

**PROBLEMS**

1. Ongoing decline in retail sales. Even though Seattle is growing rapidly and adding new customers, unit sales (kWh) are declining.
2. Revenue under-recovery: chronic under-collection of revenue to cover costs.
3. Revenue volatility: Retail revenue getting riskier and harder to forecast, swings each year are larger than historical.
4. Large and growing debt burden. Large capital program 60%+ financed by debt.
5. Rate structure doesn't match cost structure. Most of rates is energy charge, while most of cost is not energy.
6. Cross subsidies between ratepayers. Low users subsidized by high users. Solar and extreme-low consumers' bills do not cover fixed costs of service. Inequity/RSJ implications?

Below are three rate/revenue policy strategy areas for Review Panel discussion. These options are not mutually exclusive; any/all could be pursued.

City Light recommends that all three strategies (conservative forecasting, rate restructuring, decoupling) be employed, in conjunction with unbundling and gradualism.

**1. MORE CONSERVATIVE FORECASTING/POLICIES****Variations:**

- a) Improve/correct retail sales forecast
- b) Budget for conservative (lower than expected) retail sales
- c) Raise financial policy target (e.g. debt service coverage 2.0x)

**What it means:** Adjust financial planning methods to increase revenue requirement (retail revenue).

**Benefits:** Increase chances of full revenue collection, which improves utility financial health/stability. More capital expenditures would be paid upfront with cash, reducing debt load (and interest costs).

**Downside:** Higher near-term rate increases, getting lower as debt load goes down.

**Rate Impacts:** Higher bills for all customers in the near-term. Improved rate stability.

**2. RESTRUCTURE RATES****Variations:**

- a) Increase fixed charges (e.g. customer charge, minimum charge, peaking charge)
- b) Reduce second block rate (lower energy charge) or eliminate residential blocks
- c) Move away from net metering to a standard offer distributed generation rate

**What it means:** Collect more revenue through non-per-kwh charges.

**Benefits:** Better align revenue collection with cost of service. Improved revenue stability (less impact from consumption swings).

**Downside:** Potential reduction of price signal for conservation (for most customers). Increases payback period for solar installs.

**Rate Impacts:** Within rate classes, higher bills for low-use customers, and lower bills for higher-use. Some improved bill stability (e.g. winter heating).

### 3. DECOUPLING

**Variations:**

- Decoupling mechanism (decouple kwh from revenue)
- Expand RSA to retail revenue

**What it means:** A decoupling mechanism (e.g. PSE) recalibrates rates periodically to capture past revenue under/over collection. Using the RSA to decouple rates is similar, but the cash reserve buffers shortfalls, supplemented by surcharges as needed.

**Benefits:** Insulates utility from revenue uncertainty, improving financial stability.

**Downside:** Decreased rate predictability.

### OTHER CONSIDERATIONS

- 1. Unbundling:** Any option could be combined with re-stating rates (unbundling) which would improve customer and stakeholder understanding of electrical service components.

2018 Residential Rates – City	Adopted	Unbundled*
Basic Service Charge (\$/Month)	\$5.05	\$5.05
Delivery Charge (\$/kWh)		4.7¢
Energy Charge (\$/kWh)		
First Block	7.8¢	2.2¢
Second Block	13.2¢	7.6¢
Community Benefit Charge (\$/kWh)		0.9¢

\* No impact to bills' bottom line

- 2. Gradualism:** Any policy objective could be implemented all at once, or slowly over time. In the illustrative example below, an annual 5% increase is concentrated in the fixed customer charge and first block rate. The second block rate is inflated by 2% to preserve the current price signal.

	2018	2019	2020	2021	2022	2023	2024
Assumed Rate Increase (%)		5%	5%	5%	5%	5%	5%
Customer Charge (\$/Month)	5.05	6.00	7.00	8.00	9.00	10.00	11.00
First Block (¢/kWh)	7.8	8.3	8.9	9.5	10.1	10.8	11.6
Second Block (¢/kWh)	13.2	13.5	13.8	14.0	14.3	14.6	14.9

## SUMMARY TABLE

Problems/Concerns	Potential Solutions		
	More Conservative	Decoupling	Restructure Rates
Ongoing decline in retail demand	+++	++	+
Revenue under-recovery	++	+++	+
Revenue volatility		+++	+
Large and growing debt burden	+++	+	+
Rate structure doesn't match cost structure			+++
Cross subsidies between ratepayers (equity)			++

## WHAT OTHERS ARE DOING

Revenue uncertainty and retail demand decline is impacting all utilities.

	More Conservative	Decoupling	Rate Restructuring (Residential)		
			Fixed Monthly Charge	Block Rates	Other
Seattle	1.8x	No	\$4.86	Yes	
Tacoma	2.0x min target 2.4x 5-yr avg	No	\$11.00 MF \$13.50 SF	No	
Snohomish	1.9x 5-yr avg	No		No	
Sacramento	2.0x	No	\$20	No	TOU/EV option
Austin	2.0x +	No	\$10	Yes	TOU, EV rate pilots
LADWP	2.0x+	Yes (2012)	Based on highest monthly use (each year)	Yes	TOU option \$10 minimum bill
San Antonio	1.8x 3-yr avg	No	\$8.75	No	2¢/kwh summer capacity charge for >600 kWh, optional Large Use residential rate w/ demand charge
Phoenix (SRP)	2.9x 5-yr avg		\$20	No	Many price plans: TOU, EV, Solar, prepay, etc.
PSE		Yes (2013)	\$7.87	Yes	
Avista		Yes (2014)	\$8.50	Yes	

## CASE STUDIES

### SACRAMENTO (SMUD)

Sacramento’s System Infrastructure Fixed Charge (SIFC) collects for the ongoing fixed cost of interconnection (delivery), metering, billing, and customer service. Introduced in 2012, the SIFC has increased by \$2 each year, reaching \$20 in 2017.

#### SMUD System Infrastructure Fixed Charge (SIFC)

	2012	2013	2014	2015	2016	2017
SIFC (\$/month)	\$10	\$12	\$14	\$16	\$18	\$20
Percentage of costs (projected)	40%	48%	56%	64%	72%	80%

In 2013, SMUD started to transition to eliminate tiers in residential rates by 2017. In 2015, SMUD declared its intention to make time-based rates the standard for residential customers by 2018.

The new residential time-of-use schedule prices energy higher during the 5-8 pm peak. SMUD’s peak hours were formerly 4 to 7 p.m but over the years, increasing solar production pushed their system peak to later in the day.

### LOS ANGELES (LADWP)

Los Angeles has three-tiered rates, separated into two zones (zone 1 is coastal and cooler while zone 2 is inland and hotter). In 2016, LADWP introduced a Power Access Charge, a new fixed charge based on a customer’s peak usage over the year. LA also has a decoupling mechanism to stabilize revenues.

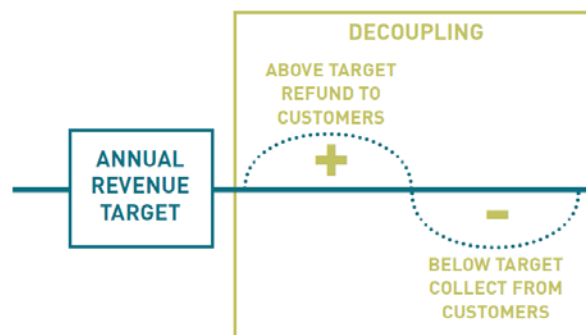
#### Power Access Charge (PAC)

The PAC is a new monthly fixed charge that will help to recover the basic infrastructure cost for providing access to the power grid. The PAC is tied to a customer’s electricity use, varies according to three usage tiers, and increases in price at each tier level. It also factors in the geographic temperature zone (Zone 1, cool, or Zone 2, warm) where a customer lives. The PAC will be calculated initially based on the year from April 15, 2015-April 14, 2016, and then every October 1st based on the highest monthly amount of electricity delivered to a customer the past year. Since the PAC is tied to consumption, customers can lower their charge each year by reducing their electric use. The following table shows the electricity allotment and price for each tier and temperature zone.

#### Electric Rate Tiers per Temperature Zone

	Zone 1 Usage (kWh)	Zone 2 Usage (kWh)	Cost Effective 2016	
			April 15	July 1
<b>Tier 1</b>	First 350	First 500	\$0.55	\$0.85
<b>Tier 2</b>	Next 700 (351-1050)	Next 1000 (501-1500)	\$2.00	\$3.00
<b>Tier 3</b>	Over 1050	Over 1500	\$6.00	\$9.00

**Base Rate Revenue Target (BRRT):** The BRRT uses a standard industry practice called decoupling to encourage conservation while covering LADWP’s fixed costs of providing reliable water and electricity service. Revenues above the sales target will be returned to customers while revenues below the sales target are recovered through charges over the next calendar year.



Source LADWP 2016 Rates Factsheet

## AUSTIN

In 2102, Austin Energy increased the fixed monthly charge from \$6 to \$10 and rolled out a new 5-tier residential rate structure. The tiers change seasonally and increase rates gradually with consumption, from 2.8¢ to 10.8¢. Austin’s per-kwh rates are unbundled into energy, power supply, community benefit, and regulatory components.

2016 saw ongoing debate in Austin on whether consumption was positively or negatively correlated with income. Regional activists claimed that low-income customers use less energy, and that this is “just assumed in this industry”. However, Austin Energy’s analysis showed customers on low income assistance had higher summer usage, and attributed this to a lack of modern weatherization and inefficient air conditioners.

## TACOMA

Tacoma residential rates are structured with flat (no blocks) unbundled per-kwh charges (delivery and energy components) as well as the fixed charge. Tacoma Power is in the process of steadily increasing fixed charges.

Rate increases approved by Tacoma’s Public Utilities Board in April 2017 included a \$3 increase to the (fixed) customer charges for both 2017 and 2018. Tacoma Power originally proposed increasing the fixed charge by \$5.75 each year, which represented 100% of the residential rate increase. This proposal was met by strong opposition from the NW Energy Coalition, who described the proposal as “ferociously regressive” and a “huge burden for low income customers”. In response, Tacoma presented statistical analysis showing that 98% of variation consumption could not be explained by income, and argued that increasing fixed charges mitigates the worst impacts (high winter heating bills) of a rate increase. Per Tacoma, their fixed cost to connect a customer is \$25 per month.

Ultimately, the change approved was a compromise; half of the original proposal.

<b>Tacoma Power Fixed Customer Charge</b>			
<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
\$5.50	\$10.50	\$13.50	\$16.50

## SNOPUD

Snohomish is in discussions about adding an infrastructure charge to their rate schedules, to allow for “better allocation of costs, correct price signals”. Per Snohomish, the average monthly consumption for a low-income discount customer (931 kWh) is slightly higher than the average for non-discount customers (908 kWh).

### Snohomish PUD Infrastructure Charge Options

Infrastructure Charge	Energy Rate (Standard)	Energy Rate (Discount)
\$0 (current)	10.25	10.11
\$5	9.71	9.57
\$15	8.62	8.48
\$25	7.53	7.39
\$35	6.44	6.30

A chart from SnoPUD’s recent presentation:

### Washington Utilities’ Residential Fixed Charges

