Ms. Renee Jenkins<br>Docketing Division<br>Public Utilities Commission of Ohio<br>Ohio Power Siting Board<br>180 East Broad Street<br>Columbus, Ohio 43215

## RE: Hamilton/AMP Meldahl Transmission Line and Substation Projects <br> OPSB Case Nos. 10-2439-EL-BSB and 10-2440-EL-BTX <br> Responses to Additional Clarification Questions from OPSB Staff

Dear Ms. Jenkins:

On behalf of the City of Hamilton and American Municipal Power, Inc., the Applicants for pending consolidated cases $10-2439-E L-B S B$ and $10-2440-E L-B T X$, please accept for filing in the docket the attached responses to questions asked by Staff of the Ohio Power Siting Board.

Please contact me with any questions.
Sincerely,


April R. Bott
Bott Law Group LLC
5126 Blazer Parkway
Dublin, Ohio 43017
614-761-2688
abott@bottlawgroup.com
Enclosure

```
This is to certify that the imayes appearing are an accurate and complete reproduction of a case file document delivered in the regular course of burines.
```



Via E-mail to: jon.pawley@puc.state.oh.us
Jon Pawley
Ohio Power Siting Board
180 East Broad Street
Columbus, OH 43215

## RE: Responses to OPSB Staff Questions: <br> Meldahl Hydroelectric Project-Transmission Line and Substation OPSB Case Nos. 10-2439-EL-BSB and 10-2440-EL-BTX

Dear Jon:
On September 12, 2011, OPSB posed three additional clarification questions to the Applicants by electronic mail. On behalf of the Applicants, City of Hamilton and American Municipal Power, Inc., this letter answers OSPB's questions. For ease of review, OPSB's questions have been set forth below followed by the answers to each question.

1. Please list the types of structures (wood, steel, pole, tower, or H-frame) presently being considered by the Applicant at each location for clarification (table form) for structures 1-41 of the Preferred Route and the Alternate Route.

Tables 1 and 2 below list the types of structures presently anticipated for the Preferred Route (Table 1) and the Alternate Route (Table 2).

Table 1 - Structure Information for the Preferred Route

| Structure <br> No. | Structure Type | Wood / Steel | Number of <br> Poles |
| :---: | :---: | :---: | :---: |
| 1 | Take-off Structure | Steel | 2 |
| 2 | Steel Large Angle (with cross braces) | Steel | 3 |
| 3 | Y - Frame Structure | Steel | 1 |
| 4 | Y - Frame Structure | Steel | 1 |
| 5 | 3-Pole Tangent Dead End | Steel | 3 |
| 6 | River Crossing Dead-End | Steel | 3 |
| 7 | River Crossing Lattice Tower | Steel | --- |
| 8 | River Crossing Lattice Tower | Steel | --- |
| 9 | River Crossing Dead-end | Steel | 2 |
| 10 | Wood Medium Angle (guyed) | Wood | 3 |
| 11 | Tangent Wood H-Frame | Wood | 2 |


| Structure No. | Structure Type | Wood / Steel | Number of Poles |
| :---: | :---: | :---: | :---: |
| 12 | Wood Large Angle (guyed) | Wood | 3 |
| 13 | Tangent Wood H-Frame | Wood | 2 |
| 14 | Tangent Wood H-Frame | Wood | 2 |
| 15 | Tangent Wood H-Frame | Wood | 2 |
| 16 | Tangent Wood H-Frame | Wood | 2 |
| 17 | Wood Small Angle (guyed) | Wood | 3 |
| 18 | Tangent Wood H-Frame | Wood | 2 |
| 19 | Tangent Wood H-Frame | Wood | 2 |
| 20 | Tangent Wood H-Frame | Wood | 2 |
| 21 | Tangent Wood H-Frame | Wood | 2 |
| 22 | Wood Small Angle (guyed) | Wood | 3 |
| 23 | Tangent Wood H-Frame | Wood | 2 |
| 24 | Tangent Wood H-Frame | Wood | 2 |
| 25 | Tangent Wood H-Frame | Wood | 2 |
| 26 | Tangent Wood H-Frame | Wood | 2 |
| 27 | Tangent Wood H-Frame | Wood | 2 |
| 28 | Tangent Wood H-Frame | Wood | 2 |
| 29 | Wood Large Angle (guyed) | Wood | 3 |
| 30 | SPECIAL Small Angle Wood H-Frame (with cross braces, side guying) | Wood | 2 |
| 31 | Steel Double Dead End Angle Pole | Steel | 1 |
| 32 | Steel Tangent Dead End Pole | Steel | 1 |
| 33 | Tangent Wood H-Frame | Wood | 2 |
| 34 | Wood Medium Angle (guyed) | Wood | 3 |
| 35 | Tangent Wood H-Frame | Wood | 2 |
| 36 | Tangent Wood H-Frame | Wood | 2 |
| 37 | Wood Medium Angle (guyed) | Wood | 3 |
| 38 | Tangent Wood H-Frame | Wood | 2 |
| 39 | Tangent Wood H-Frame | Wood | 2 |
| 40 | Tangent Wood H-Frame | Wood | 2 |
| 41 | End Steel H - Frame | Steel | 2 |

Table 2 - Structure Information for the Alternate Route

| Structure <br> No. | Structure Type | Wood / Steel | Number of <br> Poles |
| :---: | :---: | :---: | :---: |
| 1 | Take-off Structure | Steel | 2 |
| 2 | Steel Large Angle (with cross braces) | Steel | 3 |
| 3 | Y - Frame Structure | Steel | 1 |
| 4 | Y- Frame Structure | Steel | 1 |
| 5 | 3-Pole Tangent Dead End | Steel | 3 |


| Structure No. | Structure Type | Wood / Steel | Number of Poles |
| :---: | :---: | :---: | :---: |
| 6 | River Crossing Dead-End | Steel | 3 |
| 7 | River Crossing Lattice Tower | Steel | --- |
| 8 | River Crossing Lattice Tower | Steel | --- |
| 9 | River Crossing Dead-end | Steel | 2 |
| 10 | 3 Pole Steel structure | Steel | 3 |
| 11 | 3 Pole Steel structure | Steel | 3 |
| 12 | Wood Small Angle (guyed) | Wood | 3 |
| 13 | Tangent Wood H-Frame | Wood | 2 |
| 14 | Wood Small Angle (guyed) | Wood | 3 |
| 15 | Tangent Wood H-Frame | Wood | 2 |
| 16 | Tangent Wood H-Frame | Wood | 2 |
| 17 | Wood Small Angle (guyed) | Wood | 3 |
| 18 | Small Angle Wood H-Frame (guyed) | Wood | 2 |
| 19 | Tangent Wood H-Frame | Wood | 2 |
| 20 | Tangent Wood H-Frame | Wood | 2 |
| 21 | Tangent Wood H-Frame | Wood | 2 |
| 22 | Wood Small Angle (guyed) | Wood | 3 |
| 23 | Tangent Wood H-Frame | Wood | 2 |
| 24 | 3 Pole Steel structure | Steel | 3 |
| 25 | 3 Pole Steel structure | Steel | 3 |
| 26 | 3 Pole Steel structure | Steel | 3 |
| 27 | Wood Small Angle (guyed) | Wood | 3 |
| 28 | Wood Small Angle (guyed) | Wood | 3 |
| 29 | Wood Small Angle (guyed) | Wood | 3 |
| 30 | Tangent Wood H-Frame | Wood | 2 |
| 31 | Tangent Wood H-Frame | Wood | 2 |
| 32 | Wood Small Angle (guyed) | Wood | 3 |
| 33 | Wood Small Angle (guyed) | Wood | 3 |
| 34 | Tangent Wood H-Frame | Wood | 2 |
| 35 | Tangent Wood H-Frame | Wood | 2 |
| 36 | Small Angle Wood H-Frame (guyed) | Wood | 2 |
| 37 | Tangent Wood H-Frame | Wood | 2 |
| 38 | Tangent Wood H-Frame | Wood | 2 |
| 39 | Tangent Wood H-Frame | Wood | 2 |
| 40 | Tangent Wood H-Frame | Wood | 2 |
| 41 | Wood Small Angle (guyed) | Wood | 3 |
| 42 | Tangent Wood H-Frame | Wood | 2 |
| 43 | Wood Small Angle (guyed) | Wood | 3 |
| 44 | Tangent Wood H-Frame | Wood | 2 |
| 45 | Tangent Wood H-Frame | Wood | 2 |
| 46 | Tangent Wood H-Frame | Wood | 2 |


| Structure No. | Structure Type | Wood / Steel | Number of Poles |
| :---: | :---: | :---: | :---: |
| 47 | Tangent Wood H-Frame | Wood | 2 |
| 48 | Small Angle Wood H-Frame (guyed) | Wood | 2 |
| 49 | Tangent Wood H-Frame | Wood | 2 |
| 50 | Tangent Wood H-Frame | Wood | 2 |
| 51 | Tangent Wood H-Frame | Wood | 2 |
| 52 | Tangent Wood H-Frame | Wood | 2 |
| 53 | Tangent Wood H-Frame | Wood | 2 |
| 54 | Wood Small Angle (guyed) | Wood | 3 |
| 55 | Tangent Wood H-Frame | Wood | 2 |
| 56 | Wood Small Angle (guyed) | Wood | 3 |
| 57 | Tangent Wood H-Frame | Wood | 2 |
| 58 | Tangent Wood H-Frame | Wood | 2 |
| 59 | Tangent Wood H-Frame | Wood | 2 |
| 60 | Tangent Wood H-Frame | Wood | 2 |
| 61 | Wood Large Angle (guyed) | Wood | 3 |
| 62 | Wood Small Angle (guyed) | Wood | 3 |
| 63 | Tangent Wood H-Frame | Wood | 2 |
| 64 | Tangent Wood H-Frame | Wood | 2 |
| 65 | Tangent Wood H-Frame | Wood | 2 |
| 66 | Wood Small Angle (guyed) | Wood | 3 |
| 67 | Tangent Wood H-Frame | Wood | 2 |
| 68 | Small Angle Wood H-Frame (guyed) | Wood | 2 |
| 69 | Tangent Wood H-Frame | Wood | 2 |
| 70 | Small Angle Wood H-Frame (guyed) | Wood | 2 |
| 71 | Tangent Wood H-Frame | Wood | 2 |
| 72 | Wood Medium Angle (guyed) | Wood | 3 |
| 73 | Tangent Wood H-Frame | Wood | 2 |
| 74 | Tangent Wood H-Frame | Wood | 2 |
| 75 | Wood Small Angle (guyed) | Wood | 3 |
| 76 | End Steel H - Frame | Steel | 2 |

2. Please explain based on engineering principles why the Preferred Route line could not be extended to the north and east over Bear Creek so as to shorten the span and avoid impacts to taller trees currently in the route's alignment. (Why can't structure 31 be placed in the open area to the east?)

The primary reason for spanning Bear Creek was to preserve, to the greatest extent practicable, the riparian corridor to maintain water quality and habitat in Bear Creek. While a line height of $40^{\prime}$ will result in some topping of trees, the riparian corridor along Bear Creek is maintained which was the original intent in altering the original design.

In addition, the proposed route cannot be moved to relocate Structure 31 to the east, because the proposed route was deliberately shifted to the west already to avoid two cultural resources: 33 Ct694 and 33Ct695. These sites are both eligible for listing on the National Register of Historic Places and have potential archaeological significance. As part of the FERC process, Ohio SHPO has concurred with the study and recommendations to avoid resources 33 Ct 694 and 33Ct695. A report describing these features and the archaeological survey is included as Appendix 06-5 of the OPSB Transmission Line Application (OPSB Case No. 10-2440-ELBTX).

## 2a. Related, what is the maximum span distance and structure height at the Bear Creek crossing that the Applicant can accommodate to increase the 40 ' tree topping statement listed in prior interrogatories for the Preferred Route?

If the structure locations remain as currently shown (i.e., the span does not change), additional ground clearance can only be achieved by increasing the heights of the structures. Due to the topography and the angle at which the line crosses the valley, the increase in tower height would likely not be proportional to the increase in ground clearance. That is, if the towers were raised a foot, it would result in additional ground clearance, but less than a foot. With the increased heights, the structures would have to be enlarged to accommodate the increased structural loadings. Depending upon how much structure 30 would increase in height, it would have to be changed to a steel structure that would require a drilled concrete pier foundation(s). This would increase the disturbance to the land around the structure and access way due to increased amount of equipment needed for the installation of the foundation and steel structure versus that which is needed for the direct buried wooden structure.

Please contact me if you have any questions or need additional information.
Sincerely,
whifereot

April R. Bott

cc: Charles Young<br>Mark Brandenburger<br>Phil Meier<br>John Bentine

