



# Putting Our Customers First

**WATER & POWER RATES REQUEST, 2016-2020**

**Energy and Environment Committee**

**March 1, 2016**



# Priorities for Rates Request

**Replace aging infrastructure**

**Protect from drought, transform supplies & meet mandates**

**Improve customer service & keep rates competitive**



# Recommended 5-Year Rate Changes with Residential Bill Impacts

**Half of residential customers will realize a combined Water and Power Average Annual Increase of 3% or less.**

	Low-Use Residential (250 kWh/Month 8 HCF/Month)	Typical Residential (500 kWh/Month 12 HCF/Month)	High-Use Residential (900 kWh/Month 27 HCF/Month)
<b>Current Monthly Bill</b>	<b>\$74.97</b>	<b>\$130.67</b>	<b>\$276.03</b>
<b>5-Year Avg. Annual Power Rate Change</b>	<b>\$.84 (2.2%)</b>	<b>\$1.17 (1.56%)</b>	<b>\$5.26 (3.45%)</b>
<b>5-Year Avg. Annual Water Rate Change</b>	<b>\$1.07 (2.6%)</b>	<b>\$3.02 (4.8%)</b>	<b>\$11.05 (7.2%)</b>
<b>5-Year Avg. Monthly Bill Annual Change</b>	<b>\$1.91 (2.4%)</b>	<b>\$4.20 (3.0%)</b>	<b>\$16.31 (5.3%)</b>
<b>Average New Monthly Bill At the End of 5 Years</b>	<b>\$84.49</b>	<b>\$151.65</b>	<b>\$357.56</b>

# Recommended 5-Year Rate Changes for Commercial Customers

## Proposed 5-Year Water and Power Rate Change

	Small Commercial (1,000 kWh/Month 15 HCF/Month)	Medium Commercial (12,250 kWh/Month 80 HCF/Month)	Large Commercial (100,000 kWh/Month 500 HCF/Month)
<b>Current Monthly Bill</b>	<b>\$235.32</b>	<b>\$2,320.19</b>	<b>\$17,457.88</b>
<b>5-Year Avg. Annual Power Rate Change</b>	<b>\$4.32 (2.5%)</b>	<b>\$76.46 (3.7%)</b>	<b>\$590.20 (3.7%)</b>
<b>5-Year Avg. Annual Water Rate Change</b>	<b>\$3.01 (3.8%)</b>	<b>\$10.14 (2.5%)</b>	<b>\$60.10 (2.3%)</b>
<b>Total 5-Year Avg. Annual Rate Change</b>	<b>\$7.33 (2.94%)</b>	<b>\$86.60 (3.5%)</b>	<b>\$650.30 (3.5%)</b>
<b>Average Monthly Bill Increase At End of 5 Years</b>	<b>\$36.65</b>	<b>\$433.00</b>	<b>\$3,251.00</b>
<b>Average New Monthly Bill At End of 5 Years</b>	<b>\$271.97</b>	<b>\$2,753.21</b>	<b>\$20,709.37</b>

# Ways to Save

## We continue to expand Customer Programs that help manage bills and benefit the environment



### AIR CONDITIONING TUNE UP PROGRAM

- Can reduce cooling costs 20% - 30%
- Extends life of the AC Unit



### POOL PUMP REBATES

- Variable Speed: \$1000 incentive and \$33 average monthly bill savings



### Water Conservation

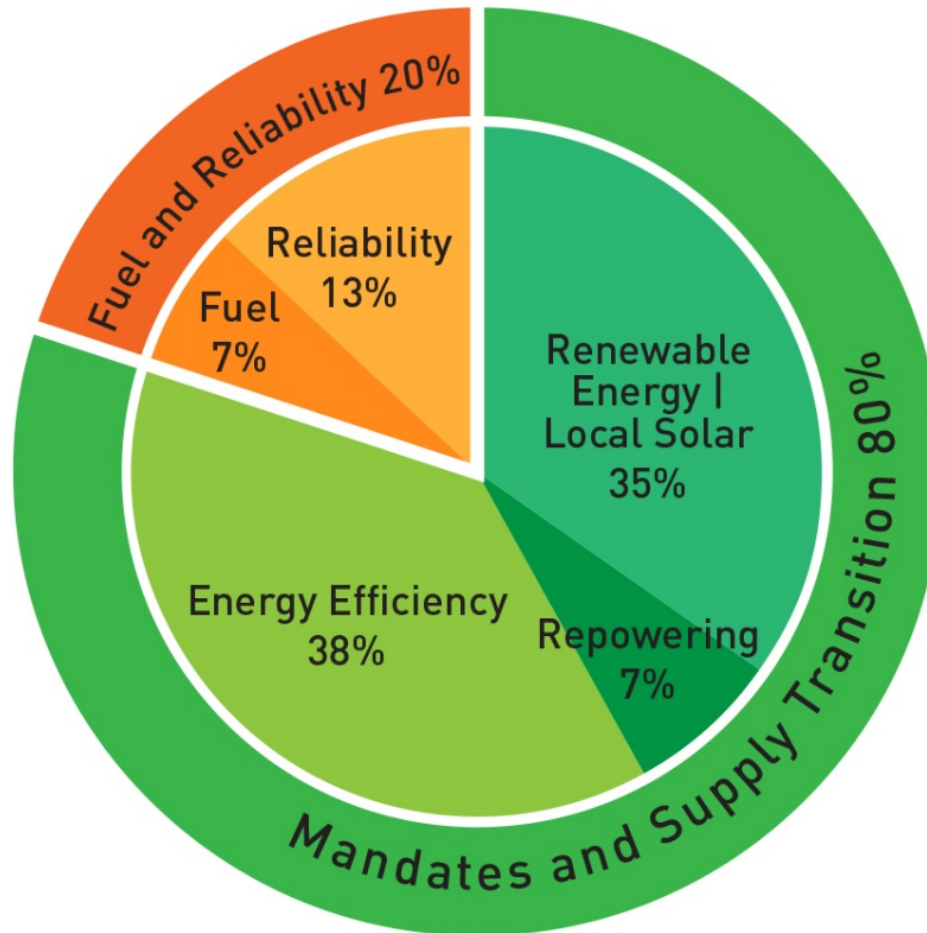
- Commercial Rebates
- for Water-Saving Measures
- Technical Assistance
- Education & Outreach

# POWER RATE ACTION

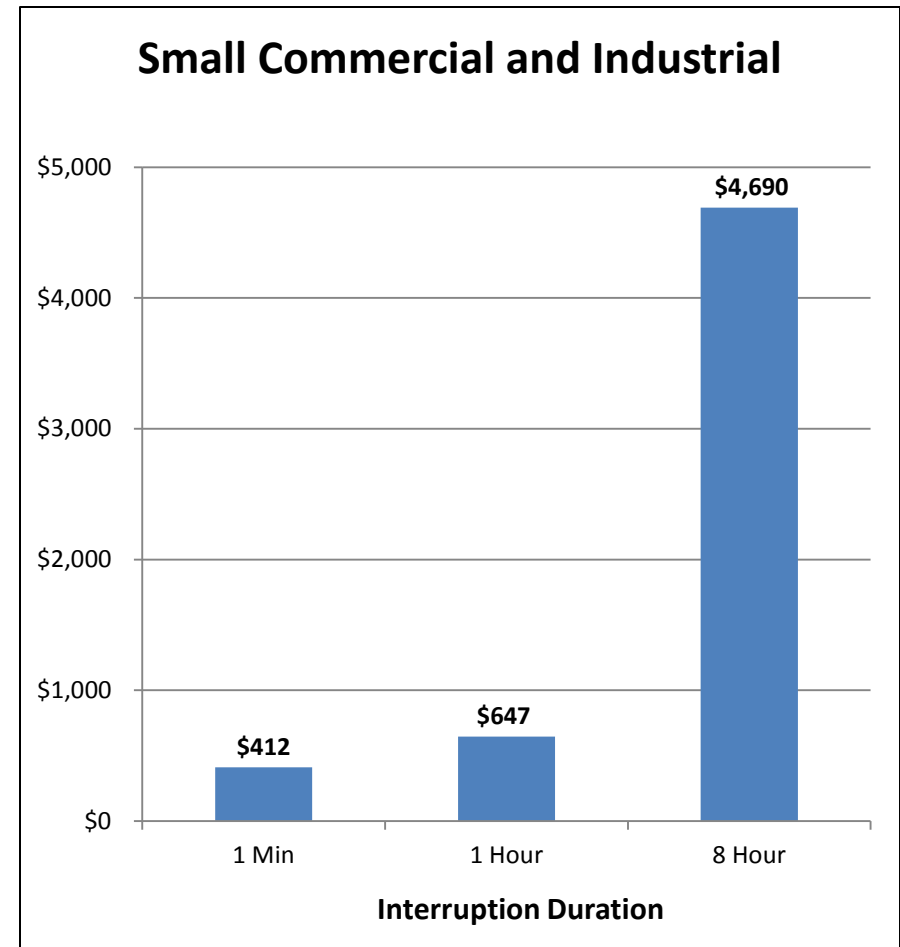
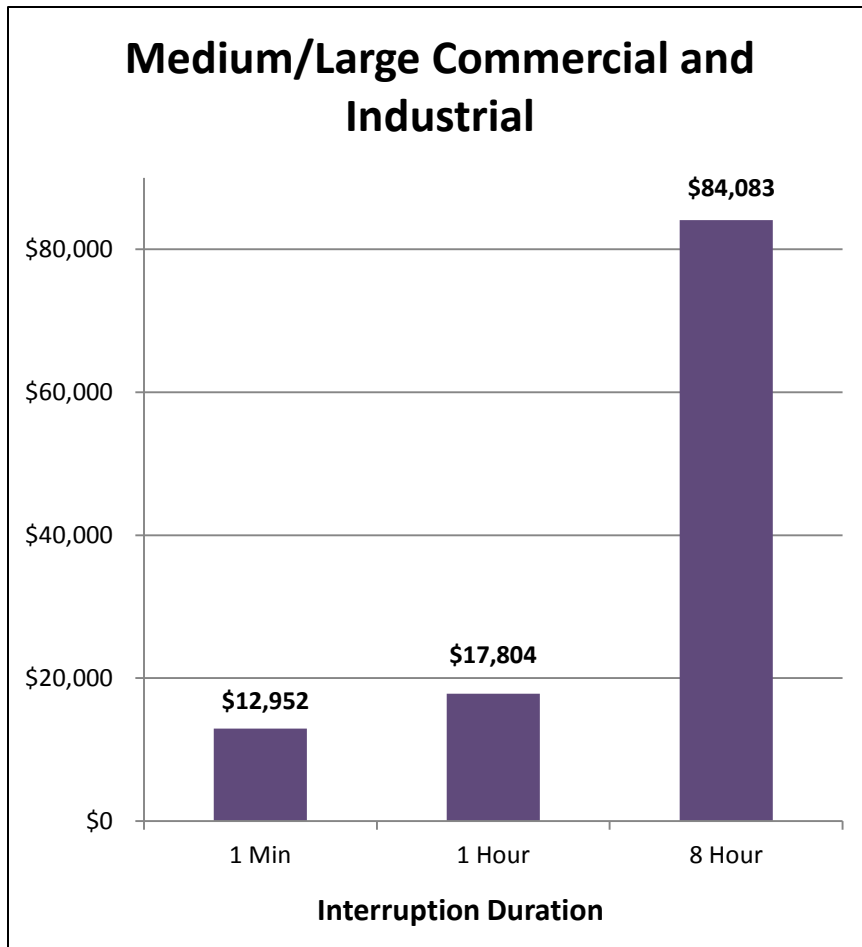


# How Does The Power Rates Break Down?

## Mandates: 80% of Power Revenues



# Customer Costs of Power Interruptions

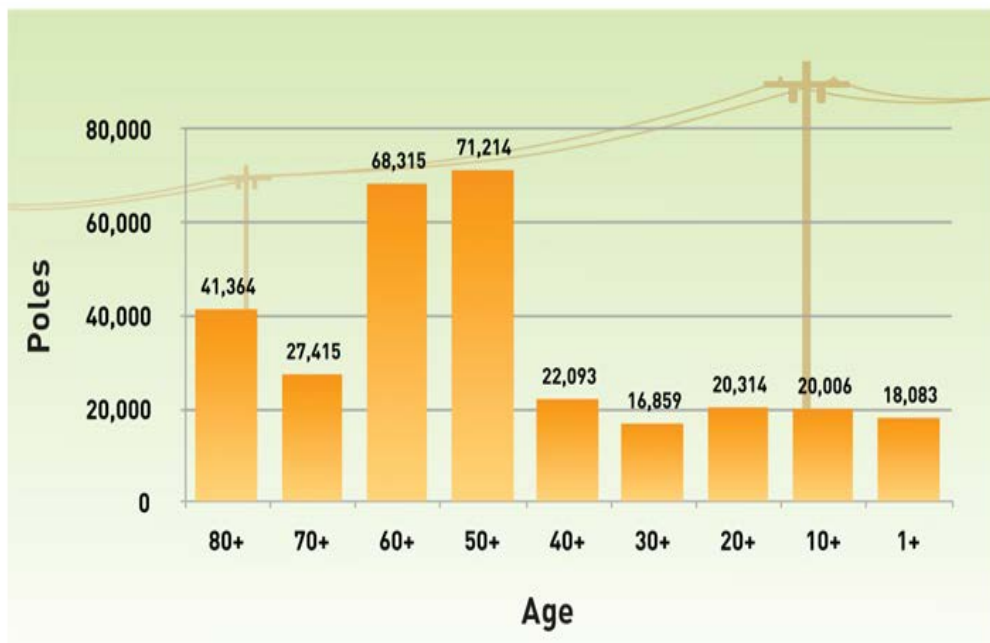


“Updated Value of Service Reliability Estimates for Electric Utility Customers in the United States.” Ernest Orlando Lawrence Berkeley National Laboratory, January 2015  
(<https://gig.lbl.gov/sites/all/files/lbnl-6941e.pdf>)



# Proactive Investment in Power Infrastructure: Increasing Reliability, Creating Jobs and Saving Money

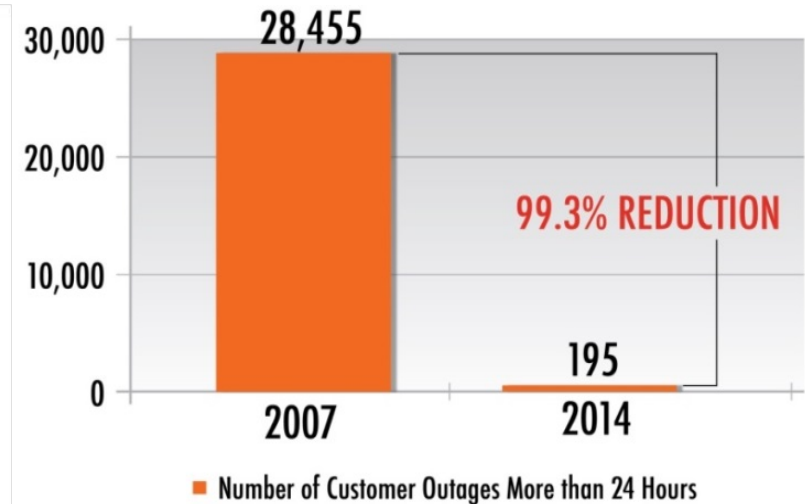
## Power poles: Critical infrastructure that's aging rapidly



## Aging & Vulnerable Power Infrastructure

Roughly 43% of power poles are 60 years or older; nearly 65% are over 50 yrs. old.

## 2007 vs. 2014 Heat Storms



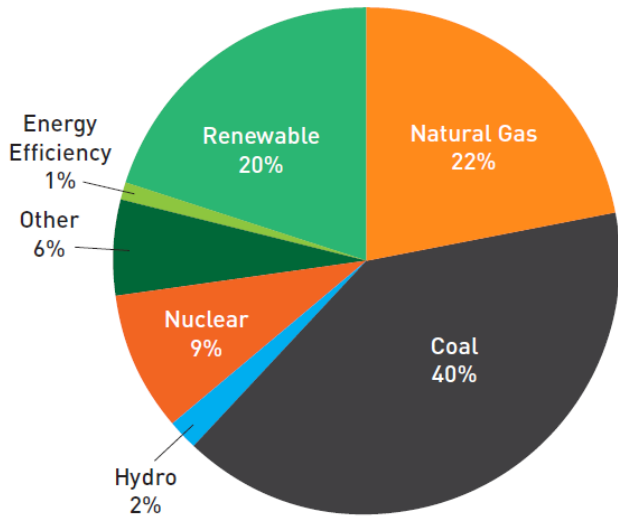
## Heat Storms

- Replacement of distribution transformers after 2007 heat storm
- Reduced customer outages over 24 hours by 99% during 2014 heat storm

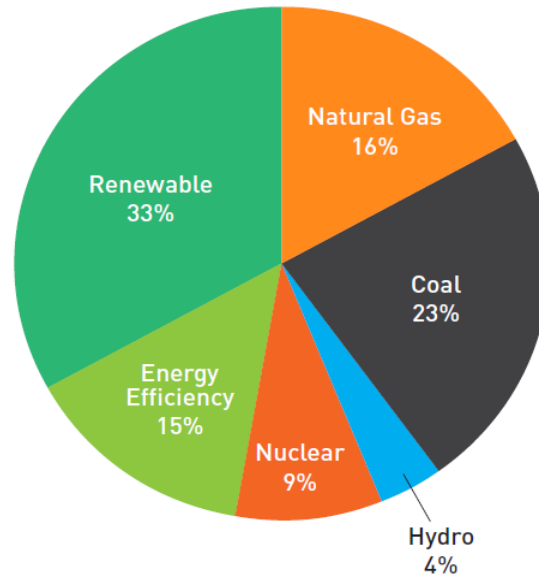
# Power Supply Transition & Mandates

Meeting mandates and reducing CO<sub>2</sub> emissions 60% by 2026 to create clean energy for our customers.

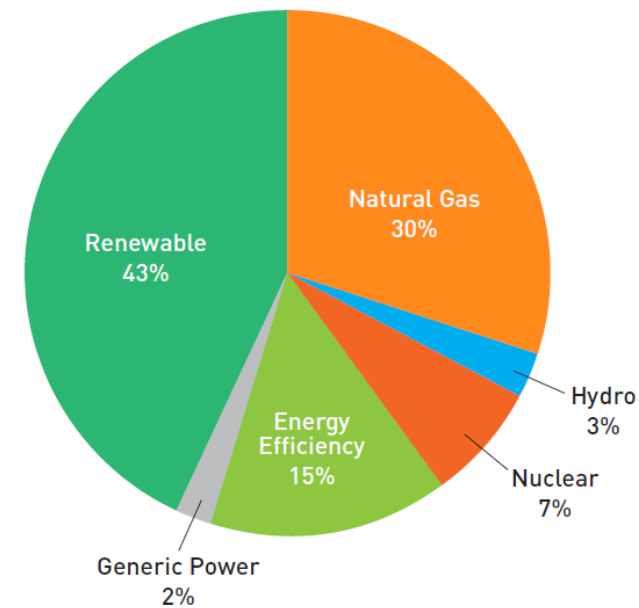
2014



2020



2026



CO<sub>2</sub> emissions: 14.9 mt  
(metric tons = mt)

10.4 mt

5.9 mt

CO<sub>2</sub> emissions in 1990 (reference point): 17.9 mt

# Power : 5-Year Spending Plan for Core Initiatives

Historical Average * (in millions)	Core Initiative	5-Yr Average (in millions)	5-Yr Total (in millions)
\$525	Power System Reliability Program (PSRP)	\$850	\$4,249
\$800	Supply Transition and Mandates **	\$1,057	\$5,286
\$120	Customer Opportunities Programs	\$261	\$1,307
<b>\$1,445</b>	<b>Total</b>	<b>\$2,168</b>	<b>\$10,841</b>

\*Historical Average based on last completed fiscal years 2012-13 and 2013-14.

\*\*Supply transition and mandates includes coal transition, renewables and repowering.



# Summary of Changes to Rate Proposals

Changes have been incorporated into the final rate proposal as a result of input from the OPA and stakeholders. With these changes and current market conditions, the overall Power rate increases have dropped by 0.9% as compared to the original proposal in July 2015.

---

<b>Performance-based Rates</b>	New metrics-based reporting to improve LADWP's performance, accountability and transparency
<b>Net Wholesale Revenue</b>	Net wholesale revenues in excess of budgeted amounts will be directly credited to Power customers
<b>Contribution in Aid of Construction</b>	Amounts paid by customers for upgrades / equipment for new developments in excess of budgeted amounts will be directly credited to Power customers
<b>Interim Rate Review</b>	Requires a "check in period" which includes: revised five-year financial and performance outlook and status of LADWP responses to Mayoral and City Council reports
<b>Lower Fuel Prices</b>	Lower natural gas prices are reflected, which reduces the annual system average Power rate increase
<b>Power Access Charge</b>	Modified the Power Access Charge from energy to/from meter residential service; to only charging for the energy that flows into a metered residential service
<b>Reliability Program Spending Transparency/Over-collection Prevention</b>	Creation of pass through adjustment factor for Reliability Program increases transparency through performance reporting and aligns revenues with spending
<b>Rate Action Effective Date</b>	If approved, the new Water and Power rates will become effective 4/1/16

---

# Power Access Charge



The LADWP is proposing a Power Access charge tied to the highest level of consumption over the last year. This would provide customers with an opportunity to adjust their usage patterns to minimize the use of the Power Infrastructure and their bills. Major elements of this access charge include:

- Three tier structure
- kWh thresholds are the same as energy usage
- Access charge and energy (kWh) rates are designed in sync to manage conservation incentives and customer bill impacts
- Fixed rate monthly charge will be reset every October based on highest monthly amount of energy received in the past year

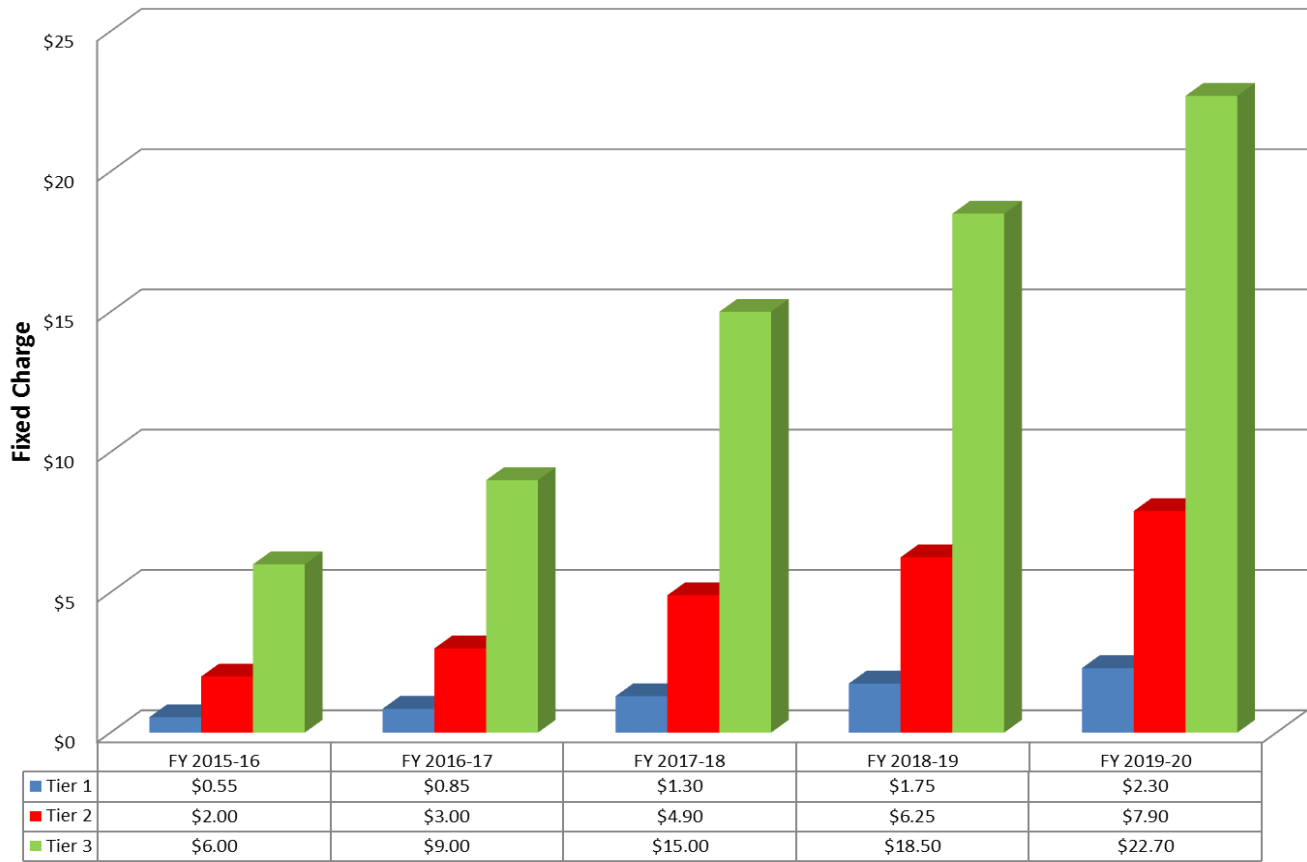
Proposed kWh threshold by temperature zone

	Zone 1 Monthly Usage (kWh)	Zone 2 Monthly Usage (kWh)
Tier 1	First 350	First 500
Tier 2	351 - 1050	501 - 1500
Tier 3	Over 1050	Over 1500

# Power Access Charge



Proposed Residential Monthly Power Access Charge



In addition to recovery of costs, the proposed access charge will:

- Minimize the bill impact on low usage customers
- Promote conservation
- Ensure equitable costs for solar and other distributed generation

# Appendix

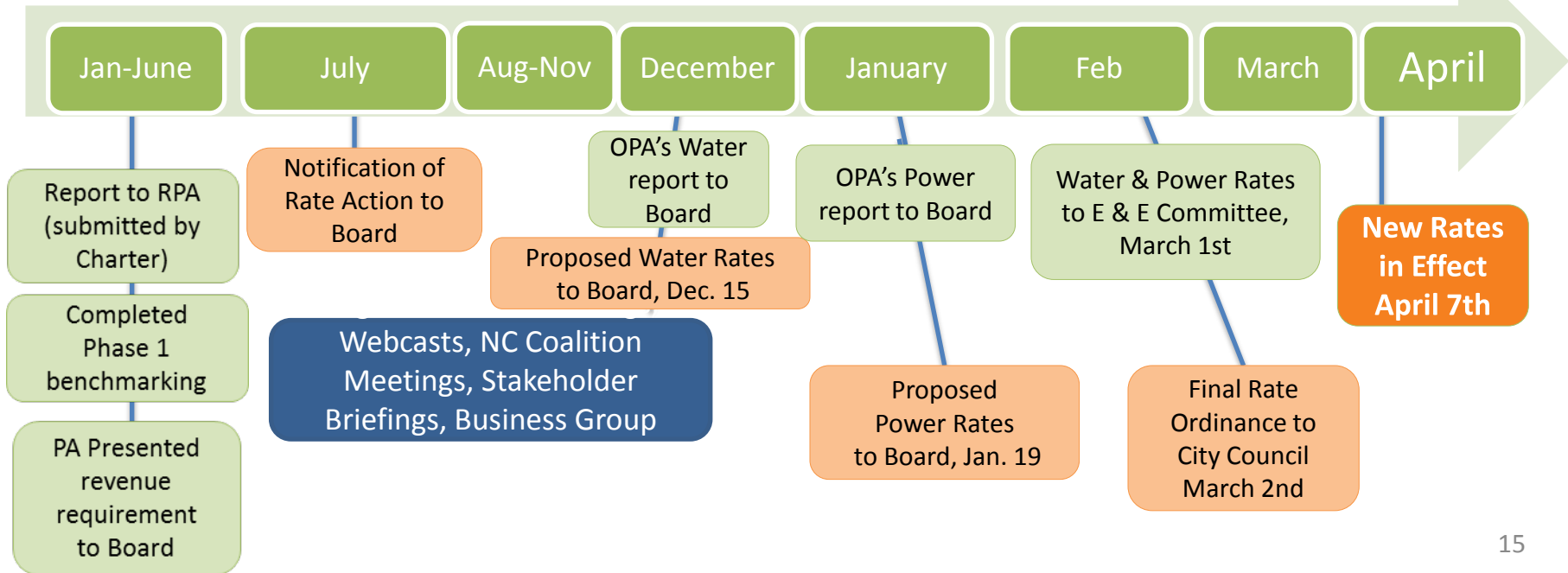
# Timeline for Rate Request



2015

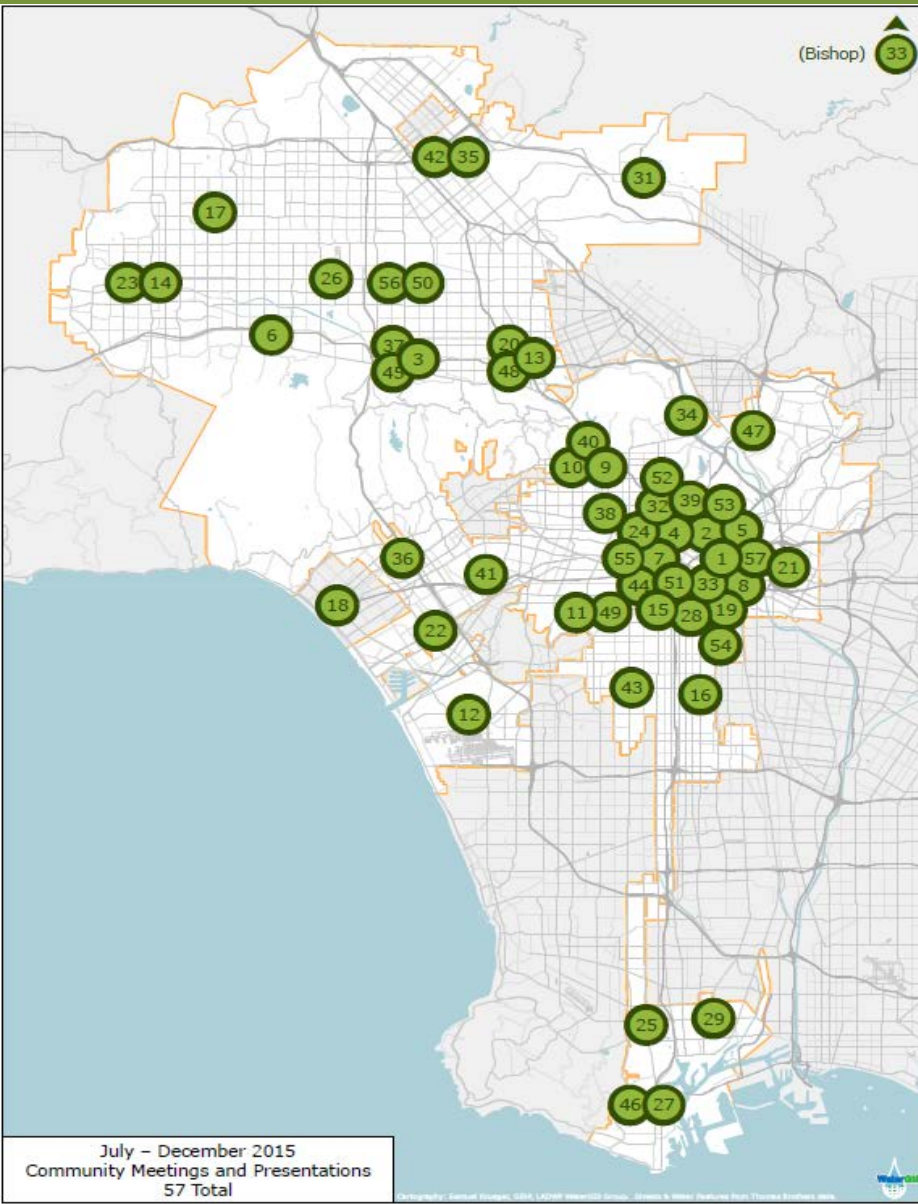
2016

NC Notification & Public Outreach  
Prop. 218 Notice





# Outreach Summary - Meetings

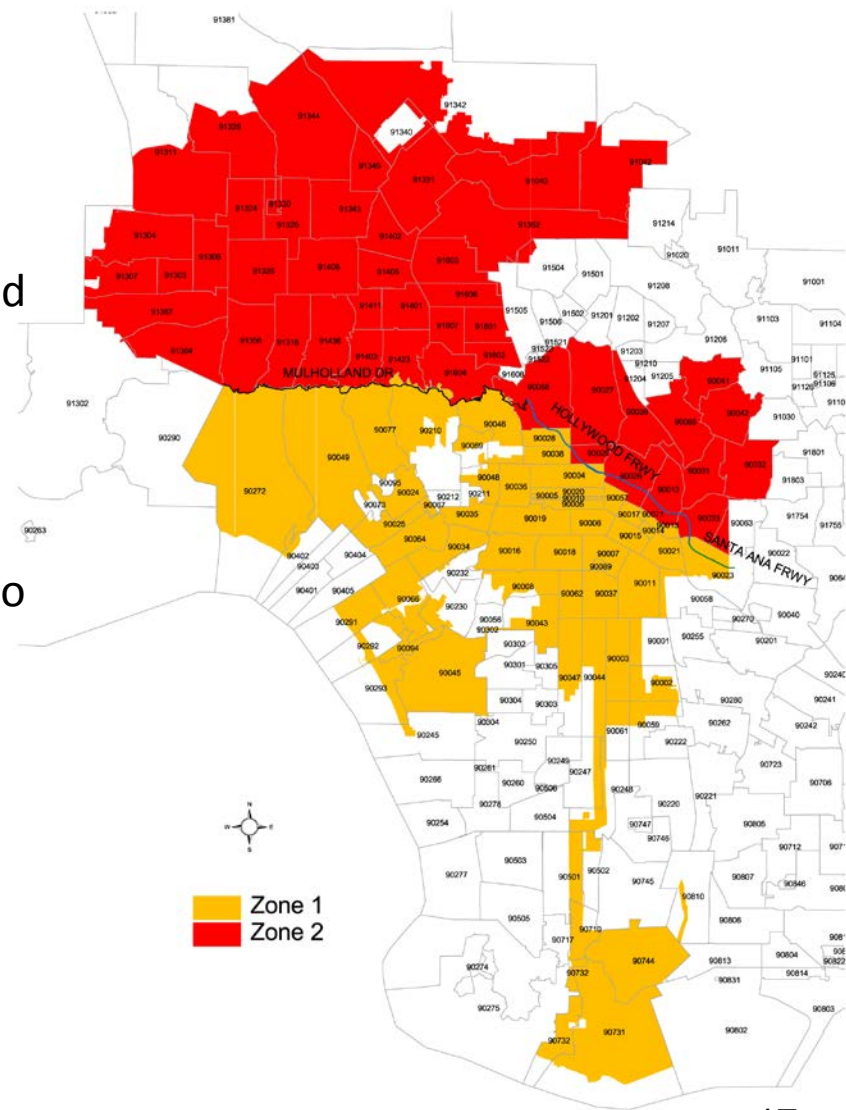


## 70+ rates presentations across Los Angeles since July

- 19 Regional Meetings
- 16 Business & Commercial Customer Briefings
- 18 NC, Community & HOA Briefings
- 8 Environmental, Legislative Briefings
- 2 Webinars
- 1.8 million emails to stakeholders
- **384,386 video views**
- **236,886 website views**

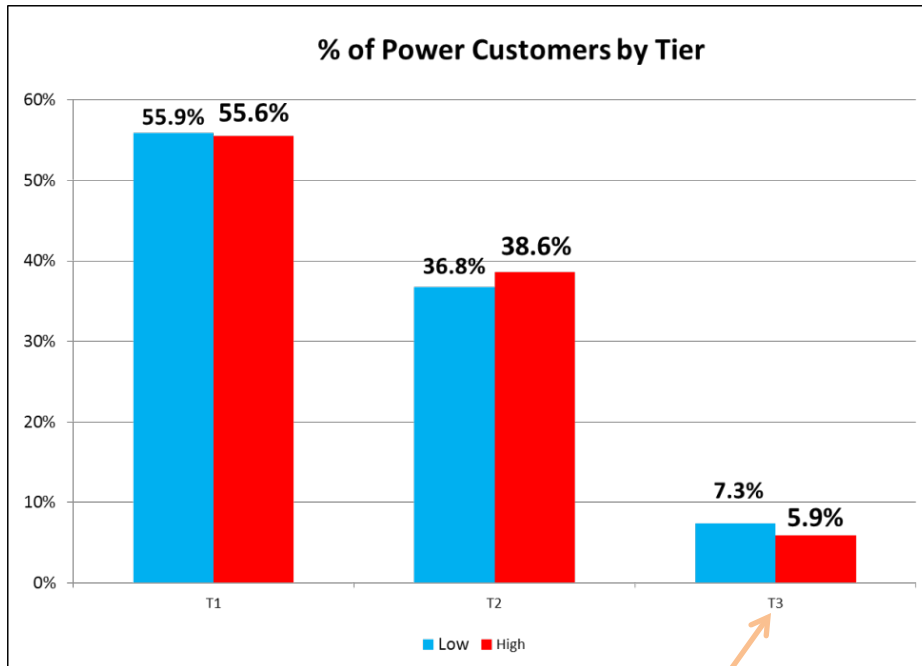
# Power Tiered Rates & Temperature Zones

- Temperature zones established in 2008
- Increasing Block Rate Structure: The tiered rate structure encourages residential customers with high energy usage to reduce consumption during peak energy days.
- The Department service territory has two climatic regions and the Tiers have been based on those regions.
- The map shown gives a general indication of the Temperature Zones for the Tiered Rate Structure.
- The dividing line between zones would be from Mulholland Drive, Hollywood Freeway, to Golden State Freeway with Zone 1 being to the South and Zone 2 to the North.

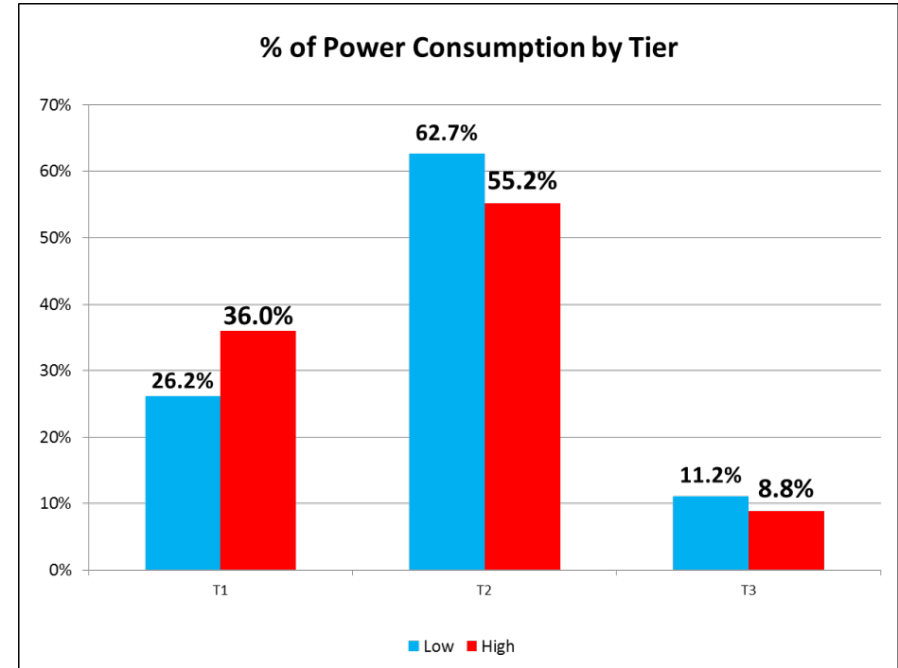


	Zone 1 Monthly Usage (kWh)	Zone 2 Monthly Usage (kWh)
Tier 1	First 350	First 500
Tier 2	351 - 1050	501 - 1500
Tier 3	Over 1050	Over 1500

# Power Consumption & Customers by Tier and Temperature Zone



**High Zone: Less Customers in Tier 3**



**High Zone: less Consumption in Tier 2 and Tier 3**

# Office of Public Accountability / Ratepayer Advocate

## Report - Power

The Office of Public Accountability (OPA) has been instrumental in the formation of this rate proposal:

- Bi-weekly meetings with LADWP staff since July 2013 and has reviewed major aspects of the LADWP's financial plans, including, major capital projects, marginal cost study results, and various rate design options.
- The OPA has completed a comprehensive analysis of both the Water and Power rate proposals, with the LADWP preparing 230 financial sensitivity cases.
- The OPA and Navigant diligently worked with LADWP staff to improve accountability, transparency and Departmental performance by including:
  - performance-based rate making
  - an interim rate review

# Performance-Based Rate Making

## **Performance-based rate making**

The rate proposal includes enhanced reporting requirements to improve LADWP's performance, accountability, and transparency:

- Report quarterly on specific key performance metrics to the Ratepayer Advocate and semiannually to the Board
- Board, Ratepayer Advocate, and Energy and Environment Committee will review the performance on metrics and mitigation plans
- Specific targets and variance ranges for these metrics will be proposed to the Board in January 2016

## **Interim Rate Review**

An interim rate review will be conducted, in conjunction with the RPA, during year three, this shall include:

- A revised five-year financial and performance outlook
- Revised base rate revenue targets based on updated costs
- Status of Departmental responses to any Mayoral/City Council reports requested as part of this rate action

# Common Questions & Concerns

## Biggest topics:

- Replacing and fixing aging infrastructure
- Financial relationship with the City
- Protecting LA against the drought
- Protecting our most vulnerable populations from higher rates
- Creating jobs and boosting the economy



# Economic Benefits of Infrastructure Investments

## Economic Modeling and Analysis:\*

### Water Infrastructure Investment:

\$228 million in additional investment per year over the next 5 years →  
**\$1.8 billion in economic output and supports 9,035 private sector jobs**

### Power Infrastructure Investment:

\$370 million in additional power infrastructure investment per year over the next 5 years will generate → **\$2.8 billion in economic output and supports 12,632 private sector jobs**

### Total Economic Benefits:

Combined Water and Power Infrastructure investments will generate → **\$4.7 billion in economic output and supports 21,666 private sector jobs**

**Infrastructure upgrades can create up to 4X  
the economic benefits as their costs**

\*Analysis prepared by Beacon Economics

# Cost Savings

**Cost Reduction Plan:** Saved \$466.9M in reduced OT, labor costs, operations and capital costs

**Labor Agreement:** Will save \$456M over 4 years; \$5B over 30 years

**Lower Cost Financing:** Will save approx. \$267M for water & power projects

**Securitization:** New JPA will reduce Water project borrowing costs of \$188 M over next 5 years.

**Benchmarking:** Will provide sustained cost savings and revenue collections to offset future rate increases.



# Responses to Council Requests in 2012

**Cost efficiencies, benchmarking, accountability and transparency create a strong foundation for future rate actions**

Negotiated new labor contract to save costs, re-align salaries & benefits	✓
Completed Phase 1 of Benchmarking Studies	✓
Conducted Cost of Service studies	✓
Reviewed overtime policies and contract requirements to find savings	✓
Re-evaluated surcharge approach with restructured rates	✓
Achieved efficiencies through process improvements and continuing to find more	✓

# Key Benchmarking Results

## High Level Analysis -- 1<sup>st</sup> Phase of 3 Phase Study

Metric/Focus Area	Key Points
Total O&M Costs per Customer	This metric is one of the most significant measures of cost effectiveness and it indicates that LADWP is in-line with industry peers
Reliability (SAIDI & SAIFI)*	Frequency of outages: Highest ranking Duration of outages: 2 <sup>nd</sup> highest ranking
Distribution Infrastructure Investment Levels	Ranking shows that the level of infrastructure investment is low relative to peer utilities. Additional investments in the Distribution infrastructure (Power System Reliability Program or PSRP) will bring LADWP more in-line with peers.
Customer Service O&M	LADWP spending for power is very low in this area relative to peers, but water spending is above average

\* Refers to the System Average Interruption Duration Index (SAIDI) and the System Average Interruption Frequency Index (SAIFI)

# 2015 Industrial, Economic & Administrative Survey

The Board was previously provided with a presentation on the 2015 IEA Survey, which included a detailed review of the Department in several areas including infrastructure, governance, security, technology, customer service and outreach, and rates benchmarking.

A set of recommendations impacting current and planned operations has also been identified (see below). The LADWP is currently taking steps to address many of the recommendations within this rate proposal and operational planning.

---

## Key Recommendation Areas Are:

Adequate Infrastructure Replacement Levels

Cross System Utilization of Best Practices, such as Project Management

Greater Reporting of Metrics to Facilitate Trust & Transparency

Human Capital

Centralized Financial Controls & Reporting

Overall Governance of LADWP

Program Implementation Capacity for Staffing and Contract Resources

---

# What Is “Decoupling?”

It is an industry best practice that is used within rates and enables power and water conservation WHILE covering a utility’s fixed costs of providing reliable water and electricity services.

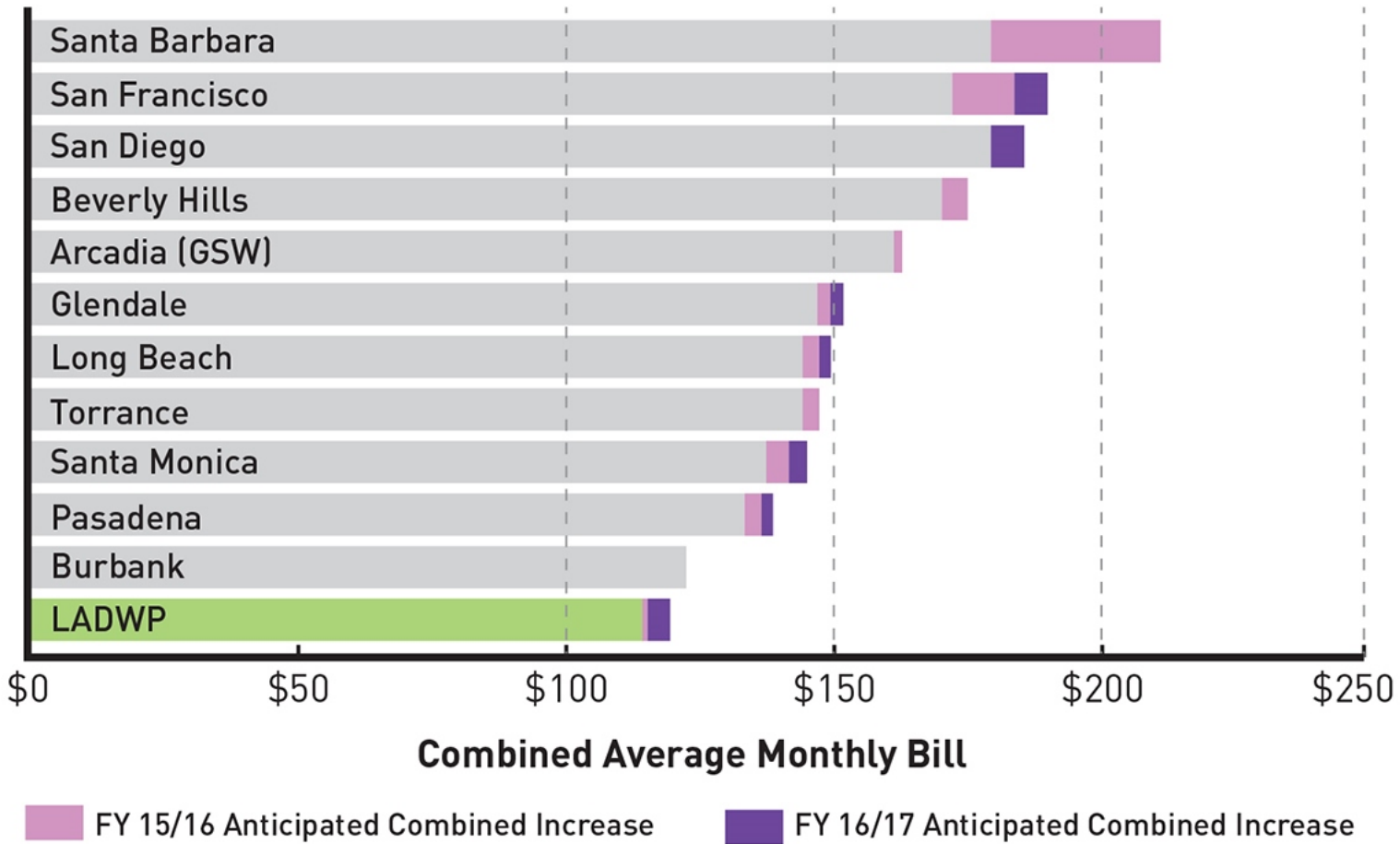
Revenues **ABOVE** sales target are returned to customers.

Revenues **BELOW** sales target are recovered through charges over the next calendar year.



# Our Rates Are Competitive

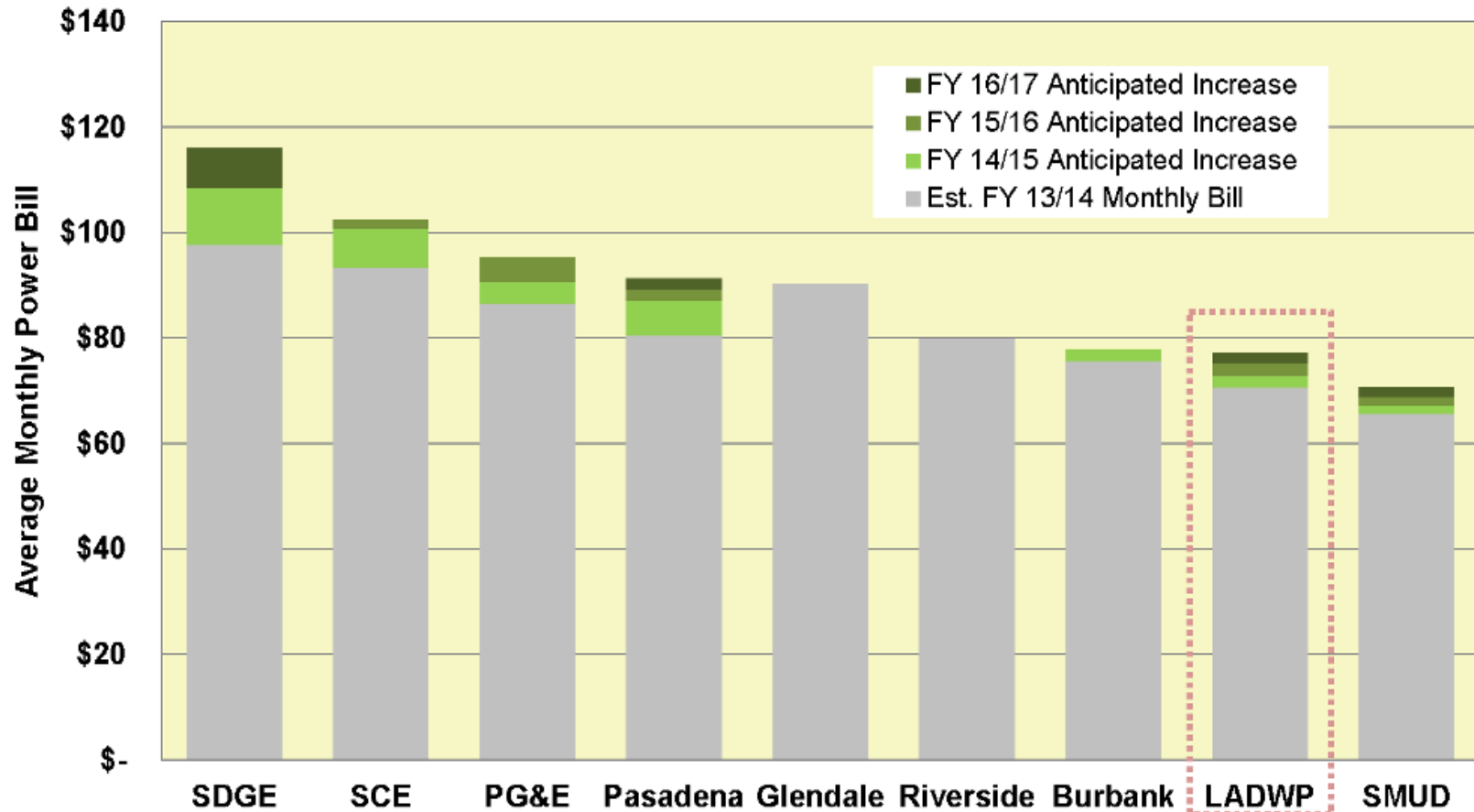
## How L.A. Water & Power Bills Compare Before & After Rates Changes



\*Data for the listed utilities only available for FY 15/16 and FY 16/17

# Industry Trends – Power

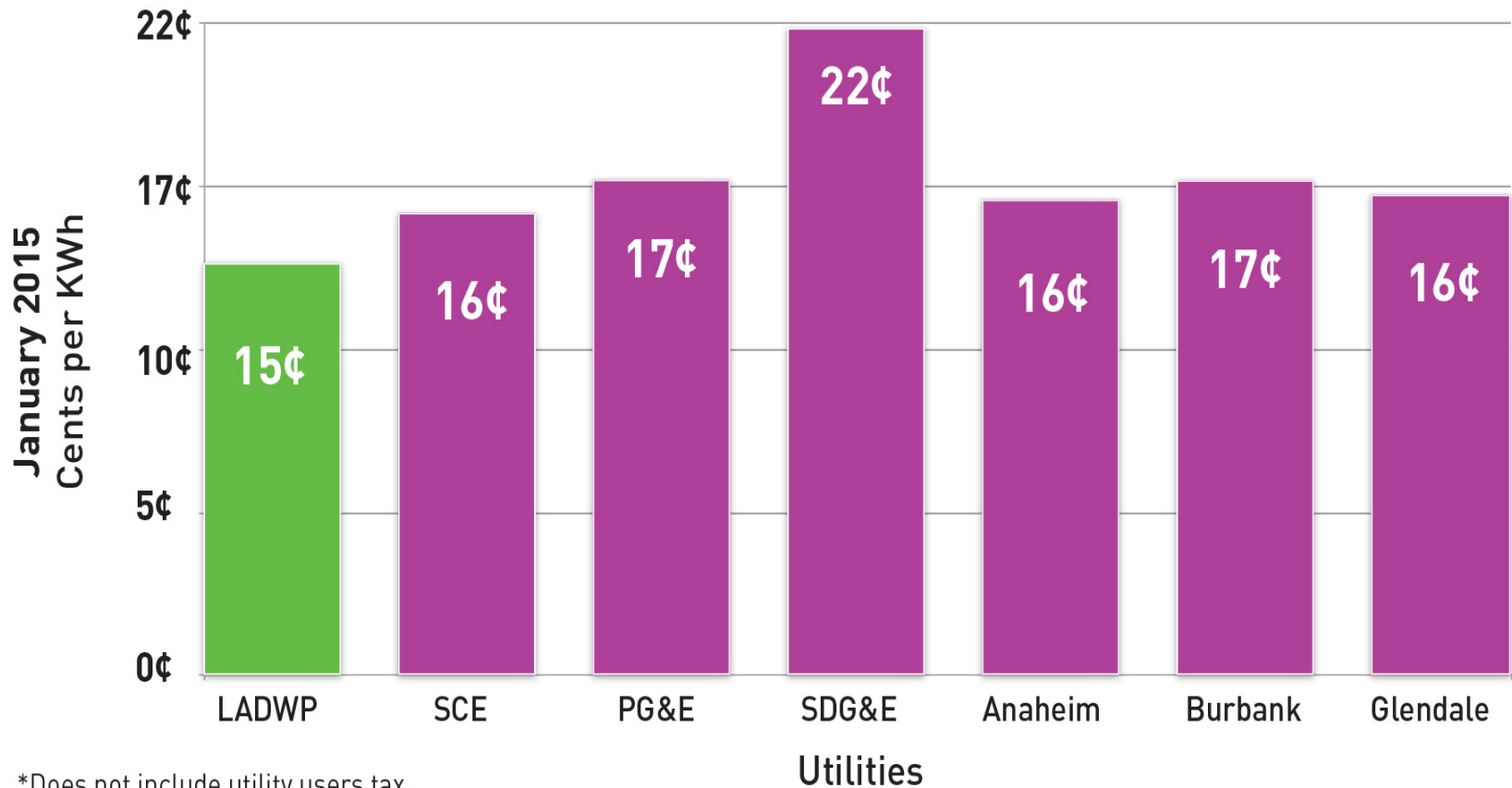
## How Do LADWP's Power Rates Compare?



\* Comparison was prepared in January 2015

# Commercial Rates Are Competitive - Power

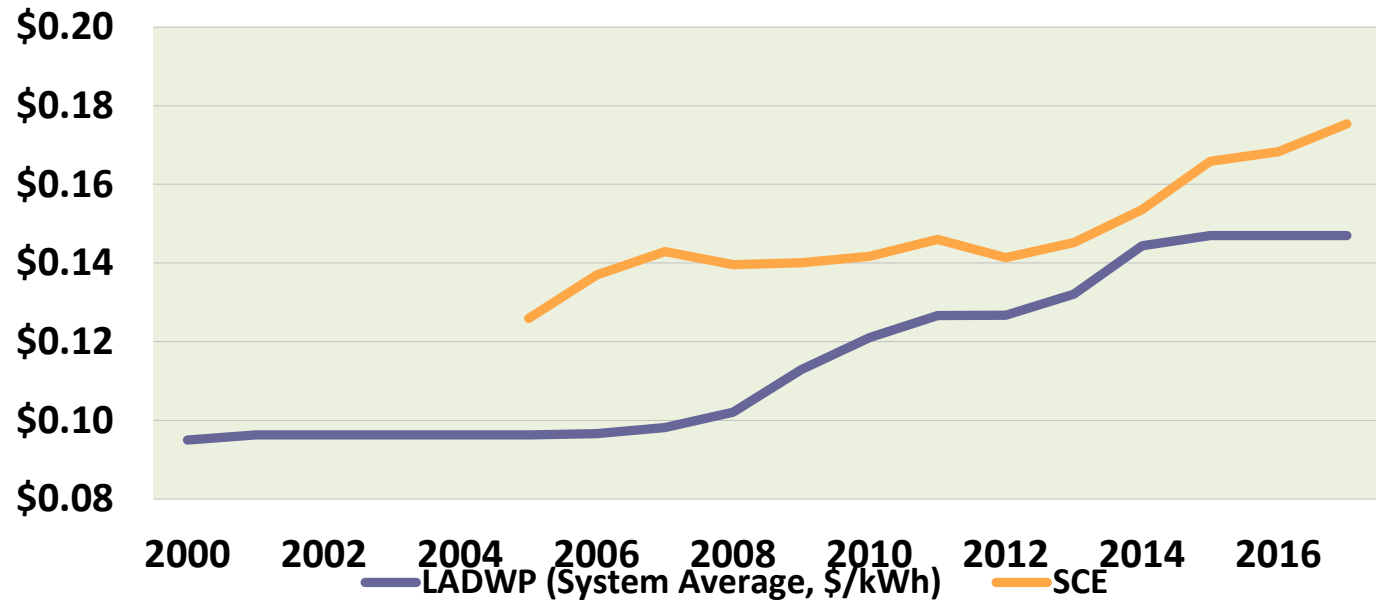
## Large Commercial & Industrial Customers Power Rate Comparison with Neighboring Cities



\*Does not include utility users tax.

# Our Rates Have Not Kept Pace

## Southern CA Edison vs. LADWP Electric Rate Increases





# How Much Do We Need?

## 5-Year Revenue Needs

**Power: \$720 Million**



**Water: \$330 Million**



# What Will We Spend the Money On?

## Power Capital Projects

	<i>5-Year Average Spending (\$1,000)</i>
Energy Efficiency	
•Energy Conservation Incentives	\$92,582
•Retrofit Com'l Customers with High Efficiency Lighting System	\$43,388
•Home Energy Improvement Program	\$17,026
Infrastructure	
•Design/Const. New Business Line	\$62,874
•Design Repl/Relocation Per Customer Needs	\$24,337
Operating Support	
•Financial System Replacement	\$23,996
•Valley Center Improvement	\$9,771
•Fiber Optic Enterprise Capital	\$8,168
System Replacement Program	
•Replacing Deteriorated Poles	\$94,558
•Replacing Deteriorated Crossarms	\$52,902
•Replacement of 4.8KV and 34.5KV	\$51,109
Renewable Portfolio Standard	
•New Transmission Line from Barren Ridge to Haskell	\$33,615
Repowering Scattergood Units 1 & 2	\$110,228

## Power O&M Projects

	<i>5-Year Average Spending (\$1,000)</i>
Infrastructure	
•Nuclear Generation Expense	\$39,239
•Haynes Generating Station	\$25,645
•Scattergood Generating Station	\$16,517
Operating Support	
•Customer Contact Center	\$50,923
•Meter Reading	\$19,260
Power System Replacement Program	
•Maintenance of Overhead Distribution System	\$33,821
•PTD Vegetation Management Program	\$26,459
•Safety and Craft Journeyman Training	\$25,912
Renewable Portfolio Standard	
•Pine Tree Wind Power Plant	\$12,328

# LAUSD – LADWP Partnership

- Savings from the largest energy user and one of the largest water consumers
- Helps LADWP avoid the cost of building new power plants (***\$54 Million in avoided Generation***)
- Brings projects funded by Prop 39, LAUSD and other sources into our savings portfolios
- Addresses schools most in need
- Students will experience efficiency in action; learning opportunities at school and home



Lighting Retrofits at Banning High School, Wilmington

# LAUSD – LADWP Partnership

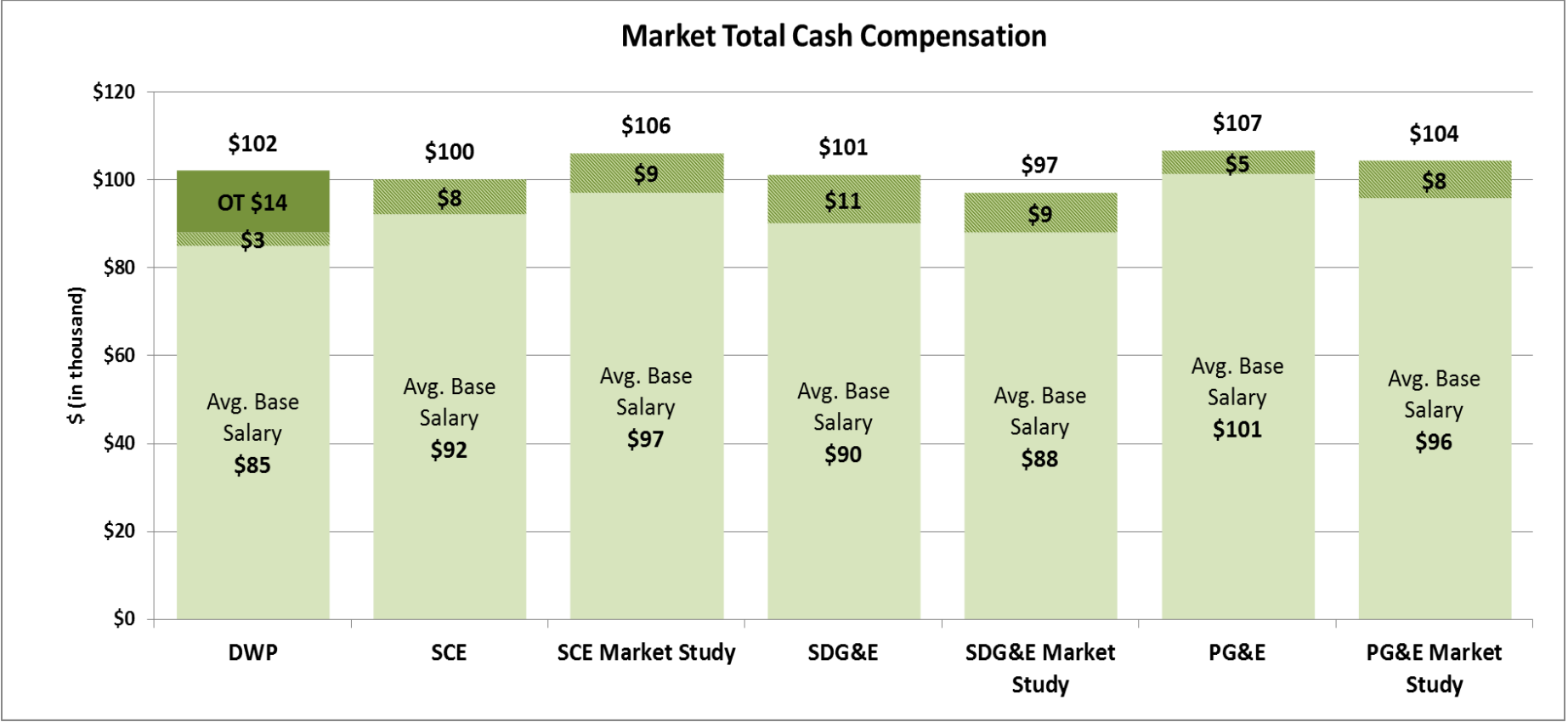
## MOU Partnership:

- The LADWP will invest \$43 million towards additional energy efficiency and water conservation projects over a three-year period, including:
  - Energy efficiency upgrades (lighting fixtures, air conditioning units, etc.)
  - Water efficiency upgrades (high-efficiency urinals, toilets, irrigation)
  - Educational outreach
  - New technologies (stormwater capture/reuse, heat island mitigation)
  - Project management services including assisting LAUSD with Prop 39
  - MOU and funding supports projects that LAUSD is not able to fund through its own bond funding programs

## LAUSD Bill Impact:

- Combined LAUSD annual water and power bill now is approx. \$92 million
- Through the savings achieved with the MOU and using the proposed rate increases, LAUSD's costs at the end of five years will be approximately \$90.8 million annually or approx. \$1-\$2 million lower than they are now

# Comparison of Total Cash Compensation



\* SCE data source: p.53 of 2015 General Rate Case for SCE - HR Volume 2, Part 2 - Total Compensation Study/Table D-2 Competitive Analysis - by Total Compensation Dollars (000s) for SCE

\* SDG&E data source: Appendix D of SDG&E Direct Testimony of Debbie Robinson Compensation, Health & Welfare - November 2014/Table D-2 SDG&E Study Summary (including Corporate Center): Aggregate Compensation Dollars (000s)

\* PG&E data source: Pacific Gas and Electric Company, 2017 General Rate Case, Exhibit (PG&E-8), Human resources, Work papers Supporting Chapters 5-7, 2017 General Rate Case Total Compensation Study: Volume II - Supporting Documentation - Appendix D, Table D: PG&S Study Summary Aggregate Compensation Dollars (\$000s)

\* LADWP: use class average salary applied to sample of job classes

# Cost of Power Service Interruptions

## Cost of Power Service Interruptions (by event and customer type)

Interruption Cost	Interruption Duration					
	Momentary	30 minutes	1 Hour	4 Hours	8 Hours	16 Hours
<b>Medium and Large C&amp;I (Over 50,000 Annual kWh)</b>						
Cost per Event	\$12,952	\$15,241	\$17,804	\$39,458	\$84,083	\$165,482
Cost per Average kW	\$15.9	\$18.7	\$21.8	\$48.4	\$103.2	\$203.0
Cost per Unserved kWh	\$190.7	\$37.4	\$21.8	\$12.1	\$12.9	\$12.7
<b>Small C&amp;I (Under 50,000 Annual kWh)</b>						
Cost per Event	\$412	\$520	\$647	\$1,880	\$4,690	\$9,055
Cost per Average kW	\$187.9	\$237.0	\$295.0	\$857.1	\$2,138.1	\$4,128.3
Cost per Unserved kWh	\$2,254.6	\$474.1	\$295.0	\$214.3	\$267.3	\$258.0
<b>Residential</b>						
Cost per Event	\$3.9	\$4.5	\$5.1	\$9.5	\$17.2	\$32.4
Cost per Average kW	\$2.6	\$2.9	\$3.3	\$6.2	\$11.3	\$21.2
Cost per Unserved kWh	\$30.9	\$5.9	\$3.3	\$1.6	\$1.4	\$1.3

“Updated Value of Service Reliability Estimates for Electric Utility Customers in the United States.” Ernest Orlando Lawrence Berkeley National Laboratory, January 2015

(<https://gig.lbl.gov/sites/all/files/lbnl-6941e.pdf>)

# Cost of Power Service Interruptions

## Cost of Power Service Interruptions (by timing of event and customer type)

Timing of Interruption	% of Hours per Year	Interruption Duration					
		Momentary	30 minutes	1 Hour	4 Hours	8 Hours	16 Hours
<b>Medium and Large C&amp;I</b>							
Summer	33%	\$16,172	\$18,861	\$21,850	\$46,546	\$96,252	\$186,983
Non-summer	67%	\$11,342	\$13,431	\$15,781	\$35,915	\$77,998	\$154,731
<i>Weighted Average</i>		<i>\$12,952</i>	<i>\$15,241</i>	<i>\$17,804</i>	<i>\$39,458</i>	<i>\$84,083</i>	<i>\$165,482</i>
<b>Small C&amp;I</b>							
Summer Morning	8%	\$461	\$569	\$692	\$1,798	\$4,073	\$7,409
Summer Afternoon	7%	\$527	\$645	\$780	\$1,954	\$4,313	\$7,737
Summer Evening/Night	18%	\$272	\$349	\$440	\$1,357	\$3,518	\$6,916
Non-summer Morning	17%	\$549	\$687	\$848	\$2,350	\$5,592	\$10,452
Non-summer Afternoon	14%	\$640	\$794	\$972	\$2,590	\$5,980	\$10,992
Non-summer Evening/Night	36%	\$298	\$338	\$497	\$1,656	\$4,577	\$9,367
<i>Weighted Average</i>		<i>\$412</i>	<i>\$520</i>	<i>\$647</i>	<i>\$1,880</i>	<i>\$4,690</i>	<i>\$9,055</i>
<b>Residential</b>							
Summer Morning/Night	19%	\$6.8	\$7.5	\$8.4	\$14.3	\$24.0	\$42.4
Summer Afternoon	7%	\$4.3	\$4.9	\$5.5	\$9.8	\$17.1	\$31.1
Summer Evening	7%	\$3.5	\$4.0	\$4.6	\$9.2	\$17.5	\$34.1
Non-summer Morning/Night	39%	\$3.9	\$4.5	\$5.1	\$9.8	\$17.8	\$33.5
Non-summer Afternoon	14%	\$2.3	\$2.7	\$3.1	\$6.2	\$12.1	\$23.7
Non-summer Evening	14%	\$1.5	\$1.8	\$2.2	\$5.0	\$10.8	\$23.6
<i>Weighted Average</i>		<i>\$3.9</i>	<i>\$4.5</i>	<i>\$5.1</i>	<i>\$9.5</i>	<i>\$17.2</i>	<i>\$32.4</i>

“Updated Value of Service Reliability Estimates for Electric Utility Customers in the United States.” Ernest Orlando Lawrence Berkeley National Laboratory, January 2015

(<https://gig.lbl.gov/sites/all/files/lbnl-6941e.pdf>)