



EEU 2013-01 – Re: Department of Public Service and Burlington Electric Department joint proposal to implement electric and thermal energy efficiency performance metrics during the 2015-2014 performance period

Pursuant to its Order of Appointment,¹ the Burlington Electric Department (“BED”) and the Department of Public Service (“Department”) jointly propose eleven electric performance metrics and three performance indicators related to the provision of efficiency services addressing thermal energy and process fuels (“TEPF”) for implementation during the 2015 – 2017 EEU performance period. The performance metrics have been developed consistent with previous Board Orders and are intended to ensure that BED’s customers receive the maximum value possible from rate-payer funded efficiency programs.² The performance metrics consist of the following:

Quantifiable Performance Indicators:

1. Annual Incremental Electricity Savings (MWh)
2. Total Resource Benefits
3. Summer Peak Demand Savings (MWs)
4. Winter Peak Demand Savings (MWs)
5. Long term Market Transformation
6. Business Comprehensiveness

Minimum Performance Requirements

7. Minimum Electric Benefits
8. Equity for Residential ratepayers
9. Equity for Low Income ratepayers
10. Equity for Commercial Small Business ratepayers
11. Program Implementation Efficiency (formerly Administrative Efficiency)

TEPF Performance Indicators

1. Annual incremental net MMBTU savings
2. Residential Single family comprehensiveness
3. Equity for Residential customers

¹ Dated April 19, 2011

² See, Docket 7466, Order of 8/20/2010, pg. 70.

Additionally, BED and the Department propose a mechanism to adjust the afore-mentioned performance indicators. Consistent with past performance periods, the mechanism allows for adjustments to target level Total resource benefits (“TRB”) due to events beyond BED’s control.

Electric Performance Metrics

In the following sections, BED provides a brief description of the proposed performance metrics, performance targets, assigned weights in terms of their overall importance and the policy goal each metric is designed to advance. Similar to the previous set of performance metrics approved by the Board for the 2012- 2014 Demand Resource Plan (“DRP”), the following proposed performance metrics were structured in a manner that is similar to those proposed by VEIC.

Annual Incremental Energy Savings, Total Resource Benefits, Summer and Winter Peak Demand Savings

The three-year direct resource acquisition performance metrics are as follows:

QPI#	Title	Performance Indicator	Target	Policy Goal Advanced	Weight
1	Electricity Savings	Annual incremental net MWh expected savings	22,364	Annual incremental MWh savings indicator intended to encourage EEU's to design and implement efficiency initiatives that will maximize electrical energy savings	27%
2	Total Resource Benefits	Present worth of lifetime electric, fossil, and water expected benefits	25,036,087	Encourage EEU's to design and implement efficiency initiatives that will maximize the lifetime electric, fossil fuel, and water benefits	31%
3	Summer Peak Demand Savings	Cumulative net summer peak demand expected savings	3,205	Cumulative summer peak demand savings indicator intended to encourage EEU's to design and implement efficiency initiatives that will maximize the capacity reduction coincident with peak summer demand	17%
4	Winter Peak Demand Savings	Cumulative net winter peak demand expected savings	3,311	Cumulative winter peak demand savings indicator intended to encourage EEU's to design and implement efficiency initiatives that will maximize the capacity reduction coincident with peak winter demand	14%

For the purposes of setting resource acquisition goals, BED and the Department agree to increase the modeled energy efficiency potential in the city of Burlington by 10 percent to establish the above – captioned stretch goals. Although the stretch goals are aggressive, BED and the Department assert that these goals are achievable. By establishing stretch goals, BED will need to implement innovative programs designed to expand the reach of its programs into new markets, increase program participation and encourage customers to adopt new technologies and practices.

BED and the Department agree that establishing stretch goals equal to 110 percent of modeled energy efficiency potential is appropriate for BED due to the unique characteristics of the City of Burlington. For example, BED's service territory has a:

- High percentage of small single family homes and condominiums that consume less than 420 kWh per month,
- High concentration of mixed use buildings,
- High percentage of small rental units; and,
- High percentage of college students that tend to turnover units more frequently than typical renters.

The above noted city-specific characteristics made the modeling process challenging because the energy efficiency potential in BED's service territory needed to be extrapolated from the state-wide results of the updated DRP potential study. Nevertheless, BED and the Department agree that the resource acquisition stretch goals effectively balance the Board's objectives of encouraging the acquisition of all realistically achievable energy resources with the need to responsibly invest rate-payer funds in resources that are cost effective.

Performance will be measured in accordance with the Department's annual savings verification process.

Long term market transformation

The intent of this QPI is to encourage the EEU's to design and implement energy efficiency initiatives that maximize market transformation. BED interprets market transformation as the process of intervening in various markets to create lasting change in market dynamics by effectively addressing barriers to efficiency or creating opportunities that potentially accelerate the adoption of cost-effective energy efficiency as a matter of standard practice.³

For this performance indicator, BED and the Department agree that BED should continue to provide commercial customers with On-Bill Financing ("OBF"). OBF is a widely recognized tool that has the potential to increase commercial customer participation by addressing first cost barriers to energy efficiency. By financing upfront costs, OBF also encourages customers to implement deeper energy savings projects than they would otherwise. BED introduced OBF in March, 2013 but due to administrative challenges at the US Department of Commerce, BED had to stop accepting applications

³ See: <http://www.aceee.org/portal/market-transformation>

until the Spring of 2014. Thus far, there are 8 loans that have been financed through the customer's electric bill.

For the 2015 -2017 DRP, BED and the Department propose the following performance metric:

QPI#	Title	Performance Indicator	Target	Policy Goal Advanced	Weight
5	Long-term Market Transformation	On bill financing of electric efficiency measures and projects to commercial customers and non-owner occupied residential real estate investors	Standard OBF applications: 50 Multi-family OBF Applications: 10	Encourage EEU's to design and implement efficiency initiatives that maximize market transformation	5%

As indicated in the table above, there will be two components to this performance metric: a "standard" commercial customer OBF metric and a multi-family residential real estate owner metric. Standard commercial customers shall include all businesses currently taking service under BED's small general service or large general service tariff whose business is not directly related to leasing residential apartments. The multi-family residential real estate owner metric shall include non-owner occupied residential properties taking service under either the small general or large general service tariff.

Business Comprehensiveness

The objective of the business comprehensiveness metric is to design programs that encourage business customers to implement deeper energy savings projects. While the objective is laudable, achieving deep savings has proven difficult due to various market barriers.

BED's target for this metric during the 2012 – 2014 DRP was to achieve an average depth of savings of 26,400 kWh per Business Existing Facilities (BEF) participant. While BED has been successful in increasing the number of BEF participants by 166 unique customer locations, the average depth of savings is approximately 16,364 MWh's over 447 participants as of June 30, 2014. With six months remaining, it is not likely that BED will be able to encourage customers to increase to the depth of savings needed to achieve the target by December 31, 2014.

For the 2015 -2017 DRP, BED and the Department propose a revised business comprehensiveness metric that is aggressive yet realistic given the realities of BED's commercial market that is comprised of numerous small commercial accounts consuming less than 40,000 kWh per year. As the table below indicates, BED will strive

to achieve an average depth of savings equal to 8 percent per BEF participant relative to the average BEF participant's electric load in 2014.

QPI#	Title	Performance Indicator	Target	Policy Goal Advanced	Weight
6	Business Comprehensiveness of Savings	Increase the average kWh savings per Business Existing Facilities participant	Average depth of savings equal to 8% relative to the average BEF participant's electric load during the 12 month period ending December 31, 2014	Intended to ensure that energy efficiency initiatives are designed and implemented to acquire comprehensive savings	6%

Minimum Electric Benefits

The intent of this metric is to ensure that all BED ratepayers, collectively, benefit from energy efficiency investments and that the monetized value of such investments is greater than the costs. Consistent with previous DRPs, the proposed target is to achieve benefits that are 1.2 times the cost of implementing and evaluating BED's energy efficiency programs.

QPI#	Title	Performance Indicator	Target	Policy Goal Advanced	Weight
7	Minimum Electric Benefits (Equity for all Electric Ratepayers)	Total electric benefits divided by total costs	Equal or greater than 1.2 benefit/cost ratio	Equity for all Vermont electric customers as a group by assuring that the overall electric benefits are greater than the costs incurred to implement and evaluate the EEU and the EEC	0% (Minimum Requirement)

Residential ratepayer equity

Pursuant to Board Order, BED is required to develop a portfolio of programs that maintains an equitable level of resource acquisition spending between and among its residential, low income and small businesses customers. The intent of the Board's Order is to ensure that the ratepayers in each customer class receive benefits that are roughly proportional to the amount each class pays into the energy efficiency fund.

To ensure that BED's residential ratepayers receive their equitable portion of energy efficiency benefits, BED and the Department agree to set the minimum required investment in the residential sector equal to \$1.3 million over the three- year DRP period, as the table below demonstrates.

QPI#	Title	Performance Indicator	Target	Policy Goal Advanced	Weight
8	Equity for Residential Ratepayers	A minimum level of overall efficiency efforts, as reflected in spending, will be dedicated to residential customers	\$1.3 million	Equity for residential customers by assuring that a minimum level of overall efficiency efforts, as reflected in spending, will be dedicated to residential customers	0% (Minimum Requirement)

As in previous DRP's, the minimum \$1.3 million investment in the residential sector was set at 70 percent of the amount paid into the energy efficiency fund by residential customers. Setting the minimum investment at 70% of total residential receipts allows for increased flexibility to acquire cost effective energy efficiency savings, if necessary, in non-residential sectors. It is also important to note that residential customers represent approximately 25 percent of the total electric energy load in Burlington, thus, the above noted minimum investment factor is applied to 25 percent of the total \$7.5 million resource acquisition budget. In summary, the minimum \$1.3 million investment in the residential class was calculated in the following manner and consistent with the DRP modeling assumptions.

Total Resource Acquisition Budget, less RA R&D	\$	7,547,794
Percent of residential load relative to total electric load		25%
Total residential receipts	\$	1,886,949
Minimum residential investment factor		70%
Minimum 3 year residential investment	\$	1,320,864

Low income ratepayer equity

BED is also required to ensure low income customers receive a share of the energy efficiency benefits, as reflected in spending, that is roughly proportional to the amount that low income customers pay into the energy efficiency fund. Historically, low income customer contributions have approximated 2.6 percent of the total residential budget. With the recently approved budget, BED and the Department agree that the low income customer minimum spending requirement should amount to \$137,000, as shown in the table below.⁴

QPI#	Title	Performance Indicator	Target	Policy Goal Advanced	Weight
9	Equity for Low-income Customers	A minimum level of overall efficiency efforts, as reflected in spending, will be dedicated to Low-income customers	\$137,000	Equity for low-income customers by assuring that a minimum level of overall efficiency efforts, as reflected in spending, will be dedicated to low-income households	0% (Minimum Requirement)

⁴ It is important to note that the proposed budget is also consistent with BED's modeling assumptions.

Similar to the residential sector, the minimum amount of investment in low income programs was limited to 70% of the total low income budget. In summary, the low income budget was calculated in the following manner:

Total Resource Acquisition Budget, less RA R&D	\$ 7,547,794
X % contribution of Low Income HH into total RA budget	2.6%
X 70% limit on spending	70%
Minimum Low income spending	\$ 137,370

Small business equity

As noted above, the objective of this metric is to ensure that small business customers receive an equitable share of the energy efficiency benefits acquired over the three year performance period. However, the metric for assessing whether small business customers actually receive an equitable share of the benefits has not historically been measured in terms of spending levels. Instead, the performance metric is the number of total small businesses participating in BED's programs. In the previous DRP, the minimum requirement was 158 small business customers. For this DRP, BED and the Department agree to establish a minimum metric of 225 small business customers, defined as those customers consuming 40,000 kWh or less per year, or 75 small businesses per year as shown in the table below.

QPI#	Title	Performance Indicator	Target	Policy Goal Advanced	Weight
10	Equity for Small Business Customers	Number of total non-residential premises with annual electric use 40,000 kWh/yr or less participating in energy efficiency programs.	225	Equity for small business customers by assuring that a minimum level of overall efficiency efforts, as reflected in participation, will be dedicated to small business accounts	0% (Minimum Requirement)

Program Implementation Efficiency

The intent of the Program Implementation Efficiency metric is to encourage EEU's to continuously assess and improve the operations of their programs in order to maximize ratepayer value to the greatest extent possible. In addition to being a continuous effort, improving operational performance is also an iterative process that should be monitored over time.

In the previous DRP, the Department engaged Navigant Consulting Inc. to conduct assessments of five key BED business processes. For the 2015 - 2017 DRP, BED and the Department agree that BED should continue to conduct these assessments. Accordingly, BED agrees to identify and map additional key business and program implementation processes for future assessment. As the table below highlights, BED will establish a set

of milestone dates for conducting the assessments and reporting the findings of such assessments.

QPI#	Title	Performance Indicator	Target	Policy Goal Advanced	Weight
11	Program Implementation Efficiency -	Meet pre-determined milestones on schedule	a.) Identify and submit to the DPS business processes for assessment by January 31 of each year b.) Report baseline performance and target levels for improvement to the DPS by December 31 of each year in the DRP	This indicator is intended to encourage the program administrator to continually assess its operations to continue to deliver services that maximize ratepayer value	0% (Minimum Requirement)

The intent of the assessments is to fully understand BED's business and implementation processes in order to improve the operational efficiency of the organization, as well as its effectiveness to deliver energy efficiency services. Once the identified processes have been assessed, BED will then seek to implement the recommended process improvements, if feasible. In addition, BED shall, where appropriate, also establish during the three-year DRP period internal monitoring mechanisms to measure the performance of key business processes that have already been assessed in order to prevent any deterioration in operational performance.

TEPF performance indicators

In this section, BED and the Department briefly describe the proposed TEPF performance metrics, the target goals and the policy objectives each metric is intended to advance. As noted above, there are three proposed metrics: Thermal and mechanical energy savings, residential single family comprehensiveness and equity for residential customers.

Thermal and mechanical energy efficiency

Similar to the electric savings performance metric, the intent of this TEPF metric is to encourage the EEU's to design and implement efficiency initiatives that will maximize unregulated fossil fuel energy savings in buildings. The three-year cumulative target goal is to achieve thermal and process fuel savings of 1,470 MMBTU's, split between the residential sector (92%) and C&I sector (8%). Customers receiving natural gas services will not be eligible to participate in this program. Consequently, BED's TEPF programs will focus on residential condominiums located at Red Rocks and LedgeWood, both of which are not served by Vermont Gas Systems, Inc. The three year resource acquisition performance metric is:

PI #	Definition	Performance Indicator	Policy Goal Advanced	Target
1	Thermal & Mechanical Energy Efficiency Savings (Residential and Commercial)	Incremental net MMBTU savings (3Yr total)	Intended to encourage EEU's to design and implement efficiency initiatives that will maximize unregulated thermal energy savings	1470 MMBTU

Residential Single Family comprehensiveness

The purpose of this QPI is to ensure that the EEU's design and implement programs capable of acquiring comprehensive savings – both electric and thermal - by providing retrofit services to eligible participants in a manner that is consistent with the State energy plan. BED and the Department agree that this QPI should include two components:

- a) Average Air Leakage reduction
 - i. 34 % reduction per project
 - ii. Projects shall be defined as a work completed by a Home Performance with ENERGY STAR (HPwES) contractor in a single family (1-4 units) home or condominium. All households in which TEPF-funded incentives are provided through HPwES will be included in the average, regardless of whether or not air infiltration reduction is achieved.
- b) Percent of households with both shell and heating systems measures installed, within contiguous calendar years
 - i. 16% of premises
 - ii. Significant heating system measures will include system replacements, distribution improvements such as duct sealing or installing improved or right-sized ductwork, burner replacements, etc. with a cost of at least \$200 per reported job. Neither setback thermostats nor clean and tunes shall count as significant heating system measures for this Performance Indicator. Shell measures include any measures that reduce conductive losses through the building shell (typically insulation measures) as well as air infiltration reductions. Example of qualifying contiguous calendar years: a household implementing shell measures in 2014 and a heating system measure in 2015, or vice versa.

The three-year performance metric for this QPI is:

PI #	Definition	Performance Indicator	Policy Goal Advanced	Target
2	Residential single family comprehensiveness	1) Air leakage reduction 2) Percent of households with both shell and heating systems measures installed within contiguous calendar years	Intended to ensure that energy efficiency initiatives are designed and implemented to acquire comprehensive savings	1) 34% reduction per project 2) 16% of premises

Equity for Residential Customers

Similar to electric energy savings, the intent of this performance metric is to ensure that residential customers receive a minimum level of the energy efficiency benefits, as reflected in spending, associated with the delivery of TEPF programs. BED and the Department agree that for the purposes of setting this minimum performance indicator, BED shall dedicate \$195,500 of the total TEPF approved budget to the residential sector, as shown in the table below.

MPR#	Definition	Performance Indicator	Policy Goal Advanced	Target
1	Equity for Residential Customers	Minimum level of overall efficiency, as reflected in spending, is dedicated to residential customers or 95% of total budget (\$294,000), less 70% performance metric cap	Equity for residential customers by assuring that a minimum level of overall efficiency efforts, as reflected in spending, will be dedicated to residential customers	\$195,500

As with electric energy savings, the minimum spending amount was set at 70 percent of the budget to provide for additional flexibility in managing program implementation strategies and designs. In summary the \$195,500 minimum investment level in the residential sector was calculated in the following manner:

Total Residential TEPF budget	\$	294,000
X Performance Cap		70%
X Minimum performance limit		95%
Total Residential Spending metric	\$	195,510

Future Adjustments to Quantifiable Performance Targets

The Department of Public Service ("Department") and Burlington Electric Department ("BED") propose two mechanisms for the adjustment of quantifiable performance indicators ("QPIs"). The first mechanism, consistent with past performance periods, allows the Department and BED to adjust the total resource benefits ("TRB") due to changes in Board-approved avoided costs and other potential changes to the State Screening Tool for efficiency investments that could have potential effects on performance targets. The second mechanism allows the Department and BED to

propose adjustments to QPIs to reflect market changes that affect measured baselines or net to gross factors used for the establishment of performance targets.

Adjustments to target levels for TRB (QPI 2) due to changes in Board-approved avoided costs, discount rate, or inflation rate used in State Screening Tool

In past performance periods, the 100% target level and stretch target level for TRB has been adjusted to reflect changes in Board-approved avoided costs without additional Board proceedings. The Department and BED propose that this practice continue. It is also proposed that any changes to the discount rate or inflation rate used in the State Screening Tool follow the same process to modify target levels for TRB. These two variables can have a significant impact on TRB depending on how they are applied.

The method for adjusting the QPI for TRB to reflect changes in Board-approved avoided costs, or the discount rate or inflation rate used in the State Screening Tool, is proposed to be a three-step process:

- (1) Credit BED with accomplishments from the beginning of the performance period through the end of the last full year of the previous factors;
- (2) Revalue the remainder of the original performance period TRB target levels utilizing the new factors; and
- (3) Calculate new hybrid performance period TRB target levels based on a combination of the TRB achieved prior to the adoption of the new factors and the remainder of the target levels with new factors.

Adjustments to QPIs based on market changes

The 20-year forecast of savings that lead to the development of performance targets contains a myriad of assumptions, including those related to the baselines used to measure savings from "market opportunity" or "replace on burnout" measures, and "net to gross" assumptions made to estimate the amount of freeriders and/or spillover associated with a particular measure. These assumptions are subject to change during a three-year performance period. Such changes are reflective of enhanced understanding of markets, and should not necessarily affect program administrator performance toward QPIs either positively or negatively.

If assumptions related to measures, baselines, or net-to-gross factors that have previously been agree upon by the Department and BED significantly change over the course of a three-year performance period, the Department and BED agree to

adjust applicable QPIs with the following Board process⁵:

- (1) The Department and affected Energy Efficient Utilities ("EEUs") jointly notify the Board and characterize the adjustment under consideration;
- (2) The Board issues notice to interested stakeholders in the Demand Resources Plan process, providing an opportunity to request a workshop and/or make comments;
- (3) If no comments are made and a workshop is neither requested by a stakeholder nor desired by the Board, then the Board will notify the Department and affected EEUs that they can adopt the adjusted goals;
- (4) If a workshop is requested, then the Board will identify a process at that workshop; and
- (5) If comments are provided, then an opportunity for reply comments should be provided and a Board decision shall be issued following conclusion of the comment periods.

Any agreed upon adjustments to performance targets will be reflected in the BED annual report, and next practicable quarterly report. Any disagreements between the Department and BED regarding the above processes shall follow the dispute resolution process set forth in the "Process and Administration of an Order of Appointment."

⁵ Any such measure baseline adjustments must cumulatively account for changes in savings equal to or greater than 5 percent of any of the three-year MWh, MW, or TRB 100% targets. Any adjustments subsequent to the first adjustment will cumulatively account for new changes in QPIs equal to or greater than 1 percent of total (revised) three-year 100% targets. Any agreed-upon adjustments to performance targets will be reflected in the EEU's annual report, and next practicable quarterly report.