



 **Seattle City Light**

# Strategic Plan Update

Utility Select Committee

June 9, 2014

[www.seattle.gov/light/strategic-plan](http://www.seattle.gov/light/strategic-plan)

## WHAT WILL WE COVER TODAY?

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- **Review of Strategic Plan objectives, structure & rate path**
- **Overview of three new initiatives for 2015-2020 Update**
- **Introduce the policy framework and goals for rate design proposal**

# Review of Strategic Plan Objectives, Structure & Rate Path

## RECOMMITMENT TO STRATEGIC OBJECTIVES

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Improve **customer experience** and **rate predictability**.

Increase **workforce performance** and **safety practices**.

Enhance **organizational performance**.

Continue **conservation** and **environmental leadership**.

# 2015-2020 UPDATE RETAINS SAME STRUCTURE

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## Baseline

- Ensure current levels of service by delivering on 22 original assumptions

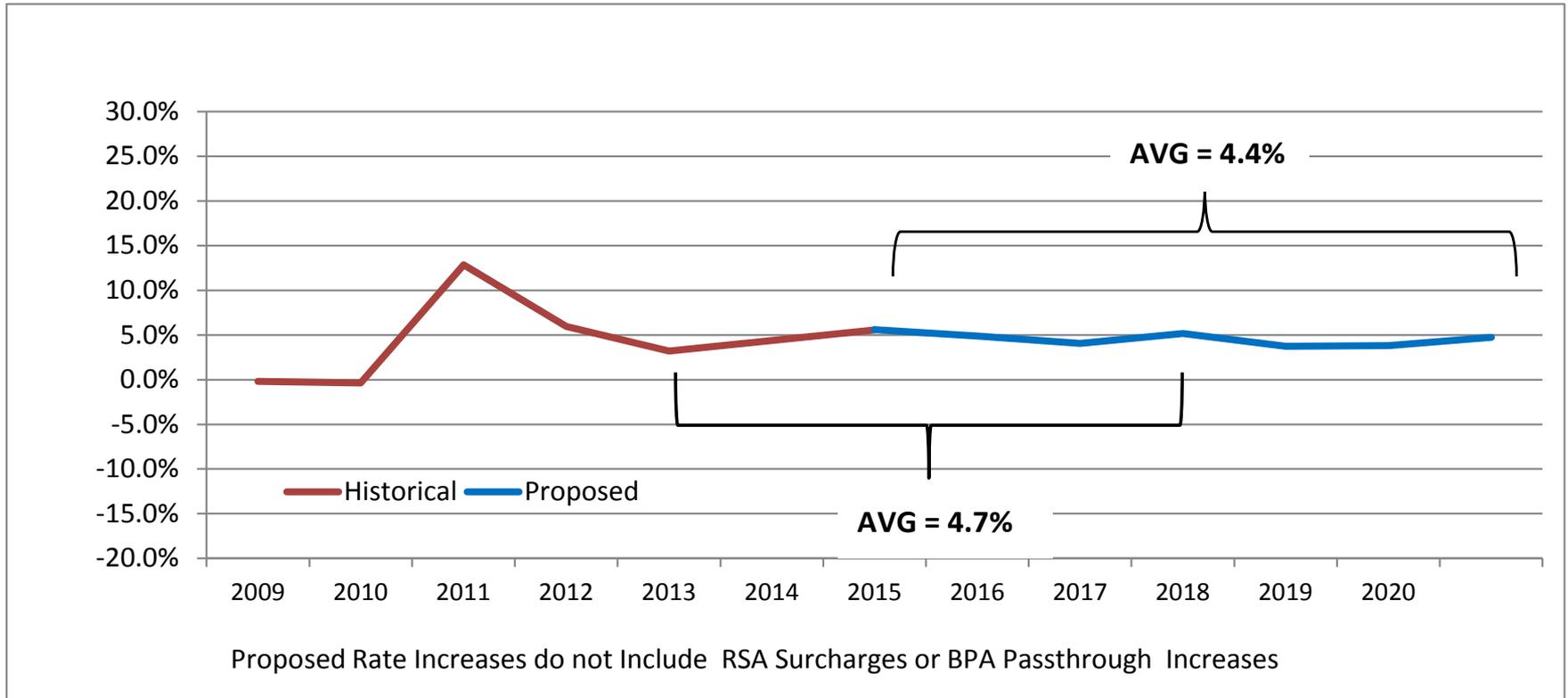
## Efficiencies

- Continue to deliver \$18m in annual savings
- Identify additional savings opportunities through future benchmarking efforts

## Strategic Plan Initiatives

- 2013-2018 plan has 36 initiatives, 26 assumed to continue into 2015-2020
- New Initiatives for 2019-2020
  - Distribution Automation (2019-2020)
  - Master Service Center Plan (2019-2020)
- Other Changes for 2015 -2020 Update
  - Net Wholesale Revenue Initiative Adjustment
  - Rate Design Proposal

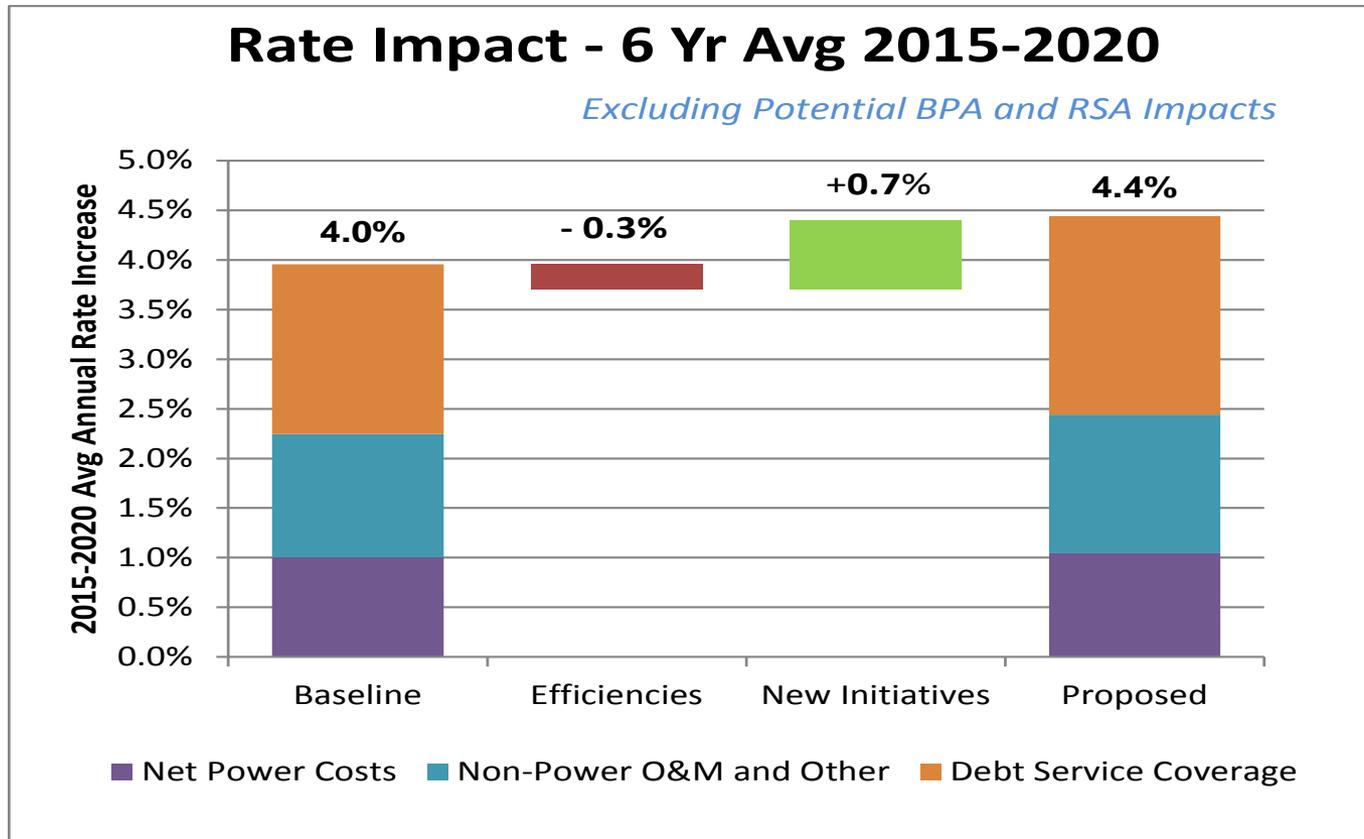
# UPDATED STRATEGIC PLAN RATE PATH 2013-2018 VS. 2015-2020



**New 6 year glide path reflects average annual rate increases of 4.4%**

**Reduction in rate pressure with the addition of two new years**

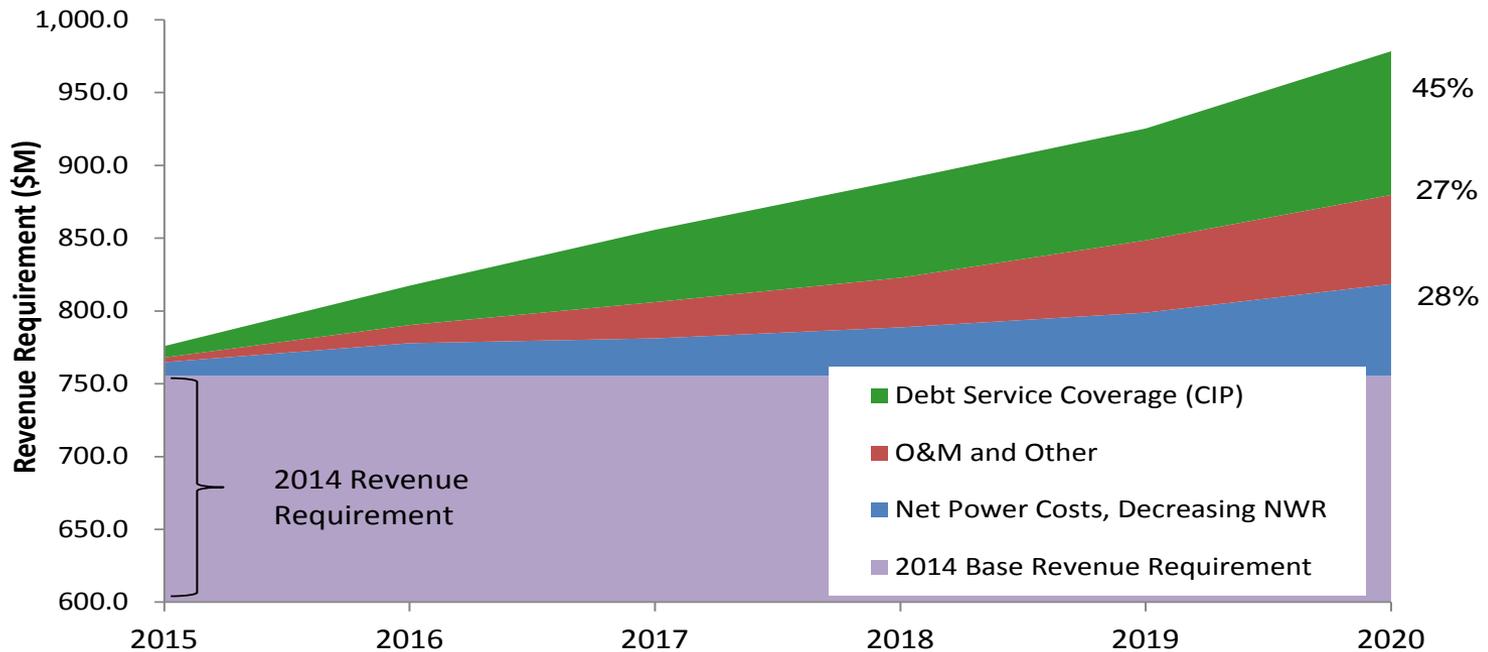
# STRATEGIC PLAN: BASELINE AND DRIVERS



With two new years added to the plan, the rate increase continues to be largely driven by baseline costs to maintain current levels of service and infrastructure

# 2015-2020 STRATEGIC PLAN UPDATE

## 2014 Strategic Plan Revenue Requirement Drivers



Increase in revenue requirement is driven primarily by investment in infrastructure and inflation

Strategic Plan Update  
2015-2020  
New Initiatives

# Distribution Automation Initiative

What is it?

How does it benefit customers and the utility?

# FUTURE DISTRIBUTION AUTOMATION (DA)

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Existing systems monitor and control equipment inside the substation

New systems will control, monitor and automate equipment outside substations on the distribution system

## ***Impact:***

- Improve System Reliability
  - Reduce outage duration
  - Reduce outage frequency
- Improve Operational Efficiency
- Improve Safety

# DISTRIBUTION MANAGEMENT SYSTEM

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## Software platform for:

- Demand response
- Energy delivery optimization
- Support Electric Vehicles and Solar Technologies
- Other applications



**DA systems will be integrated with DMS to further optimize systems operations**

# IMPLEMENTATION PLAN

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## Existing DA initiatives:

- Implement 10 distribution systems by 2019
- Install switches and communication equipment
- Pilot test 2014/2015
- Project cost - \$6.5M

## New DMS Initiatives:

- Complete upgrading EMS in 2017
- DMS software implementation in 2019/2020
- Integrate with DA systems
- Estimated project cost - \$12M



# Service Centers Facilities Master Planning Initiative

What is needed?

How does it benefit customers and the utility?

## SERVICE CENTER CHALLENGES – NEED FOR MASTER PLANS

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### Service centers form the backbone of City Light's operations

- Providing mission essential functions and
- Directly impact the mission to provide reliable, low-cost power to customers.

### Issues

- Built in the 1950s and 1920s respectively, City Light's North and South Service Centers have exceeded their intended operational lifespans.
- South Service Center sits in the liquefaction zone impacting continuity of operations following a major earthquake.

# MISSION/GOALS OF SERVICE CENTER MASTER PLANNING

Long term master plan that meets the following mission/goals:

## Customer Service

welcome / educational opportunities / civic presence

## Operational Excellence

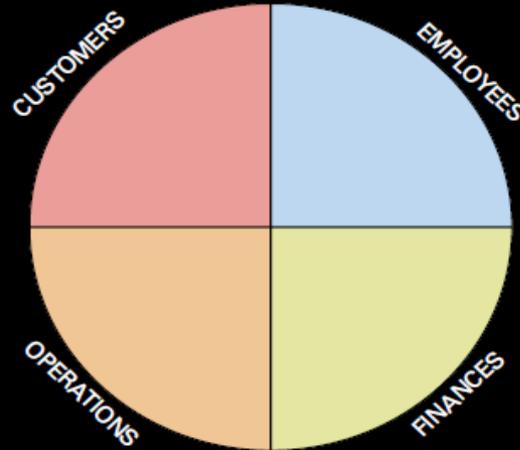
maximum efficiency / improved workflow / reliability & responsiveness

## Employee Performance

safety / collaboration / recruitment

## Financial Strength

longterm cost savings / flexibility for 30 years / security



## Evaluation Criteria

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### Reliable

Essential functions out of liquefaction zone

### Responsive

More distribution of functions across service area

### Efficient

Streamlined organization & staffing

### Neighborhood

Reduced impact to residential zones

### Cost

Land / design / entitlement / construction

## SERVICE CENTER PLANNING OPTIONS

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- A. **Seismic Upgrade to the South Service Center and North Service Centers**  
building structures and critical portions of the service yard to maximize continuity of operations following a major seismic event. ***Option included in the plan.***  
Estimated Cost: \$90M
- B. **Replace South Service Center** – Move functions at SSC to a new service center outside the seismic liquefaction zone and some functions from the NSC to a new service center. The South Service Center would be repurposed, or sold.  
Estimated Cost: \$350M
- C. **Single Large Service Center** – relocates all functions from the existing NSC and SSC to a new single, large service center in a central location to City Light’s service area.  
Estimated Cost: \$450M

*\* Est in 2014 \$’s*

## NEXT STEPS

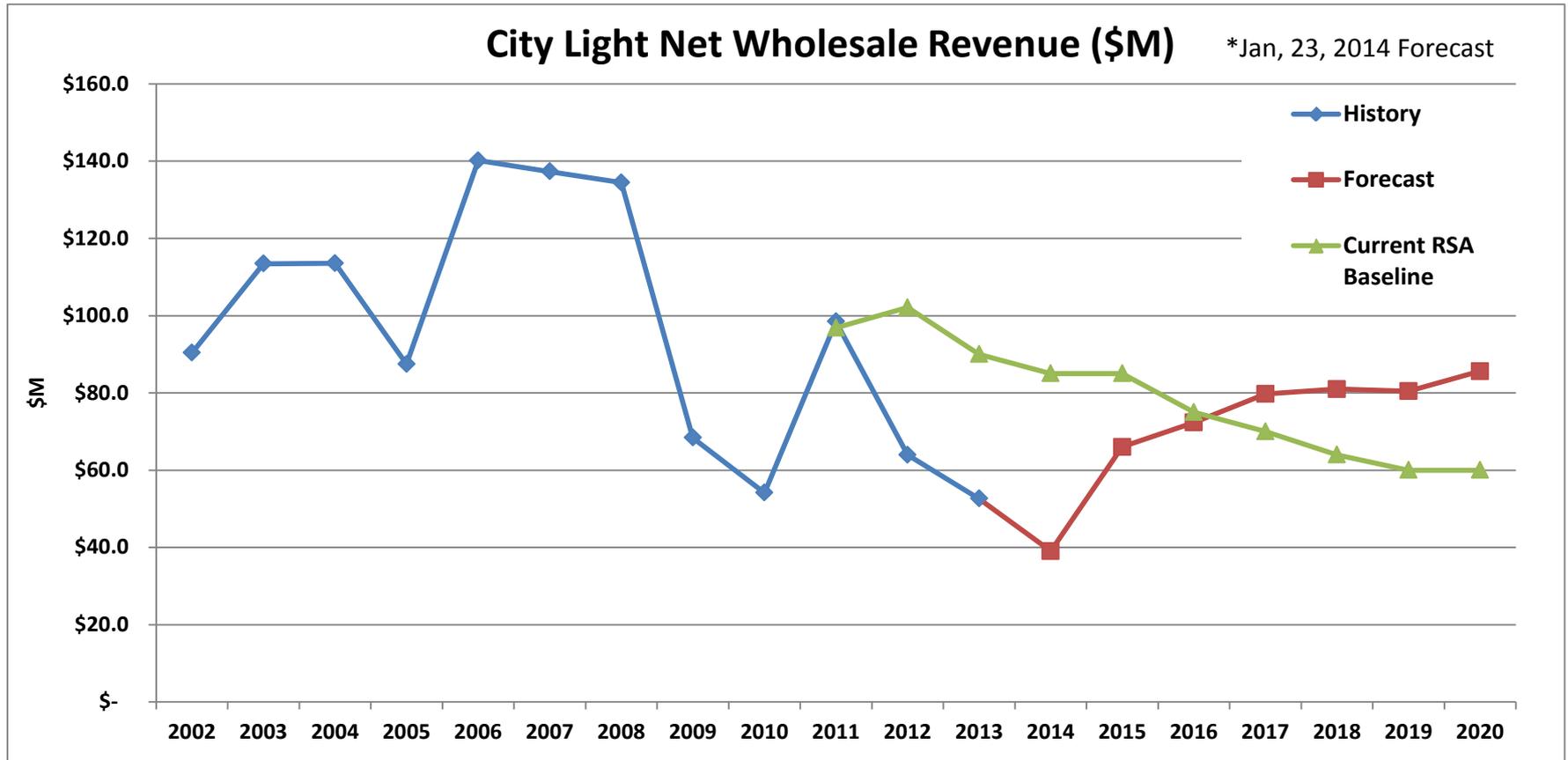
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- Continue to develop design options that best respond to the goals and evaluation criteria for review and consideration.
- 2019-2020 funding is a placeholder which can cover Specific Seismic Liquefaction concerns at SSC, or,
- Provide initial capital requirement for other options

# Net Wholesale Revenue/Rate Stabilization Account Initiative

# OUTLOOK - NET WHOLESALE REVENUE

The current RSA Baseline in 2013-2018 plan is much higher than the forecasted NWR. This could lead to prolonged RSA surcharges



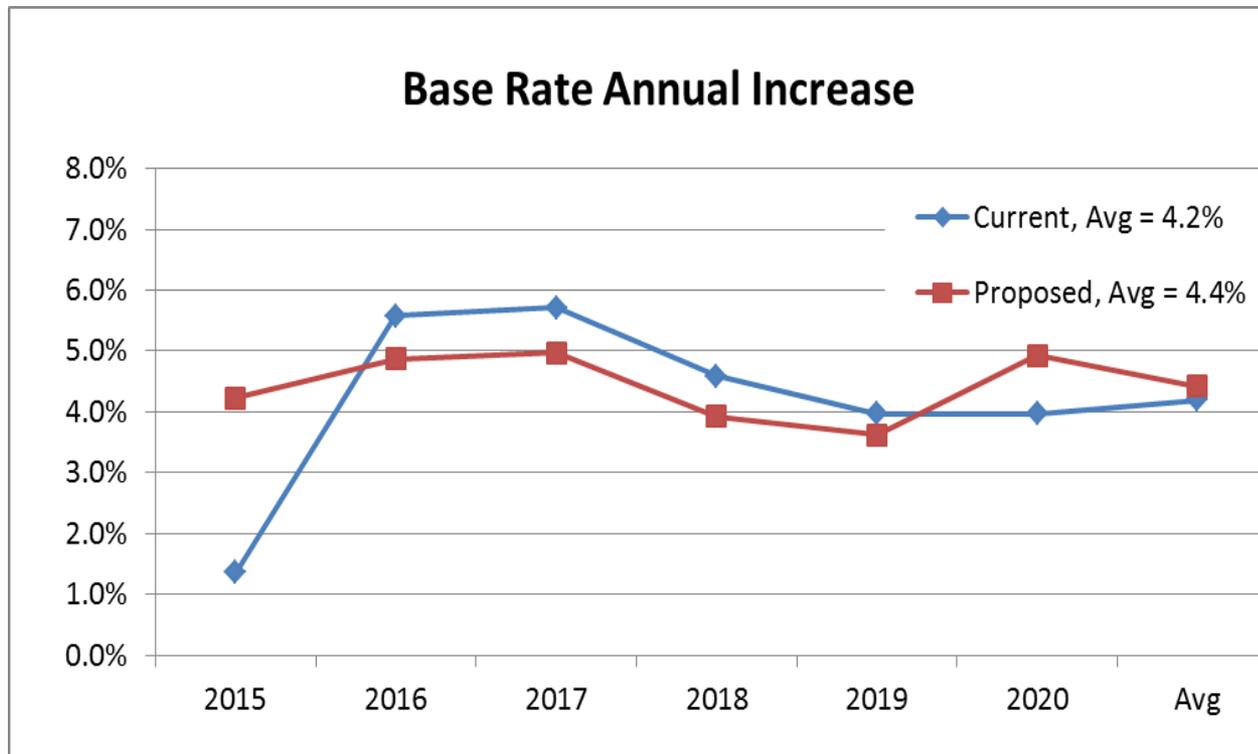
## NET WHOLESALE REVENUE CONCEPT

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<b>RSA Baseline NWR, \$M</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Original Plan	85	75	70	64	60	60
Proposed	65	60	60	60	55	50
Difference	20	15	10	4	5	10

The proposal will address the chronic gap between the NWR Budget and expected NWR.

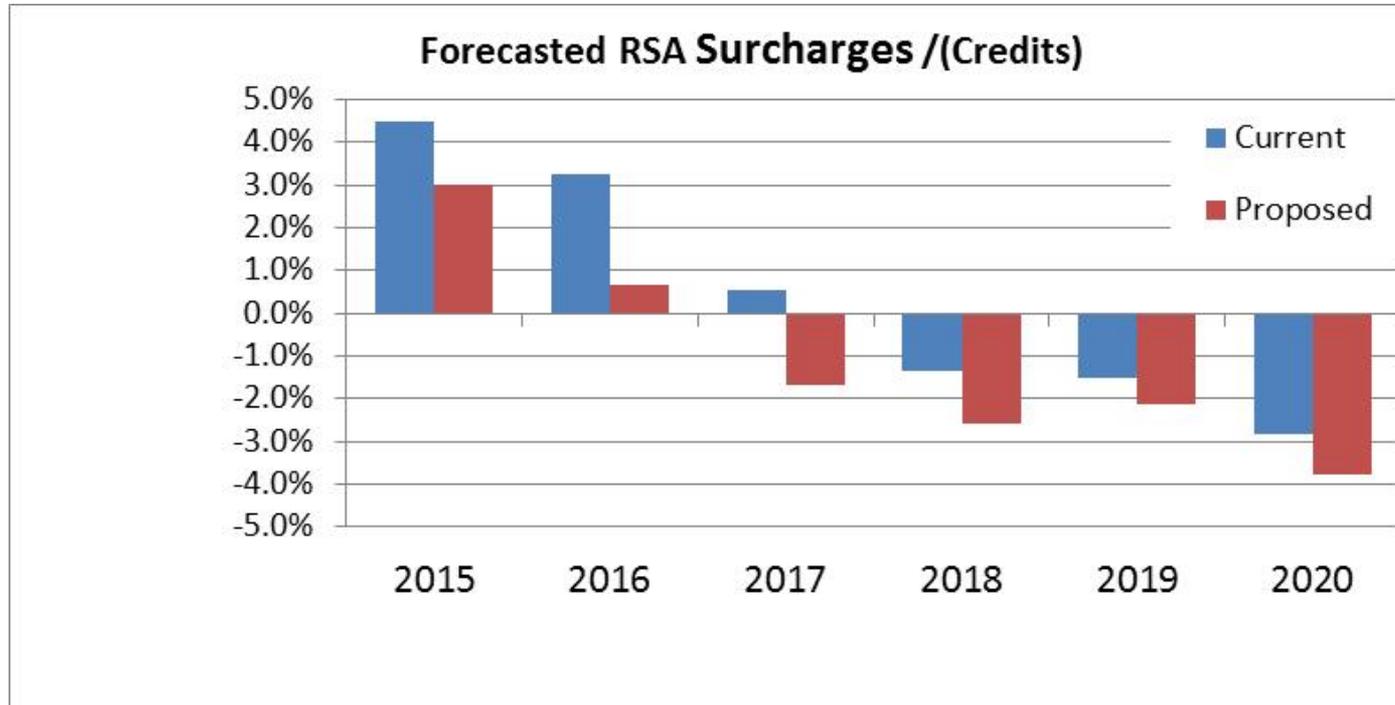
# COMPARATIVE IMPACT OF CONCEPT – BASELINE



\*Jan, 23, 2014 Forecast

- **Proposal provides a flat rate profile**
- **Total impact is only a slight increase in rates from 4.2% to 4.4%**

# COMPARATIVE IMPACT OF CONCEPT – RSA SURCHARGE/CREDIT



\*Jan, 23, 2014 Forecast

- **Size and duration of RSA surcharges greatly reduced**
- **Avg. effective rate change (base rate and RSA) for 6 years is 3.5%**

# Rate Design

Issue and Goals

# RATE DESIGN - TIMELINE

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- **Direction from Council in 2012\***
  - Assess rate design
  - Find balance between conflicting objectives (equity, energy efficiency, financial stability, etc)
  - Gradually phase in changes to moderate customer impacts
- **Process**
  - 2 Year Effort
  - Extensive Customer Engagement
    - Industry Comparisons
    - Public Outreach
  - Review Panel support of utility recommendation

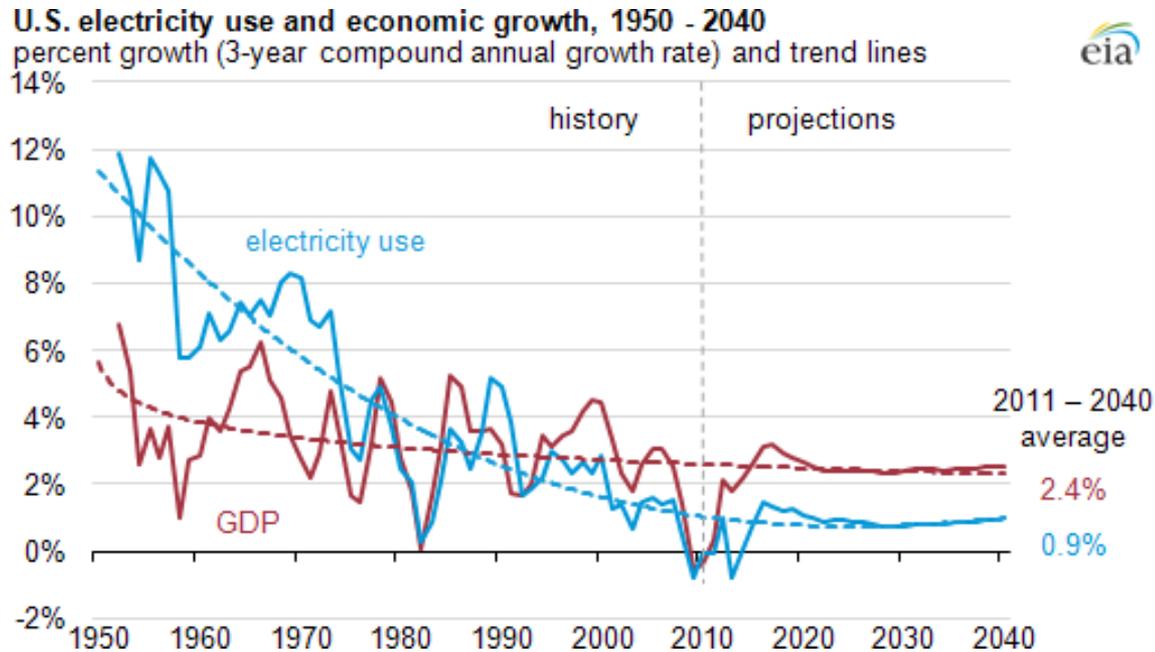
*\* Council Resolution 31351 (May 2012)*

# RATE DESIGN: CUSTOMER CHOICES

- Customers want more and better service:
  - Mobile/online tools
  - Performance-based incentives
  - Net-metering
  - Improved reliability
  - Conservation
  - Solar
- While using less and less energy

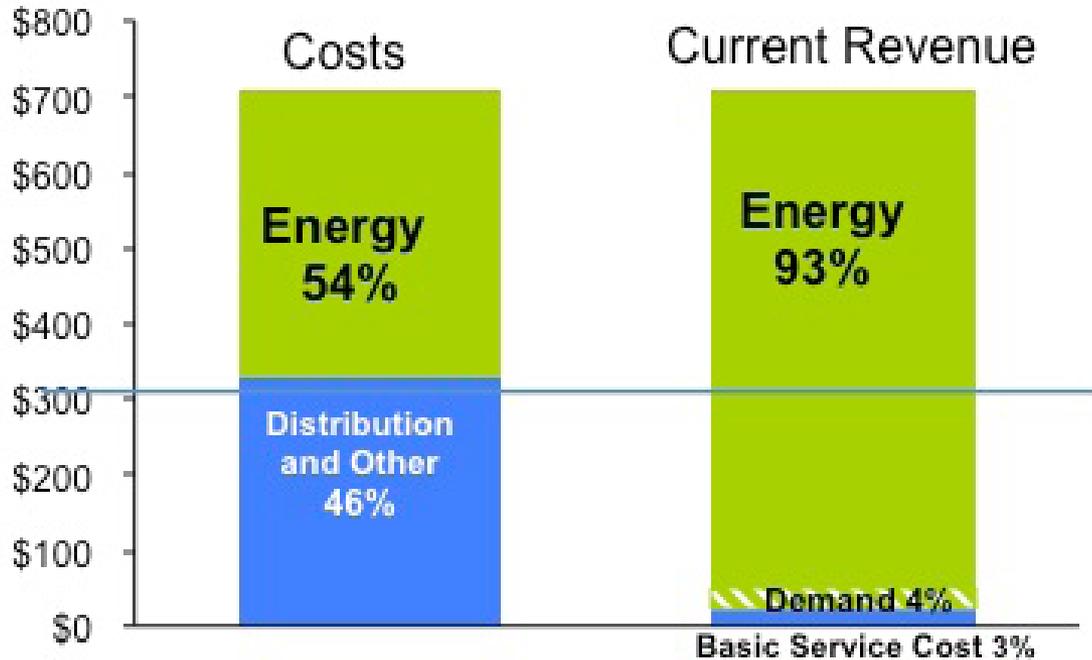


# SERVICE NEEDS ARE INCREASING. ENERGY DEMAND IS NOT.



- Environmental and conservation programs are changing the landscape.
- In 1950, energy consumption grew about 12 percent a year. Now, growth averages less than one percent a year.

# FIXED COSTS. VARIABLE REVENUE



## Issue

- Model has not changed significantly since the 1980s.
- Does not accurately reflect the cost of maintaining City Light's infrastructure and providing high quality customer service.

# WHAT OTHERS ARE SAYING



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*Electric power companies challenge "net metering" policies, saying nonsolar households end up with higher costs.*



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Increasingly, households can pay up front for power. While some say such plans can help consumers stick to a budget and save energy, others see troubling implications for consumers.



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Landmark rules for power plants proposed Monday by the Obama Administration benefit from reductions already taking place.



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The Obama administration Monday will propose rules seeking a 30 percent reduction in power plant emissions, a signature action against climate change.

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# WHAT OTHERS ARE SAYING

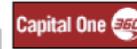
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### On Rooftops, a Rival for Utilities



Monica Almeida/The New York Times

Solar panels north of Los Angeles. According to the Energy Information Administration, rooftop solar electricity accounts for less than a quarter of 1 percent of the nation's power generation.

By DIANE CARDWELL  
Published: July 26, 2013

For years, power companies have watched warily as solar panels have sprouted across the nation's rooftops. Now, in almost panicked tones, they are fighting hard to slow the spread.

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Wealth Matters: Seeking Light in the Heat of Energy Investing (July 27, 2013)

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Alarmed by what they say has become an existential threat to their business, utility companies are moving to roll back government incentives aimed at promoting solar energy and other

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May 23, 2014, 11:45 A.M. ET

## Barclays Downgrades Electric Utility Bonds, Sees Viable Solar Competition

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By Michael Aneiro

**Barclays** this week downgrades the entire electric sector of the U.S. high-grade corporate bond market to underweight, saying it sees long-term challenges to electric utilities from solar energy, and that the electric sector of the bond market isn't pricing in these challenges right now. It's a noteworthy downgrade since electric utilities which make up nearly 7.5% of Barclays' U.S. Corporate Index by market value. From Barclays credit strategy team:

Electric utilities... are seen by many investors as a sturdy and defensive subset of the investment grade universe. Over the next few years, however, we believe that a confluence of declining cost trends in distributed solar photovoltaic (PV) power generation and residential-scale power storage is likely to disrupt the status quo. Based on our analysis, the cost of solar + storage for residential consumers of electricity is already competitive with the price of utility grid power in Hawaii. Of the other major markets, California could follow in 2017, New York and Arizona in 2018, and many other states soon after.

In the 100+ year history of the electric utility industry, there has never before been a truly cost-competitive substitute available for grid power. We believe that solar + storage could reconfigure the organization and regulation of the electric power business over the coming decade. We see near-term risks to credit from regulators and utilities falling behind the solar + storage adoption curve and long-term risks from a comprehensive re-imagining of the role utilities play in providing electric power.

Barclays says bond risk premiums for the electricity sector indicate investors are ignoring these risks for now.

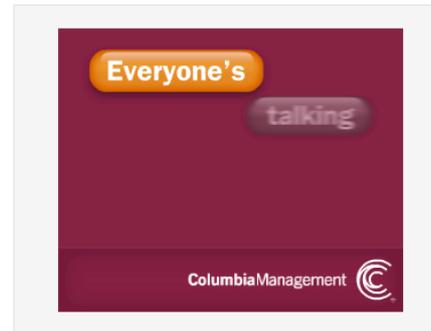
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## The Economics of Grid Defection



Distributed electricity generation, especially solar PV, is rapidly spreading and getting much cheaper. Distributed electricity storage is doing the same, thanks largely to mass production of batteries for electric vehicles. Solar power is already starting to erode some utilities' sales and revenues.

[Download the Four Page Overview](#)

But what happens when solar and batteries join forces? Together they can make the electric grid optional for many customers—without compromising reliability and increasingly at prices cheaper than utility retail electricity. Equipped with a solar-plus-battery system, customers can take or leave traditional utility service with what amounts to a “utility in a box.”

This “utility in a box” represents a fundamentally different challenge for utilities. Whereas other technologies, including solar PV and other distributed resources without storage, net metering, and energy efficiency still require some degree of grid dependence, solar-plus-batteries enable customers to cut the cord to their utility entirely.

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By Ehren Goossens, Mark Chediak, and Jim Polson | May 29, 2014

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# CHALLENGE AND OPPORTUNITY

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- Utility landscape is rapidly changing
  - Increased Renewables
  - Increased Energy Efficiency
  - Increased interest in Energy Independence
- Others in the industry have been caught Flatfooted
- Our chance to innovate and get in front of the challenge

# Questions

