Seattle City Light Power Revenue Adjustment Mechanism

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Issue

Seattle City Light meets a substantial portion of its annual revenue requirement with wholesale revenues. In fact, apart from BPA, City Light is the largest public power participant in the Northwest power market. Under normal water conditions, City Light will sell in excess of three million megawatt-hours of surplus energy into the market. On an annual basis this sales activity represents over 30% of City Light's total firm system load. These wholesale revenues help offset costs of City Light operations, debt service and taxes that would otherwise be paid through retail rates. However, wholesale revenues are subject to significant volatility due to hydro generation and wholesale power market prices, both of which are largely uncontrollable and very difficult to forecast. For example, City Light currently estimates 2010 net wholesale revenue can fall between $75 million below or $122 million above the expected level of $120 million.[1] Table 1 illustrates the volatility of the recent past.

Table 1. Net Wholesale Revenue ($M)

2003	2004	2005	2006	2007	2008	2009
$113	$114	$87	$140	$137	$134	$69

Prior to the 2000-2001 energy crisis on the West Coast, fluctuations occurred but their magnitude was much smaller because: a) City Light had less surplus power to sell; and b) market prices were more stable. The current volatility in wholesale revenue makes it difficult for the utility to maintain both financial performance and current customer service levels when wholesale revenues are significantly less than planned. In years of extremely low wholesale revenue, City Light must cut back on programs and service levels and/or risk not meeting its debt service coverage commitments. Reducing planned capital expenditures provides no benefit to debt service coverage in the current year. Discretionary expenses that can be changed by management decisions total less than $202 million in 2010 which is not large enough to cover the potential downside volatility in net wholesale revenue without the potential of significant adverse effects on current operations.

City Light's budget does not contain any substantial level of discretionary funding that can be scaled back in a year of wholesale revenue shortfalls without directly impacting customer service, reliability or other essential aspects of utility services. This was demonstrated in 2009 as the Utility struggled to continue to provide services that customers depend on in light of significant budget cutbacks. The utility was forced this year to profoundly impact programs such as street lighting, responsiveness to various service issues, and the Utility's commitment to key programs such as conservation and tree-trimming. These service cutbacks are not acceptable to customers or their elected representatives, and continued exposure of the Utility to this financial volatility is not consistent with the utility's vision of setting the standard of providing the best customer service of comparable utilities in the nation.

Proposal

To mitigate this volatility, City Light is proposing the adoption of an automatic wholesale power revenue adjustment mechanism (PRAM) that will adjust retail rates to offset the amount by which wholesale revenue differs from levels expected at the time retail rates were set. This proposal is similar to

[1] Deviations of $75m and $122m are at the 5th and 95th percentiles, respectively, of SCL's probabilistic forecast.

mechanisms already in place in other utilities and even in our own utility. Automatic rate adjustments for uncertain and uncontrollable energy costs and revenues are commonly used in utility rate structures (e.g., fuel cost adjustment clauses, see examples in Table 3 at the end of this paper, and City Light already has a similar automatic adjustment mechanism in place to pass BPA power cost increases or decreases on to its customers.

City Light is proposing a PRAM which would have the potential to adjust rates in three-month increments. A PRAM account balance would be used to track the difference in wholesale revenue compared to the expected level associated with the adopted rates. At the end of every month, the difference between the actual and expected wholesale revenue would be entered to the PRAM account balance. That balance would be used to adjust rates based on the criteria below.

Key Features

- Customers would receive a credit when net wholesale revenue is above the expected level and a charge when it is below.
- The charge or credit would be adjusted every three months.
- There would be a maximum rate change of $10 per MWh.

Under the proposed PRAM, 100% of the difference between actual net wholesale revenue and the expected level would be calculated and added to the PRAM account every three months. City Light proposes that deviations will be disbursed or collected only when the PRAM account balance is under minus $10 million and or over plus $10 million. If the PRAM account balance is in between these limits, no charge or credit would be implemented and the PRAM account balance would roll to the next period. Every three months the balance of the account (assuming it exceeds plus or minus $10 million) would then be disbursed to or collected from customers by placing a credit or a charge on all energy sales to retail customers during the associated three month adjustment period[2].

A maximum rate change of $10/MWh would protect customers from extremely large swings in their rates. A $10/MWh increase or decrease from current rates for the average residential customer who consumes around 0.71 MWh per month translates to a maximum monthly bill change of around $7.10. City Light proposes that any wholesale revenue deviations not disbursed or collected in one adjustment period because of the maximum adjustment would be rolled over and disbursed or collected in following periods.

Figure 1 below is an example of how the proposed PRAM would operate under high and low wholesale revenues for a three month period.

[2] A one month administration lag would be needed to calculate and implement the charge or credit. The resulting credit or charge would be provided to billing staff to be placed on all retail sales starting the following month and it would remain in place for three months. For example, the deviations for January through March (first quarter) would be collected or disbursed through retail bills in May through July (first adjustment period).

Figure 1

City Light Proposed PRAM
• When actual Wholesale Revenue is above planned levels, 100% of the surplus revenue is distributed to retail customers as a credit on energy sales. • When Wholesale Revenue is below planned levels, 100% of the revenue deficit is collected from retail customers with a charge on energy sales. • Adjustments are made every 3 months.
Example: High Wholesale Revenue for 3 month period
Planned WR = $30 million, Actual WR = $45 million (Difference = +$15 million), Expected Energy sales in following 3 months = 2.2 million MWh **Credit** Customer Sales **$6.82 per MWh** ($15m*100%/2.2m) Impact on Average Residential Customer = decrease of $4.84 per month (for 3 months)
Example: Low Wholesale Revenue for 3 month period
Planned WR = $30 million, Actual WR = $15 million (Difference = -$15 million), Expected Energy sales in following 3 months = 2.2 million MWh **Charge** Customer Sales **$6.82 per MWh** ($15m*100%/2.2m) Impact on Average Residential Customer = increase of $4.84 per month (for 3 months)

Estimated PRAM Performance Results

It is useful to look at the full range of potential outcomes when estimating how a PRAM would perform. The impact on customers and the utility resulting from implementing a PRAM can vary significantly, constrained, of course, by the maximum retail rate change permitted. As part of its forecasting and risk management processes, City Light estimates the range of the uncertainty in wholesale revenue by running over 2000 scenarios that take into account volatility in: hydro conditions, market prices and retail load. These scenarios of wholesale revenue were used to estimate the performance of a PRAM over a full range of possible outcomes. PRAM charges or credits as calculated in each scenario provide a basis for the indicators below that illustrate the operations of the PRAM.

Table 2 contains summary statistics for average annual PRAM rate adjustments and debt service coverage levels.

The data entered in Table 2 are defined as follows:

- Average Annual (PRAM) Charge
  - The annual (PRAM) charge is the weighted average of each quarterly charge over the full year.
  - The average annual (PRAM) charge is the annual charge averaged over all scenarios. While each quarterly charge will vary, this is the average charge customers would expect to pay in the first year of the PRAM.
- Probability of Average (PRAM) Charge > a stated amount
  - The estimated probability of having an annual (PRAM) charge greater than the stated amount, given City Light's uncertainty in wholesale revenue.

- City Light Revenue Certainty
  - The estimated probability of achieving debt service coverage greater then the stated amount, given the debt service coverage target used to set rates and City Light's uncertain wholesale revenue.
  - The estimated probability of having positive Cash from Operations (CFO)

Table 2

PRAM Performance Summary Table

	No PRAM	PRAM
Customer Rates Impacts*		
Avg Annual Charge ($/MWh)	na	0.5
Probablility of avg charge > $2/MWh	na	43%
Probablility of avg charge > $4/MWh	na	28%
Probablility of avg charge > $6/MWh	na	14%
SCL Revenue Certainty*		
Probability DSC > 1.5	53%	75%
Probability DSC > 1.6	41%	42%
Probability DSC > 1.7	30%	21%
Probability CFO > 0	87%	99%

* $2, $4 and $6 /MWh are respectively 4%, 7%, 11% increases over the average system rate.
**Assumes an expected DSC of 1.6

On the next page, Figure 3 shows the estimated distributions for debt service coverage and Figure 4 shows the distribution of the annual impact for the average residential customer.

Revenue Stability

City Light is currently proposing a gradual three-year rate increase that would target debt service coverage of 1.6, 1.7 and 1.8 in 2010, 2011 and 2012, respectively. This gradual increase will help ease the financial impact to customers but, without a PRAM, will also expose the utility to more financial risks, such as not being able to meet critical debt service coverage or not having positive cash from operations to contribute to its capital program.

Table 2 and Figure 3 both show that the proposed PRAM provides the needed additional revenue stability for City Light. Without a PRAM, City Light would need to have a larger 2010 rate increase or reduce its programs and customer service levels in addition to the large cuts the Utility is already proposing. Thus, a PRAM is an essential component of City Light's three-year rate proposal, as it mitigates what would otherwise be a more significant increase in base rates while assuring future bond holders that the utility can guarantee revenue to make debt service payments, even in years of low wholesale revenue.

Figure 3

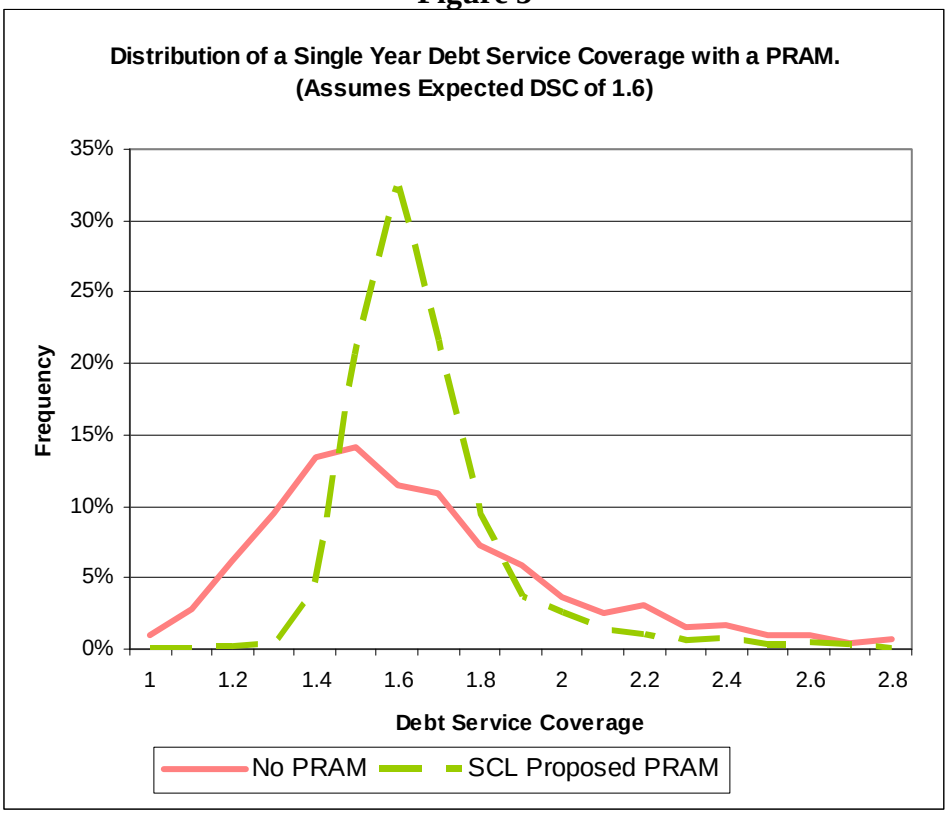
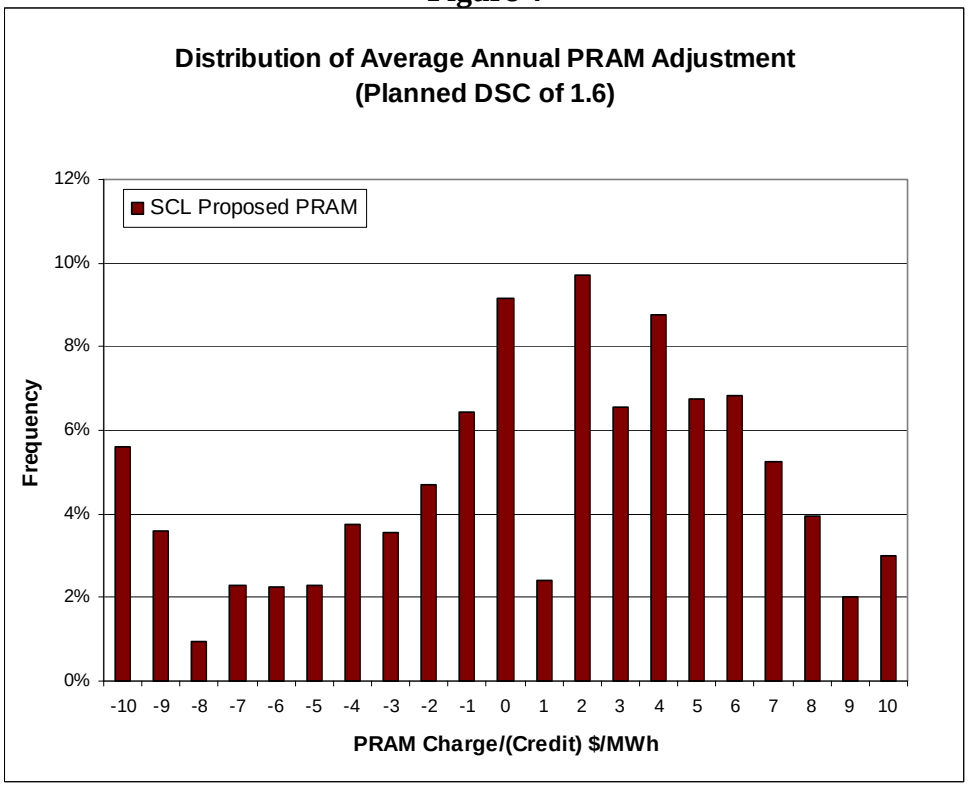


Figure 4



Customer Credits/Charges

Figure 4 shows the estimated distribution of PRAM charges. The distribution is not symmetric because the forecast distribution of wholesale revenue is not symmetric, and as a result, the $10 million threshold has disproportional impacts on credits and charges. City Light estimates that there is a 14% probability that customers would have an annual charge of over $6 per MWh, which is equivalent to a little over $4 a month for an average residential customer.

Financial Policy

If the City Council adopts a PRAM, City Light requests that its financial policy for 2010 lower its targeted debt service coverage level to 1.6 for 2010 (and increase it to 1.7 and 1.8 in 2011 and 2012, respectively). City Light believes the existence of the PRAM will allow it to maintain strong credit ratings, as a PRAM increases revenue stability. This would provide immediate benefits to ratepayers, as a reduction in debt service coverage requirements mitigates the increase in base rates to customers in the upcoming rate case.

Without a PRAM, City Light would need to: (1) increase retail rates significantly more than it is proposing (approximately 21% to meet the 2.0 coverage compared City Light's proposal of 8.8% at 1.6 coverage) or (2) make substantial unsustainable program cuts that would impact core customer services, or (3) take on imprudent financial risk, or (4) some combination of these unfavorable choices. A reduction in debt service coverage without a PRAM would almost certainly lead to a significant credit rating downgrade. The extremes of any of these options are unfavorable and would have both short term and long term repercussions for the utility and its customers. A PRAM could be used as a tool that helps maintain financial stability, ensures continuity of utility customer service, and maintains the utility's bond ratings.

Even with a PRAM, it is likely that reducing targeted debt service coverage to 1.6 in 2010 greatly increases the likelihood of a credit rating downgrade if that coverage reduction is not presented as part of a committed strategy to restore debt service coverage to a higher level in the near future. City Light's research and discussions with public finance experts have provided evidence that coverage levels of other utilities, and especially "AA" rated utilities, are above the 2.0 level. Accordingly, even the targeted level of 1.8 in 2012 presents some risk that the rating agencies will find this proposal grounds to reduce our ratings, with near certainty of this happening if we target only 1.6 in 2010 with no committed plan to get to 1.8.

Even with the adoption of a PRAM effective in 2010, City Light recommends that the financial policies be revised to reflect the new debt service coverage targets (1.6, 1.7 in 2010-2011 and 1.8 thereafter), and that the legislation take the form of a City ordinance rather than a resolution. This would provide additional assurance that, if necessary, action will be taken in 2011, 2012 and beyond to increase rates and achieve these coverage targets. City Light has an accompanying white paper with a broader discussion of financial policies, and proposed legislation to implement recommended changes.

Conclusion

Automatic rate adjustments for uncertain and uncontrollable energy costs and revenues are commonly used in utility rate structures. City Light has an automatic adjustment mechanism in place to pass BPA rate increases or decreases on to its customers. However, wholesale revenue is a substantially larger source of uncertainty in City Light's operating budget than BPA expenses, and the addition of a mechanism to address this volatility is especially warranted to provide the financial stability City Light needs to provide a consistent and planned level of service to customers.

Under the proposed PRAM, customer rates are increased when wholesale revenue is below expected levels and decreased when it is above expected levels. City Light currently proposes that 100% of the wholesale revenue difference be passed on to customers. Once City Light's financial strength is restored and we have experience with the PRAM, the percent deviation might become a policy parameter that can adjust the trade-off between utility revenue stability and customer rate impacts.

Table 3 – Power Cost Adjustment Mechanisms at Other Utilities

Power Cost Adjustment Mechanisms at Other Utilities					
Utility	**Frequency of true up adjustment**	**How is it done**	**Hydro Variation**	**Major Consideration**	**Length**
Austin	**Annual**	Cents per kWh	No Hydro	Trigger at 10% under collection	Year
Avista-Idaho	Annual	Cents per kWh	Yes	Trigger at 10% under collection	Year
*Avista-WA	Annual	Cents per kWh	Yes	Trigger at 10% under collection (different charge for each class	Year
Puget	When next PCA is Filed	Cents per kWh	Yes	Triggers at $20 Million under collection	is
Baltimore Gas & Electric Co	February-June-October- or more frequently if necessary	Cents per kWh	No Hydro	Cost of energy & transmission related services	
Nashville Electric Service	January-April-July-October	Cents per kWh	No Hydro	Spot market price of coal	
Gulf Power	Annual or next rate case	Cents per kWh	No Hydro	Current month's cost of fuel	Year
*Xcel	When necessary	Cents per kWh	No Hydro	Cost of fuel	3/8 5/8
Portland General Electric	Annual	Cents per kWh	No Hydro	Net cost of fuel, hedges,fuel transportation, power contracts, wholesale sales, & transmissiom/wheeling.	
Duke Energy	Monthly basis	Cents per kWh	No Hydro	Current cost of fuel & purchased power.	
Middle Tennessee Electric	Quarterly	Cents per kWh	No Hydro	Fuel costs-coal-natural gas	
Kodiak Electric	When necessary	Cents per kWh	No Hydro	Current cost of fuel & purchased power.	
CVEC	Monthly basis	Cents per kWh	No Hydro	Actual cost of energy	
Northfork Electric Cooperative	Monthly basis	Cents per kWh	No Hydro	The average cost of power per kWh purchased from suppliers during the previous month.	
Grand River Dam Authority	Monthly basis	Cents per kWh	No Hydro	Some fossil fuel and purchased power.	
Oregon Trail Electric	When necessary	Cents per kWh	No Hydro	When BPA wholesale rates go up or down and future price increases in cogeneration power purchase contracts.	
Idaho Power	Annual	Cents per kWh	No Hydro	Fuel costs and power purchase	
City of Anaheim	Quarterly	Cents per kWh	No Hydro	Costs related to the procurement of generation of energy-power production, purchased power, and any other costs involved in delivering energy.	
Indianapolis Power & Light Co	Quarterly	Cents per kWh	No Hydro	Estimated expense of fuel based on a three month average cost of fossil and nuclear fuels.	
SMUD**	**Proposal - When necessary	Cents per kWh	22 percent	When they are 4% below budget and the seed fund of $30 M falls to $0 M, a surcharge goes into effect. When the seed fund reaches 4% above the $30 M cap, customers receive a deduction in rates.	
LAWP	Quarterly- January 1 April 1-July 1 and October 1.	Cents per kWh	8 percent	The Energy Cost Adjustment (ECA) recovers the cost of fuel, purchased power including renewable resources, demand side management costs ,and revenue losses through application of the Energy Cost Adjustment Factor and other variable operational costs. ECA is adjusted quarterly.	
Grant County PUD	No PCA				
Chelan County PUD	No PCA				