would be a significant impact ... The potential for habitat fragmentation resulting from (Atlantic) would be further reduced because the majority of the disturbed areas would be allowed to return to pre-existing condition."

If the project is permitted, then habitat fragmentation would be certain rather than potential, the Forest Service replied. Some of the disturbed areas would be re-vegetated, to some degree. Only already disturbed land would be "allowed to return to pre-existing condition" because wherever mature forest is being cleared, it is highly unlikely that ecosystem services of the same quality will be restored in our lifetimes, the Forest Service said. "The fact that some areas will be revegetated does not reduce the likelihood of fragmentation at all, because it is a linear fragmentation. There will still be a 600-plus mile unbroken line of cleared land if this pipeline is installed."

FERC had concluded, "Given the large amount of wildlife habitat that would remain undisturbed within the geographic scope of influence, the measures that Atlantic and (Dominion) would use to minimize impacts associated with vegetation and habitat removal and re-establish the right of way, and the requirements for restoration for other projects, we conclude that ACP and SHP, combined with the other identified projects, would not have a significant cumulative impact on wildlife."

The Forest Service retorted, "Given the incomplete survey information and analysis of impacts of the proposed actions on the most sensitive species in this area (migratory birds, management indicator species), this statement is premature and needs to be substantially verified with currently unfinished sections of this EIS, reports and analysis."

The Forest Service said the draft EIS "has incomplete survey information and analysis of impacts of the proposed actions on sensitive species, as well as visuals and cultural resources. Preliminary determinations of 'may adversely affect' for a number of federally listed species puts into question the above statement of 'not cumulatively significant' for this project alone. No information is presented from the other ongoing gas pipeline projects overseen by FERC to substantiate the statement that any adverse effects impacts on sensitive resources would be adequately mitigated, to come to a 'not cumulatively significant' conclusion. There is no justification given in this section for this statement other than 1) how many acres the pipelines

would affect, 2) whether or not the MNF and GWNF would need to amend their (management plans), 3) that there are only two other FERC-jurisdictional projects evaluated in NFS lands, and that 4) any other projects' effects would be mitigated by various means.

"There is no information about effects to vegetation, water, air quality, soils, wildlife, recreation, scenery, timber, or other resources for either of these two forests. Please justify the conclusion that impacts to these forests would not be cumulatively significant by summarizing the impacts expected to each of these resources within each of these forests in relation to the forests' resources as a whole, including threatened and endangered species, and deriving the cumulative impact per Forest as a summation of the individual impacts," USFS said.

The draft EIS states the forest land resource management plan would be amended to make provisions for Atlantic and address its proposed impacts. But "changing the plan" to accommodate a project is not the same thing as addressing proposed impacts, as this statement implies, the USFS said. "This statement should be changed to better reflect what it is intended to mean: that the ACP project cannot be made consistent with the (plan), and the (plan) will therefore be changed to accommodate the project."

FERC had noted environmental inspectors "will have the authority to stop activities that violate environmental conditions of federal or state/commonwealth environmental permits and landowner agreements and to order appropriate corrective action," according to the draft EIS.

That statement needed clarification, the USFS said. "On NFS lands, the Forest Service representative will promptly notify the (inspector) of any situation that requires corrective action. Upon receipt of such notification, whether oral or written, the (inspector) shall immediately stop work in the affected area until the situation has been corrected to the satisfaction of the Forest Service representative."

The draft's handling of viewshed impacts was another shortcoming, USFS said. "It is essential that the Forest Service and the public fully understand and trust the accuracy of the methods used to prepare the photo simulations for assessing the impacts to scenery."

The Forest Service asked FERC to, among other things, provide details about how the terrain model is matched to the photograph; identify the source and sites of known survey locations; include the locations where LIDAR data was available and used to generate photo simulations; and explain whether the color varies by location.

"The photo simulations are somewhat disappointing overall," the USFS said. "Some photos are too dark and the major landform in the image is backlit ... Lacking quality lighting in the photos eliminates our ability to see existing landscape elements of color, texture and pattern, without which we cannot assess the degree of contrast introduced by the proposed project."