

1 H.317

2 Introduced by Representatives Masland of Thetford, Cheney of Norwich,
3 Conquest of Newbury, Deen of Westminster, Lanpher of
4 Vergennes, Stevens of Shoreham and Zuckerman of Burlington

5 Referred to Committee on

6 Date:

7 Subject: Public service; energy; micro-grids

8 Statement of purpose: This bill proposes to allow the public service board to
9 authorize the establishment and operation of micro-grids within the service
10 areas of distribution utilities. The bill proposes to establish who is eligible to
11 establish a micro-grid; the characteristics of such a system; and a notice
12 process. It proposes to address bilateral exchanges of power and other services
13 between a micro-grid and a distribution utility, and requires the board to
14 address, among other matters, interconnection issues, agreements between a
15 micro-grid firm and a distribution utility, licensing requirements for micro-grid
16 firms, and product quality requirements.

17 An act relating to authorizing the development and implementation of
18 micro-grids within the service area of an electric distribution utility

19 It is hereby enacted by the General Assembly of the State of Vermont:

1 Sec. 1. 30 V.S.A. § 251a is added to read:

2 § 251a. MICRO-GRID AUTHORIZATION

3 (a) The public service board may authorize a cooperative or a for-profit
4 company other than an electric distribution utility to establish a micro-grid
5 under this section, provided that each of the following is true:

6 (1) The micro-grid will serve more than one distinct legal entity.

7 (2) The micro-grid will have one or more independent sources of
8 electric power generation or storage, or both.

9 (3) There is compliance with the requirements of this section.

10 (b) A micro-grid authorized under this section shall have a maximum
11 capacity level of 20 megawatts (MW) and shall serve no more than 100
12 customers. In authorizing a particular micro-grid, the board shall consider the
13 costs and benefits that may be incurred or provided to the state's electric power
14 system by allowing the establishment of the micro-grid.

15 (c) The board by rule or order shall develop a symmetric tariff that governs
16 the bilateral transactions of power and other services between micro-grids and
17 electric distribution utilities and sets basic rates applicable to such transactions
18 and services. If a micro-grid is smaller than 1 MW, it shall be served under a
19 standard commercial tariff, which may include both time of day and capacity
20 charges. In this situation, power sales to the relevant electric distribution

1 utility shall be covered under the utility's standard tariff for sales by small
2 independent generators.

3 (d) A micro-grid firm and an electric distribution utility may reach a
4 contractual agreement that specifies rates that apply instead of the basic rates
5 established by the board. Such a contract shall be subject to review by the
6 board only if the rates under that agreement provide a greater than 20-percent
7 reduction as compared to the board's basic rates. Any such contractual
8 agreement shall be for a fixed term not to exceed 20 years; however,
9 renegotiation and extension of the agreement shall be allowed.

10 (e) An applicant for micro-grid approval shall notify the board and
11 department and the relevant distribution utility no less than nine months in
12 advance of its intent to establish a micro-grid. The notice shall include the
13 capacity, location, and number of customers expected on the micro-grid and an
14 estimate of the power sale and purchase transactions anticipated with or
15 through the relevant distribution utility. It shall include an analysis of the
16 demands on the distribution system associated with scheduled micro-grid
17 maintenance and plausible unscheduled micro-grid outages.

18 (f) The board by rule or order shall establish standards for interconnection
19 of micro-grids in order to assure safe and reliable operation, including
20 provisions that address how soon a distributed power resource must disconnect
21 from the distribution system after a distribution system power outage occurs.

1 However, if a distribution utility has installed intelligent distributed control,
2 the standard shall specify that when a fault occurs in the distribution system,
3 and distributed resources such as micro-grids are not threatened by large fault
4 currents, micro-grids should electronically query the distribution system to ask
5 whether they should stay connected in order to supply limited service to nearby
6 customers or disconnect for safety or other reasons.

7 (g) The board by rule or order shall establish approved interconnection
8 specifications and rates for interconnection of micro-grids under which the
9 distribution utility shall be required to cover one-half of the costs of
10 interconnection. Tariffs or interconnection standards for micro-grid systems
11 shall specify minimum power quality supplied by and to a micro-grid, and the
12 interconnection system shall be designed and tested to meet the power
13 requirements of the system. Power requirements and any associated penalties
14 in tariffs or interconnection standards shall apply equally to distribution
15 utilities and to micro-grid firms.

16 (h) The board by rule or order shall establish licensing procedures for
17 micro-grid firms that at a minimum shall include requirements that: an office
18 be maintained within the state; the applicant has the necessary financial,
19 management, and technical capabilities; necessary records be maintained; and
20 the firm be accessible to the board, the department, consumers, and the
21 distribution utilities of the state. In addition, an applicant must demonstrate the

1 products and services it will provide; methods for billing customers and
2 customer dispute resolution; a line of credit; a mechanism for collecting any
3 state fees and taxes; a method for meeting minimum electric quality standards;
4 and a method for providing information such as consumption and reliability
5 data to customers and to the state.

6 (i) The board shall adopt all rules and orders required by this section no
7 later than March 31, 2010.