

**STATE OF VERMONT
PUBLIC SERVICE BOARD**

Joint Petition of Vermont Transco, LLC,)
Vermont Electric Power Company, Inc.)
("VELCO"), City of Burlington Electric)
Department ("BED") and Green Mountain)
Power Corporation for a certificate of public)
good, pursuant to 30 V.S.A. Section 248,)
authorizing the construction of the so-called)
East Avenue Loop Project in Williston, South)
Burlington, Colchester, Winooski and)
Burlington, Vermont, which consists of: (1))
the replacement of 4.8 miles of an existing)
single 115 kV line between VELCO's Essex)
Substation and its East Avenue Substation)
with two new 115 kV lines within the same)
corridor; (2) expansion of the East Avenue)
Substation; (3) installation of a new 1.5-mile)
34.5 kV line from the East Avenue Substation)
to BED's McNeil Substation; (4) construction)
of a new substation at the McNeil Generating)
Station; (5) installation of new and relocated)
equipment from BED's Lake Street)
Substation to the McNeil Substation; and (6))
removal of several circuits connected to)
BED's Lake Street Substation)

Docket No. 7314

**PREFILED REBUTTAL TESTIMONY OF
TERRY G. CECCHINI
ON BEHALF OF
PETITIONERS**

November 26, 2007

Summary: The purpose of Mr. Cecchini's testimony is to respond from the Green Mountain Power Corporation perspective to a recommendation made by City of South Burlington witness Juli Beth Hinds, that a single-pole, double-circuit line design configuration be used in the Country Club Estates and Valley Ridge neighborhoods in the City of South Burlington. Mr. Cecchini also responds to a concern expressed by the Department of Public Service regarding Demand Response.

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EXHIBITS

None

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PETITIONERS**

- 1 **1. Introduction**
- 2 Q1. Please state your name.
- 3 A1. My name is Terry G. Cecchini.
- 4

1 Q2. Have you previously filed testimony in this proceeding?

2 A2. Yes. I submitted direct prefiled testimony on behalf of the Petitioners in this
3 docket.

4

5 **2. Overview**

6 Q3. What is the purpose of your rebuttal testimony?

7 A3. My rebuttal testimony responds to the October 12, 2007 testimony submitted by
8 Juli Beth Hinds on behalf of the City of South Burlington (Q8 & A8), which
9 suggests that the East Avenue Loop Project (“Project”) line design be modified in
10 the Country Club Estates and Valley Ridge neighborhoods to a single-pole,
11 double-circuit steel pole 115 kV line design. I also respond to a concern raised by
12 the Department of Public Service regarding the role of Demand Response in
13 Green Mountain Power’s analysis.

14

15 **3. Single-Pole, Double-Circuit Design**

16 Q4. Does Green Mountain Power agree that a single-pole line design is warranted in
17 these neighborhoods?

18 A4. No. This new line is proposed to introduce a second, redundant feed into the area
19 that is essential to the reliability of Green Mountain Power’s load.

20

21 Q5. In what way is this redundant feed essential to the reliability of Green Mountain
22 Power’s load?

1 A5. As set forth in Mr. LaForest's Rebuttal Testimony, Ms. Hinds' suggested design
2 compromises VELCO's 115 kV system, which in turn compromises Green
3 Mountain Power's load (See LaForest Rebuttal Q5/A5). In addition, the 20-year
4 study from which the Project originated indicates that a new VELCO substation
5 ("Gorge VELCO") will be required to support additional load in the year 2010.
6 This new substation – presently expected to be located near Green Mountain
7 Power's Gorge Substation – will be supplied by the same lines that supply the
8 East Avenue Substation. Moreover, Gorge VELCO will provide an additional
9 transformer for Green Mountain Power's load in Colchester, Winooski, and
10 Essex. The additional transformer at Gorge VELCO, if approved, will serve as a
11 back-up for the East Avenue Substation 115-34.5 kV transformer. Gorge VELCO
12 is the central component of Phase II of the twenty-year plan upon which this
13 Project is based.

14
15 Q6. How would South Burlington's proposed single-pole, double-circuit design
16 compromise reliability in Phase II?

17 A6. Once Phase II is completed, a single event occurring at or near the single-pole
18 structures along the East Avenue 115 kV lines could result in the loss of both the
19 East Avenue Substation's 115-34.5 kV load and the Gorge VELCO Substation's
20 115-34.5 kV load. (BED's East Avenue Substation 115-13.8 kV load would also
21 be lost, see Kasti Prefiled Rebuttal Testimony Q6/A6.) This single event could
22 thus result in a double contingency, which the system is not designed to handle.

1 The result will leave Green Mountain Power's 34.5 kV network in Colchester,
2 Winooski and Essex (as well as the BED load served out of McNeil) with only
3 one source from the Essex VELCO Substation. Under relatively high-load
4 conditions, Green Mountain Power will not be able to serve those loads. The
5 reliability benefits of this critical second circuit would thus be significantly
6 compromised by the single-pole, double-circuit design that Ms. Hinds proposes.

7
8 **4. Demand Response**

9 Q7. Please respond to the concern raised by John Becker of the DPS that analysis was
10 deficient because it did not address demand response or other load management
11 resources within Green Mountain Power's East Avenue Loop service territory.

12 A7. Mr. Becker correctly notes that the magnitude of demand response resources
13 needed would likely far surpass what could be practically expected, given the
14 local concentration of customers. The material point is that the reliability issues
15 that the Project is designed to solve are not ones that demand response can
16 adequately address.

17
18 Green Mountain Power considered demand response and concluded that it is not
19 an equivalent resource when compared to the proposed transmission solution for
20 this reliability problem. Moreover, Green Mountain Power concluded that,
21 because the Project must cover local outage contingencies (i.e., not New England-
22 wide), demand response is not an appropriate solution in this case. As the Public

1 Service Board has noted, “[d]emand response programs, while helpful to the
2 system, cannot provide for contingencies in the same manner as transmission or
3 generation. Demand response programs are not instantaneous and thus cannot be
4 called upon in emergencies.” (Finding 106, p.52, 1/28/05 Order in Docket No.
5 6860).

6
7 There are other practical concerns related to the use of demand response that
8 make it even less likely to be an effective alternative to a reliability-driven need
9 for replacement of lost local transmission system elements. To cite only one
10 example, reliability-related concerns often occur over multiple days. For
11 generation, or explicit load reduction, to function as an alternative to transmission
12 for a local reliability problem, these non-transmission alternatives have to be
13 present for the entire duration of the reliability concern, deployed before the
14 event, and be present each day there is a problem requiring their use. The Board
15 has noted in other cases that relying on demand response resources “for (an)
16 extended duration is likely to lead to a poor response rate” (Finding 107, p.52,
17 1/28/05 Order in Docket No. 6860).

18
19 These generalizations hold true for Green Mountain Power’s service territory. It
20 is for this reason that I believe the concern raised by Mr. Becker does not rise to a
21 level of deficiency in Green Mountain Power’s analysis regarding demand
22 response within the local study area.

1

2 **5. Conclusion**

3 Q8. Does this conclude your testimony at this time?

4 A8. Yes, it does.

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