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ELECTRICAL CONSULTANTS, INC.
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February 10, 2015

Mr. Brent Oberlin
ISO New England, Inc.
One Sullivan Rd.
Holyoke, MA 01040-2841
Re: Cost Estimate Summary; 345 kV +/- 200 MVAR STATCOM Addition at Coopers Mills

Dear Brent:

Electrical Consultants, Inc. (ECI) has completed cost estimating efforts for the STATCOM addition at Coopers Mills Substation. The major components for the project include:

1) The 345 kV substation expansion at Coopers Mills
2) The 345 kV tie line to the STATCOM
3) The STATCOM
4) Access Roads and rough grading at the STATCOM site

ECI utilized the basic data provided by Central Maine Power (CMP) which outlined the 345 kV yard additions, the proposed 345 kV transmission line route and the location of the future STATCOM as inputs for the estimate. The major components of the estimate can further be described as follows:

Substation Expansion

ECI utilized the substation One-line diagram and General Arrangement drawing and our experience designing 345 kV substations to develop a complete estimate including all labor, materials, and engineering for the substation expansion. The major components for the expansion include two (2) 345 kV circuit breakers, seven (7) motor operated disconnect switches, CVTs, surge arresters, bus work and steel structures. A site expansion to the northeast is necessary for the new 345 kV bus work and to provide drive space and fencing. It was assumed that the existing control building has room for the new 345 kV line breaker relay and control panel(s). Note that all controls for the STATCOM will be located at the STATCOM site. The One-line diagram and General Arrangement drawing for the proposed Coopers Mills Substation expansion are included as *Exhibits 1 and 2*, respectively at the end of this letter.

345 kV Transmission Tie Line

CMP provided an approximate transmission line route as illustrated in *Exhibit 1*. ECI adjusted the transmission line routing slightly to simplify the existing line crossing construction and to reduce the number of heavy angle structures in what appears to be wetland area. These adjustments didn't change the basic number of construction units required on the CMP alignment. The takeoff location at the Coopers Mills end remained unchanged. For the estimate there were four (4) single circuit heavy angle structures, two (2) tangent structures, two transmission line crossings are required as well as 2,000' of ROW clearing. The estimate assumes steel pole structures. Heavy angle structures are on caisson foundations and tangent

structures are direct imbedded. The overall line length is about 0.8 miles. Based on aerial images showing June 2014 construction activities and expected site conditions ECI assumed matting was required along the entire line route. An aerial image showing the location of the STATCOM and site conditions is included as *Exhibit 3*, located at the end of this letter.

STATCOM

ECI used the project description that was provided by CMP as basis for requesting cost estimates from five (5) manufacturers. ECI requested turn-key quotes [redacted] All three bidders provided quotes with similar assumptions, namely that; there were no unusual subsurface site conditions requiring mitigation; the site was brought to a rough grade, an access road was provided and; omission of costs for taxes and permitting.

The bidder instructions were as follows:

1. Provide Turnkey Installation for +/- 200 MVAR, 345 kV STATCOM located in Northeast US. Please include budgetary (-25 to +25%) estimate for design, engineer, manufacture, factory testing, transportation to site, installation, site commissioning, spares, and training associated with the +/- 200 MVAR, 345 kV STATCOM.

2. The cost estimate does not include any additions at the existing Coopers Mills Substation; estimates should only be for the STATCOM addition located off-site.

3. The cost estimate does not include the 345 kV overhead line between the existing Coopers Mills Substation and the STATCOM site. The estimate should include a 345 kV dead end and all facilities within the STATCOM site.

4. Four (4) single-phase transformers (three in service plus a spare) are required for reliability to interconnect to the 345 kV system. These transformers shall be located at the STATCOM site.

5. The STATCOM site must be located as shown on the site plan (see Exhibit to this letter). Vendor shall assume land rights are already secured.

6. The STATCOM turnkey cost estimate should include a control building and all auxiliaries that would make it a complete standalone facility.

7. Quotes must be in US Dollars.

8. Assume a 2017 installation timeframe.

For the final estimate, ECI utilized the average of the three (3) STATCOM vendor estimates.

Cost Summary

The summary of the individual cost components are listed below:

1) Substation (345 kV expansion of Coopers Mills Substation)	$4,152,663
2) STATCOM (+/- 200 MVAR STATCOM Turnkey Install)	$32,023,333
3) Transmission Tie Line	$1,573,524
4) Access Roads and Site work at STATCOM site location	$710,000
Total	**$38,459,520**

The major cost item is the STATCOM. The vendors were requested to provide a +/- 25% quote on the STATCOM. ECI chose those limits to ensure the overall project cost would be within the required overall tolerance of -25% plus +50%.

The three STATCOM prices ranged from a high of $35M to a low of $30M. As mentioned earlier, ECI used the average cost of the three STATCOM vendor quotes. One vendor proposed a Static Var Compensator (SVC) as an alternate to the requested STATCOM. That vendor placed the SVC cost at between $25M to $30M.

In terms of estimating, we are using 2015 dollars and have not accounted for the time value of money, significant variations in raw materials, real estate acquisition/easements as well as handling and disposal of contaminated soils. Additionally, we have not added the utility overhead burdens or any contingency that the utility would normally add to project costs.

[redacted]

Sincerely,

[redacted]

[redacted]

cc: [redacted]

Exhibit 1

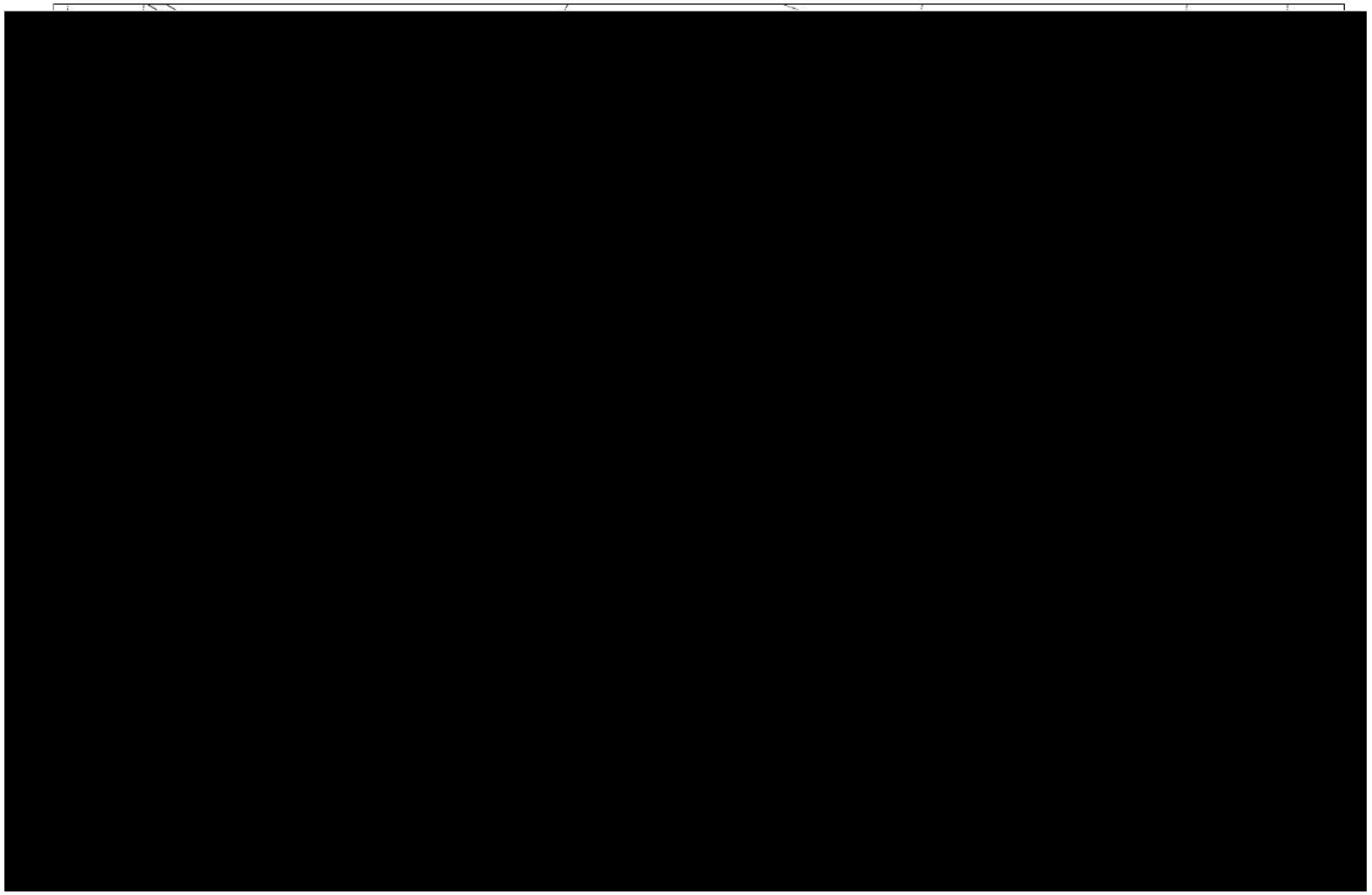

Exhibit 2

LEGEND:
- EXISTING
- PROPOSED
- FUTURE
- REMOVE

GREATER BOSTON SOLUTION ALTERNATIVES STUDY

CONCEPTUAL ONE LINE DIAGRAM
COOPERS MILLS SUBSTATION
200 MVAR STATCOM ADDITION

DATE:	DWG NO.	REV NO.
1-9-15	SK-COOP-OL	0

Exhibit 3