

MEMORANDUM

Date: March 22, 2016

To: Representative Tony Klein
Senator Chris Bray

From: Jon Copans, Public Service Department

Subject: Response to Joint Energy Committee Questions Regarding Energy Efficiency Utilities; Distribution of Benefits and Charges to Customer Sectors

The Department of Public Service (DPS) received the Joint Energy Committee's letter of February 10, 2016 and follow up questions related to the Energy Efficiency Utilities (EEU) distribution of benefits and charges to customer sectors. The information prepared by staff and included herein is intended to address the Committees questions related to the following items.

- 1. Explanation of the process and criteria used to determine the allocation of resource acquisition between the commercial and residential sectors and the process by which the energy efficiency charge is allocated between those sectors.*
- 2. Comparison, for the last five full years, of the percentage of resource acquisition dollars allocated to each sector with the percentage of energy efficiency charge collections allocated to each sector.*
- 3. Other information the DPS considers relevant to this issue.*

Introduction

The Demand Resource Plan (DRP) proceeding is the process that the Public Service Board (PSB) uses to establish three-year EEU budgets and performance goals. This proceeding also establishes the allocation of resource acquisition (RA) budgets between the commercial, residential, and other sectors as well as sector equity minimum spending requirements as part of EEU Quantifiable Performance Indicators (QPIs). Energy efficiency charge (EEC) rates are established annually outside the DRP process. The calculation determining annual EEC rates uses EEU budgets that the PSB has previously approved in the DRP. EEC rates are calculated based on commercial and residential sector electricity sales which is has typically not been commensurate with EEU sector specific program investments.

Response to the Joint Energy Committees questions of February 10, 2016

- 1. Explanation of the process and criteria used to determine the allocation of resource acquisition between the commercial and residential sectors and the process by which the energy efficiency charge is allocated between those sectors.*

Residential and Commercial/ Industrial Sector Equity

As is the case in other jurisdictions, the cost of saved energy in the residential sector is typically higher than the cost of saved energy in the commercial and industrial (C&I) sector. This is confirmed for Vermont in the Department’s 2014 Benchmarking study¹. Because the cost of saved energy varies by sector, it is important to establish sector equity standards to ensure a reasonably balanced sector specific investment strategy. Sector equity standards are currently in place for Vermont’s EEUs to help ensure a minimum amount of sector specific EEC collections are directed back to the programs designed for the sector from which they came.

Sector equity standards were developed for the purposes of modeling RA savings for the residential and commercial and industrial (C&I) sectors in the PSB’s DRP proceedings that established energy efficiency budgets and goals for the 2012-2014 and 2015-2017 performance periods. In the most recent DRP the sector specific program budget allocation percentages in Exhibit 1² were used for the process of modeling expected savings in the first half of the DRP. As shown in the chart below the Department proposed a more equitable shift in sector spending over time to reflect EEC collections by sector. This recommendation also considers savings yield rates between the residential and C&I sector and sector potential savings.

Exhibit 1: Sector Equity Assumptions for Modeling EEU Savings in the DRP

Year	EVT (VEIC)		BED		
	Res	Com	Res	Com	
2012	32%	68%	25%	75%	Historic Reference
2013	31%	69%	25%	75%	
2014	33%	67%	25%	75%	
2015	34%	66%	25%	75%	2015-2017 Period
2016	36%	64%	25%	75%	
2017	37%	63%	25%	75%	
2018	37%	63%	25%	75%	
2019	34%	66%	25%	75%	
2020	42%	58%	25%	75%	
2021	42%	58%	25%	75%	
2022	43%	57%	25%	75%	
2023	43%	57%	25%	75%	
2024	43%	57%	25%	75%	
2025	43%	57%	25%	75%	

¹ See pages 23 and 28 for commercial and residential lifetime cost of electric energy saved where commercial sector lifetime savings is \$0.02/ kWh and residential sector is \$0.03/ kWh for Efficiency Vermont.

http://publicservice.vermont.gov/sites/dps/files/documents/Energy_Efficiency/EVT_Performance_Eval/VT%202011%20%26%202012%20High%20Level%20Benchmarking.pdf

² DPS filing of August 15, 2013 in the DRP proceeding recommending policy and modeling assumptions see page 3 and 4.

<http://psb.vermont.gov/sites/psb/files/projects/EEU/drp2013/DPSScenariosJointAssumptionsandQPIFrameworks2013-08-15.pdf>

2026	43%	57%	25%	75%
2027	43%	57%	25%	75%
2028	43%	57%	25%	75%
2029	42%	58%	25%	75%
2030	42%	58%	25%	75%
2031	42%	58%	25%	75%
2032	42%	58%	25%	75%
2033	42%	58%	25%	75%
2034	42%	58%	25%	75%

In the second half of the DRP, after EEU budgets are ordered, the PSB conducts additional process to solicit recommendations for EEU Quantifiable Performance Indicators (QPIs) and Minimum Performance Requirements (MPRs). For the 2012-2014 and 2015-2017 EEU performance periods this process has yielded MPRs related to ensuring equity in a number of areas for including equity for all residential ratepayers. Other equity related MPRs include minimum electric benefits, minimum level of participation by low-income households, minimum level of participation by small business customers, and geographic equity³.

In the last two DRP proceedings the sector specific program budget allocation percentages were applied to the actual PSB ordered EEU total resource acquisition budget to arrive at projected residential and C&I sector spending. The equity for residential rate payers MPR was established as 70% of the projected RA budget for the residential sector. For example, in the 2015-2017 performance period the total RA budget is approximately \$127M and the method described above yielded expected three-year RA sector program budgets of approximately \$45M in the residential sector and \$82M in the C&I sector for Efficiency Vermont (EVT). Subsequently, EVT's equity for residential ratepayers MPR was set at \$32.5M for the 2015-2017 performance period. Further, City of Burlington Electric Department (BED) expected three-year RA sector program budgets are approximately \$1.9M in the residential sector and \$5.6M in the C&I sector. Subsequently, BED's equity for residential ratepayers MPR was set at \$1.3M for the 2015-2017 performance period⁴.

Note that the process by which the energy efficiency charge (EEC) is allocated between the residential and C&I sectors for EEC collections is defined by the methodology in Board Rule 5.300⁵ and based on electricity sales revenue (not projected program spending). Specifically, section 5.304 (B) of the Rule states the following requirement.

The methodologies for calculating the Energy Efficiency Charge rates shall use kWh and kW sales and revenue data from the most recent calendar year for which complete information is available.

³ See the PSB's QPI order, pages 7 through 9, outlining equity related minimum requirements for Efficiency Vermont. <http://psb.vermont.gov/sites/psb/files/projects/EEU/drp2013/EEU-2013-01%20Order%20re%20QPIs%20EVT%20%26%20BED.pdf>

⁴ EVT and BED's PSB approved QPIs and MPRs can be found here. <http://psb.vermont.gov/sites/psb/files/projects/EEU/drp2013/EEU-2013-01%20QPI%20Attachment.pdf>

⁵ See the PSB's Board Rule 5.300 found here. <http://psb.vermont.gov/sites/psb/files/rules/OfficialAdoptedRules/Adopted%20Rule%205%20300.pdf>

Therefore, the EEC is allocated based on the customer classes' annual revenue. Annual revenue consists of all Distribution Utility charges including customer, energy, and demand charges for residential, commercial, and industrial customers. For example, if the residential class makes up 50% of total electric utility annual revenue, then 50% of the EEC will be allocated to the residential class.

2. *Comparison, for the last five full years, of the percentage of resource acquisition dollars allocated to each sector with the percentage of energy efficiency charge collections allocated to each sector.*

Exhibit 2 below is a summary of total EEC collections for BED and EVT for years 2010-2014. For this portion of the analysis the Department used data from its annual calculation of EEC rates. The annual EEC rates calculation takes place in coordination with the PSB as outlined in section 3.506 of Board Rule 3.500. Percent EEC collections by sector are determined on the basis of kWh and kW sales and revenue data.

Exhibit 2: EEC Collected by Sector

		2010	%	2011	%	2012	%	2013	%	2014	%
BED	Res	\$541,499	28%	\$599,300	29%	\$546,214	26%	\$647,086	28%	\$665,516	27%
	C&I	\$1,367,853	72%	\$1,498,675	71%	\$1,556,505	74%	\$1,698,517	72%	\$1,762,785	73%
	Sub-total	\$1,909,352	100%	\$2,097,975	100%	\$2,102,718	100%	\$2,345,603	100%	\$2,428,301	100%
EVT	Res	\$15,638,058	45%	\$18,483,767	49%	\$18,794,249	49%	\$20,414,958	49%	\$22,057,502	48%
	C&I	\$18,855,998	55%	\$19,292,629	51%	\$19,577,336	51%	\$21,338,200	51%	\$23,499,604	52%
	Sub-total	\$34,494,056	100%	\$37,776,397	100%	\$38,371,585	100%	\$41,753,158	100%	\$45,557,105	100%
BED + EVT	Res	\$16,179,557	44%	\$19,083,067	48%	\$19,340,462	48%	\$21,062,043	48%	\$22,723,017	47%
	C&I	\$20,223,851	56%	\$20,791,304	52%	\$21,133,841	52%	\$23,036,717	52%	\$25,262,389	53%
Total		\$36,403,408	100%	\$39,874,371	100%	\$40,474,303	100%	\$44,098,760	100%	\$47,985,406	100%

Exhibit 3 below is a summary of BED and EVT EEC spending by sector. For this portion of the analysis the Department used past RA spending by sector for BED and EVT as reported in their energy efficiency annual reports. Note that collections are somewhat greater than spending in this analysis because non-RA costs such as EEU non-resource acquisition program costs, DPS evaluation costs, EVT performance award and operations fees, and Fiscal Agent/ Fund audit fees are not included. These non-RA costs may or may not be directly attributable to sector specific spending.

Exhibit 3: EEC Program RA Invested by Sector

		2010	%	2011	%	2012	%	2013	%	2014	%
BED	Res	\$552,304	30%	\$565,748	28%	\$575,846	33%	\$486,702	24%	\$729,804	33%
	C&I	\$1,262,511	70%	\$1,457,912	72%	\$1,182,768	67%	\$1,503,184	76%	\$1,474,525	67%
	Sub-total	\$1,814,815	100%	\$2,023,660	100%	\$1,758,614	100%	\$1,989,886	100%	\$2,204,329	100%
EVT	Res	\$10,371,586	32%	\$11,014,403	34%	\$13,652,397	43%	\$13,307,510	42%	\$15,414,704	37%
	C&I	\$21,602,614	68%	\$21,216,670	66%	\$18,001,553	57%	\$18,503,785	58%	\$25,694,568	63%
	Sub-total	\$31,974,200	100%	\$32,231,073	100%	\$31,653,950	100%	\$31,811,295	100%	\$41,109,272	100%
BED + EVT	Res	\$10,923,890	32%	\$11,580,151	34%	\$14,228,243	43%	\$13,794,212	41%	\$16,144,508	37%
	C&I	\$22,865,125	68%	\$22,674,582	66%	\$19,184,321	57%	\$20,006,969	59%	\$27,169,093	63%
Total		\$33,789,015	100%	\$34,254,733	100%	\$33,412,564	100%	\$33,801,181	100%	\$43,313,601	100%

Exhibit 4 below is a variance comparison of the percentage of EEC collections allocated to each sector with the percentage of RA program dollars invested in each sector for EVT and BED.

Exhibit 4: EEC Collection vs. RA Program Investment

		2010			2011			2012			2013			2014		
		EEC Collections	RA Invest.	Variance	EEC Collections	RA Invest.	Variance	EEC Collections	RA Invest.	Variance	EEC Collections	RA Invest.	Variance	EEC Collections	RA Invest.	Variance
BED	Res	28%	30%	2%	29%	28%	-1%	26%	33%	7%	28%	24%	-3%	27%	33%	6%
	C&I	72%	70%	-2%	71%	72%	1%	74%	67%	-7%	72%	76%	3%	73%	67%	-6%
	Sub-total	100%	100%		100%	100%		100%	100%		100%	100%		100%	100%	
EVT	Res	45%	32%	-13%	49%	34%	-15%	49%	43%	-6%	49%	42%	-7%	48%	37%	-11%
	C&I	55%	68%	13%	51%	66%	15%	51%	57%	6%	51%	58%	7%	52%	63%	11%
	Sub-total	100%	100%		100%	100%		100%	100%		100%	100%		100%	100%	
BED + EVT	Res	44%	32%	-12%	48%	34%	-14%	48%	43%	-5%	48%	41%	-7%	47%	37%	-10%
	C&I	56%	68%	12%	52%	66%	14%	52%	57%	5%	52%	59%	7%	53%	63%	10%
Total		100%	100%		100%	100%		100%	100%		100%	100%		100%	100%	

Exhibit 5 below is a comparison of the percentage of EEC collections allocated to each sector with the percentage of RA program dollars actually invested in each sector and also the sector equity assumption for modeling savings in the DRP for the applicable years. For example, in 2014 collections for EVT's residential sector was 48% of total EEC collections, the actual program RA investment was 37%, the sector percent savings modeling assumption was 33%. For 2014 this indicates that residential sector program RA investments exceeded the modeling assumption but do rise to be equal with collections.

Exhibit 5: EEC Collection vs. RA Program Investment vs. DRP Sector Equity Assumption

		2012			2013			2014		
		EEC Collections	Program RA Invst.	Model Assump.	EEC Collections	Program RA Invst.	Model Assump.	EEC Collections	Program RA Invst.	Model Assump.
BED	Res	26%	33%	25%	28%	24%	25%	27%	33%	25%
	C&I	74%	67%	75%	72%	76%	75%	73%	67%	75%
	Sub-total	100%	100%	100%	100%	100%	100%	100%	100%	100%
EVT	Res	49%	43%	32%	49%	42%	31%	48%	37%	33%
	C&I	51%	57%	68%	51%	58%	69%	52%	63%	67%
	Sub-total	100%	100%	100%	100%	100%	100%	100%	100%	100%

3. Other information the DPS considers relevant to this issue.

The Department does not have any other information relevant to this issue at this time.