

STATE OF VERMONT  
PUBLIC SERVICE BOARD

EEU-2013-01

2013-2014 Demand Resources Plan Proceeding )

Order entered: 12/20/2013

**ORDER DETERMINING THERMAL ENERGY AND PROCESS FUEL  
RESOURCE ACQUISITION MODELING INPUTS**

**I. INTRODUCTION**

On June 10, 2013, the Vermont Public Service Board ("Board") issued an Order that initiated a workshop process to develop the second statewide long-term Demand Resources Plan ("DRP"). The workshop process will lead to, among other items, a Board decision regarding statewide short- and long-term thermal energy and process fuel ("TEPF") budgets and goals.

In this Order, we determine that TEPF budgets and energy savings shall be analyzed using separate budgets determined for the City of Burlington Electric Department ("BED") and Efficiency Vermont based upon their respective estimated ISO-NE Forward Capacity Market ("FCM") revenues and allocations of estimated Regional Greenhouse Gas Initiative ("RGGI") proceeds. In addition, we approve the TEPF policy and modeling input assumptions to be used in analyzing TEPF budget and energy savings.

**II. PROCEDURAL HISTORY**

On June 16, 2013, Board staff held a workshop at which participants discussed scheduling proposals for this proceeding in light of lessons learned from the last DRP proceeding (proceeding number EEU-2010-06).

On July 3, 2013, the Department of Public Service ("Department") filed on behalf of itself, Vermont Energy Investment Corporation ("VEIC") operating as Efficiency Vermont,<sup>1</sup> and BED in its capacity as an energy efficiency utility ("EEU"),<sup>2</sup> a proposed schedule for this proceeding along with a memorandum regarding assumptions for scenario modeling.

On August 1, 2013, the Board issued an Order that established a schedule for this proceeding. The schedule included: (1) a deadline of October 15, 2013, for workshop participants to file descriptions of proposed policy assumptions and numerical values for available modeling input assumptions to be used when modeling TEPF savings; and (2) an October 28, 2013, workshop to discuss modeling assumptions.

On October 15, 2013, VEIC and BED jointly filed proposed numerical values for available modeling input assumptions to be used when modeling TEPF savings.

On October 31, 2013, Board staff convened a workshop to discuss the October 15, 2013, proposals.

On November 15, 2013, the Department filed reply comments regarding the October 15, 2013, proposals.

### **III. TEPF BUDGETS**

Pursuant to 30 V.S.A. § 209(e)(1), EEUs are required to use certain net revenues from their participation in the FCM and net proceeds from Vermont's participation in RGGI "to deliver thermal energy and process fuel energy efficiency services in accordance with this section for unregulated fuels to Vermont consumers of such fuels." Thus, unlike for electric energy efficiency, the Board does not set the budgets for TEPF efficiency, rather the budgets are estimated based on the expected revenues and proceeds from Vermont's participation in the FCM and RGGI.

BED and VEIC propose that TEPF budget and energy savings shall be analyzed using separate budgets determined for BED and Efficiency Vermont based upon their respective

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1. VEIC serves as Vermont's statewide EEU, known as Efficiency Vermont, under an Order of Appointment issued by the Board on 12/20/10 in Docket 7466.

2. BED serves as an EEU in its service territory, under an Order of Appointment issued by the Board on 4/19/11 in Docket 7466.

estimated FCM revenues and allocations of estimated RGGI proceeds. BED and VEIC propose that no new revenue source for TEPF budgets be included in the forecast.

### Discussion

Pursuant to 30 V.S.A. § 209(e)(1), the statutory framework for funding TEPF efficiency programs is different from that for funding electric efficiency programs; the Board does not have discretion regarding the budgets for TEPF programs. Therefore, there is no need for the Board to have a range of budget options for those programs.

The August 1, 2013, Order established a deadline of January 10, 2014, for the Department to file estimated TEPF budgets for resource acquisition and non-resource acquisition activities. Separate budgets shall be determined for BED and Efficiency Vermont based upon their respective estimated FCM revenues and allocations of estimated RGGI proceeds. We require that TEPF budget and energy savings be analyzed using these separate budgets determined for BED and Efficiency Vermont.

## **IV. TEPF MODELING INPUT ASSUMPTIONS**

BED and VEIC filed joint recommendations, and the Department filed comments, on available modeling input assumptions, presented in two primary categories: (1) policy assumptions; and (2) model input assumptions. TEPF measures will be considered for program implementation within a 3- and 10-year forecast period in which measures are assumed to be cost-effective and produce a net reduction in total thermal-and-process-energy consumption.

We discuss policy and model input assumptions below.

### **A. Policy Assumptions**

#### **(1) Low-income Sector Equity Requirements**

The Department, BED, and VEIC recommend that low-income sector equity requirements for TEPF modeling be different for Efficiency Vermont than for BED.

For Efficiency Vermont, both BED and VEIC initially recommended that TEPF modeling assume low-income spending to be 17 percent of the resource acquisition budget. The 17 percent low-income spending was used in the DRP process for the 2012-2014 performance period.

The Department recommends the 17 percent spending level be used as a low-income minimum spending requirement, rather than as a low-income spending target assumption for TEPF modeling. The Department recommends that TEPF modeling assume low-income spending to be 21 percent of the resource acquisition budget. This value was arrived at based on:

- The assumption that approximately one third of statewide (non-BED) residential customers are low income and residential spending is 75 percent of the funds allocated to TEPF resource acquisition, resulting in a full-equity constraint of 25 percent;
- An equity constraint of 70 percent to determine a minimum spending requirement, resulting in a minimum spending requirement of 17 percent; and
- Splitting the difference between the low-income spending minimum and full equity constraint and adding the result of 4 percent to the minimum spending requirement, resulting in a 21 percent low-income spending assumption.

VEIC and BED agree with the Department's adjustments to the low-income spending percentage.

The Department, BED and VEIC recommend for BED that the model assume no low-income spending because the low-income TEPF market is extremely small in BED's service territory. Over 95 percent of low-income households in BED's service territory use natural gas for space heating and domestic hot water. The natural gas to these customers is provided by Vermont Gas Systems, Inc. which implements thermal energy efficiency programs.

## **(2) Residential Sector Equity Requirements**

The Department, BED, and VEIC recommend that the level of residential spending for both Efficiency Vermont and BED be based on the percentage of residential customers who consume thermal and process fuels in Vermont.

Using current data on thermal-and-process-fuel use and accounting for some uncertainty associated with that data, BED and VEIC initially recommended that, for Efficiency Vermont, TEPF modeling be assume residential spending to be 70 percent of the resource acquisition budget. The Department suggests wood use should be included when determining the percentage of residential customers consuming thermal fuels. Accounting for wood use in Efficiency

Vermont's service territory, the Department recommends that TEPF modeling assume residential spending to be 75 percent of the resource acquisition budget. VEIC and BED agree with the Department's adjustments to the residential sector percentage.

The Department, BED, and VEIC recommend that, for BED's service territory, TEPF modeling assume residential spending to be 95 percent of the resource acquisition budget. This policy assumption recognizes that about 95 percent of commercial buildings use natural gas for space heating, and thus BED's customer base for the TEPF market is predominantly residential. This will result in the same percentage split between the residential and the commercial and industrial sectors currently being used for BED's 2012-2014 performance period.

### **(3) Commercial and Industrial Sector Equity Requirement**

The Department, BED, and VEIC recommend that TEPF modeling, for both Efficiency Vermont and BED, assume commercial and industrial spending to be the inverse of the residential percentages, described above.

### **(4) High Efficiency Biomass Heating Systems**

The Department, BED, and VEIC recommend that TEPF modeling include assumptions for the requirement to offer measures addressing high efficiency biomass heating systems, pursuant to 30 V.S.A. § 209(e)(1)(A).

## **B. Modeling Inputs**

The Department, BED, and VEIC made recommendations for TEPF modeling input assumptions, for both Efficiency Vermont and BED, summarized in the table below.

The Department, BED, and VEIC note that they are currently identifying, characterizing, and prioritizing behavioral measures, AMI-enabled measures, and other new measures that are not currently part of the Technical Reference Manual and EEU savings portfolios. In order to better understand and characterize the savings associated with behavioral measures, the Department recommends that if VEIC and BED elect to model costs and savings associated with

behavioral measures, the TEPF modeling results be presented in two ways: with and without behavioral measure costs and savings.

<b>TEPF Modeling Inputs</b>	
Impacts of Changes in Codes and Standards	Modeling assumptions based on those contained in the Technical Reference Manual for individual measure characterizations.
Avoided Costs	Modeling assumptions based on the most recent Board Order regarding avoided costs.
Measure Decay	Modeling assumptions based on those contained in the Technical Reference Manual for individual measure characterizations.
Base Equipment Energy Efficiency Levels, Free Rider and Spill Over Rates, and Measure Life	Modeling assumptions based on those contained in the Technical Reference Manual for individual measure characterizations.
Behavioral Measures and other New Measures	All behavioral and other new measures, examined over the modeling time period, are assumed to be cost-effective through state screening tool.

**C. Discussion**

No other comments on the policy and input modeling assumptions have been received. We find the policy and input modeling assumptions, with the modifications recommended by the Department, to be reasonable, and they are hereby approved.

We are persuaded by the Department's recommendation that the TEPF modeling results should be presented with and without behavioral measure costs and savings, in order to better understand and characterize the savings associated with behavioral measures. We therefore require that the TEPF modeling results be presented with and without behavioral measure costs and savings.

## **V. CONCLUSION**

In this Order, we determine that TEPF budget and energy savings shall be analyzed using separate budgets determined for BED and Efficiency Vermont based upon their respective estimated FCM revenues and allocations of estimated RGGI proceeds. In addition, we approve the TEPF policy and modeling input assumptions jointly proposed by BED and VEIC and further modified by the Department, and require that the TEPF modeling results be presented with and without behavioral measure costs and savings.

## **VI. ORDER**

IT IS HEREBY ORDERED, ADJUDGED, AND DECREED by the Public Service Board of the State of Vermont that:

1. Thermal-energy-and-process-fuel budget and energy savings shall be analyzed in this proceeding using separate budgets determined for the City of Burlington Electric Department and Efficiency Vermont based upon their respective estimated Forward Capacity Market revenues and allocations of estimated Regional Greenhouse Gas Initiative proceeds.
2. The thermal-energy-and-process-fuel policy and modeling input assumptions jointly proposed by the City of Burlington Electric Department and Vermont Energy Investment Corporation on October 15, 2013, as modified by the Vermont Department of Public Service's November 15, 2013, filing, are approved.

Dated at Montpelier, Vermont, this 20th day of December, 2013.

s/ JamesVolz )

PUBLIC SERVICE

s/ John D. Burke )

BOARD

s/ Margaret Cheney )

OF VERMONT

OFFICE OF THE CLERK

FILED: December 20, 2013

ATTEST: s/Susan M. Hudson  
Clerk of the Board

*NOTICE TO READERS: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: psb.clerk@state.vt.us)*