

Witness: Allen W. Scarfone, Timothy F. Laskowski, John C. Case
Request from: Energy Facilities Siting Board

Question:

Please refer to Exhs. EFSB-A-14, EFSB-A-15, and EFSB-A-16. Please discuss an alternative of using the Southern Route for a single 345 kV line from Ludlow to North Bloomfield with a spur or tap at South Agawam Junction extending to Agawam Station where a 345 kV / 115 kV transformer would be located. Include cost and environmental impacts in the discussion.

Response:

Power-flow studies would have to be conducted to determine if the elimination of a second 345-kV circuit to the Agawam Substation would violate national and regional reliability standards. This analysis requested by EFSB-A-045 will be conducted by the Company and provided to the Siting Board under a schedule being worked out by both parties.

This request seeks discussion of a hypothetical alternative of using the southern route for the proposed new 345-kV line from Ludlow to North Bloomfield and then tapping it at South Agawam Junction for a 345-kV circuit connection between South Agawam Junction and Agawam Substation. A new 345-kV ring bus could then be built at Agawam Substation, instead of a breaker-and-a-half design, to connect the planned two 345/115-kV autotransformers. The Company does not perceive that there is justification for reducing the proposed 345-kV infrastructure at Agawam Substation. Although no studies have been performed, the establishment of only a single 345-kV circuit to serve the Agawam Substation from South Agawam Junction is unlikely to improve the capability, operability and flexibility of the transmission system proposed under the GSRP. In the event of a fault on the 345-kV circuit between Ludlow and North Bloomfield, 345-kV system connectivity to Agawam Substation would be interrupted. The loss of the Ludlow Substation 345-kV source also interrupts the Agawam Substation and thus eliminates Agawam as the back-up bulk power source planned under the GSRP Project. In addition, loss of the 345-kV Ludlow - Barbour Hill 3419 circuit and the 345-kV Ludlow -Agawam - North Bloomfield circuit negatively impact the Connecticut Import interface level.

This hypothetical solution variation would allow the section of 345-kV line from South Agawam Junction to Agawam Substation to be configured as it is proposed now for the project on the preferred northern route in this section. In other words, the second 345-kV circuit segment would not be required. This would eliminate the need for the additional right-of-way required in this section under the current project design on the noticed-alternative southern route, and would provide some benefits by reducing the amount of clearing that would be required, including some in rare species habitat. There are relatively few wetlands located north of South Agawam Junction up to Agawam Substation, and since either option considers two lines of poles, there is little wetland impact difference between these options in this section. New load-flow studies would have to be performed with this alternative in order to calculate magnetic field levels. This alternative would reduce line costs by \$9 - \$12 million.

The layout at Agawam Substation would be very similar to the currently proposed layout, since a 2-bay, breaker-and-a-half bus arrangement looks very similar to a ring-bus design. The Company anticipates no difference between the proposed Agawam Substation footprint, and one that would be developed for this scenario. The ring-bus design would allow a reduction in the number of circuit breakers to three, which would reduce substation costs by approximately \$3 - \$5 million.

Assuming that this alternative is feasible and would meet required Planning criteria, the reduced clearing in this section would not be enough to offset the significant overall environmental advantage that the preferred northern route project has. Nor would the estimated cost reduction of \$12 - \$17 million be

enough to offset the currently estimated \$52 million advantage that the proposed project on the preferred northern route currently enjoys over the noticed alternative using the southern route.

Witness: Scott Newland, Timothy Barton
Request from: Energy Facilities Siting Board

Question:

Please refer to the response to EFSB-U-38. If the southern route was selected, would the response change with regard to tree clearing and the lines that would need to remain during construction along the northern route?

Response:

If the southern route was selected for construction of the 345-kV line, due to the construction duration and outage constraints on the existing 115-kV lines, installation of the new structures would be required before the existing structures can be removed. As a result, there will be minimal, if any, reduction in tree clearing.

In addition, if the southern route is selected for the new 345-kV line, there are several locations along the existing ROW where the existing structures would be re-used and new 115-kV structures would be installed. Similar to the scenario discussed above, there will be minimal, if any, reduction in tree clearing.

However, post construction, some amount of re-vegetation would be allowed, up to 30 feet under the current layout for the Southern Route Alternative. As stated previously, the actual amount of vegetation re-growth would depend on current and future land usage of the ROW by adjacent property owners.

Western Massachusetts Electric Company
Docket No. EFSB 08-2/D.P.U. 08-105/08-106

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Witness: Scott Newland, Timothy Barton
Request from: Energy Facilities Siting Board

Question:

Please refer to the response to EFSB-LU-29. Please provide copies of the final MOUs when available. Would the MOUs with the five communities differ if the southern route is selected for the 345 kV line, since the northern route would still have the 115 kV upgrades?

Response:

A copy of the executed MOU for Ludlow is included in EFSB-Z-003-SP01. Copies of the final MOUs for Agawam, West Springfield, Chicopee and Springfield will be provided, when executed, as supplemental filings for EFSB-Z-001, -002, -004 and -005.

Similar MOUs would have to be negotiated with the five communities along the northern route even if the southern route is selected for the 345-kV line. However, if the 345-kV line is constructed along the southern route, MOUs will also have to be negotiated with Longmeadow, Hampden, East Longmeadow and Wilbraham.

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Question:

Please also refer to the three versions of Table 5-5, Table 5-6, Table 5-10, Table 5-11 found in (1) the Petition; (2) Timothy Barton's prefiled testimony; and (3) the response to EFSB-LU-30. Are the versions in EFSB-LU-30 the most accurate accounting of the impacts along the two 345 kV routes, where the 22.9 miles of the northern route is entirely in Massachusetts and the 21 miles of the southern route includes 5.4 miles in Connecticut?

Response:

Information provided in tables in the response to Information Request EFSB-LU-030 should be used when comparing the two 345-kV line-route alternatives, provided that no account is taken of the 115-kV work when the southern route is selected. As explained at Section 4.6.6 of the Petition, since the 115-kV line construction on the "northern route" ROW between the Agawam and Ludlow Substations will be required whether the northern or southern route is selected for the 345-kV line, the impacts of locating the 345-kV line along the southern route include two sets of construction impacts along a total of 61 miles of ROW, as compared with one set of impacts along 39 miles of ROW if the 345-kV line is located along the northern route.

Please note per the response to Information Request EFSB-LU-030 that the length of the noticed-alternative southern route in Massachusetts is 23 miles, and this length excludes 4.4 miles of the southern route alternative through Enfield, Connecticut and 1 mile through Suffield, Connecticut.

Witness: Scott Newland, Timothy Barton
Request from: Energy Facilities Siting Board

Question:

Please refer to the Petition at 5-40 and the response to EFSB-LU-30. Please explain how the Company has concluded that visual impacts would be greater along the southern route when the southern route has significantly fewer residences and more buffer. Is this conclusion by the Company and the associated higher score for the southern route also dependent on the use of the northern route for the 115 kV upgrades? If the routes are compared solely based on the 345 kV lines, does the Company still conclude that the visual impacts are greater for the southern route? If so, please explain.

Response:

As the question suggests, the visual impact rating from an overall project perspective has been analyzed and determined to be much higher if the southern route alternative is selected for the 345-kV line because the 115-kV upgrades would still be required on the northern route, resulting in visual impacts to two rights-of-way. The analysis for the visual impacts was based on an analysis of the routes in GIS as described in the Petition at 4-28. The visibility rating is a subjective rating and was assigned to portions of the segment based on the length of the line that was considered to have a high (5), medium-high (4), medium (3), medium-low (2), or low (1) impact. These ratings were assigned based on the presence of residences, businesses, and roads within 1/4-mile of the transmission line. For portions of the segment where the 345-kV line structures would be significantly taller than the existing structures in the corridor, the visibility ratings were multiplied by a multiplier of 1.5. As indicated above, the visibility ratings provided on page 5-40 of the Petition did include the visual impacts associated with the 115-kV line upgrades for both the preferred northern route and noticed-alternative southern route. Thus the visual rating was much higher for the Southern Route Alternative project (visual impacts in two corridors) than the Northern Route project (visual impacts in only one corridor.)

A re-analysis, based in the same rating system described above, was completed and the data was presented in the response to Information Request EFSB-LU-030 with the route comparison based solely on the 345-kV line. The visibility rating for both the preferred northern route and the noticed-alternative southern route would in that case be the same, 33.4. Therefore, if the route alternatives are compared solely based on the 345-kV facilities, the visual impacts would be the same.