North Bend Wind Project

Public Road Execution Plan

The North Bend Wind Project is a 200 MW wind project located just southwest of Highmore along the Hughes and Hyde County line. The project is scheduled to commence as early as the spring of 2022 with all turbines being final commissioned by the end of the year. This schedule is subject to change based on the execution of major project contracts and agreements.

To construct the project, the Balance of Plant (BOP) contractor that will be selected by Engie shall utilize the existing infrastructure located on the project site consisting of county roads and approaches. This existing infrastructure will need to be maintained and likely upgraded in order to support the construction traffic for the project. The following lays out the steps the BOP contractor will take to identify necessary upgrades, and steps that will be taken to maintain public access on the roads during construction. This is a four-phase process consisting of Design, Construction, Maintenance, and Restoration. The BOP contractor and ENGIE will work closely with both Hughes and Hyde Counties through all phases. A Road Use and Maintenance Agreement (RUMA) will be executed between ENGIE and both counties to memorialize the road maintenance obligations.

1. Design Phase: This phase includes the investigations and engineering design needed to determine current conditions and upgrade requirements, and to adequately source appropriate local road material. This phase starts several months prior to the planned start of construction, and generally coincides with both the timeline required to execute the RUMA and ENGIE's requirements for budget development and risk mitigation. Activities performed are detailed below

    a. Road Material Composition Study: The BOP contractor will mobilize a 3-5 person engineering team to the project area to conduct the study. This will help the BOP contractor understand the material makeup of the county roads in their current condition. An initial study route will be developed prior to mobilization and provided to the county road superintendent. The engineering team will conduct Falling Weight Deflectometer (FWD) and/or Ground Penetrating Radar (GPR) testing along the proposed route. The field work typically takes 1-2 weeks to complete, and reports are typically completed and published 1-2 weeks later. Public use of the roads will continue during

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b. the study, and all work in the roadway will include standard traffic control measures to ensure public safety.

c. Pre-Construction Road Survey: Roadway video will be collected utilizing a hood mounted high definition (1080P) digital video camera in conjunction with a GPS tracklog. Video will be post processed and a PDF map with hyperlinks to the video segments will be provided. This will be completed as close to the start of construction as possible to capture the status of the roads prior to mobilization. This will help document the existing condition of the routes to be used on the project.

d. Desktop Analysis: A desktop analysis will be done to verify existing grades and rates of vertical curvature (k-values) along the proposed route. The analysis will be based on topographic information that has been collected by the surveyor for the project. An overall map will be provided highlighting the general grades identifying any areas that would not be feasible to use for delivery of turbine components.

e. Existing County Structure Inventory: An engineering team will visually inspect and inventory the county/township roads, culverts, and bridges that will be utilized on the haul route.

f. Deliverables: This includes the reports, studies, findings, and videos collected during the design phase. These will be made available to the county at the completion of this phase for review and comment.

    1) Engineering reports that include analyzing axle load capacity, general roadway and pavement condition, specific potential problem areas identified by the video and the test results, and other issues related to suitability of the roadways to withstand truck traffic from the wind farm construction. This will include recommendations for roadway improvements to the haul routes.

    2) A report with maps and appendices will be created that include:

        a. Culverts and Bridges will be inventoried based on a Good/Fair/Poor rating system and include existing cover and culvert type. Pictures of the culverts will be included.

b. Bituminous/Asphalt/Chip Seal/Gravel roads inventoried based on a Good/Poor rating system.

c. Road widths, to be measured once per mile.

The above steps, combined, will establish the status of the existing infrastructure along with engineering improvements and/or modifications required to accommodate the construction traffic for the duration of the project under normal weather patterns in the area.

Improvements and/or modifications that will be required based on this analysis, may include:

a. Roadway widening through additional clearing, grading, aggregate, and/or compaction.
b. Turning radius improvements, built up in the same manor.
c. Cement stabilization on gravel roads with an engineered mix design.
d. Reinforcement of culverts and bridges with additional material or overlays.
e. Additional culverts for drainage as needed for any plan improvements.
f. Additional chip seal or cold patch applications.
g. Additional project signage to help direct delivery trucks on to approved routes.
h. Typically, no new paving will be required.

2. Construction Phase: This phase covers all construction efforts to complete any necessary public road upgrades. This phase starts with the proposed upgrades, the RUMA execution, and an approved Conditional Use Permit (CUP), as required. Key activities are outlined below.

a. The BOP contractor in conjunction with ENGIE will prepare a plan that identifies proposed modifications and improvements that are needed to support component deliveries based on the preconstruction surveys noted above. This plan will be shared and approved by Hyde County and included as an exhibit to the RUMA. Points of Contact (POCs) and a communication plan will be developed with both Hughes and Hyde Counties, the BOP contractor, and ENGIE prior to the start of construction. This will include identifying a county liaison so that Hughes and Hyde Counties have the ability flag any road issue concerns and quickly resolve them. The communication plan will remain in place for the duration of the project construction.

b. Following approval, The BOP contractor will move forward with construction activities per the engineer drawings and specifications.

1) Upgrades: Crews and equipment including graders, compactors, dozers, and dump trucks will be mobilized to a central laydown yard. Work will be organized out of that yard. Crews will generally work a 6 day, 10 hour per day, schedule during construction. The BOP contractor will coordinate with the county on planned activities to ensure there is sufficient notice given for all scheduled activities. The BOP contractor will provide signage for crews and delivery personnel to ensure agreed upon routes are used. Work will generally be performed during regular daytime hours; no night work is planned for this operation. During construction upgrades, all applicable local, state, and federal safe work practices will used to help maintain regular traffic through the area. This may include traffic control devices, flagmen, and signage prior to and within the work zones. Good housekeeping practices will be implemented to eliminate impact from construction debris. If a temporary closure is required to complete an upgrade, it will be coordinated with the county to provide sufficient notice and minimal impact to the public.

2) Deliveries: Deliveries will be completed on designated roads only. Training is conducted with crews, operators, and truck drivers on which routes are allowed to be used. Signage will be posted identifying both approved and any potentially restricted access areas. Speed limits on the project will be limited to no more than 35MPH on all county roads during the construction timeframe and all jobsite personnel will give right-of-way to the local traffic where applicable by pulling over and waiting to pull out onto county roads. The project will require delivery of some oversized loads. All loads will be in accordance with applicable permits. Due to the nature of oversized permitted loads, The BOP contractor will undoubtedly have to temporarily shut down some roads and provide traffic control to ensure the safety of the public as well as the construction workers on the site.

3) Non-Approved Road Use: during the design phase all roads necessary for use will be identified, the final plan will be reviewed and approved by the county. Roads not identified for use in the plan will be avoided. Drivers or operators using un-approved roads may be asked to leave the project.

3. Maintenance Phase: This phase starts with completion of the upgrades and will continue through the duration of the construction of the wind project. Due to the heavy traffic during construction

4. the local roads will require routine maintenance in order to keep them in a stable condition for not only construction traffic but local traffic as well. The maintenances activities outlined below are those most typically used. Exact requirements will depend on durability of the roads, road use, and weather. The BOP contractor and ENGIE will continually monitor the condition of the project roads and modify the scope or frequency of the maintenance activities as needed.

    a. Road Graders/Blades – The BOP contractor will have road graders dedicated to the public roads to maintain a crown for drainage as well as removing any washboards and potholes.

    b. Dust Control – Water trucks will be assigned in order to mitigate nuisance dust in times of heavy traffic. Special attention will be placed in front of residences to ensure the dust does not affect their homes and livestock. Additional chemical applications such as Magnesium Chloride may be used is some areas if water is not sufficient for dust control.

    c. Additional Stabilization based on Excessive Weather – In the event that excessive weather impacts the project The BOP contractor can install additional aggregates as well as stabilize county roads to the extent that they will hold up to the harsh climates upon approval. Hyde County will be consulted with if this is determined to be necessary.

5. Reclamation Phase: This phase starts once all wind farm construction activities have concluded. This phase will include the following activities.

    a. The BOP contractor will proceed with reclaiming all temporary construction with the removal of temporary intersection modifications and approaches that were installed throughout the project.

    b. The additional gravel from this temporary construction will be placed on the public roads where needed.

    c. The BOP contractor will also blade and groom the roads to ensure the crown is established upon exiting the project site to ensure the roads are left in the same condition pre-construction or better.

    d. Post Construction Road Survey:

        Prior to the BOP contractor demobilizing and immediately following reclamation, a roadway video will be collected utilizing a hood mounted high definition (1080P)

digital video camera in conjunction with a GPS tracklog. Video will be post processed and a PDF map with hyperlinks to the video segments will be provided. Video will be taken in the same order so that the Pre-Construction video can be compared for any discrepancies or questions that may arise after construction is complete. This information will be shared with Hyde County for the determination that the modifications made are consistent with what is outlined in the Road Maintenance Agreement.

e. As will be memorialized in the Road Maintenance Agreement, the road conditions will be left in a condition equivalent or better to the condition of the roads prior to the commencement of construction. This will be determined through the Pre-Construction Survey to document the road conditions prior to construction occurring.

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