

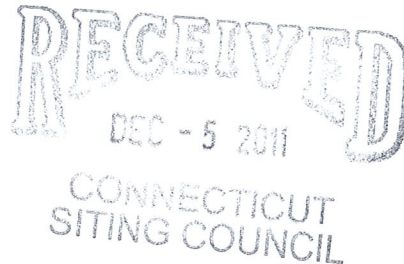
**PULLMAN  
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ATTORNEYS

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December 1, 2011

**VIA ELECTRONIC MAIL AND U.S. MAIL**

Linda L. Roberts  
Executive Director  
Connecticut Siting Council  
10 Franklin Square  
New Britain, CT 06051



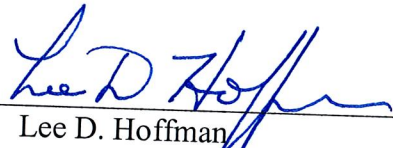
**Re: Petition 983 - BNE Energy Inc., Flagg Hill Road, Colebrook, CT**

Dear Ms. Roberts:

BNE Energy Inc., hereby submits an original and 15 copies of the Existing Road Condition Study prepared by GM2 Associates, Inc., on behalf of the Town of Colebrook. A CD will be forthcoming containing an electronic copy of all photographs and videos taken as part of the study. When BNE receives the CD, BNE will submit a copy to the Council.

If you have any questions concerning this submittal, please contact the undersigned at your convenience. Please return a date-stamped copy of this filing in the enclosed envelope. Thank you in advance for your assistance.

Respectfully submitted  
BNE ENERGY INC.

By:   
Lee D. Hoffman  
Its Attorney

cc: Service List for Petition 983  
Melanie A. Bachman (via electronic mail)  
Michael A. Perrone (via electronic mail)

ACTIVE/72955.2/MSTONE/2644580v1

**EXISTING CONDITION STUDY  
FLAGG HILL ROAD AND ROCK HALL ROAD  
FOR  
WIND FARM PROJECTS  
COLEBROOK, CT**

**Prepared by:**

**GM2 Associates, Inc.  
115 Glastonbury Blvd  
Glastonbury, CT 06033**

**RECEIVED  
DEC - 5 2011  
CONNECTICUT  
SITING COUNCIL**

**NOVEMBER 30, 2011**

## INTRODUCTION

This report was prepared by GM2 Associates, Inc. (GM2) on behalf of the Town of Colebrook to document the existing condition of two roads, Flagg Hill Road and Rock Hall Road, which will see substantial construction traffic from the proposed wind farm projects. This study will be used as a baseline for evaluating any impacts to the two roads resulting from the anticipated construction traffic. A follow up study will be conducted after the wind farm construction is completed, evaluating the road conditions at that time and comparing those conditions to the baseline established in this study. In this way, impacts to the roads from construction traffic can be analyzed and a determination of improvements that may be needed as a result can be made.

Various types of construction vehicles are anticipated to drive on Flagg Hill Road and Rock Hall Road as a result of the proposed project. Construction vehicle types may include dump trucks, concrete trucks, loaders, graders, back-hoes and multi-axle extended trailers. The multi-axle extended trailers will be used to deliver the tower and blade structures for the wind farm. The structures will be 80 and 100 feet in length. Multi-axle trailers are proposed to distribute the loads to maintain legal H-20 road weight limits.

## STUDY AREA

This study encompasses approximately 1,500 feet of Flagg Hill Road and approximately 1,400 feet of Rock Hall Road. The North Site study limits run from the intersection of Route 44 and Rock Hall Road to the proposed entrance and or access roads that will service the proposed wind farm site. The South Site study limits run from the intersection of Route 44 and Flagg Hill Road to the proposed entrance, approximately 900 feet from Route 44, and the temporary access road, approximately 1,500 feet from Route 44, which will service the proposed wind farm site. Figure 1 indicates the locations of the two study areas.

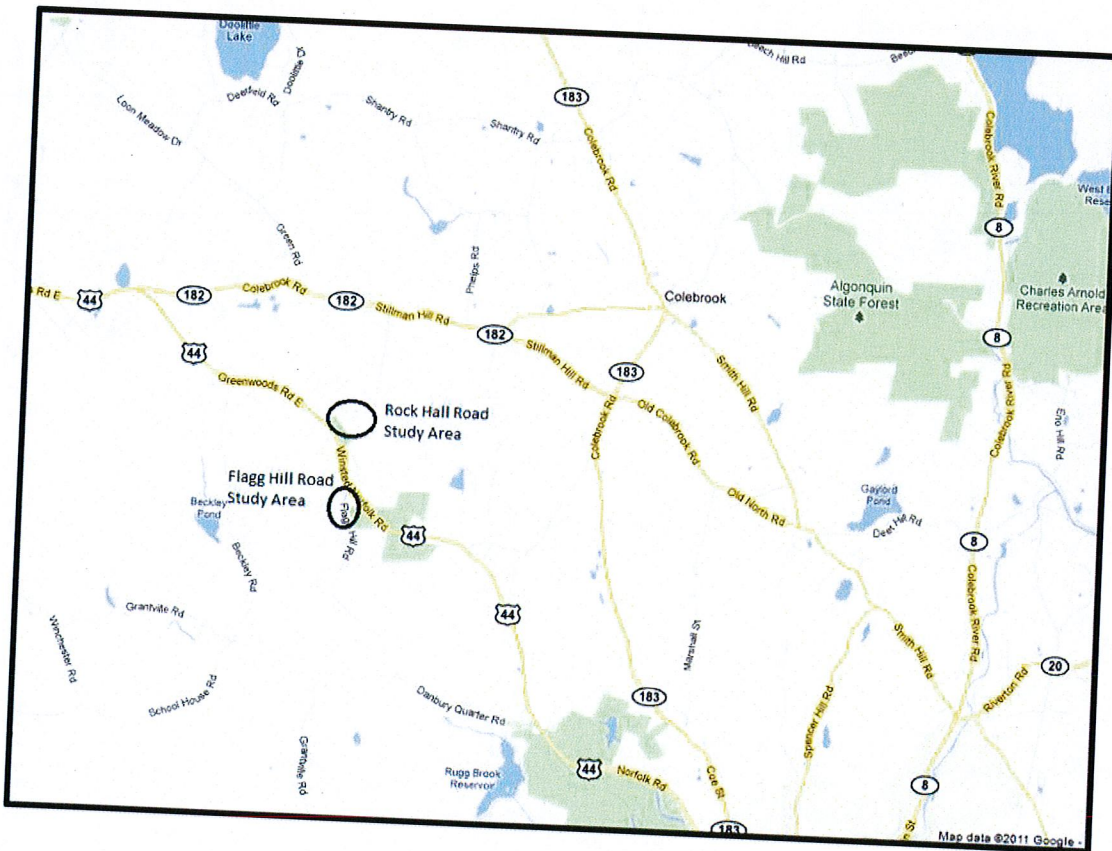


Figure 1 – Location Plan

## EXISTING CONDITIONS

GM2 personnel performed a visual inspection and walk through for each road evaluated in this study. Both roads were viewed on November 23 and 28, 2011. This section summarizes the overall existing condition of each roadway and documents the condition of the roadway pavement and roadside drainage. Photographs and videos were taken along each roadway to create a record of existing conditions. Photographs are included in this report, and the enclosed CD contains an electronic copy of all photographs and videos taken as part of this study.

### **Flagg Hill Road**

Flagg Hill Road is a local dead end road serving a handful of residential homes. To the north it intersects with Route 44 and to the south it is a dead end street with a gravel surface turnaround area. The overall condition of the roadway pavement is good, and according to the Town of Colebrook was resurfaced within the last 5 years. Existing asphalt thickness was measured at 3 inches. Intermittent longitudinal cracking was noted over the study area but the extents and severity of cracks was limited. The cracks were generally confined to the center and west side of the pavement. These cracks along the roadway edge could be attributed to the wet conditions with the shallow roadside ditch adjacent to the west side of the roadway and shoulder area. No rutting of the pavement was noted within the study area. An area of complete pavement failure was noted on the western edge of Flagg Hill Road, between the temporary access road and the permanent entrance to the South Site. This failure area was approximately 15 feet long and encroached into the roadway approximately 4 feet. The failure was the result of significant rainwater runoff flows which washed out the edge of the roadway. The gravel driveway at the southern limit of the study area, proposed to serve as temporary site access, showed evidence of repeated erosion due to water running across the bottom of the driveway close to Flagg Hill Road.

On the east side of the roadway, road drainage is by sheet flow due to the steep bank. West side drainage is through a combination of catch basins, shallow roadside ditches and cross culverts. On both visits the west side of the roadway was observed to be wet. The catch basin ditch system is drained by two cross culverts located between the proposed permanent entrance and temporary access driveway. The first and most southerly is a CMU headwall draining to the east side of the road. This culvert also picks up a pipe from an existing catch basin north of the temporary access driveway. The second culvert connects to a CMU catch basin structure draining the shallow roadside ditch on the west side which was observed to be in poor condition with no top and blocks dislodged. Both culverts appeared to be performing properly.

A large metal pipe culvert is located at the north end just south of Route 44 carrying a stream, which flows west to east. This culvert, approximately 4 foot in diameter appeared to be performing properly but the bottom condition could not be observed.

### **Rock Hall Road**

Rock Hall Road is a local connector road between Route 44 to the south and Route 182 to the north. The overall condition of Rock Hall Road is very poor. Extensive alligator cracking was noted along the entire length of road investigated by this study. Asphalt pavement thickness appeared to be less than 3 inches. Numerous potholes were present at the time of walk through, with a couple of potholes measuring more than 1 foot across. Pavement heaving was also observed in some areas.

The roadway is drained by shallow roadside ditches from the high point at the south end to the low point area where the roadside drainage is sheet flow draining to a stream crossing at the roadway low point. A large metal pipe carries the stream across Rock Hall Road with the stream flowing west to east. The culvert appeared to be performing properly but the pipe bottom condition could not be observed.

Considering the existing very poor condition of the road, further deterioration is anticipated from the proposed construction traffic. The current roadway cross section is not capable of carrying the loads from heavy truck traffic without sustaining further damage and pavement failures.

# ATTACHMENT A

## FLAGG HILL ROAD PHOTOGRAPHS



Flagg Hill Road – Longitudinal Cracking



Flagg Hill Road – Area of Pavement Failure





Gravel Driveway on Flagg Hill Road – Erosion due to poor drainage



Flagg Hill Road – Gravel cul-de-sac at end of road



Flagg Hill Road – Culvert South of Route 44, West Side



Flagg Hill Road – CMU catch basin structure and culvert, West Side



Flagg Hill Road – CMU Headwall and culvert with contributing pipe, West Side



Flagg Hill Road – East Side, sheet flow and steep fill slope

## ATTACHMENT B

# ROCK HALL ROAD PHOTOGRAPHS



Rock Hall Road – Alligator Cracking



Rock Hall Road – Potholes and Pavement Cracking



Rock Hall Road – Potholes, Pavement Failure Area, Pavement Cracking



Rock Hall Road – Alligator Cracking, Rutting on Roadway Edge