IG DR 5-1, Supp Attach 1 IPL - Cause No. 44576 Page 1 of 79



# AN ANALYSIS OF THE IMPACTS OF ADOPTING A STRAIGHT-FIXED VARIABLE RATE DESIGN:

### A REPORT PREPARED FOR INDIANAPOLIS POWER & LIGHT COMPANY BY CONCENTRIC ENERGY ADVISORS

### DRAFT

### CONFIDENTIAL

### **DECEMBER 2013**

### Table of Contents

I.	Int	roduction
	A.	General Background
	B.	Calculating the Effects of an SFV Rate Design
II.	Cu	stomer Impact Analyses
	A.	Residential Customer Classes (RS, RC, RH)
	B.	Small Secondary Service Customer Classes (SS, SH, SE)
	C.	Large Commercial and Industrial Customers (SL, PL, HL1/2/3)12
	D.	Process Heating (PH)13
III	. Eff	Fects of SFV Rate Design on Margin Stability
IV.	Eco	onomic and Policy Considerations of SFV Rate Design15
	A.	Residential and Small Secondary Service16
	1.	Effectiveness in Recovering Costs
	2.	Fairness in Apportioning Costs Among Customers17
	3.	Promotion of Efficient Usage18
	B.	Large Secondary and Higher Voltage Service
	1.	Effectiveness in Recovering Costs
	2.	Fairness in Apportioning Costs Among Customers18
	3.	Promotion of Efficient Usage19
V.	CO	NCLUSION

#### I. Introduction

Indianapolis Power & Light Company ("IPL") retained Concentric Energy Advisors, Inc. ("Concentric") to conduct an analysis of the implications of moving IPL's rate structure to a straight-fixed variable ("SFV") rate design which would recover a larger percentage of the fixed costs through fixed charges. In particular, this analysis focuses on the effects that an SFV rate design would have on: (i) different groups within each class; and (ii) the stability of IPL's cost recovery.

In undertaking this analysis, Concentric conducted analyses of each of the following rate schedules:

- RS Residential Service
- RH Residential Electric Space Heating / Water Heating
- RC Residential Electric Space Heating
- SS Secondary Service Small
- SH Secondary Service Electric Space Conditioning
- SE Secondary Service Electric Space Conditioning Schools
- SL Secondary Service Large
- PH Process Heating
- PL Primary Service Large
- HL1 High Load Factor Primary Distribution Service
- HL2 High Load Factor Sub-transmission
- HL3 High Load Factor Transmission

#### A. General Background

A typical electric utility rate design generally consists of either a two-part or three-part rate that contains these rate components:

- **Customer Charge** fixed fee paid each month for being connected to the system with the right to receive service;
- Energy Charge a fee that is based on the amount of metered energy (kWh) the customer consumes during a month;
- **Demand Charge** a fee related to the highest instantaneous demand (KW) the customer places on the system during a month, or a period of months.

These three charges reflect factors that determine the cost incurred by the utility to serve a particular customer. For example, regardless of the amount of energy or power the customer uses, the utility

#### DRAFT: January 16, 2014 FOR DISCUSSION PURPOSES ONLY

generally incurs customer-related costs for metering, service drops, line transformers, distribution lines, billing and customer service simply because the customer is attached to the system. In addition, the amount of fuel and variable generation costs incurred by the utility are a function of the amount of energy (kWh) the customer consumes. Finally, the amount and cost of capacity for generating plants, transmission and distribution lines, sub-stations, and transformers is related to the instantaneous demand (KW) that customers as a group require at any given point in time on the system as a whole, or on specific portions of the system.

It is also important to distinguish between variable costs such as fuel which change from year to year in proportion to the amount of energy the customer uses, and those costs such as installed equipment and salaries which are sunk, fixed, and generally unrelated to the amount of energy a customer consumes. While there are multiple goals of rate design, from the perspective of properly reflecting cost responsibility, and providing appropriate price signals, the ideal rate design is one that reflects the manner in which costs are incurred for the benefit of the customer. This requires recognizing the distinction between fixed and variable costs in the rate design.

Residential and small commercial customers usually pay a two-part rate consisting of a Customer Charge and an Energy Charge because most of these customers have been too small to justify installing more expensive meters that also measure the maximum instantaneous demand. Although the residential and small commercial Customer Charges recover some fixed costs, a large portion of fixed costs are recovered in the Energy Charge component of the rates.

Large commercial and industrial customers may pay Energy Charges designed to recover some small portion of fixed costs, but these larger customers (who have demand meters) generally have rates that are designed to collect most fixed costs in a Demand Charge component of the rates. Because the Demand Charge is based on the maximum instantaneous demand that a customer places on the system, it generally reflects the size and cost of capacity that the utility installs to serve each customer's demand. However, although the costs assigned to be collected in a Demand Charge are generally fixed, the revenue collected in a Demand Charge will vary if a customer's peak usage changes from one month, or one year to the next. Many utilities address the mismatch between fixed costs and variable revenue collection by using "demand ratchets" that bill the customer based on its highest demand recorded during a certain number of past months. These demand ratchets somewhat reduce the variability of revenue collection, and the variability of cost responsibility

#### DRAFT: January 16, 2014 FOR DISCUSSION PURPOSES ONLY

among the customers. However, while a ratchet might ensure the recovery of fixed, demand-related costs for one to two years, the costs of utility equipment that are to be recovered in a Demand Charge often are being depreciated and recovered over periods of 20 years or more. Thus, variations in large customers' demand can lead to margin instability issues that are similar to those experienced by recovering fixed costs in the Energy Charges of smaller customers.

#### B. Calculating the Effects of an SFV Rate Design

In order to determine the impacts of a change in rate design, it was necessary to calculate two sets of rates for each customer class that are each designed to recover the same revenue:

- (i) An SFV rate design that is designed to recover costs incurred during a recent test year; and,
- (ii) An Update of the current rate design that is designed to recover the same annual revenues from each class that are recovered in the SFV rate design.

By designing these two sets of rates to recover the same revenue requirement, we are able to isolate the effect of a rate design change from the effects of a general rate increase.

For each rate class, there were four primary sources of data used in this analysis:

- Costs allocated to the rate class in IPL's cost of service study for the test year ending March 31, 2012 to establish the class revenue requirement.
- Customer, Energy, and Demand costs that were functionalized, classified, and allocated to each rate class in the cost of service study which were used to calculate the components of an SFV rate design.
- Individual rate design components were calculated using billing demand data contained in the revenue proof for the test year ending March 31, 2012.
- Customer bills under the two alternative rate designs were calculated using customers' monthly billing data.

For rate classes with a large number of customers, the amount of data required to estimate revised bills and rate impacts for the entire population was too large to manage economically. Consequently, for these rate classes, the analysis is based on the billing data for the sample of customers that are used to develop the company's load research data.

#### II. Customer Impact Analyses

To summarize the impacts on different types of customers when the number of customers in a rate class is large, the analysis divides customers in a class into categories that have similar total usage and "load factors,"<sup>1</sup> and then calculates the average impact for customers in each category. In contrast, impacts on each individual customer are shown for rate classes with a relatively small number of customers.

#### A. Residential Customer Classes (RS, RC, RH)

The current rate design methodology recovers approximately 88 percent of the revenue requirement through the variable energy (kWh) charge; whereas an SFV rate design would recover approximately 41 percent of revenue in an energy charge. Given a lower portion of fixed costs being recovered through a variable charge, revenues and margins will not vary as much annually. The Appendix provides charts showing the variation in normalized total revenues over the 2008 to 2012 period for the three residential rate codes.

The SFV monthly customer charge for residential customers is calculated to be \$55.91. The result of moving to SFV rates is that lower-use customers will see an increase in costs and high-use customers a decrease. The break-even point for an average customer is at 1,200 kWh of monthly usage for rate code RS, 1,600 kWh for RC, and 1,800 for RH. Charts showing this impact are provided in the Appendix titled, "Average Monthly Bill Impact Since 2008."

Individual customers will experience different impacts from a change to SFV rate design depending on their total usage in a year, and the proportion of their usage that is concentrated in the first block or the second block of the Updated Current rate structure. For example, one could compare two customers who both use the same kWh in a year. If one customer uses the same amount of energy each month, it will have a relatively high proportion of its usage billed in the high-priced first block of the Energy Charge. In contrast, the other customer who uses very little energy for several months and then a large amount of energy in other months will have a higher proportion of its usage billed in the low-priced second block. For this reason, it is useful to examine the impacts on individual customers who use different amounts of energy in a year, and also distinguish between

<sup>&</sup>lt;sup>1</sup> The term "load factor" is used in this analysis refers to the average monthly kWh, divided by the total kWh during the highest month of usage. This is somewhat different from common usage which defines load factor as the average hourly usage during a time period, divided by the highest instantaneous demand during the time period.

#### DRAFT: January 16, 2014 FOR DISCUSSION PURPOSES ONLY

customers based on the stability of their usage during the year. The stability of usage is measured by a "Load Factor" calculation that divides average monthly usage by the usage during the highest month of the year. This classification of customers into a matrix that shows both usage and load factor is particularly useful for analyzing impacts within those customer classes with non-linear rate designs and populations so large that sample data were used in the analyses. Detailed tables for each of the residential rate classes are provided in the appendix, and Figure 1 below provides a summary table showing total customers, percentage of customers, and the weighted average annual bill change for five distinct bill impact ranges.<sup>2</sup> Following this summary table are three bar charts depicting this data.

	Average Annual Bill Change - Test Year Ending March 2012											
		Percentage Change in Average Annual Bill										
		Decrease of										
	Decrease btwn	(15)% to	Increase btwn	Increase btwn	Increase over							
	(50)% - (15)%	Increase of	15% - 50%	50% - 100%	100%	Tot	al					
RS Customer Count	45,853	102,613	44,406	25,620	32,205	25	50,697					
RS % of Customers	18.29%	40.93%	17.71%	10.22%	12.85%	10	00.00%					
RS Average Dollar Change	\$ (444)	\$ (44)	\$ 154	\$ 340	\$ 466	\$	95					
RC Customer Count	9,578	16,127	1,947	4,274	-	(T)	31,926					
RC % of Customers	30.00%	50.51%	6.10%	13.39%	0.00%	10	00.00%					
RC Average Dollar Change	\$ (399)	\$ (31)	\$ 190	\$ 354	\$ -	\$	23					
RH Customer Count	28,679	82,013	16,139	13,273	1,867	14	11,971					
RH % of Customers	20.20%	57.77%	11.37%	9.35%	1.32%	10	00.00%					
RH Average Dollar Change	\$ (471)	\$ (55)	\$ 235	\$ 356	\$ -	\$	13					

Figure 1 - Summary of Residential Average Annual Bill % Change

<sup>&</sup>lt;sup>2</sup> None of the residential customers are estimated to see a percentage decrease in their annual average bill greater than 50%.

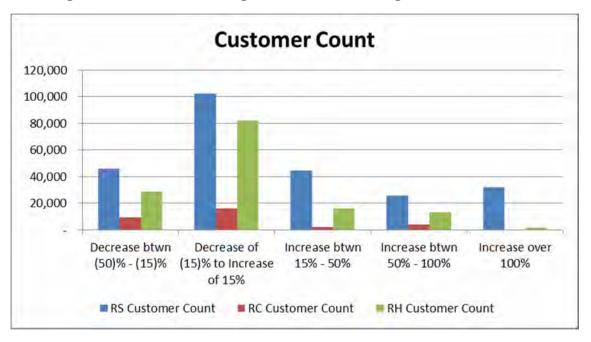


Figure 2 - Residential Average Annual Bill % Change – Customer Count

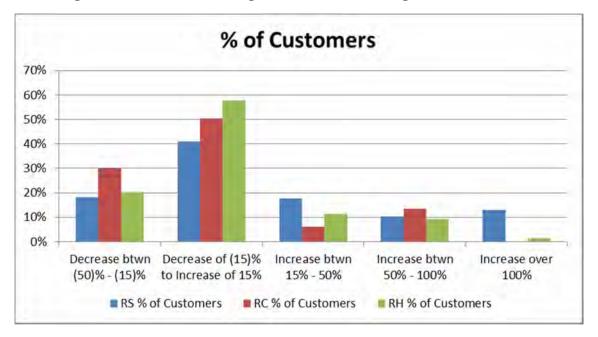


Figure 3 - Residential Average Annual Bill % Change - % of Customers

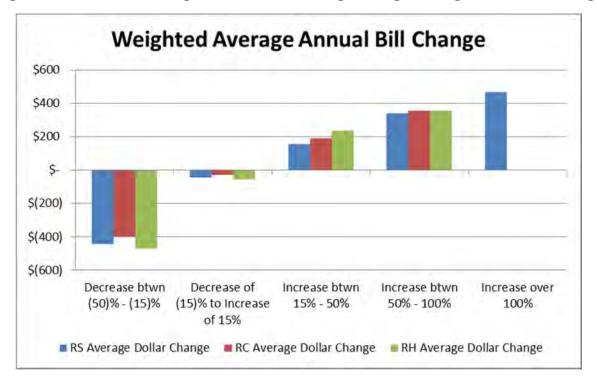


Figure 4 - Residential Average Annual Bill % Change - Weighted Avg. Annual Bill Change

#### B. Small Secondary Service Customer Classes (SS, SH, SE)

For Rate SS the current rate design methodology recovers approximately 94 percent of the revenue requirement through the Energy Charge which varies with kWh usage. In contrast, an SFV rate design would recover approximately 38 percent of the revenue requirement through the Energy Charge. The movement for SS customers is from 99 percent to 48 percent; and for SE customers is from nearly 100 percent to 48 percent. With a reduced portion of costs being recovered through a variable charge, revenues and margins will not vary as much annually.

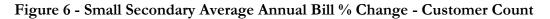
The SFV monthly customer charge is calculated to be \$143 for SS, \$454 for SH, and \$2,554 for SE. The result of moving to SFV rates is that lower-use customers will see an increase in their bills and high-use customers a decrease. The break-even point for an average customer is at 2,500 kWh of monthly usage for rate code SS and 12,000 kWh for SH customers. Charts showing these impacts are provided in the Appendix titled, "Average Monthly Bill Impact Since 2008." The SE rate code was analyzed for each of the 13 customers which is also summarized in the Appendix.

#### DRAFT: January 16, 2014 FOR DISCUSSION PURPOSES ONLY

Similar to the tables provided in the above residential section the below table provides a summary by total customers, percentage of customers, and the weighted average annual bill change for six distinct bill impact ranges. Following this summary table are three bar charts depicting this data.

Figure 5 -	Summarv	of Small	Secondary	Average A	Annual I	Bill % Change

	Average Annual Bill Change - Test Year Ending March 2012										
		Perce	entage Change i	n Average Annu	al Bill						
			Decrease of								
			(15)% to								
	Decrease btwn	Decrease btwn	Increase of	Increase btwn	Increase btwn	Increase over					
	(100)% - (50)%	(50)% - (15)%	15%	15% - 50%	50% - 100%	100%	Total				
SS Customer Count	91	11,641	5,865	2,933	2,933	23,462	46,925				
SS % of Customers	0.19%	24.81%	12.50%	6.25%	6.25%	50.00%	100.00%				
SS Average Dollar Change	(14,969)	\$ (3,416)	\$ 64	\$ 608	\$ 854	\$ 1,323	\$ (2,590)				
SH Customer Count	1	544	273	334	483	2,725	4,360				
SH % of Customers	0.02%	12.48%	6.26%	7.66%	11.08%	62.50%	100.00%				
SH Average Dollar Change	(345,314)	(23,023)	(1,344)	1,677	3,104	4,220	\$ (60,113)				
SE Customer Count	-	3	3	1	-	6	13				
SE % of Customers	0.00%	23.08%	23.08%	7.69%	0.00%	46.15%	100.00%				
SE Average Dollar Change	-	(80,452)	13,031	75,852	-	26,652	\$ 5,847				





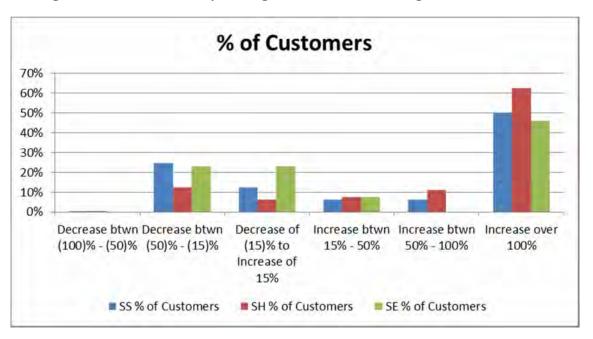
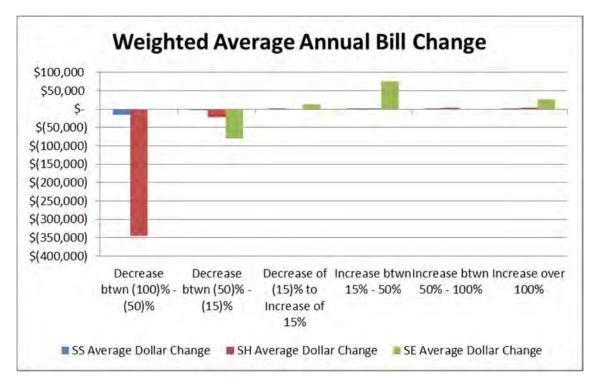


Figure 7 - Small Secondary Average Annual Bill % Change - % of Customers

Figure 8 - Small Secondary Average Annual Bill % Change – Annual Bill Change



#### C. Large Commercial and Industrial Customers (SL, PL, HL1/2/3)

Given that rate codes SL, PL, HL1, HL2, and HL3 are all demand-billed rates, movement to an SFV rate design did not have a material effect on individual customers, nor on revenue stability. The COS study implies that the current rate design is recovering some portion of demand-related costs in the customer component of the rates. As a result, a 3-part "SFV" rate design results in a *reduced* customer charge for all classes.

	Current	Updated	
	Rate	Rate	SFV Rate
Rate	Design	Design	Design
Secondary Service (Large) (Rate SL)	\$ 103.33	\$ 98.70	\$ 20.46
Primary Service Large (Rate PL)	\$ 310.67	\$ 289.65	\$ 21.04
High Load Factor Service - Primary (Rate HL1)	\$ 310.67	\$ 303.06	\$ 28.80
High Load Factor Service - Sub-Transmission (Rate HI	\$ 310.67	\$ 294.43	\$ 63.14
High Load Factor Service - Transmission (Rate HL3)	\$ 310.67	\$ 290.09	\$ 23.67

Figure 9 - Large Commercial and Industrial Customer Charges

The most important effect of the SFV, or COS-based, rate design for these larger rate classes would be a significant increase in the Demand Charges for all of these rate classes because the fixed costs to be recovered in the Energy Charge generally would be moved to the Demand, rather than the Customer, component of the rate design. The analysis indicates that an SFV rate design would have a minimal (<2%) impact on the total bill of any customers in the PL or HL1/2/3 rate classes.

The chart below shows the bill impacts for the SL customers and the fact that an SFV rate design would actually reduce the bills of a majority of customers. Among those that would experience a rate increase, only a very small percentage (27 of 4,744 customers) would experience a rate increase exceeding 10 percent and the greatest increase would be 15 percent. Overall, these customer impacts are modest and manageable.

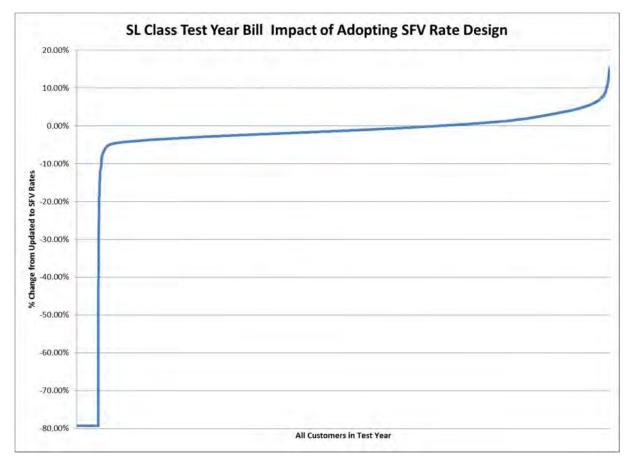


Figure 10 - SL Class Customer Rate Impacts of Changing to SFV Rate Design

#### D. Process Heating (PH)

Given that Rate PH does not have a demand component the current rate design recovers approximately 97 percent of the revenue requirement through the variable kWh charge; whereas an SFV rate design would recover approximately 48 percent. The result of such a change is that the customer charge would increase from \$307 under the updated rate design scenario to \$8,560 with the application of SFV rates. This change in the customer charge has a large impact on customers that use less than 2 million kWh during the test year increasing an individual customers' total bill from 30 percent to over 1,000 percent in some instances. Those customers that use more than 2.7 million kWh will see a decrease of 12 percent to 48 percent. The results by each customer account is presented in the Appendix.

#### III. Effects of SFV Rate Design on Margin Stability

By placing a significant portion of fixed cost recovery at risk in the variable Energy Charge component of rates, the current rate design can cause significant variations in the annual margin earned. In order to measure the impact of an SFV rate design on the margin stability of each rate class, the SFV Energy Charge (with no fixed costs) is subtracted from the Energy Charge(s) in the Updated existing rate structure. The result is the amount of "fixed cost loading" per kWh in the Updated existing rate design. The fixed cost loading is then multiplied times the monthly kWh actually consumed by the rate class in each of the five calendar years, 2008-2012.<sup>3</sup> This calculation indicates the amount of fixed cost recovery in the Energy Charge that would have occurred each year depending on whether SFV or the Updated current rate design were in effect. By subtracting the amount of fixed-cost recovery intended in the test year rate design, the amount of fixed-cost over/(under) collection is then calculated. Finally, this amount is adjusted for the marginal income tax effects to determine the total dollar amount that the after-tax return on equity would have changed as a result of a rate design change.

To place the fluctuating margins in perspective for each rate class, the change in margins is compared to the equity return allocated to the rate class in the COS study. The percentage increase or decrease in equity return for each year associated with the existing rate design, and the range of returns between the highest to lowest of the five years is shown in the following table:

		% ROE Over/(Under)						
	2008	2009	2010	2011	2012		Range	
Residential (RS, RC, RH)	5.21%	-23.67%	40.52%	25.11%	-14.87%	\$	17,154,303	
Secondary Service (SS)	8.14%	-8.84%	5.52%	4.02%	-4.75%	\$	2,934,118	
Secondary Service (SE)	161.18%	36.65%	38.33%	41.08%	-48.19%	s	191,604	
Secondary Service (SH)	139.51%	44.72%	107.46%	79.48%	-18.90%	Ş	3,538,876	
Process Heating (PH)	127.02%	110.03%	-58.69%	-32.27%	-33.78%	\$	697,464	

Figure 11 - Change in Equity Return and Range

This table indicates that the Updated current rate design can lead to very large swings in margins as a result of changes in usage from one year to the next. For residential service, the Updated current rate design would allow a swing of as much as \$17 million in the return on equity attributable to residential customers. Other classes experience a smaller range of dollar swings in return on equity,

<sup>&</sup>lt;sup>3</sup> The declining-block rate structure is reflected in the monthly margin calculations for classes that have decliningblock rates.

but the relative size of the swings in percentage terms is quite large for all rate classes, except the SS rate class. An SFV rate design would eliminate these rate-design related swings in margins and result in constant margins if all variables except usage fluctuations were to be held constant.

#### IV. Economic and Policy Considerations of SFV Rate Design

The most widely accepted principles for evaluating the reasonableness of public utility rates were enunciated by Professor James C. Bonbright: (*Principles of Public Utility Rates*, 1961, page 291):

- 1. The related, "practical" attributes of simplicity, understandability, public acceptability, and feasibility of application.
- 2. Freedom from controversies as to proper interpretations.
- 3. Effectiveness in yielding total revenue requirements under the fair-return standard.
- 4. Revenue stability from year to year.
- 5. Stability of the rates themselves, with a minimum of unexpected changes seriously adverse to existing customers.
- 6. Fairness of the specific rates in the apportionment of total costs of service among the different consumers.
- 7. Avoidance of "undue discrimination" in rate relationships.
- 8. Efficiency of the rate classes and rate blocks in discouraging wasteful use of service while promoting all justified types and amount of use.<sup>4</sup>

The evaluation in this report will focus on the extent to which an SFV rate design satisfies these criteria, especially items (3), (6), and (8) above, which are the three criteria that Bonbright designated as being primary for evaluating a rate structure.

<sup>&</sup>lt;sup>4</sup> Bonbright, James C., *Principles of Public Utility Rates*, 1961, page 291.

#### A. Residential and Small Secondary Service

#### 1. Effectiveness in Recovering Costs

Because it recovers nearly all fixed costs in fixed monthly Customer Charges, an SFV rate design generally is more effective in recovering the revenue requirement on which rates are based. The current rate structure creates uncertainty as to whether IPL will recover its costs in any given year; especially for smaller customers with a large proportion of fixed costs recovered in the Energy Charge. This uncertainty, or instability, of cost recovery is mitigated somewhat by several mechanisms within the rate structure.

First, the Energy Charge for the residential (RS/RC/RH) customers is a declining-block rate that recovers more fixed costs per unit for the first 500 kWh each month, and fewer fixed costs if the customer uses more than 500 kWh. For customers with electric space or water heating, there is also a third block which includes little or no fixed costs for usage over 1,000 kWh in a month. This declining-block rate structure means that revenue and margins collected from customers whose total usage falls within the first or second block will be extremely unstable as usage changes. Approximately 26 percent of residential bills had their marginal usage in the first block, 53 percent in the second block, and 21 percent in the third block that is available only to RC and RH customers.

A similar declining-block Energy Charge is also used in the small secondary (SS) customer rate design where there is a higher charge for each of the first 5,000 kWh than for additional energy use beyond 5,000 kWh. For the SS class, 87 percent of the test year bills had their marginal usage in the first block, while only 13 percent had marginal usage in the tail block.

Although it is not clear that a declining-block rate design provides more revenue stability than a flat Energy Charge that is designed to recover the same amount of fixed costs, the declining-block rate design generally collects a greater proportion of the fixed costs from small customers than would be collected using a flat Energy Charge to collect the same fixed costs. However, an SFV rate design will provide more revenue stability than any rate design that attempts to recover a large portion of fixed costs in an Energy Charge.

#### DRAFT: January 16, 2014 FOR DISCUSSION PURPOSES ONLY

Second, there are a number of rate riders that allow IPL to adjust its rates regularly in response to changes in costs.<sup>5</sup> These rate riders reduce some of the regulatory lag risks associated with changing costs, but because they recover the costs through the energy charge these riders may exacerbate the variability created by recovering fixed costs in the Energy Charge component of rates.

For example, the following riders allow adjustments to the Energy Charge in order to reflect changes in fixed costs:

- No. 13 Air Conditioning Load Management
- No. 20 Environmental Compliance Cost Recovery
- No. 22 Core and Core Plus Demand Side Management

In the next rate case, the fixed costs associated with these riders will be rolled into the rate design and collected on a basis determined by the COS study and whatever new rate design is adopted at that time.

Third, the Customer Charges for the RS and SS rate classes are higher for large customers than for small customers. For example, RS customers who use 325 kWh or less in a month pay \$6.70 for the month, while RS customers who use more than 325 kWh pay an \$11.00 Customer Charge. Similarly, SS customers pay \$11.38 if their usage is less than or equal to 5,000 kWh, but they pay \$32.14 if usage exceeds 5,000 kWh. These stepped Customer Charges offset the effects of a declining block Energy Charge very slightly by levying a higher Customer Charge for higher usage customers who generally have some usage in lower-cost energy blocks. To the extent that larger customers within a rate class require more expensive equipment with more capacity than smaller customers, this increasing step Customer Charge might be justified on a cost basis.

#### 2. Fairness in Apportioning Costs Among Customers

The economic measure of fairness is the extent to which a rate structure reflects the costs of providing service to particular customers. An SFV rate design generally would apportion costs among customers in the residential and small secondary rate classes more fairly than the existing rate structure by more accurately reflecting the way in which costs are incurred to serve these customers.

<sup>&</sup>lt;sup>5</sup> IPL's riders require IPL to support the costs in each filing and are subject to review by other parties, including the OUCC, and a public hearing prior to the IURC's decision as to whether our rates may be adjusted.

#### 3. **Promotion of Efficient Usage**

One of the advantages of an SFV rate design is that it promotes efficient usage of electricity by more closely equating the marginal price (i.e., Energy Charge) with the marginal cost of providing service. In contrast, a rate design that recovers a large portion of fixed costs in the Energy Charge will tend to discourage efficient and economical usage of electricity by setting a marginal price significantly higher than the marginal cost of service.

As noted above, a significant number of RS and SS bills have their marginal usage in the first block and therefore pose a very high price for marginal consumption that has a far lower marginal cost of production. Consequently, an SFV rate design would be superior to the current rate design in terms of promoting efficient usage.

#### B. Large Secondary and Higher Voltage Service

#### 1. Effectiveness in Recovering Costs

For customer classes with a Demand Charge, an SFV rate design would have a small impact on cost recovery and margin stability from one year to the next because only a small portion of fixed costs are at risk in the Energy Charge. Instead, these classes generally recover most of the fixed costs in the Demand Charge. Because IPL applies a 12-month demand ratchet in calculating the monthly billing demand there is an element of margin stability in the demand charges. Although this report did not undertake a study of the effect of demand ratchets, if IPL is contemplating rate design changes it should consider the possibility of increasing the number of months in the demand ratchet (e.g., 24 months) in order to improve revenue stability and effectiveness in recovering costs from the large customer classes.

#### 2. Fairness in Apportioning Costs Among Customers

Although an SFV rate design generally improves the fairness in apportioning costs among customers, this study indicates that an SFV rate design would have an insignificant impact on the annual bills of those classes that have demand charges. However, the Process Heating (PH) class does not have demand charges and an SFV rate design would generally cause an enormous shift in costs among PH customers. The size of this shift suggests that the current PH rate design may not adequately reflect the costs of serving individual customers within this class, and that a movement

toward an SFV rate design could improve the fairness in apportioning costs among the PH customers.

#### 3. **Promotion of Efficient Usage**

Because the fixed cost loading on the Energy Charge generally is small for customers with demand charges, an SFV rate design would have only a small impact on promoting more efficient usage. However, price signals for efficient usage by the PH class might be substantially improved by a change to an SFV rate design.

#### V. CONCLUSION

The table below summarizes the results of the analysis of the impacts of changing an Updated version of the current rate design to an SFV rate design. The two most important impacts for consideration are the number, or proportion of customers in a rate class who experience large rate increases as a result of the change in rate design, and the effect on margin stability. The effect on margin stability is measured by the range of ROE that each class would produce if its energy usage varied by the same amounts that were experienced in the five-year period from 2008-2012. While the Updated version of the current rate design would produce the ROE range shown below, an SFV rate design should produce zero (0) variation in ROE as a consequence of variations in energy usage.

	% of Cus	% of Customers With Increase				
	> 10%	> 20%	> 30%	ROE Range		
RS	44.17%	34.06%	23.07%			
RH	25.40%	20.72%	20.72%			
RC	23.99%	19.49%	13.39%			
RS/RH/RC				\$ 17,154,303		
SS	68.75%	62.50%	62.50%	\$ 2,934,118		
SE	53.85%	53.85%	53.85%	\$ 191,604		
SH	81.24%	76.81%	74.98%	\$ 3,538,876		
SL	0.57%	0.00%	0.00%	\$ 554,605		
PL	0.00%	0.00%	0.00%	\$ 30,907		
PH	71.43%	68.57%	65.71%	\$ 697,464		
HL1	0.00%	0.00%	0.00%	\$ 133,799		
HL2	0.00%	0.00%	0.00%	\$ 26,105		
HL3	0.00%	0.00%	0.00%	\$ 129,476		

Figure 12 - Customer Increases and ROE Range

The greatest improvement in margin stability would come from converting the **residential classes** to an SFV rate design. If the Updated current rate design had been in effect during the past five years, the return on equity would have varied within a range of \$19 million, while the SFV rate design would have eliminated this margin variation. However, a significant percentage of residential customers would experience annual bill increases greater than 10 percent, and many residential customers would experience bill increases in excess of 30 percent.

Moving the **small secondary (SS)** customers to an SFV rate design also would improve margin stability significantly. As shown above, the Updated current rate design would have produced an ROE range of \$3.3 million from the SS rate class. However, more than 60 percent of the customers in the SS rate class would see their bills increase by more than 60 percent.

An SFV rate design also would improve margin stability significantly for the **SH rate class**, for which the ROE range would have been \$4.0 million with the Updated current rate design. Approximately 81.24 percent of the SH customers would see a double-digit rate increase as result of adopting an SFV rate design. Because the SH rate schedule applies to electric space conditioning, which tends to be used most during system peaks when marginal energy costs tend to be highest, it is not clear that price signals for efficient usage would be improved by unloading all of the fixed

#### DRAFT: January 16, 2014 FOR DISCUSSION PURPOSES ONLY

costs from the SH Energy Charge. Consequently, load research data for the SH class should be compared with IPL's hourly energy costs before making a final decision to move SH customers fully, or partially, to an SFV rate design.

The ROE range for large **secondary service (SL)** customers would have been approximately \$600,000. Consequently, there would be a small improvement in margin stability associated with moving these customers to an SFV rate design, and the adverse impacts on individual customers would be negligible.

The **Process Heating (PH)** class, with an ROE range of \$690,000, also would provide a small improvement in margin stability by moving to an SFV rate design. However, a majority of customers would experience very large bill increases as a result of such a change. Nevertheless, an SFV rate design should provide improved price signals that promote efficient usage for this rate class.

For the other large customer rate classes (**SE, PL, HL1/2/3**) there would be little improvement in margin stability associated with adopting an SFV rate design. A majority of SE customers would experience large rate increases so that, on balance, the impacts of an SFV rate design may outweigh the advantages for the SE class. For PL and the HL1/2/3 rate classes, there would be very little advantage in adopting an SFV rate design and very little impact on the bills of individual customers. However, IPL may want to consider lengthening the demand ratchet period for these classes.

IG DR 5-1, Supp Attach 1 IPL - Cause No. 44576 Page 22 of 79



### APPENDIX

# AN ANALYSIS OF THE IMPACTS OF ADOPTING A STRAIGHT-FIXED VARIABLE RATE DESIGN:

### A REPORT PREPARED FOR INDIANAPOLIS POWER & LIGHT COMPANY BY CONCENTRIC ENERGY ADVISORS

**DRAFT** CONFIDENTIAL

"Farmania: Energy Advance" and the logic methodically regioned and method Conceptor. Energy Advance". Any manufactured root probabilities:

# Summary of Impacts to Residential Classes

As described in the report Concentric examined the impacts on individual customers who use approximately the same amount of energy in a year, and also look at the stability of their usage during the year (i.e., "Load Factor" - a calculation that divides average monthly usage by the usage during the highest month of the year). The average annual bill impacts for customers in different usage/load factor categories during the test year ending March 31, 2012 is provided in each of the below sections; RC, RS, and RH. These tables are color coded based on a gradient as detailed below, where the mid-point represents a small change in the average annual bill during the test year.

Highest Decrease	► Mid-Point ◄	→ Highest Increase

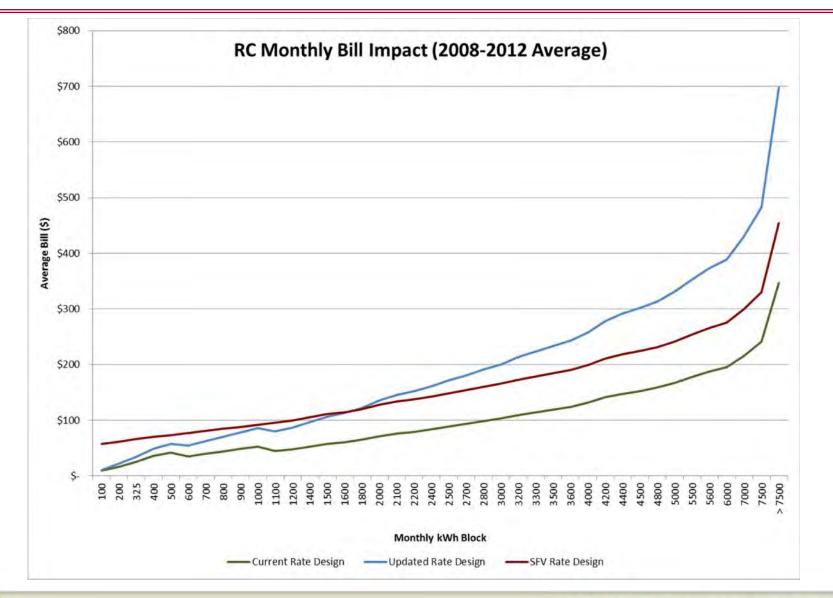
Average Annual Bill Change - Test Year Ending March 2012

A summary table of all rate classes is provided below, which is also replicated in the report.

	Avenuge Ai	Average Annual Bin change Test real Enang March 2012							
		Percentage Change in Average Annual Bill							
		Decrease of							
	Decrease btwn	(15)% to	Increase btwn	Increase btwn	Increase over				
	(50)% - (15)%	Increase of	15% - 50%	50% - 100%	100%	Total			
RS Customer Count	45,853	102,613	44,406	25,620	32,205	250,697			
RS % of Customers	18.29%	40.93%	17.71%	10.22%	12.85%	100.00%			
RS Average Dollar Change	\$ (444)	\$ (44)	\$ 154	\$ 340	\$ 466	\$ 95			
RC Customer Count	9,578	16,127	1,947	4,274	-	31,926			
RC % of Customers	30.00%	50.51%	6.10%	13.39%	0.00%	100.00%			
RC Average Dollar Change	\$ (399)	\$ (31)	\$ 190	\$ 354	\$-	\$ 23			
RH Customer Count	28,679	82,013	16,139	13,273	1,867	141,971			
RH % of Customers	20.20%	57.77%	11.37%	9.35%	1.32%	100.00%			
RH Average Dollar Change	\$ (471)	\$ (55)	\$ 235	\$ 356	\$ -	\$ 13			

Residential Service (Rate RS) - Codes RS, RC, RH	Current Rate Design	Updated Rate Design	SFV Rate Design
Customer Charge 1 Block	-	-	-
Customer Charge 2 Block	325	325	325
Customer Charge 1 (0-325 kWh)	6.70	7.30	55.91
Customer Charge 2 (Over 325 kWh)	11.00	11.99	55.91
Energy Block 1	-	-	-
Energy Block 2	500	500	500
Energy Block 3	1,000	1,000	1,000
Block 1 (1st 500 kWh)	0.0670	0.1002	0.0378
Block 2 (Over 500 kWh)	0.0440	0.0772	0.0378
Block 3 (Over 1,000 kWh w/El. Htg. and/or Wtr. Htg.)	0.0318	0.0650	0.0378





# Residential Customers (RC): Bill Impact

		Updated Rate	Design - Averag	ge Annual Bi	ill - TY Endin	g March 201	.2	
				Load Factor				
		Range	0%-40%	40%-46%	46%-54%	54%-61%	>61%	Total
	Range	Bin	0%	40%	46%	54%	61%	
ە	0-7,107	-	429	700	534	421	708	558
sag	7,107-10,803	7,107	908	951	973	932	948	942
۲	10,803-15,440	10,803	1,228	1,286	1,254	1,182	1,336	1,257
kWh Usage	15,440-21,089	15,440	1,547	1,528	1,597	1,606	1,618	1,579
	>21,089	21,089	-	2,488	2,503	2,204	2,213	1,882
	Total		822	1,391	1,372	1,269	1,364	1,244
		SFV Rate De	sign - Average	Annual Bill	- TY Ending I	March 2012		
				L	oad Factor			
		Range	0%-40%	40%-46%	46%-54%	54%-61%	>61%	Total
	Range	Bin	0%	40%	46%	54%	61%	
പ	0-7,107	-	803	897	834	788	891	843
sag	7,107-10,803	7,107	1,005	1,013	1,019	997	998	1,006
۲	10,803-15,440	10,803	1,166	1,185	1,161	1,127	1,202	1,168
kWh Usage	15,440-21,089	15,440	1,326	1,317	1,352	1,360	1,365	1,344
	>21,089	21,089	-	1,869	1,877	1,703	1,708	1,431
	Total		860	1,256	1,248	1,195	1,233	1,158





# Residential Customers (RC): Bill Impact

	Difference btwn SFV and Updated Rate Design - Average Annual Bill - TY Ending March 2012									
				Load Factor						
		Range	0%-40%	40%-46%	46%-54%	54%-61%	>61%	Total		
	Range	Bin	0%	40%	46%	54%	61%			
a	0-7,107	-	374	197	300	367	184	284		
sag	7,107-10,803	7,107	97	62	47	65	50	64		
n n	10,803-15,440	10,803	(62)	(101)	(93)	(55)	(134)	(89)		
kWh Usage	15,440-21,089	15,440	(221)	(212)	(246)	(246)	(253)	(235)		
	>21,089	21,089	-	(620)	(626)	(501)	(505)	(450)		
	Total		38	(135)	(124)	(74)	(132)	(85)		
	% Difference	btwn SFV and	Updated Rate D	esign - Ave	rage Annual	Bill - TY End	ing March 2	012		
				L	oad Factor					
		Range	0%-40%	40%-46%	46%-54%	54%-61%	>61%	Total		
	Range	Bin	0%	40%	46%	54%	61%			
ە	0-7,107	-	87%	28%	56%	87%	26%	51%		
sag	7,107-10,803	7,107	11%	6%	5%	7%	5%	7%		
n n	10,803-15,440	10,803	-5%	-8%	-7%	-5%	-10%	-7%		
kWh Usage	15,440-21,089	15,440	-14%	-14%	-15%	-15%	-16%	-15%		
	>21,089	21,089	0%	-25%	-25%	-23%	-23%	-24%		
	Total		5%	-10%	-9%	-6%	-10%	-7%		



# Residential Customers (RC): All Customer Bins

	Population kWh Sum - TY Ending March 2012												
					Load Factor								
		Range	0%-40%	40%-46%	46%-54%	54%-61%	>61%	Total					
	Range	Bin	0%	40%	46%	54%	61%						
a)	0-7,107	-	8,796,029	5,015,106	5,627,634	3,627,414	4,332,973	27,399,156					
Usage	7,107-10,803	7,107	12,675,945	12,395,236	17,925,053	10,586,102	10,350,255	63,932,591					
) ñ	10,803-15,440	10,803	11,254,595	18,449,757	30,953,877	20,358,947	19,671,335	100,688,511					
۲N k	15,440-21,089	15,440	6,705,343	13,205,407	31,004,510	25,871,941	28,104,968	104,892,169					
_ <b>X</b>	>21,089	21,089	3,671,255	11,523,624	35,026,911	38,440,769	54,166,435	142,828,994					
	Total		43,103,167	60,589,130	120,537,985	98,885,173	116,625,966	439,741,421					

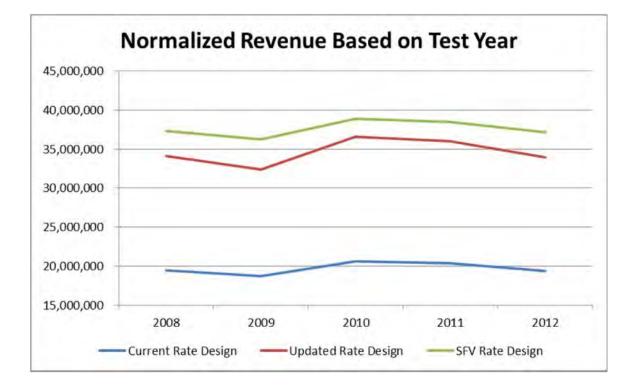
			Populati	ion Customer Cou	nt - TY Ending Mare	ch 2012		
					Load Factor			
		Range	0%-40%	40%-46%	46%-54%	54%-61%	>61%	Total
	Range	Bin	0%	40%	46%	54%	61%	
e	0-7,107	-	2,456	977	1,097	721	970	6,221
sag	7,107-10,803	7,107	1,437	1,389	1,985	1,165	1,148	7,124
	10,803-15,440	10,803	882	1,426	2,372	1,558	1,503	7,741
Ŵ	15,440-21,089	15,440	379	745	1,733	1,438	1,557	5,852
<b>–</b>	>21,089	21,089	138	430	1,259	1,348	1,813	4,988
	Total		5,292	4,967	8,446	6,230	6,991	31,926

# Residential Customers (RC): All Customer Bins

	Population kWh Sum - TY Ending March 2012												
					Load Factor								
		Range	0%-40%	40%-46%	46%-54%	54%-61%	>61%	Total					
	Range	Bin	0%	40%	46%	54%	61%						
a)	0-7,107	-	2.00%	1.14%	1.28%	0.82%	0.99%	6.23%					
Usage	7,107-10,803	7,107	2.88%	2.82%	4.08%	2.41%	2.35%	14.54%					
	10,803-15,440	10,803	2.56%	4.20%	7.04%	4.63%	4.47%	22.90%					
kWh	15,440-21,089	15,440	1.52%	3.00%	7.05%	5.88%	6.39%	23.85%					
×	>21,089	21,089	0.83%	2.62%	7.97%	8.74%	12.32%	32.48%					
	Total		9.80%	13.78%	27.41%	22.49%	26.52%	100.00%					

			Populati	ion Customer Cou	nt - TY Ending Mare	ch 2012		
					Load Factor			
		Range	0%-40%	40%-46%	46%-54%	54%-61%	>61%	Total
	Range	Bin	0%	40%	46%	54%	61%	
a	0-7,107	-	7.69%	3.06%	3.44%	2.26%	3.04%	19.49%
sage	7,107-10,803	7,107	4.50%	4.35%	6.22%	3.65%	3.60%	22.31%
) Ď	10,803-15,440	10,803	2.76%	4.47%	7.43%	4.88%	4.71%	24.25%
۲ ۸	15,440-21,089	15,440	1.19%	2.33%	5.43%	4.50%	4.88%	18.33%
*	>21,089	21,089	0.43%	1.35%	3.94%	4.22%	5.68%	15.62%
	Total		16.58%	15.56%	26.45%	19.51%	21.90%	100.00%

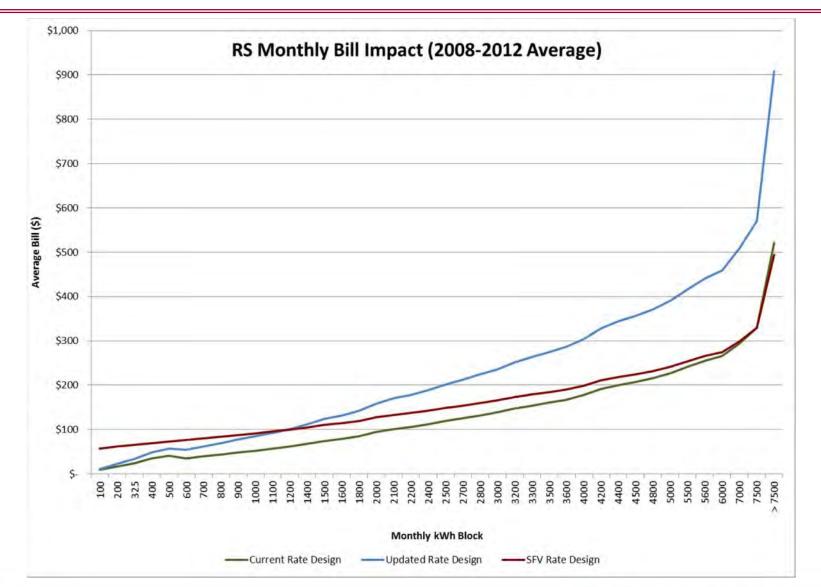
# Residential Customers (RC): Normalized Revenue





CONCENTRIC ENERGY ADVISORS

Residential Service (Rate RS) - Codes RS, RC, RH	Current Rate Design	Updated Rate Design	SFV Rate Design
Customer Charge 1 Block	-	-	-
Customer Charge 2 Block	325	325	325
Customer Charge 1 (0-325 kWh)	6.70	7.30	55.91
Customer Charge 2 (Over 325 kWh)	11.00	11.99	55.91
Energy Block 1	-	-	-
Energy Block 2	500	500	500
Energy Block 3	1,000	1,000	1,000
Block 1 (1st 500 kWh)	0.0670	0.1002	0.0378
Block 2 (Over 500 kWh)	0.0440	0.0772	0.0378
Block 3 (Over 1,000 kWh w/El. Htg. and/or Wtr. Htg.)	0.0318	0.0650	0.0378



# Residential Customers (RS): Block Analysis



# Residential Customers (RS): Bill Impact

		Updated Rate	Design - Avera	ge Annual Bi	ill - TY Endin	g March 201	2	
				L	oad Factor			
		Range	0%-38%	38%-44%	44%-49%	49%-54%	>54%	Total
	Range	Bin	0%	38%	44%	49%	54%	
a)	0-5,494	-	254	477	443	372	482	406
sagi	5,494-8,411	5,494	752	768	827	820	869	807
Ď	8,411-10,227	8,411	1,012	1,031	996	1,030	1,005	1,015
kWh Usage	10,227-15,420	10,227	1,030	1,287	1,220	1,310	1,245	1,218
<b>—</b>	>15,420	15,420	1,691	2,086	1,537	1,874	2,082	1,854
	Total		948	1,130	1,005	1,081	1,137	1,060
		SFV Rate De	sign - Average	Annual Bill	TY Ending	March 2012		
				L	oad Factor			
		Range	0%-38%	38%-44%	44%-49%	49%-54%	>54%	Total
	Range	Bin	0%	38%	44%	49%	54%	
a	0-5,494	-	733	817	800	777	812	788
sag	5,494-8,411	5,494	934	927	953	946	964	945
kWh Usage	8,411-10,227	8,411	1,032	1,041	1,025	1,040	1,028	1,033
ĺ.≫	10,227-15,420	10,227	1,064	1,163	1,131	1,175	1,144	1,135
	>15,420	15,420	1,361	1,554	1,293	1,450	1,552	1,442
	Total		1,025	1,100	1,040	1,078	1,100	1,069



# Residential Customers (RS): Bill Impact

	Difference b	twn SFV and U	pdated Rate De	esign - Avera	age Annual E	Bill - TY Endi	ng March 20	12
				L	oad Factor			
		Range	0%-38%	38%-44%	44%-49%	49%-54%	>54%	Total
	Range	Bin	0%	38%	44%	49%	54%	
o م	0-5,494	-	480	340	357	404	330	382
sage	5,494-8,411	5,494	181	160	126	126	95	138
) N L	8,411-10,227	8,411	20	10	29	10	23	18
kWh Usage	10,227-15,420	10,227	34	(124)	(90)	(135)	(100)	(83)
-	>15,420	15,420	(331)	(532)	(244)	(424)	(530)	(412)
	Total		77	(29)	36	(4)	(36)	9
	% Difference	btwn SFV and	Updated Rate D	Design - Ave	rage Annual	Bill - TY End	ing March 20	)12
				L	oad Factor			
		Range	0%-38%	38%-44%	44%-49%	49%-54%	>54%	Total
	Range	Bin	0%	38%	44%	49%	54%	
e	0-5,494	-	189%	71%	81%	109%	69%	94%
sag	5,494-8,411	5,494	24%	21%	15%	15%	11%	17%
n u	8,411-10,227	8,411	2%	1%	3%	1%	2%	2%
kWh Usage	10,227-15,420	10,227	3%	-10%	-7%	-10%	-8%	-7%
	>15,420	15,420	-20%	-26%	-16%	-23%	-25%	-22%
	Total		8%	-3%	4%	0%	-3%	1%



# Residential Customers (RS): All Customer Bins

	Population kWh Sum - TY Ending March 2012											
					Load Factor							
		Range	0%-38%	38%-44%	44%-49%	49%-54%	>54%	Total				
	Range	Bin	0%	38%	44%	49%	54%					
e	0-5,494	-	72,778,181	36,155,950	24,244,291	21,308,470	32,547,734	187,034,626				
Usage	5,494-8,411	5,494	100,916,136	89,635,002	63,912,751	54,362,446	59,385,006	368,211,341				
) ñ	8,411-10,227	8,411	59,379,315	70,984,466	56,530,127	51,200,899	53,442,739	291,537,546				
kw ا	10,227-15,420	10,227	100,234,575	176,323,355	163,020,761	161,841,083	185,112,531	786,532,305				
×	>15,420	15,420	50,591,032	141,325,785	168,195,560	230,475,957	406,715,123	997,303,457				
	Total		383,899,239	514,424,558	475,903,490	519,188,855	737,203,133	2,630,619,275				

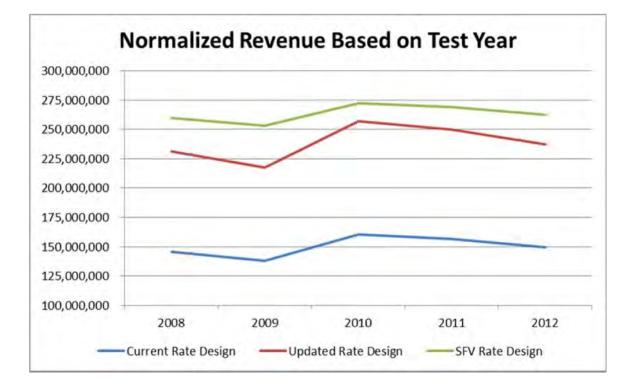
			Populat	ion Customer Cour	nt - TY Ending Marc	h 2012		
					Load Factor			
		Range	0%-38%	38%-44%	44%-49%	49%-54%	>54%	Total
	Range	Bin	0%	38%	44%	49%	54%	
e	0-5,494	-	26,453	9,494	6,359	5,752	9,767	57,825
	5,494-8,411	5,494	14,714	12,844	9,119	7,729	8,492	52,898
	8,411-10,227	8,411	6,409	7,635	6,073	5,490	5,729	31,336
۲ ۸	10,227-15,420	10,227	8,160	14,187	13,005	12,832	14,601	62,785
*	>15,420	15,420	2,594	7,019	8,121	10,663	17,456	45,853
	Total		58,330	51,179	42,677	42,466	56,045	250,697

# Residential Customers (RS): All Customer Bins

	Population kWh Sum - TY Ending March 2012												
					Load Factor								
		Range	0%-38%	38%-44%	44%-49%	49%-54%	>54%	Total					
	Range	Bin	0%	38%	44%	49%	54%						
a)	0-5,494	-	2.77%	1.37%	0.92%	0.81%	1.24%	7.11%					
Usage	5,494-8,411	5,494	3.84%	3.41%	2.43%	2.07%	2.26%	14.00%					
	8,411-10,227	8,411	2.26%	2.70%	2.15%	1.95%	2.03%	11.08%					
kWh	10,227-15,420	10,227	3.81%	6.70%	6.20%	6.15%	7.04%	29.90%					
_ <b>X</b>	>15,420	15,420	1.92%	5.37%	6.39%	8.76%	15.46%	37.91%					
	Total		14.59%	19.56%	18.09%	19.74%	28.02%	100.00%					

			Populat	ion Customer Cou	nt - TY Ending Marc	ch 2012		
					Load Factor			
		Range	0%-38%	38%-44%	44%-49%	49%-54%	>54%	Total
	Range	Bin	0%	38%	44%	49%	54%	
٩	0-5,494	-	10.55%	3.79%	2.54%	2.29%	3.90%	23.07%
	5,494-8,411	5,494	5.87%	5.12%	3.64%	3.08%	3.39%	21.10%
	8,411-10,227	8,411	2.56%	3.05%	2.42%	2.19%	2.29%	12.50%
κ. Μ	10,227-15,420	10,227	3.25%	5.66%	5.19%	5.12%	5.82%	25.04%
*	>15,420	15,420	1.03%	2.80%	3.24%	4.25%	6.96%	18.29%
	Total		23.27%	20.41%	17.02%	16.94%	22.36%	100.00%

#### Residential Customers (RS): Normalized Revenue

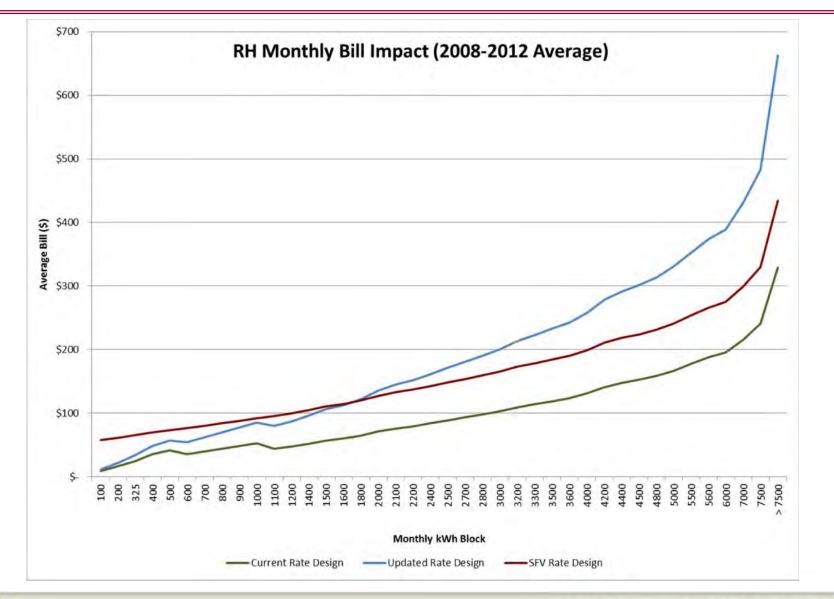




Residential Service (Rate RS) - Codes RS, RC, RH	Current Rate Design	Updated Rate Design	SFV Rate Design
Customer Charge 1 Block			
Customer Charge 2 Block	325	325	325
Customer Charge 1 (0-325 kWh)	6.70	7.30	55.91
Customer Charge 2 (Over 325 kWh)	11.00	11.99	55.91
Energy Block 1	-	-	
Energy Block 2	500	500	500
Energy Block 3	1,000	1,000	1,000
Block 1 (1st 500 kWh)	0.0670	0.1002	0.0378
Block 2 (Over 500 kWh)	0.0440	0.0772	0.0378
Block 3 (Over 1,000 kWh w/El. Htg. and/or Wtr. Htg	.) 0.0318	0.0650	0.0378



#### Residential Customers (RH): Block Analysis





17

#### Residential Customers (RH): Bill Impact

		Updated Rate	Design - Averag	ge Annual Bi	ill - TY Endin	g March 201	2	
				L	oad Factor			
		Range	0%-48%	48%-56%	56%-62%	62%-68%	>68%	Total
	Range	Bin	0%	48%	56%	62%	68%	
a	0-7,178	-	457	656	577	660	654	601
sagi	7,178-10,718	7,178	856	943	944	968	1,024	947
Ű	10,718-15,137	10,718	1,201	1,118	1,274	1,248	1,288	1,226
kWh Usage	15,137-19,285	15,137	1,271	1,573	1,496	1,507	1,547	1,479
<b>_</b>	>19,285	19,285	-	1,973	2,189	2,089	2,228	1,696
	Total		757	1,253	1,296	1,295	1,348	1,190
		SFV Rate De	esign - Average	Annual Bill	- TY Ending I	March 2012		
				L	oad Factor			
		Range	0%-48%	48%-56%	56%-62%	62%-68%	>68%	Total
	Range	Bin	0%	48%	56%	62%	68%	
e	0-7,178	-	813	883	847	881	872	859
sag	7,178-10,718	7,178	978	1,010	1,006	1,012	1,036	1,009
Ĵ	10,718-15,137	10,718	1,144	1,098	1,174	1,157	1,177	1,150
kWh Usage	15,137-19,285	15,137	1,254	1,342	1,301	1,303	1,327	1,305
<b></b>	>19,285	19,285	-	1,570	1,697	1,636	1,717	1,324
	Total		838	1,181	1,205	1,198	1,226	1,129





#### Residential Customers (RH): Bill Impact

	Difference btwn SFV and Updated Rate Design - Average Annual Bill - TY Ending March 2012										
				L	oad Factor						
		Range	0%-48%	48%-56%	56%-62%	62%-68%	>68%	Total			
	Range	Bin	0%	48%	56%	62%	68%				
a	0-7,178	-	356	227	269	220	218	258			
sag	7,178-10,718	7,178	121	68	62	44	12	61			
) Ú	10,718-15,137	10,718	(57)	(20)	(100)	(91)	(112)	(76)			
kWh Usage	15,137-19,285	15,137	(18)	(231)	(195)	(204)	(220)	(174)			
	>19,285	19,285	-	(403)	(492)	(452)	(511)	(372)			
	Total		81	(72)	(91)	(97)	(122)	(60)			
	% Difference	btwn SFV and	Updated Rate D	esign - Avei	rage Annual	Bill - TY End	ing March 20	012			
				L	oad Factor		_				
		Range	0%-48%	48%-56%	56%-62%	62%-68%	>68%	Total			
	Range	Bin	0%	48%	56%	62%	68%				
a	0-7,178	-	78%	35%	47%	33%	33%	43%			
sag	7,178-10,718	7,178	14%	7%	7%	5%	1%	6%			
	10,718-15,137	10,718	-5%	-2%	-8%	-7%	-9%	-6%			
ר	10,710 13,137	- / -									
(Wh U	15,137-19,285	15,137	-1%	-1% -15% -13% -14% -14%							
kWh Usage			-1% NA	-15% -20%							



#### Residential Customers (RH): All Customer Bins

	Population kWh Sum - TY Ending March 2012												
					Load Factor								
		Range	0%-48%	6-48% 48%-56% 56%-62% 62%-68% >68% T									
	Range	Bin	0%	48%	56%	62%	68%						
e	0-7,178	-	54,816,893	36,082,071	21,971,167	16,758,894	11,459,808	141,088,833					
Usage	7,178-10,718	7,178	58,564,004	72,517,678	53,650,540	46,428,333	32,441,232	263,601,787					
) Ň	10,718-15,137	10,718	56,697,461	95,879,056	84,310,674	84,370,708	73,795,754	395,053,653					
κ.	15,137-19,285	15,137	32,417,697	75,310,064	75,835,543	91,268,718	95,950,868	370,782,890					
×	>19,285	19,285	48,283,027	139,724,208	160,501,922	207,189,250	241,611,864	797,310,271					
	Total		250,779,082	419,513,077	396,269,846	446,015,903	455,259,526	1,967,837,434					

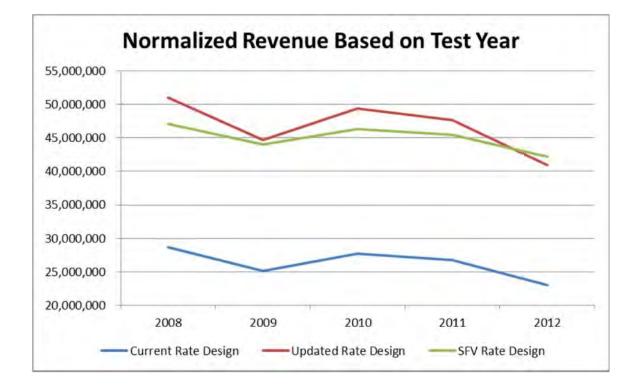
	Population Customer Count - TY Ending March 2012											
					Load Factor							
		Range	0%-48%	48%-56%	56%-62%	62%-68%	>68%	Total				
	Range	Bin	0%	48%	56%	62%	68%					
٩	0-7,178	-	13,273	6,831	4,046	3,086	2,176	29,412				
sage	7,178-10,718	7,178	6,654	8,124	5,988	5,157	3,600	29,523				
) Ň	10,718-15,137	10,718	4,488	7,503	6,574	6,539	5,682	30,786				
κ. Μ	15,137-19,285	15,137	1,912	4,427	4,441	5,338	5,586	21,704				
	>19,285	19,285	1,867	5,302	6,133	7,966	9,278	30,546				
	Total		28,194	32,187	27,182	28,086	26,322	141,971				

#### Residential Customers (RH): All Customer Bins

	Population kWh Sum - TY Ending March 2012											
					Load Factor							
		Range	0%-48%	48%-56%	56%-62%	62%-68%	>68%	Total				
	Range	Bin	0%	48%	56%	62%	68%					
e	0-7,178	-	2.79%	1.83%	1.12%	0.85%	0.58%	7.17%				
Usage	7,178-10,718	7,178	2.98%	3.69%	2.73%	2.36%	1.65%	13.40%				
n n n	10,718-15,137	10,718	2.88%	4.87%	4.28%	4.29%	3.75%	20.08%				
۲N k	15,137-19,285	15,137	1.65%	3.83%	3.85%	4.64%	4.88%	18.84%				
_ <b>X</b>	>19,285	19,285	2.45%	7.10%	8.16%	10.53%	12.28%	40.52%				
	Total		12.74%	21.32%	20.14%	22.67%	23.14%	100.00%				

	Population Customer Count - TY Ending March 2012												
					Load Factor								
		Range	0%-48%	48%-56%	56%-62%	62%-68%	>68%	Total					
	Range	Bin	0%	48%	56%	62%	68%						
٩	0-7,178	-	9.35%	4.81%	2.85%	2.17%	1.53%	20.72%					
sage	7,178-10,718	7,178	4.69%	5.72%	4.22%	3.63%	2.54%	20.80%					
) Ň	10,718-15,137	10,718	3.16%	5.28%	4.63%	4.61%	4.00%	21.68%					
κ. Μ	15,137-19,285	15,137	1.35%	3.12%	3.13%	3.76%	3.93%	15.29%					
	>19,285	19,285	1.32%	3.73%	4.32%	5.61%	6.54%	21.52%					
	Total		19.86%	22.67%	19.15%	19.78%	18.54%	100.00%					

#### Residential Customers (RS): Normalized Revenue





#### Summary of Impacts to Small Secondary Classes

	Average Annual Bill Change - Test Year Ending March 2012									
		Percentage Change in Average Annual Bill								
			Decrease of							
			(15)% to							
	Decrease btwn	Decrease btwn	Increase of	Increase btwn	Increase btwn	Increase over				
	(100)% - (50)%	(50)% - (15)%	15%	15% - 50%	50% - 100%	100%	Total			
SS Customer Count	91	11,641	5,865	2,933	2,933	23,462	46,925			
SS % of Customers	0.19%	24.81%	12.50%	6.25%	6.25%	50.00%	100.00%			
SS Average Dollar Change	(14,969)	\$ (3,416)	\$ 64	\$ 608	\$ 854	\$ 1,323	\$ (2,590)			
SH Customer Count	1	544	273	334	483	2,725	4,360			
SH % of Customers	0.02%	12.48%	6.26%	7.66%	11.08%	62.50%	100.00%			
SH Average Dollar Change	(345,314)	(23,023)	(1,344)	1,677	3,104	4,220	\$ (60,113)			
SE Customer Count	-	3	3	1	-	6	13			
SE % of Customers	0.00%	23.08%	23.08%	7.69%	0.00%	46.15%	100.00%			
SE Average Dollar Change	-	(80,452)	13,031	75,852	-	26,652	\$ 5,847			



Secondary Service (Rate SS)	Current Rate Design	Updated Rate Design	SFV Rate Design
Customer Charge 1 Block	-	-	-
Customer Charge 2 Block	5,000	5,000	5,000
Customer Charge 1 (0-5,000 kWh)	11.38	11.38	142.79
Customer Charge 2 (Over 5,000 kWh)	32.14	32.14	142.79
Energy Block 1	-	-	-
Energy Block 2	5,000	5,000	5,000
Block 1 (1st 5,000 kWh)	0.0738	0.0995	0.0381
Block 2 (Over 5,000 kWh)	0.0591	0.0848	0.0381



### \$45,000 SS Monthly Bill Impact (2008-2012 Average) \$40,000 \$35,000 \$30,000 Average Bill (\$) Average Bill (\$) \$25,000 \$15,000 \$10,000 \$5,000 \$-Monthly kWh Block -Current Rate Design ----- Updated Rate Design SFV Rate Design

#### Secondary Service (SS): Block Analysis

CONCENTRIC ENERGY ADVISORS



		Update	ed Rate Design -	Average Annua	l Bill - TY Ending	March 2012					
				Load Factor							
		Range	0%-44%	44%-58%	58%-70%	70%-81%	>81%	Total			
	Range	Bin	0%	44%	58%	70%	81%				
	0-593	0	\$ 167	\$ 179	\$ 180	\$ 181	\$ 183	\$ 178			
	593-1,434	593	248	252	252	254	259	253			
	1,434-2,334	1,434	339	342	339	341	342	341			
	2,334-3,397	2,334	441	442	442	441	447	443			
	3,397-4,497	3,397	555	558	552	552	556	555			
	4,497-5,748	4,497	677	676	676	673	676	676			
a	5,748-7,284	5,748	819	818	820	818	820	819			
sagi	7,284-9,457	7,284	1,008	1,012	1,011	1,000	994	1,005			
۳ ۲	9,457-12,571	9,457	1,270	1,283	1,277	1,269	1,276	1,275			
kWh Usage	12,571-16,939	12,571	1,653	1,672	1,664	1,664	1,672	1,665			
_	16,939-22,652	16,939	2,172	2,180	2,191	2,172	2,204	2,184			
	22,652-30,625	22,652	2,822	2,881	2,883	2,883	2,869	2,868			
	30,625-43,563	30,625	3,842	3,936	3,928	3,960	3,942	3,922			
	43,563-64,975	43,563	5,396	5,578	5,671	5,699	5,712	5,611			
	64,975-105,089	64,975	7,998	8,389	8,586	8,598	8,612	8,437			
	105,089-8,581,825	105,089	20,357	14,539	14,743	15,406	15,701	16,149			
	>8,581,825	8,581,825	-		-	-	763,225	152,645			
	Total		\$ 2,927	\$ 2,632	\$ 2,660	\$ 2,701	\$ 47,617	\$ 11,707			



		CE//	Rate Design A	verage Appual B	ill - TV Ending M	arch 2012					
		3FV	Nate Design - A	te Design - Average Annual Bill - TY Ending March 2012 Load Factor							
		Range	0%-44%								
	Range	Bin	0%		58%		81%	Total			
	0-593	0	\$ 1,721	\$ 1,725	\$ 1,725	\$ 1,726	\$ 1,727	\$ 1,725			
	593-1,434	593	1,751	1,752	1,752	1,753	1,755	1,752			
	1,434-2,334	1,434	1,784	1,785	1,784	1,785	1,785	1,785			
	2,334-3,397	2,334	1,822	1,822	1,822	1,822	1,824	1,822			
	3,397-4,497	3,397	1,864	1,865	1,863	1,863	1,864	1,864			
	4,497-5,748	4,497	1,909	1,908	1,908	1,907	1,908	1,908			
0	5,748-7,284	5,748	1,961	1,961	1,961	1,961	1,961	1,961			
kWh Usage	7,284-9,457	7,284	2,031	2,032	2,032	2,028	2,026	2,030			
n us	9,457-12,571	9,457	2,128	2,132	2,130	2,127	2,130	2,129			
N N	12,571-16,939	12,571	2,269	2,276	2,273	2,272	2,276	2,273			
×	16,939-22,652	16,939	2,461	2,463	2,467	2,460	2,472	2,465			
	22,652-30,625	22,652	2,704	2,721	2,722	2,722	2,717	2,717			
	30,625-43,563	30,625	3,097	3,106	3,105	3,119	3,112	3,108			
	43,563-64,975	43,563	3,721	3,727	3,745	3,747	3,751	3,738			
	64,975-105,089	64,975	4,782	4,831	4,881	4,872	4,868	4,847			
	105,089-8,581,825	105,089	10,045	7,429	7,502	7,785	7,911	8,134			
	>8,581,825	8,581,825	-	-	-	-	329,110	65,822			
	Total		\$ 2,709	\$ 2,561	\$ 2,569	\$ 2,585	\$ 21,953	\$ 6,475			

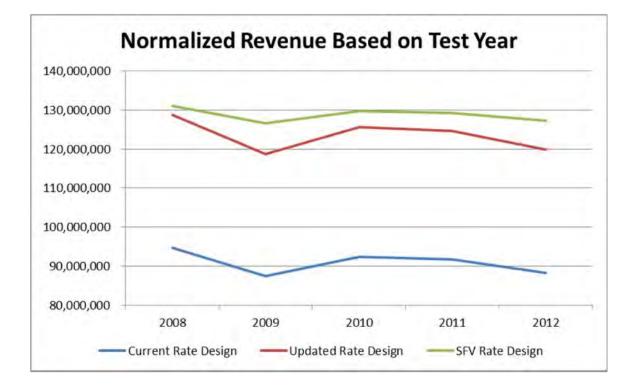


	Diffe	erence btwn SF	V and Updated I	Rate Design - Av	erage Annual Bi	II - TY Ending Ma	arch 2012				
			-	Load Factor							
		Range	0%-44%	44%-58%	58%-70%	70%-81%	>81%	Total			
	Range	Bin	0%	44%	58%	70%	81%				
	0-593	0	\$ 1,554	\$ 1,546	\$ 1,546	\$ 1,545	\$ 1,544	\$ 1,547			
	593-1,434	593	1,502	1,500	1,500	1,499	1,496	1,499			
	1,434-2,334	1,434	1,445	1,443	1,445	1,444	1,443	1,444			
	2,334-3,397	2,334	1,381	1,380	1,380	1,381	1,377	1,380			
	3,397-4,497	3,397	1,309	1,307	1,311	1,310	1,308	1,309			
	4,497-5,748	4,497	1,232	1,232	1,232	1,234	1,232	1,233			
a	5,748-7,284	5,748	1,142	1,143	1,141	1,143	1,141	1,142			
kWh Usage	7,284-9,457	7,284	1,023	1,020	1,021	1,028	1,032	1,025			
л Ч	9,457-12,571	9,457	857	849	853	858	853	854			
Š	12,571-16,939	12,571	616	604	608	609	603	608			
	16,939-22,652	16,939	289	283	276	288	267	281			
	22,652-30,625	22,652	(118)	(161)	(161)	(161)	(152)	(151)			
	30,625-43,563	30,625	(745)	(830)	(823)	(841)	(829)	(814)			
	43,563-64,975	43,563	(1,675)	(1,851)	(1,926)	(1,951)	(1,961)	(1,873)			
	64,975-105,089	64,975	(3,216)	(3,558)	(3,705)	(3,726)	(3,744)	(3,590)			
	105,089-8,581,825	105,089	(10,312)	(7,111)	(7,241)	(7,621)	(7,790)	(8,015)			
	>8,581,825	8,581,825	-	-	-	-	(434,114)	(86,823)			
	Total		\$ (219)	\$ (71)	\$ (91)	\$ (115)	\$ (25,664)	\$ (5,232)			



	% Difference btwn SFV and Updated Rate Design - Average Annual Bill - TY Ending March 2012												
			•	Load Factor									
		Range	0%-44%	44%-58%	58%-70%	70%-81%	>81%	Total					
	Range	Bin	0%	44%	58%	70%	81%						
	0-593	0	931%	865%	860%	854%	844%	870%					
	593-1,434	593	605%	596%	595%	591%	578%	593%					
	1,434-2,334	1,434	426%	422%	426%	424%	422%	424%					
	2,334-3,397	2,334	313%	312%	312%	313%	308%	312%					
	3,397-4,497	3,397	236%	234%	238%	237%	235%	236%					
	4,497-5,748	4,497	182%	182%	182%	184%	182%	182%					
a	5,748-7,284	5,748	140%	140%	139%	140%	139%	139%					
sag	7,284-9,457	7,284	101%	101%	101%	103%	104%	102%					
ñ	9,457-12,571	9,457	67%	66%	67%	68%	67%	67%					
kWh Usage	12,571-16,939	12,571	37%	36%	37%	37%	36%	37%					
-	16,939-22,652	16,939	13%	13%	13%	13%	12%	13%					
	22,652-30,625	22,652	-4%	-6%	-6%	-6%	-5%	-5%					
	30,625-43,563	30,625	-19%	-21%	-21%	-21%	-21%	-21%					
	43,563-64,975	43,563	-31%	-33%	-34%	-34%	-34%	-33%					
	64,975-105,089	64,975	-40%	-42%	-43%	-43%	-43%	-43%					
	105,089-8,581,825	105,089	-51%	-49%	-49%	-49%	-50%	-50%					
	>8,581,825	8,581,825	NA	NA	NA	NA	-57%	-57%					
	Total		-7%	-3%	-3%	-4%	-54%	-45%					

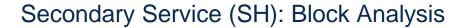


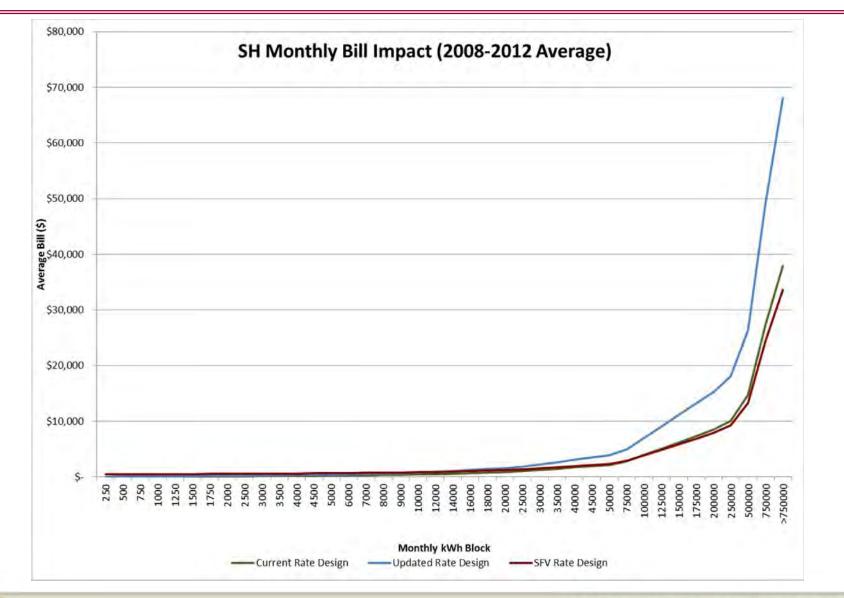




Secondary Service (Rate SH)	Current Rate Design	Updated Rate Design	SFV Rate Design
Customer Charge	11.21	12.13	454.04
Energy Charge	0.0452	0.0812	0.0396









Secondary Service	(SH): Bill	Impact
-------------------	------------	--------

	Updated Rate Design - Average Annual Bill - TY Ending March 2012												
				Load Factor									
		Range	0%-22%	22%-38%	38%-49%	49%-58%	>58%	Total					
	Range	Bin	0%	22%	38%	49%	58%						
	00-2,960	\$-	\$ 63	\$ 285	\$ 276	\$ 282	\$ 241	\$ 229					
	2,960-5,659	2,960	504	493	488	484	476	489					
	5,659-8,240	5,659	707	701	696	706	702	702					
	8,240-11,212	8,240	931	935	934	947	939	937					
	11,212-14,355	11,212	1,179	1,171	1,184	1,178	1,192	1,181					
	14,355-18,168	14,355	1,467	1,463	1,478	1,473	1,437	1,464					
98 6	18,168-22,793	18,168	1,780	1,801	1,793	1,813	1,779	1,793					
Usage	22,793-29,571	22,793	2,221	2,290	2,213	2,267	2,289	2,256					
kWh	29,571-38,443	29,571	2,892	2,875	2,855	2,913	2,898	2,887					
k	38,443-53,295	38,443	3,970	3,876	3,808	3,848	3,756	3,852					
	53,295-75,946	53,295	5,006	5,077	5,237	5,295	5,386	5,200					
	75,946-114,312	75,946	6,989	7,844	7,626	7,522	7,649	7,526					
	114,312-210,671	114,312	-	12,208	12,778	13,331	13,309	10,325					
	210,671-467,569	210,671	-	27,464	25,655	25,266	25,677	20,812					
	467,569-8,426,064	467,569	70,147	67,094	70,046	73,488	94,071	74,969					
	>8,426,064	8,426,064	-	-	-	_	684,033	136,807					
	Total		\$ 5,756	\$ 7,975	\$ 8,063	\$ 8,283	\$ 49,755	\$ 15,966					



Secondary Service (SH): Bil	I Impact
-----------------------------	----------

	SFV Rate Design - Average Annual Bill - TY Ending March 2012												
				Load Factor									
		Range	0%-22%	22%-38%	38%-49%	49%-58%	>58%	Total					
	Range	Bin	0%	22%	38%	49%	58%						
	00-2,960	\$-	\$ 1,563	\$ 5,517	\$ 5,512	\$ 5,515	\$ 5,495	\$ 4,720					
	2,960-5,659	2,960	5,623	5,618	5,615	5,614	5,610	5,616					
	5,659-8,240	5,659	5,722	5,719	5,717	5,722	5,720	5,720					
	8,240-11,212	8,240	5,831	5,833	5,833	5,839	5,835	5,834					
	11,212-14,355	11,212	5,952	5,948	5,954	5,952	5,958	5,953					
	14,355-18,168	14,355	6,093	6,091	6,098	6,095	6,078	6,091					
8e	18,168-22,793	18,168	6,245	6,255	6,251	6,261	6,244	6,251					
Usage	22,793-29,571	22,793	6,460	6,493	6,456	6,483	6,493	6,477					
kWh I	29,571-38,443	29,571	6,787	6,779	6,769	6,797	6,790	6,784					
≥ N	38,443-53,295	38,443	7,312	7,266	7,233	7,253	7,208	7,255					
	53,295-75,946	53,295	7,817	7,852	7,930	7,958	8,002	7,912					
	75,946-114,312	75,946	8,783	9,200	9,094	9,043	9,105	9,045					
	114,312-210,671	114,312	-	11,327	11,604	11,874	11,863	9,334					
	210,671-467,569	210,671	-	18,761	17,880	17,690	17,891	14,444					
	467,569-8,426,064	467,569	39,562	38,074	39,512	41,189	51,220	41,911					
	>8,426,064	8,426,064	-	-	-	-	338,720	67,744					
	Total		\$ 6,691	\$ 8,631	\$ 8,674	\$ 8,781	\$ 29,308	\$ 12,417					



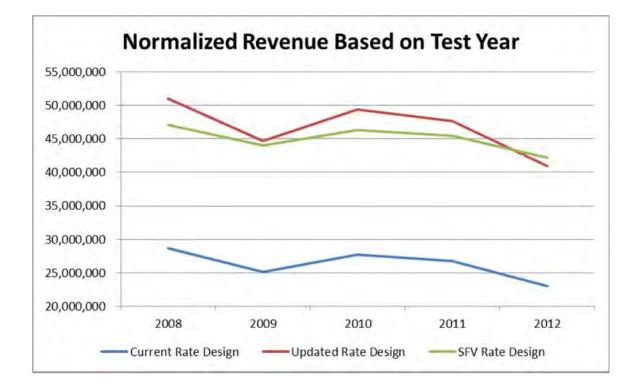
	Difference btwn SFV and Updated Rate Design - Average Annual Bill - TY Ending March 2012												
			·	Load Factor									
		Range	0%-22%	22%-38%	38%-49%	49%-58%	>58%	Total					
	Range	Bin	0%	22%	38%	49%	58%						
	00-2,960	\$-	\$ 1,500	\$ 5,231	\$ 5,236	\$ 5,233	\$ 5,254	\$ 4,491					
	2,960-5,659	2,960	5,119	5,125	5,127	5,129	5,133	5,127					
	5,659-8,240	5,659	5,015	5,018	5,021	5,016	5,018	5,018					
	8,240-11,212	8,240	4,900	4,898	4,899	4,892	4,896	4,897					
	11,212-14,355	11,212	4,773	4,777	4,771	4,774	4,766	4,772					
	14,355-18,168	14,355	4,625	4,627	4,620	4,623	4,641	4,627					
<u>8</u>	18,168-22,793	18,168	4,465	4,454	4,458	4,448	4,466	4,458					
kWh Usage	22,793-29,571	22,793	4,239	4,204	4,243	4,215	4,204	4,221					
- h	29,571-38,443	29,571	3,895	3,903	3,914	3,884	3,892	3,898					
N N	38,443-53,295	38,443	3,342	3,391	3,425	3,405	3,452	3,403					
	53,295-75,946	53,295	2,811	2,775	2,693	2,663	2,616	2,712					
	75,946-114,312	75,946	1,795	1,356	1,468	1,521	1,456	1,519					
	114,312-210,671	114,312	-	(881)	(1,173)	(1,457)	(1,446)	(991)					
	210,671-467,569	210,671	-	(8,703)	(7,775)	(7,576)	(7,787)	(6,368)					
	467,569-8,426,064	467,569	(30,586)	(29,020)	(30,534)	(32,298)	(42,851)	(33,058)					
	>8,426,064	8,426,064	-	-	-	-	(345,314)	(69,063)					
	Total		\$ 935	\$ 656	\$ 611	\$ 498	\$ (20,447)	\$ (3,549)					



Secondary Service	(SH): Bill Impact
-------------------	-------------------

	% Difference btwn SFV and Updated Rate Design - Average Annual Bill - TY Ending March 2012												
				Load Factor									
		Range	0%-22%	22%-38%	38%-49%	49%-58%	>58%	Total					
	Range	Bin	0%	22%	38%	49%	58%						
	00-2,960	-	2394%	1834%	1900%	1859%	2179%	1959%					
	2,960-5,659	2,960	1015%	1039%	1051%	1059%	1078%	1048%					
	5,659-8,240	5,659	709%	716%	721%	711%	714%	714%					
	8,240-11,212	8,240	527%	524%	525%	516%	521%	523%					
	11,212-14,355	11,212	405%	408%	403%	405%	400%	404%					
	14,355-18,168	14,355	315%	316%	313%	314%	323%	316%					
ge	18,168-22,793	18,168	251%	247%	249%	245%	251%	249%					
Usage	22,793-29,571	22,793	191%	184%	192%	186%	184%	187%					
kWh	29,571-38,443	29,571	135%	136%	137%	133%	134%	135%					
N N	38,443-53,295	38,443	84%	87%	90%	88%	92%	88%					
	53,295-75,946	53,295	56%	55%	51%	50%	49%	52%					
	75,946-114,312	75,946	26%	17%	19%	20%	19%	20%					
	114,312-210,671	114,312	NA	-7%	-9%	-11%	-11%	-10%					
	210,671-467,569	210,671	NA	-32%	-30%	-30%	-30%	-31%					
	467,569-8,426,064	467,569	-44%	-43%	-44%	-44%	-46%	-44%					
	>8,426,064	8,426,064	NA	NA	NA	NA	-50%	-50%					
	Total		16%	8%	8%	6%	-41%	-22%					





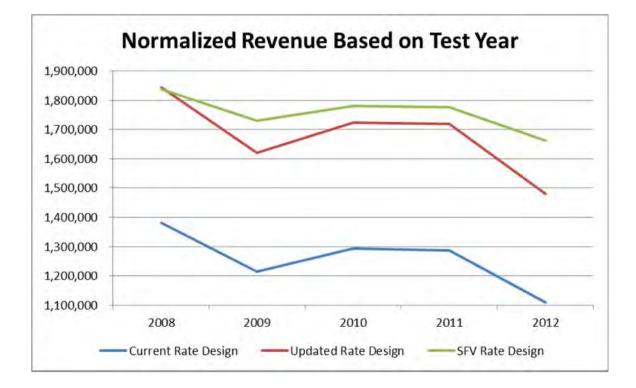


Secondary Service (Rate SE)	Current Rate Design	Updated Rate Design	SFV Rate Design
Customer Charge	11.21	12.02	2,554.61
Energy Block 1	-	-	-
Energy Block 2	5,000	5,000	5,000
Energy Block 3			
Block 1 (1st 5,000 kWh)	0.0738	0.0936	0.0380
Block 2 (Over 5,000 kWh)	0.0591	0.0789	0.0380
Block 3 (Excess of 155 x Connected load)	0.0452	0.0812	0.0380



							Difference	
	_							%
Customer	Cu	rrent	Up	dated	SF\	/	Updated	Change
MARIAN COLLEGE/MARIAN UNIVERSITY/MARIAN UNIVERSITY					Ι.			
INC/MARIAN UNIVERSITY INC/MARIAN UNIVERSITY INC	\$	73,903	\$	127,098		89,848	(37,250)	
PARK TUDOR SCHOOL	\$	403,903	\$	696,923	\$	508,166	(188,756)	-27%
M S D OF PERRY TOWNSHIP/SOUTHSIDE SPECIAL SERVICES OF								
MARION COUNTY/SOUTHSIDE SPECIAL SERVICES OF MARION								
COUNTY/SOUTHSIDE SPECIAL SERVICES OF MARION COUNTY	\$	50,221	\$	85,838	\$	70,488	(15,351)	-18%
EMINENCE COMMUNITY SCHOOL CORP/EMINENCE	Ċ	,	Ĺ.		<u> </u>	,		
COMMUNITY SCHOOL BUILDING CORPORATION/EMINENCE								
COMMUNITY SCHOOL BUILDING CORPORATION	\$	31,463	\$	53,370	\$	55,244	1,874	4%
MONROE GREGG SCHOOL DISTRICT	\$	121,693	\$	198,468	\$	214,675	16,207	8%
BOARD OF SCHOOL COMMISSIONERS	\$	158,376	\$	246,579	\$	267,590	\$ 21,012	9%
M S D OF DECATUR TOWNSHIP	\$	133,016	\$	200,628	\$	276,480	75,852	38%
HALL CIVIC ASSOCIATION	\$	11,713	\$	16,944	\$	38,232	21,289	126%
INDIANA SCHOOL FOR THE DEAF	\$	5,478	\$	8,087	\$	34,125	26,038	322%
INDEPENDENT NAZARENE CHURCH	\$	4,299	\$	6,898	\$	33,708	26,810	389%
JUNIOR ISLAMIC ACADEMY OF INDIANAPOLIS/TEXAS								
MIGRANT COUNCIL INC/TEXAS MIGRANT COUNCIL INC/TEXAS								
MIGRANT COUNCIL INC/TEXAS MIGRANT COUNCIL INC	\$	3,524	\$	5,796	\$	33,235	27,440	473%
ST LUKE'S UNITED METHODIST CHURCH	\$	2,365	\$	3,435	\$	32,088	28,654	834%
MONROE GREGG SCHOOL DISTRICT/HALL CIVIC								
ASSOCIATION/HALL CIVIC ASSOCIATION/HALL CIVIC								
ASSOCIATION/HALL CIVIC ASSOCIATION	\$	1,174	\$	1,576	\$	31,261	29,684	1883%
Total	\$	1,001,128	\$	1,651,641	\$	1,685,143	\$ 33,502	2%



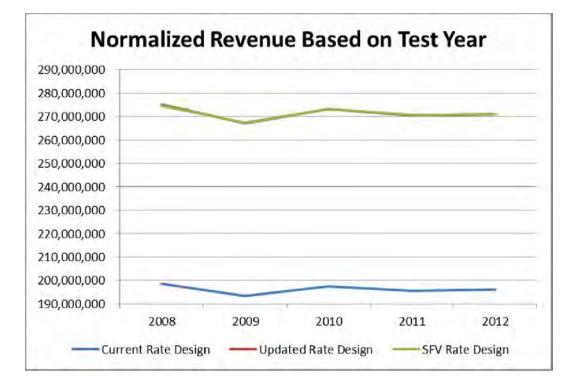




Secondary Service Large (Rate SL)	Current Rate Design	Updated Rate Design	SFV Rate Design
Customer Charge	103.33	98.70	20.46
Energy Charge	0.0268	0.0435	0.0380
Demand Block 1			
Demand Block 2	500	- 500	500
Block 1 (1st 500 kW)	10.55	12.36	14.91
Block 2 (Over 500 kW)	10.18	11.99	14.91



#### Secondary Service Large (SL): Normalized Revenue





#### Commercial and Industrial – Process Heating (PH): Rate Summary

Process Heating (Rate PH)	Current Rate Design	Updated Rate Design	SFV Rate Design
Customer Charge	310.67	306.48	8,530.85
Energy Block 1	-	-	-
Energy Block 2	250	250	250
Block 1 (1st 250 kWh)	0.0510	0.0727	0.0347
Block 2 (Over 250 kWh)	0.0360	0.0577	0.0347

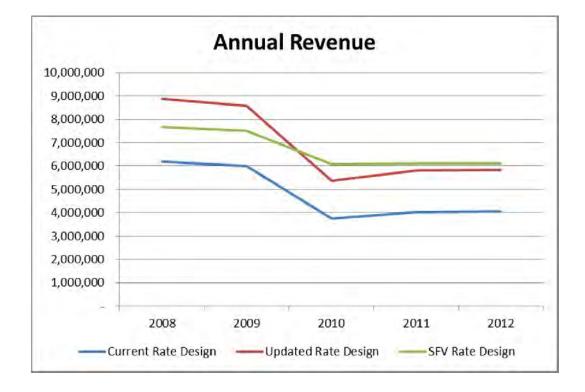


#### Commercial and Industrial – Process Heating (PH): Bill Impact

Customer						Difference btwn SFV	
Account	kWh Usage	Load Factor	Current	Updated	SFV	and Updated	% Change
478048-PH	33,862,815	76.09%	\$ 1,730,732	\$2,465,968	\$1,278,379	\$(1,187,589)	-48%
377138-PH	21,682,500	86.49%	921,792	1,392,548	855,373	(537,175)	-39%
478030-PH	5,228,370	86.49%	270,375	383,852	283,944	(99,908)	-26%
533949-PH	3,435,900	90.26%	177,735	252,291	221,694	(30,597)	-12%
570320-PH	3,000,000	75.90%	138,833	203,924	206,556	2.632	1%
275149-PH	2,695,500	86.09%	137,411	195,890	195,981	91	0%
592733-PH	2,622,600	89.02%	135,384	192,280	193,449	1,169	1%
166483-PH	2,134,200	84.09%	101,207	147,498	176,488	28,990	20%
656433-PH	1,922,250	75.99%	89,377	131,065	169,127	38,062	29%
166471-PH	1,825,800	86.16%	83,396	122,990	165,778	42,788	35%
687968-PH	1,543,500	67.95%	79,293	112,758	155,974	43,216	38%
276025-PH	1,158,000	86.94%	62,786	87,880	142,586	54,706	62%
635420-PH	965,800	77.39%	52,984	73,905	135,911	62,006	84%
570772-PH	899,700	77.61%	49,613	69,098	133,615	64,517	93%
274970-PH	724,000	73.58%	40,652	56,322	127,514	71,191	126%
274969-PH	720,640	77.55%	40,481	56,078	127,397	71,319	127%
275247-PH	704,400	85.82%	39,652	54,897	126,833	71,936	131%
166252-PH	576,800	84.75%	31,452	43,926	122,402	78,475	179%
478027-PH	526,890	91.26%	27,421	38,812	120,668	81,857	211%
274966-PH	500,160	74.06%	28,957	39,767	119,740	79,973	201%
167401-PH	478,500	50.16%	28,132	38,471	118,988	80,517	209%
551602-PH	449,400	91.12%	26,647	36,355	117,977	81,622	225%
274967-PH	390,000	69.44%	23,618	32,036	115,914	83,878	262%
274995-PH	380,100	86.54%	23,113	31,316	115,571	84,254	269%
538644-PH	367,000	73.87%	22,445	30,364	115,116	84,752	279%
166312-PH	332,240	92.74%	20,177	27,341	113,908	86,567	317%
275674-PH	297,360	86.76%	18,893	25,300	112,697	87,397	345%
591181-PH	291,200	83.11%	18,579	24,852	112,483	87,631	353%
167364-PH	218,760	82.12%	14,885	19,585	109,967	90,383	461%
549948-PH	124,600	70.16%	10,083	12,738	106,697	93,959	738%
167322-PH	73,200	80.26%	7,461	9,000	104,912	95,912	1066%
557180-PH	45,300	78.65%	6,038	6,972	103,943	96,972	1391%
Total			\$ 4,459,603	\$6,416,079	\$6,407,584	\$ (8,496)	0%



#### Commercial and Industrial – Process Heating (PH): Annual Revenue





CONCENTRIC ENERGY ADVISORS

#### Commercial and Industrial – Primary Service Large (PL): Rate Summary

Primary Service Large (Rate PL)	Current Rate Design	Updated Rate Design	SFV Rate Design
Customer Charge	310.67	289.65	21.04
Energy Charge	0.0207	0.0371	0.0361
Demand Block 1	-	-	-
Demand Block 2	500	500	500
Block 1 (1st 500 kW)	11.28	13.63	14.20
Block 2 (Over 500 kW)	11.19	13.54	14.20

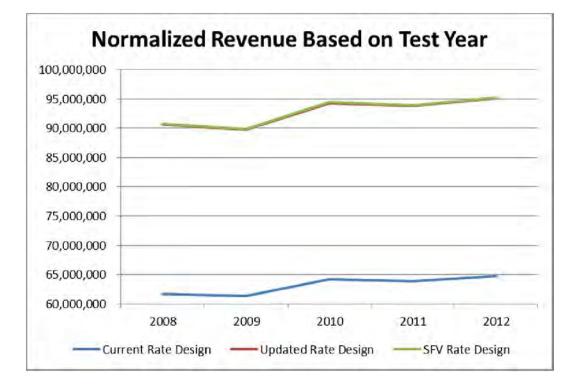


#### Commercial and Industrial – Primary Service Large (PL): Bill Impact

Upda	Updated Rate Design - Average Annual Bill - TY Ending March 2012						
	Range	Bin	0%				
	0-2,324,618	-	2,257,884				
	2,324,618-3,116,145	2,324,618	3,157,407				
	3,116,145-3,798,200	3,116,145	3,522,283				
0	3,798,200-4,581,055	3,798,200	4,365,050				
kWh Usage	4,581,055-5,474,545	4,581,055	4,588,755				
) S	5,474,545-6,457,818	5,474,545	5,795,436				
Ň	6,457,818-8,202,218	6,457,818	6,787,098				
<b>—</b>	8,202,218-9,932,145	8,202,218	7,681,895				
	9,932,145-14,026,473	9,932,145	10,827,531				
	14,026,473-21,811,418	14,026,473	15,696,572				
	>21,811,418	21,811,418	31,538,434				
	Total		8,747,122				
SF	V Rate Design - Average A		Ending March 2012				
	Range	Bin					
	0-2,324,618	-	2,247,959				
	2,324,618-3,116,145	2,324,618	3,154,227				
	3,116,145-3,798,200	3,116,145	3,501,243				
e	3,798,200-4,581,055	3,798,200	4,378,735				
kWh Usage	4,581,055-5,474,545	4,581,055	4,564,503				
∩ 4	5,474,545-6,457,818	5,474,545	5,790,666				
Ň	6,457,818-8,202,218	6,457,818	6,785,915				
_	8,202,218-9,932,145	8,202,218	7,683,160				
	9,932,145-14,026,473	9,932,145	10,851,627				
	14,026,473-21,811,418	14,026,473	15,762,121				
	>21,811,418	21,811,418	31,629,077				
	Total		8,759,021				

Difference btwn SFV and Updated Rate Design - Average Annual Bill -								
TY Ending March 2012								
	Range	Bin						
	0-2,324,618	-	(9,926)					
	2,324,618-3,116,145	2,324,618	(3,180)					
	3,116,145-3,798,200	3,116,145	(21,040)					
a	3,798,200-4,581,055	3,798,200	13,685					
sag	4,581,055-5,474,545	4,581,055	(24,252)					
Ű,	5,474,545-6,457,818	5,474,545	(4,770)					
kWh Usage	6,457,818-8,202,218	6,457,818	(1,184)					
-	8,202,218-9,932,145	8,202,218	1,265					
	9,932,145-14,026,473	9,932,145	24,096					
	14,026,473-21,811,418	14,026,473	65,549					
	>21,811,418	21,811,418	90,643					
	Total		11,899					
% Diff	erence btwn SFV and Upda	ted Rate Desig	n - Average Annual Bill -					
	•	g March 2012	,					
	Range	Bin						
	0-2,324,618	-	0%					
	2,324,618-3,116,145	2,324,618	0%					
	3,116,145-3,798,200	3,116,145	-1%					
	3,798,200-4,581,055	3,798,200	0%					
age	4,581,055-5,474,545	4,581,055	-1%					
N.	5,474,545-6,457,818	5,474,545	0%					
kWh Usage	6,457,818-8,202,218	6,457,818	0%					
×	8,202,218-9,932,145	8,202,218	0%					
	9,932,145-14,026,473	9,932,145	0%					
	14,026,473-21,811,418	14,026,473	0%					
	>21,811,418	21,811,418	0%					
	Total		0%					

#### Commercial and Industrial – Primary Service Large (PL): Annual Revenue





CONCENTRIC ENERGY ADVISORS

# Commercial and Industrial – High Load Factor Service – Primary (HL1): Rate Summary

High Load Factor Service - Primary (Rate HL1)	Current Rate Design	Updated Rate Design	SFV Rate Design
Customer Charge	310.67	303.06	28.80
Energy Charge	0.0207	0.0371	0.0363
Demand Block 1	-	-	-
Demand Block 2	4,000	4,000	4,000
Block 1 (1st 4,000 kW)	11.11	13.90	14.02
Block 2 (Over 4,000 kW)	10.57	13.36	14.02

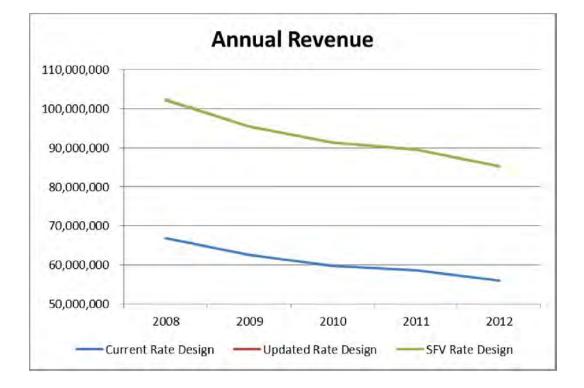


# Commercial and Industrial – High Load Factor Service – Primary (HL1): Bill Impact

HL1									
							Diffe	erence btwn	
<b>Customer Account</b>	Cu	rrent	Up	dated	SF	V	SFV	and Updated	% Change
650098-H1	\$	712,090	\$	1,095,036	\$	1,081,666	\$	(13,370)	-1%
682837-H1	\$	686,241	\$	1,050,355	\$	1,037,780	\$	(12,575)	-1%
664495-H1	\$	813,600	\$	1,252,237	\$	1,237,352	\$	(14,885)	-1%
1074-H1	\$	619,581	\$	940,827	\$	929,800	\$	(11,026)	-1%
275995-H1	\$	586,078	\$	883,775	\$	873,703	\$	(10,072)	-1%
275996-H1	\$	727,385	\$	1,106,689	\$	1,094,150	\$	(12,540)	-1%
377352-H1	\$	1,041,248	\$	1,593,541	\$	1,576,248	\$	(17,293)	-1%
62851-H1	\$	552,446	\$	819,201	\$	810,730	\$	(8,471)	-1%
275083-H1	\$	1,055,251	\$	1,602,573	\$	1,586,384	\$	(16,189)	-1%
562383-H1	\$	1,082,393	\$	1,640,328	\$	1,624,970	\$	(15,358)	-1%
167032-H1	\$	1,306,393	\$	1,990,203	\$	1,975,978	\$	(14,225)	-1%
167284-H1	\$	1,296,891	\$	1,963,628	\$	1,951,548	\$	(12,080)	-1%
62559-H1	\$	1,840,910	\$	2,835,288	\$	2,822,773	\$	(12,515)	0%
62042-H1	\$	361,854	\$	535,626	\$	533,404	\$	(2,221)	0%
579133-H1	\$	1,375,946	\$	2,061,207	\$	2,054,540	\$	(6,667)	0%
275330-H1	\$	1,533,657	\$	2,323,360	\$	2,316,557	\$	(6,804)	0%
275516-H1	\$	2,037,902	\$	3,122,729	\$	3,115,364	\$	(7,366)	0%
275511-H1	\$	1,976,870	\$	3,031,023	\$	3,026,189	\$	(4,834)	0%
377893-H1	\$	2,405,478	\$	3,680,605	\$	3,678,796	\$	(1,809)	0%
167285-H1	\$	2,480,449	\$	3,791,305	\$	3,791,210	\$	(95)	0%
376685-H1	\$	2,226,757	\$	3,381,385	\$	3,382,140	\$	755	0%
477910-H1	\$	3,230,199	\$	4,981,776	\$	4,983,118	\$	1,343	0%
275521-H1	\$	4,676,946	\$	7,224,948	\$	7,239,232	\$	14,285	0%
377449-H1	\$	2,623,358	\$	3,968,758	\$	3,978,248	\$	9,490	0%
62034-H1	\$	2,562,165	\$	3,837,042	\$	3,852,920	\$	15,878	0%
275769-H1	\$	2,168,640	\$	3,216,607	\$	3,230,899	\$	14,292	0%
477914-H1	\$	8,931,060	\$	13,757,355	\$	13,821,663	\$	64,308	0%
62050-H1	\$	7,118,240	\$	10,838,927	\$	10,907,286	\$	68,359	1%
Total	\$	58,030,025	\$	88,526,336	\$	88,514,650	\$	(11,687)	0%



## Commercial and Industrial – High Load Factor Service – Primary (HL1): Annual Revenue





## Commercial and Industrial – High Load Factor Service – Sub-Transmission (HL2): Rate Summary

High Load Factor Service - Sub-Transmission (Rate HL2)	Current Rate Design	Updated Rate Design	SFV Rate Design
Customer Charge	310.67	294.43	63.14
Energy Charge	0.0199	0.0362	0.0356
Demand Block 1	-	-	-
Demand Block 2	4,000	4,000	4,000
Block 1 (1st 4,000 kW)	10.95	13.35	13.46
Block 2 (Over 4,000 kW)	10.60	13.00	13.46

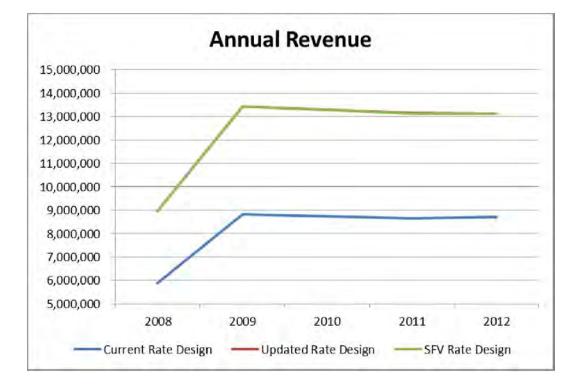


# Commercial and Industrial – High Load Factor Service – Sub-Transmission (HL2): Bill Impact

HL2									
							Diffe	rence btwn	
Customer Account	Cur	rrent	Up	dated	SF	V	SFV a	and Updated	% Change
631072-H2		629,266		950,791		942,660		(8,131)	-1%
478037-H2		880,862		1,323,296		1,313,689		(9,607)	-1%
62031-H2		2,119,290		3,207,031		3,204,860		(2,171)	0%
39098-H2	\$	4,982,124	\$	7,576,591	\$	7,595,386	\$	18,795	0%
Total	\$	8,611,543	\$	13,057,709	\$	13,056,595	\$	(1,114)	0%



## Commercial and Industrial – High Load Factor Service – Sub-Transmission (HL2): Annual Revenue





#### Commercial and Industrial – High Load Factor Service – Transmission (HL3): Rate Summary

High Load Factor Service - Transmission (Rate HL3)	Current Rate Design	Updated Rate Design	SFV Rate Design
Customer Charge	310.67	290.09	23.67
Energy Charge	0.0199	0.0365	0.0344
Demand Block 1	-	-	-
Demand Block 2	4,000	4,000	4,000
Block 1 (1st 4,000 kW)	10.65	12.81	13.46
Block 2 (Over 4,000 kW)	9.90	12.06	13.46



#### Commercial and Industrial – High Load Factor Service – Transmission (HL3): Bill Impact

	HL3									
				Difference btwn						
Customer Account	Current	Updated	SFV	SFV and Updated	% Change					
478053-H3	2,898,839	4,493,919	4,467,487	(26,432)	-1%					
39482-H3	\$ 9,463,301	\$ 14,705,430	\$ 14,714,657	\$ 9,228	0%					
604966-H3	286,264	354,620	365,611	10,992	3%					
Total	\$ 12,648,404	\$ 19,553,969	\$ 19,547,756	\$ (6,213)	0%					



## Commercial and Industrial – High Load Factor Service – Transmission (HL3): Annual Revenue

