



Los Angeles
Department of
Water & Power

RESOLUTION NO. _____

BOARD LETTER APPROVAL



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Date: January 12, 2016

SUBJECT: Proposed Power Rate Ordinance

The first attached Board Resolution requests City Council (Council) approval of a proposed incremental electric rate ordinance (Ordinance), which adopts the proposed rates and rate structures outlined in this letter, as well as enhanced performance and accountability measures.

This proposed Ordinance replaces the existing Incremental Electric Rate Ordinance, which took effect in November 2012.

The second attached Board Resolution approves projected Power System expenditures for inclusion in various adjustment factors of the proposed Ordinance for the 12-month period commencing April 1, 2016.

These resolutions are attached as Appendix 1 and Appendix 2.

SUMMARY

The Los Angeles Department of Water and Power (Department or LADWP) Power System is continuing its major transformation from predominantly coal-based generation toward renewable energy, distributed customer generation, increased energy efficiency, and other more efficient generation resources, while also working toward increasing the reliability of its infrastructure.

More specifically, the proposed Ordinance provides the revenues and revised rate structures necessary to effectively:

- Accelerate the replacement of aging infrastructure;
- Upgrade LA Basin power plants to eliminate the use of ocean water for cooling and provide quick “ramping” generation capability to complement variable renewable (e.g. wind and solar) output;
- Enable the continued growth of customer-owned solar through usage-based cost recovery;
- Contribute to the growth of the Los Angeles economy through the new economic development service rider; and
- Continue increasing the procurement of renewable energy and the implementation of energy efficiency programs to comply with Federal, State, and Local mandates and policies, including transitioning off of coal.

This Executive Summary serves to provide a high level review of the proposed rate action and is supplemented with additional detailed information and attachments.

The numbers referenced throughout this Board letter reflect the most recent financial plan. These may differ slightly from previous public presentations as the Department has made minor adjustments due to updated estimates, availability of Board approved budget numbers and the incorporation of feedback received from stakeholders. Additional information on these changes can be found in Chapter 6 of the Department’s Report to the Ratepayer Advocate attached in Appendix 6.

Proposed Revenue Increases

The proposed Ordinance will result in an increase of \$5.85 to the average monthly power bill for the “typical” Residential customer (500 kWh/month) at the end of five years. This equates to an average monthly power bill increase of \$1.17, or 1.56 percent, each year.

The proposed Ordinance, along with the remaining existing rates, will result in a system average annual rate increase of 3.86 percent, which will provide average annual revenue increases of \$144 million over the next five years for a total of approximately \$720 million.

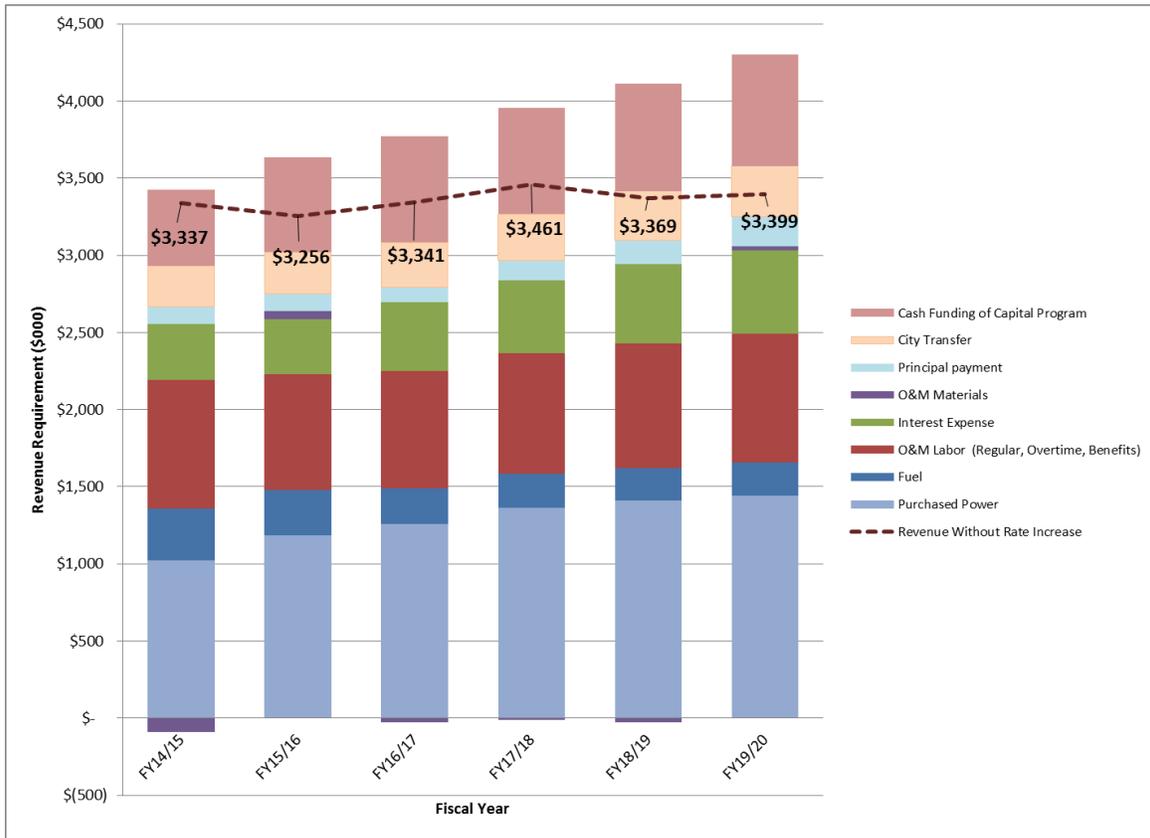
The rates in the proposed Ordinance will remain highly competitive with other California electric utilities who face similar challenges that put pressure on rates. The additional revenues will enable the Department to cost effectively borrow approximately \$4 billion to help fund nearly \$10.8 billion of expenditures for core initiatives¹, which includes \$5.5 billion of capital projects, by leveraging today’s historically low cost of capital and by maintaining the Department’s excellent AA- Power System bond rating.

Please note that the projected revenue increases provided to the Board in July of 2015 have been reduced by an average of approximately \$36 million per year due in large part to the LADWP Energy Cost Adjustment Factor (ECAAF) pass-through rate structure, which will pass along the projected decrease in market fuel prices to our customers.

¹ Please reference “Planned Investments” section including Figure 2 for breakdown of Power System core initiatives.

Without a rate action, LADWP will not have the necessary revenue to fund core initiatives and meet all regulatory mandates. Figure 1 illustrates the potential revenue shortfall the Department forecasts based on current planned expenditure levels and no rate increase over the proposed rate period.

Figure 1: Revenue Shortfall (Given No Rate Increase)



In FY 2016-17 alone, the impact of no revenue increase would require significant reductions to planned expenditures which may include, but are not limited to:

- Reductions to capital programs to upgrade infrastructure and meet regulatory mandates;
- Deep cuts to O&M spending necessary to maintain current high reliability service levels; and
- Decreased funding for planned customer service initiatives.

Ultimately, in case of further delays to this rate action, a substantially larger rate increase would be necessary in the future to cover both the cost of current programs described herein, and further improvements in infrastructure reliability and power supply transformation as well as higher future borrowing costs.

Proposed Rate Restructuring

LADWP's current overall rate structure includes base rates and adjustment factors tied to specific costs. The base rates are summarized in Appendix 11. The pass-through adjustment factors generally reflect costs outside of LADWP's control, such as fuel costs or regulatory mandates for renewable generation resources.

The proposed Ordinance maintains the existing overall rate structure with the following modifications:

- **Incremental Reliability Cost Adjustment (IRCA)** - Allow the currently fixed IRCA to adjust to match approved infrastructure reliability expenditures dedicated to the Power System Reliability Program².
- **Renewable Portfolio Standard Energy Adjustment (CRPSEA)** – Remove the cap on the existing pass-through of CRPSEA costs which facilitates the ability for the Department to meet its current Renewable Portfolio Standard (RPS) goal of 33 percent by 2020 (soon to be 50 percent by 2030 pursuant to SB 350), as well as to meet the increase in the Department's energy efficiency policy goals from a 10 percent to 15 percent consumption reduction for the ten-year period from FY 2010-11 through FY 2019-20.
- **Facility and Energy Charges** – Reallocate a certain level of capacity (kW)-based charges to energy (kWh) based charges for the Commercial and Industrial Customers to help to encourage increased utilization of solar power and energy efficiency, which is also supported by the cost of service study performed for this rate proposal.
- **Power Access Charge** – Ensure the continued growth and sustainability of customer produced generation and conservation through the appropriate price signals and adequate cost recovery for the Department's distribution and customer related infrastructure through a new consumption-based tiered charge to be applied to the Residential (R1A) customer rate structure, which is in accordance with peer utilities and industry trends.
- **Business Promotion Service Rider** – Implement an incentive for qualifying new commercial businesses that locate in the City of Los Angeles (City) and receive

² The Department originally proposed continuation of a capping mechanism for the IRCA. However, as discussed later in this Board Letter, after review of the proposed rate design, the RPA proposed a series of metrics to track performance for meeting IRCA and other adjustment factor projected spending targets for costs recovered through the specific factors. With the implementation of these metrics and associated reporting requirements, a cap on the IRCA is no longer warranted.

service under General Service Schedules A2, A3, or A4 with not less than 100 kW of load to encourage economic development in the City.

Continued Legal Considerations and the Ordinance Structure

LADWP must consider applicable legal guidance in developing proposed rates for power service. Potentially applicable guidance includes:

- City Charter Section 676, Rate Setting, which states: “rates shall be of uniform operation for customers of similar circumstances..., as near as may be, and shall be fair and reasonable, taking into consideration, among other things: (1) the nature of the uses; (2) the quantity supplied; and (3) the value of the service”; and
- Proposition 26, which declares that “a charge imposed for a specific government service or product provided directly to the payor shall not exceed the reasonable costs of providing the service or product to the payor.”

In September 2012, the Department received approval from this Board of the charges of the Incremental Electric Rate Ordinance. For this proposed rate action, LADWP will continue to adopt an electrical rate structure that preserves the 2008 rate structure, and layers incremental charges on top of the applicable existing charges of the 2008 ordinance. Therefore, for purposes of the current rate action, the results of the cost of service studies and the impact of the new revenue requirements for power service will be applied to only the proposed Ordinance. This proposed Ordinance replaces the existing Incremental Electric Rate Ordinance.

Planned Investments

The additional revenues will increase funding in the categories outlined in Figure 2 below. These investments are necessary to meet regulatory requirements, update aging infrastructure, transition to a cleaner power supply, and provide additional customer programs in the areas of energy efficiency and distributed generation.

Figure 2: Five-Year Spending Plan for Core Initiatives (O&M, Capital, and PPAs)

Historical Average (in millions)³	Core Initiative	5-Yr Average (in millions)	5-Yr Total (in millions)
\$525	Power System Reliability Program (PSRP)	\$850	\$4,249
\$800	Power Supply Transformation	\$1,057	\$5,286
\$120	Customer Opportunities Programs	\$261	\$1,307
\$1,445	Total	\$2,168	\$10,841

The Department is requesting that the proposed rate increase take effect beginning April 1, 2016. To account for the delay from the start of the current fiscal year, any shortfall will be recovered through the revenue decoupling mechanism in the Base Rate

³ Historical average based on last completed fiscal year, FY 2012-13, and FY 2013-14.

Revenue Target Adjustment (BRRTA) in the Variable Energy Adjustment (VEA) factor over a two-year period (January 1, 2017 – December 31, 2018).

Customer Bill Impacts

The proposed Ordinance will result in an increase of \$5.85 to the average monthly power bill for the “typical” Residential customer (500 kWh/month) at the end of five years. This equates to an average monthly power bill increase of \$1.17, or 1.56 percent, each year.

The majority of customers will experience a rate increase that is lower than the 3.86 percent system average rate increase due to the relatively larger rate increases for extremely high usage customers LADWP is proposing that encourage energy conservation. Furthermore, the proposed Water and Power System rates have a reduced impact on low-usage customers. A low-usage Residential customer (250 kWh/month and 8 HCF/month) will experience an average monthly power bill increase of \$1.91, or 2.42 percent, for joint power and water service each year. Typical customer bill impacts for both water⁴ and power service are summarized in Figure 3.

Figure 3: Proposed 5-Year Power Bill Changes with Estimated Monthly Costs

	Low-Use Residential	Typical Residential	High-Use Residential	Small Commercial⁵	Medium Commercial⁶	Large Commercial⁷
Avg. Water Usage (HCF / month)	8	12	27	15	80	500
Avg. Power Usage (kWh / month)	250	500	900	1,000	12,250	100,000
Current Total Monthly Bill	\$74.97	\$130.67	\$276.03	\$235.32	\$2,320.19	\$17,457.88
Five-Year Average Annual Water Bill Change	\$1.07 (2.6%)	\$3.02 (4.8%)	\$11.05 (7.2%)	\$3.01 (3.8%)	\$10.14 (2.5%)	60.10 (2.3%)
Five-Year Average Annual Power Bill Change	\$0.84 (2.20%)	\$1.17 (1.56%)	\$5.26 (3.45%)	\$4.32 (2.54%)	\$76.46 (3.69%)	\$590.20 (3.66%)
Five-Year Average Annual Total Bill Change	\$1.91 (2.42%)	\$4.20 (3.02%)	16.31 (5.31%)	\$7.33 (2.94%)	\$86.60 (3.48%)	\$650.30 (3.47%)
Total Average Monthly Bill at the End of Five Years	\$85.59	\$153.84	\$361.51	\$271.97	\$2,753.21	\$20,709.37

The typical Residential customer’s power bill will remain competitive with other California utilities. As illustrated in Figure 4, the three major California IOUs have all

⁴ Proposed Water System rates were previously approved by this Board in December 2015 as part of a separate Board letter.

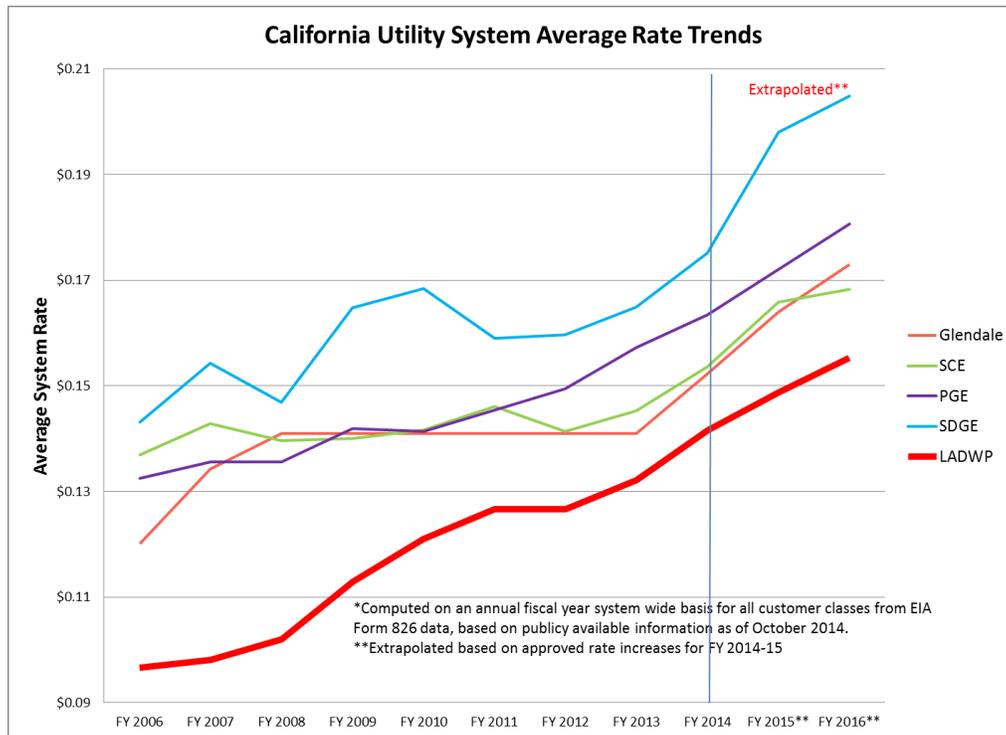
⁵ Estimated based on 0.15 load factor for small commercial customers.

⁶ Estimated based on 0.5 load factor for medium commercial customers.

⁷ Estimated based on 0.5 load factor for large commercial customers.

increased rates recently and have announced intentions to continue this trend. Similar to LADWP, these utilities have experienced significant cost increases due to programs for replacement of aging infrastructure and compliance with various regulatory mandates, including California’s RPS.

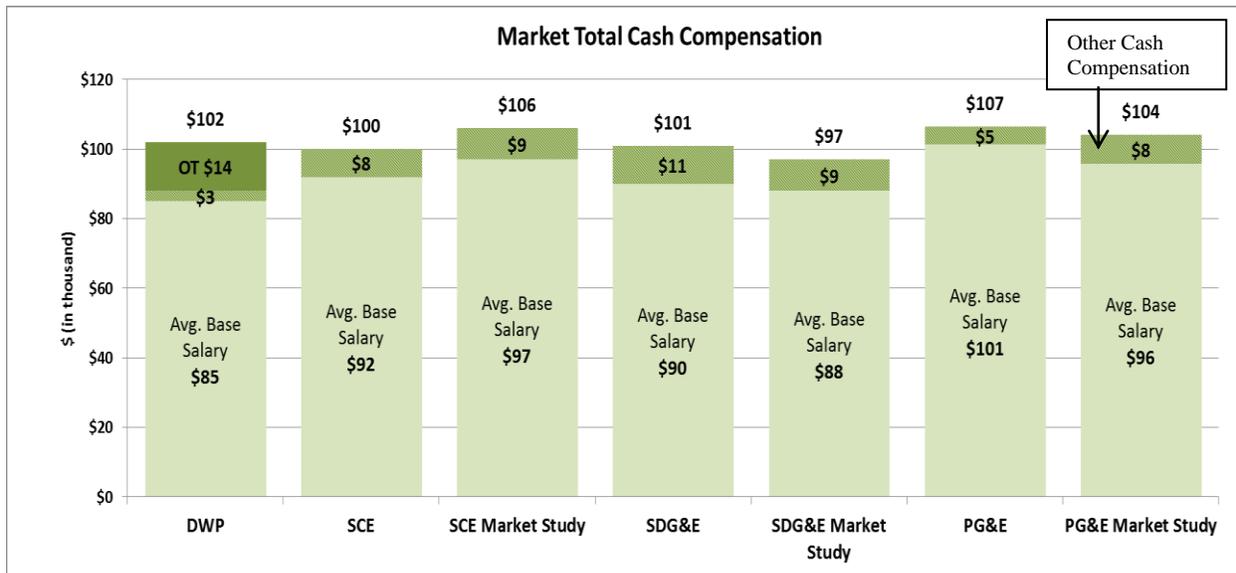
Figure 4: Comparison of California Utility System Average Rate Trends



Comparison of Total Cash Compensation to Neighboring Investor Owned Utilities

Total cash compensation provides one useful measure to compare the LADWP to other similarly situated utilities. The LADWP and others in the utility industry are facing increasing challenges in recruiting and retaining skilled employees. This leads to increased competition for the employees possessing the necessary skills and training. The closest Investor Owned Utilities (IOUs) to LADWP are Southern California Edison (SCE) and San Diego Gas and Electric (SDG&E). As part of their recent rate case filings with the California Public Utilities Commission, both of these utilities were required to file a Total Compensation Study that included actual compensation and a market study of compensation levels for jobs within each of these utilities. While the comparison to data contained in these studies shown below in Figure 5 is not meant to be a comprehensive comparison, it does indicate that LADWP employee total cash compensation is in line with at least two of the large IOUs located in the Southern California area. LADWP intends to work collaboratively with the OPA and their outside expert consultants to perform the second phase of a planned three-phase benchmarking effort.

Figure 5: Total Cash Compensation Comparison



* 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, Workpapers Supporting Chapters 5-7, 2017 General Rate Case Total Compensation Study: Volume II - Supporting Documentation - Appendix D, Table D: PG&S Study SummaryL Aggregate Compensation Dollars (\$000s)
 * LADWP: use class average salary applied to sample of job classes

Cost Of Service Study

On October 2, 2012, the Los Angeles City Council approved the LADWP’s Incremental Electric Rate Ordinance No. 182273 to provide incremental rate adjustments for FY 2012-13 and 2013-14. In its action, the Council recommended that LADWP “conduct a new formal cost of service study in order to prepare for future power rate restructuring.” In response, LADWP completed a new marginal cost of service study to determine the appropriate allocation of revenue requirement to the major customer classes and guide the development of the proposed rates.

Actions to Reduce Size of Rate Increases

To date, the Department has identified and began implementing nearly \$1 billion worth of cost savings initiatives, which will help limit the size of rate increases. These actions include, but are not limited to, the following items:

- Cost Reduction Plan - The Department, as a whole, has exceeded its three-year Cost Reduction Goal and saved over \$466.9 million from FY 2011-12 through FY 2013-14. Savings have been primarily accrued through: overtime reductions; vacancy and attrition-based labor savings; non-labor operating savings; and capital cost savings.

- New Labor Agreement - Executed in 2013, this agreement will save \$456 million through September 2017 and approximately \$5 billion over the next 30-years⁸. This agreement also included a new second pension tier that will yield significant savings over time as roughly 40 percent of the current LADWP workforce reaches retirement eligibility and is gradually replaced with employees on the second pension tier.
- Benchmarking – In February 2015, the Department completed an initial high level benchmarking study. The study is the first of a three phase, comprehensive benchmarking analysis designed to evaluate LADWP’s performance relative to peer utilities from throughout the United States. The initial study revealed favorable comparative performances in several areas of operational significance. These included Total Operations and Maintenance (O&M) costs metrics as well as reliability metrics measuring planned/unplanned electric service disruptions. The initial benchmarking study findings were also used as a “road map” to identify areas for more in-depth analysis as part of the Phase II study, which commenced in October 2015. In response to the aforementioned benchmark findings, tens of millions in sustained cost savings and revenue collections are expected to be realized and used to mitigate the need for future rate increases for LADWP customers.
- Financial Planning - Opportunities in bond refinancing, natural gas hedging and regulatory asset treatment have reduced cost of capital and daily operations.

Office of Public Accountability / Ratepayer Advocate’s Navigant Report

Attached as Appendix 7 is the Office of Public Accountability’s (OPA) Navigant report on the proposed Ordinance.

Response to Council Recommendations

On September 19, 2012, the Los Angeles City Council (Council) Energy and Environment Committee adopted a report with ten recommendations associated with third-party review of LADWP’s Incremental Electric Rate Ordinance. Programs or other activities have been developed to address all of the recommendations. While some activities are ongoing, LADWP has made significant progress in each area. In some cases, the nature of the recommendations and the activities to address them are long-term requiring continued efforts. Therefore, a summary of the activities and the present status for each applicable recommendation is included in Appendix 5, to the extent the specific item directly impacts the Power System’s operations and revenue requirement.

⁸ Cost reduction efforts have been developed and tracked on a Department-wide basis so the amounts shown for the labor agreement and cost reduction savings represent total LADWP savings.

Public Outreach and Resulting Impact on Proposed Rates

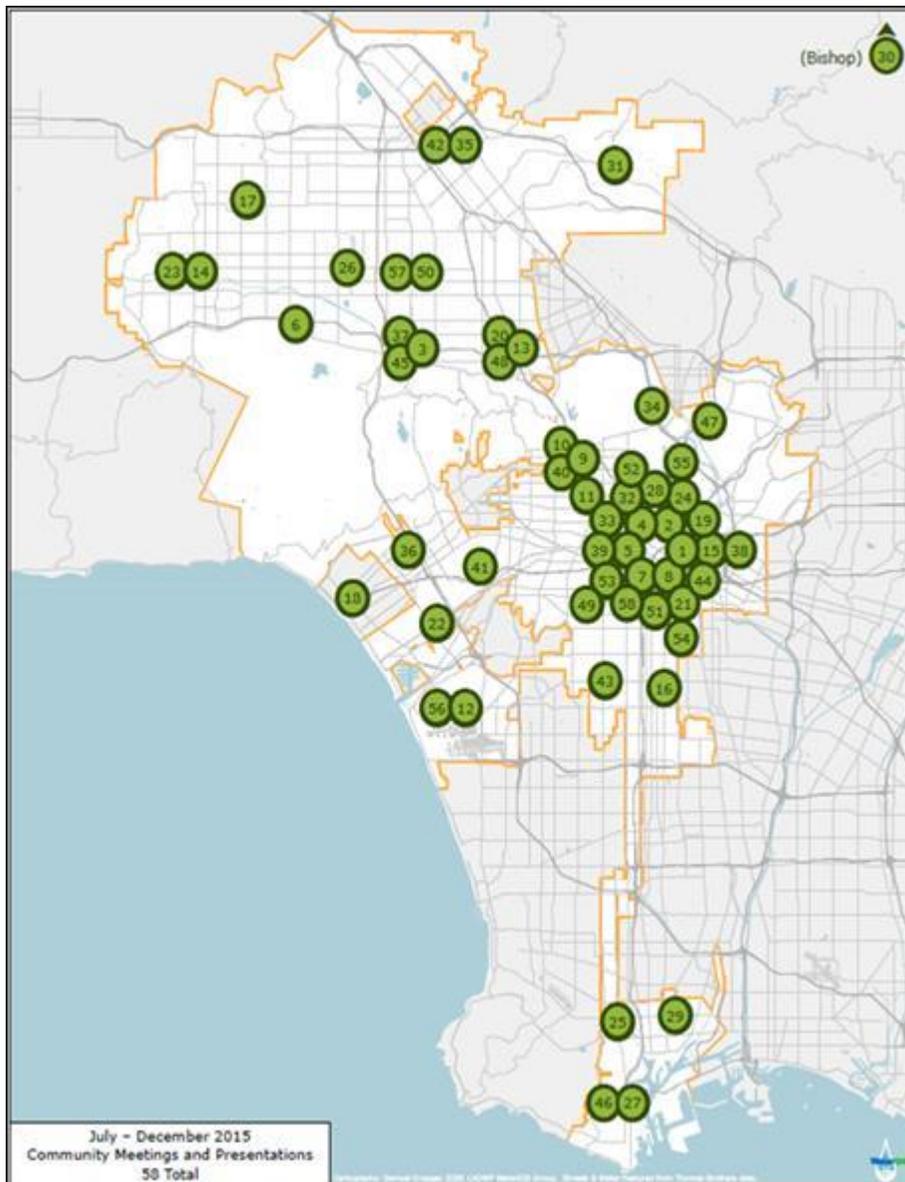
LADWP is one of the few City departments that serves all of the residents and businesses in Los Angeles on a daily basis. As a provider of vital services and one of the economic drivers in Los Angeles, the Department fully understands the responsibility it has to all of its stakeholders.

Therefore, in addition to meeting regularly with the OPA, the City Administrative Officer, and the Chief Legislative Analyst, the Department has also made significant efforts to engage the public as represented by the Neighborhood Councils, Chambers of Commerce, other business groups, environmental groups, academic institutions and other key stakeholders.

In order to make information easily accessible as well as solicit feedback, the Department has reached out to its stakeholders through a variety of channels, including public meetings, webinars and videos. Over the last five months, over 60 public meetings were held at numerous locations throughout the City and in the Owens Valley as illustrated in Figure 6. Information related to the rate case is also available to the public on the comprehensive website that the Department set up specifically to support the public outreach process.⁹ Further details on the public outreach performed is provided in Appendix 10.

⁹ <http://www.myladwp.com/>

Figure 6: Public Outreach Summary of Meetings



LADWP has worked with the Energy and Environment (E&E) Committee to provide customers living in the hotter temperature zone with programs and assistance to reduce energy usage and lower bill impacts. These efforts include plans to work with the LADWP Energy Efficiency group to identify high usage customers and proactively provide AC unit checkups to improve efficiency as well as offer incentives for installation of variable speed pool pumps.

Additionally, as a result of input from the Mayor, E&E Committee Chair, and the Office of Public Accountability (OPA), LADWP has reduced its proposed rate increase by utilizing any actual amounts exceeding budgeted amounts for the following items to lower the Base Rate Revenue Target Adjustment (BRRTA):

- Net wholesale revenue; and

- Contributions in aid of construction (CIAC), which are basically amounts paid by large customers for upgrades and equipment for new developments.

This is estimated to result in an approximately 0.51 percent lower system average annual rate increase and equates to a \$105 million lower revenue requirement over the five-year period. In the past, LADWP has utilized additional revenues from these sources to cash fund capital expenditures. At the suggestion of the previously mentioned parties, these funds will now be returned directly to customers in the form of more immediate lower rates. However, it is important to note that this requires the Department to borrow more money to fund capital projects and is somewhat offset by higher debt service costs.

A summary of feedback that the Department has incorporated from the OPA, E&E Committee, the Mayor and various public groups along with the resulting rates changes stemming from this input is presented in Figure 7.

Figure 7: Summary of Suggested Rate Changes Resulting from External Feedback

Change	Description
Performance-Based Rates	New metrics-based reporting to improve LADWP's performance, accountability and transparency (48 initial metrics). Using performance-based rates, the caps will be removed from pass-through adjustment factors.
Net Wholesale Revenue	Any actual net wholesale revenues in excess of the budgeted amounts will be used to reduce the BRRTA.
Contributions in Aid of Construction (CIAC)	Any actual amount paid by customers for upgrades and equipment for new developments that exceeds the budgeted amounts will be used to reduce the BRRTA.
Interim Rate Review	Institutes a "check-in period" within the five-year rate process, which includes: revised five-year financial and performance outlook and status of LADWP responses to Mayoral and City Council requests for reports and recommendations.
Modified Power Access Charge	Modified the Power Access Charge from charging for the energy to/from meter of residential service to only charging for the energy that flows into a metered residential service.
Reliability Program Spending Transparency / Over-collection Prevention	Creation of pass-through adjustment factors for both Water and Power System reliability programs increases transparency through periodic reporting and aligns revenues with spending.

Conclusion

The proposed Ordinance includes rate increases and revisions to the rate design that will enable the Department to increase revenues to fund vital PSRP projects, continue the power supply transformation, expand energy efficiency and customer-owned solar programs while allocating those costs appropriately and providing conservation price signals. It also includes enhanced requirements to report on the Department's performance in a more structured manner.

The Department is requesting that the proposed rate increase take effect on April 1, 2016. To gradually account for the delay in implementation from the start of the current fiscal year, any shortfall will be recovered through the revenue decoupling mechanism in the Base Rate Revenue Target Adjustment (BRRTA) factor over a two-year period (January 1, 2017 – December 31, 2018).

In addition to the Executive Summary, the Background and Detail Section included below expands on each of the aforementioned topics and provides additional details in the following manner:

- Proposed Revenue Increases;
- Proposed Rate Restructuring;
- Planned Investments;
- Customer Bill Impacts;
- Cost of Service Study;
- Major Power System Achievements;
- Office of Public Accountability / Ratepayer Advocate Report;
- Response to 2012 Council Recommendations; and
- Public Outreach and Other Input.

Attachments for Approval

The following resolutions are attached for Board approval:

- Board Resolution with proposed Ordinance (Appendix 1); and
- Board Resolution for Power Adjustment Factor Expenditures and Board Report (Appendix 2).

Informational Attachments

The following additional appendices are included to provide supplementary information to the Board as outlined in this Board Letter.

- Power System Revised Financial Plan - Case 143 (Appendix 3);
- Final Proposed Power Rates (Appendix 4);
- Response to 2012 Council Recommendations (Appendix 5);
- Department's Report to the Ratepayer Advocate with Appendices (Appendix 6)
- Ratepayer Advocate Report on Proposed Rate Action (Appendix 7)
- Deleted (Appendix 8);
- Metric Reporting Process (Appendix 9);
- Public Outreach Summary (Appendix 10); and
- Summary of Rates (Appendix 11).

RECOMMENDATION

It is recommended that your Honorable Board adopt the attached Resolution recommending the Los Angeles City Council's approval of the proposed Ordinance. It is also recommended that your Honorable Board adopt the attached Resolution approving projected Power System expenditures for inclusion in various adjustment factors of the Ordinance for the 12-month period commencing April 1, 2016.

BACKGROUND AND DETAIL

LADWP supplies electric service to approximately four million people and is the nation's largest municipal electric utility. Its service territory includes a 465-square-mile area in Los Angeles and much of the Eastern Sierras in Owens Valley, with annual sales exceeding 23 million MWh. The Power System is undergoing a historic transformation due to many factors, including aging infrastructure which has reached and/or exceeded its service life, power supply transition off of coal to cleaner renewable energy to meet regulatory mandates for preserving our environment, and customer programs to encourage energy efficiency and distributed generation.

Since the last Power System rate action in 2012, the Department has taken important steps to reduce the need for power rate increases, including cost cutting, negotiating a new labor agreement, and corporate performance benchmarking. However, given the nature of LADWP's obligations and commitments, the Department is now at a point where rate increases are necessary to:

- Provide reliable electric service to the four million Los Angeles and Owens Valley residents;
- Meet regulatory obligations;
- Continue improving customer service; and
- Maintain financial stability.

LADWP's proposed rate structure and rates will allow LADWP to meet the abovementioned objectives and obligations, while also:

- Allowing the currently fixed IRCA to adjust to match costs as they are incurred to enable favorable financing and flexibility for PSRP infrastructure initiatives;
- Allowing the full pass-through of CRPSEA costs when they are incurred to facilitate the ability for the Department to meet its RPS and Energy Efficiency targets;
- Combining or increasing facility and energy charges to encourage distributed generation such as customer-owned solar;
- Implementing a Business Promotion Service Rider for qualifying new commercial businesses that locate in the City;
- Introducing a Power Access Charge to the Residential (R1A) customer rate structure to enhance conservation price signals and stay consistent with industry trends; and
- Maintaining competitive rates relative to peer utilities.

Proposed Revenue Increases

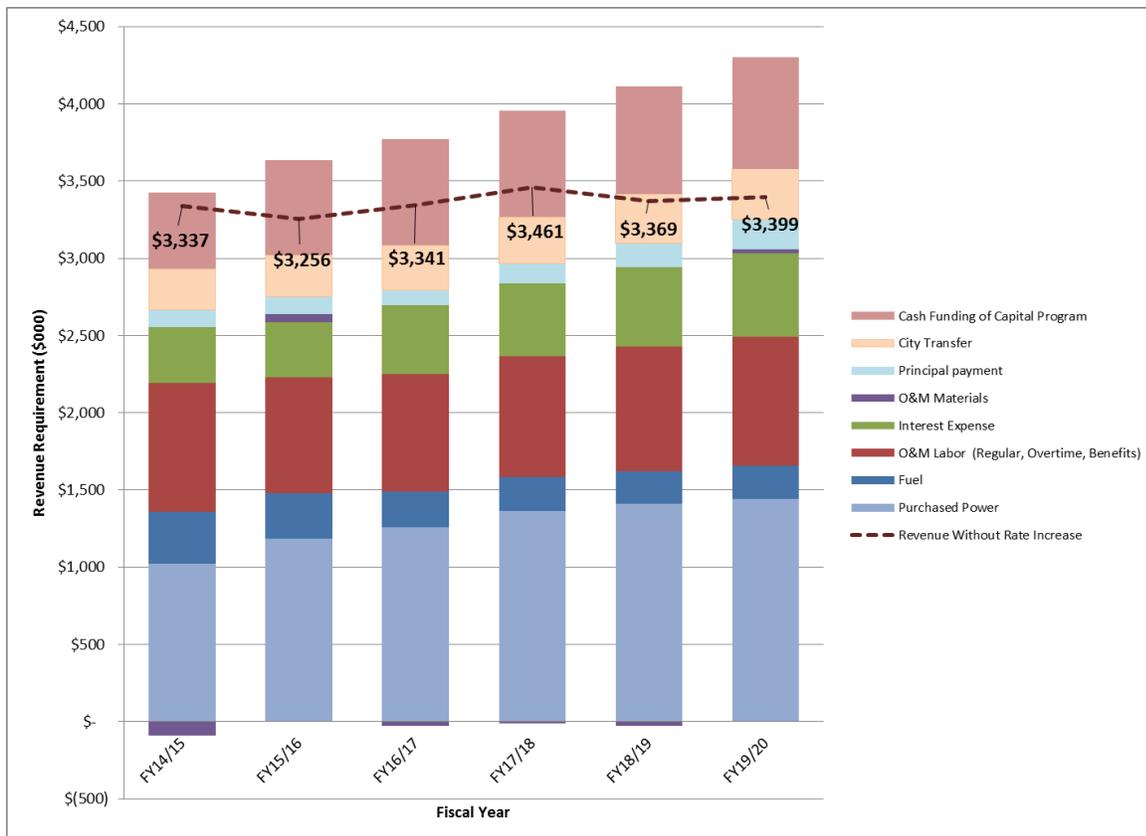
The major Department accomplishments to date have enabled reliable service while avoiding an increase to the Power System's base rates since 2012. However, LADWP has forecasted that the mix of investment and cost cutting efforts over the next five years requires an increase to the Department's revenue requirement.

The proposed Ordinance includes conservation enhancing rates, which will result in an increase of \$5.85 to the average monthly power bill for the “typical” Residential customer (500 kWh/month) at the end of five years. This equates to an average monthly power bill increase of \$1.17, or 1.56 percent, each year. Additionally, this represents a system average annual rate increase of 3.86 percent, which will provide average annual revenue increases of \$144 million over the next 5 years for a total of approximately \$720 million. The additional revenues will also enable the Department to cost effectively borrow over \$4 billion to help fund nearly \$10.8 billion of expenditures for core initiatives, which includes \$5.5 billion of capital projects, by leveraging today’s historically low cost of capital and by maintaining the Department’s excellent AA- Power System bond rating.

Please note that the projected revenue increases provided to the Board in July of 2015 have been reduced by an average of approximately \$36 million per year due in large part to the LADWP Energy Cost Adjustment Factor (ECA) pass-through rate structure, which will pass along the projected decrease in market fuel prices to our customers.

Without a rate action, LADWP will not have the necessary revenue to fund core initiatives and all regulatory mandates. Figure 8 illustrates the potential revenue shortfall the Department forecasts based on current planned expenditure and no rate increase over the proposed rate period.

Figure 8: Revenue Shortfall (Given No Rate Increase)



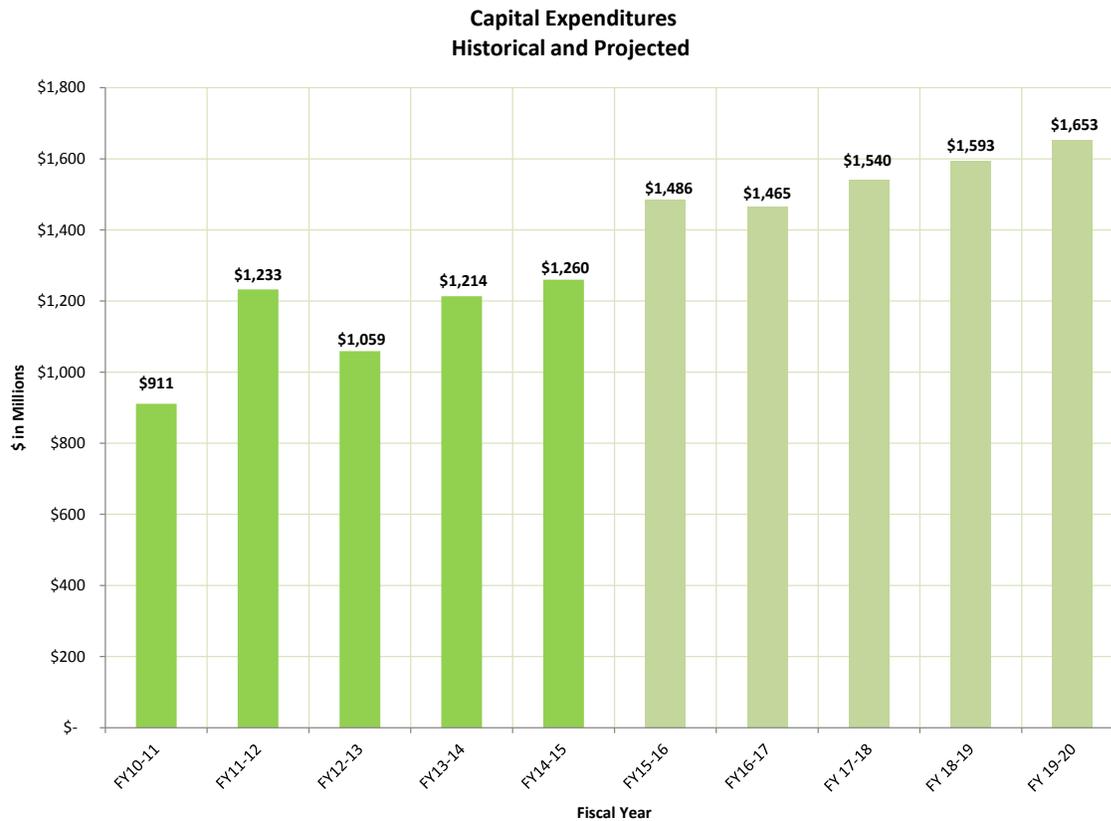
If incremental revenue is not available, the Department would be in jeopardy of not meeting its mandatory regulatory and legal obligations without a significant deterioration in financial stability. Therefore, without the proposed rate increases, the Department would be required to make cuts in programs that are critical but not directly tied to regulatory mandates, such as increased Power System infrastructure replacements and continued customer service improvements.

In addition, delays in implementing the proposed rate structure will delay the realization of the expected benefits of the new rate design, including, but not limited to the enhancement of price signals for energy conservation, alignment of rates with the cost of service study results and additional incentives for distributed generation. The Department has developed a five-year rate proposal to provide certainty for customers and to allow LADWP to make long-term contract commitments to obtain the most favorable pricing and other terms for construction, materials and other services.

Ultimately, in case of further delays, LADWP would likely need to request a substantially larger rate increase in the future to cover both the cost of current programs described herein, and further improvements in infrastructure reliability and power supply transformation.

As shown in Figure 9, proposed capital spending will average approximately \$1.5 billion annually over the proposed five-year rate period compared to \$1.1 billion on average for the previous five years (FY 2010-11 through FY 2014-15), representing an approximate 36 percent total increase.

Figure 9: Capital Expenditures Historical and Projected



To finance these expenses, LADWP will increase borrowing. Debt service cost levels are projected to increase from \$473 million in FY 2015-16 to \$717 million by FY 2019-20 (an increase of nearly \$244 million in 5 years) as shown in Figure 10.

Figure 10: Summary of Capital Expenditures and Borrowing

(\$Million)	Proposed Rate Period				
	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
Capital Expenditure	\$1,486	\$1,465	\$1,540	\$1,593	\$1,653
New Debt Required for Capital Expenditures	\$428	\$836	\$874	\$887	\$931
On-Balance Sheet Debt	\$8,856	\$9,544	\$10,233	\$10,920	\$11,622
Off-Balance Sheet Debt	\$1,826	\$1,608	\$1,491	\$1,411	\$1,333
Total On and Off Balance Sheet Debt	\$10,682	\$11,152	\$11,724	\$12,331	\$12,956
On-Balance Sheet Debt Service Costs	\$473	\$499	\$580	\$644	\$717
Off-Balance Sheet Debt Service Costs	\$275	\$243	\$274	\$203	\$167
Total On and Off Balance Sheet Debt Service Costs	\$748	\$742	\$854	\$847	\$883

Meeting Board approved financial metrics for capital structure/leverage and cash flow is crucial for the Department to maintain its favorable bond rating. These metrics provide critical points of reference for assessing financial risk and help preserve favorable

borrowing rates for capital investment. Given the level of expected borrowing to finance capital projects, minimizing interest rates is critical to maintaining reasonable customer rates.

LADWP’s revenue requirement and proposed rates are developed to meet the following Board approved metrics: (i) maintain a minimum debt service coverage at 2.25 times, (ii) maintain a minimum operating cash target of 170 days of operating cash on hand, (iii) maintain a full obligation coverage ratio of over 1.70 and (iv) maintain a debt-to-capitalization ratio of less than 68 percent. These criteria are set by the Board based on advice from PRAG, the Department’s financial advisor, and input from rating agencies such as Moody’s. Figure 11 provides the projected cash on hand, debt service coverage ratio, and capitalization ratio based on the Department’s financial plan.

Figure 11: Financial Metrics During the Proposed Five-Year Rate Plan

Financial Metric	Board Approved Target	Proposed Rate Period					Five-Year Average
		FY 15-16	FY16- 17	FY17- 18	FY 18-19	FY 19-20	
Operating Cash Target (Days Cash on Hand)	170	171	170	170	170	170	170
Full Obligation Coverage Ratio	1.7	1.7	1.8	1.7	1.8	1.8	1.8
Debt Service Coverage	2.25	2.50	2.69	2.45	2.34	2.26	2.45
Capitalization Ratio (%)	<68.0	61.81%	63.13%	64.34%	65.40%	66.43%	64.22%

For additional details see the Power System Revised Financial Plan Case 143 in Appendix 3.

Proposed Rate Restructuring

The proposed rate structure will continue to be a combination of base rates and adjustment factors designed to align program costs and revenues. Several changes are proposed to increase the alignment of costs and revenues, encourage conservation and promote the use of distributed generation.

The proposed changes are designed to make the rate structure more consistent across major customer classes while providing LADWP more certainty that revenue collected will cover costs. LADWP’s proposed rate design will help enable a gradual transition to a distribution-based utility, with indifference to the number of customers installing self-generation while continuing to support the economic development of the City.

LADWP must consider applicable legal guidance in developing proposed rates for power service. Potentially applicable guidance includes:

- City Charter Section 676, Rate Setting, which states: “rates shall be of uniform operation for customers of similar circumstances..., as near as may be, and shall be fair and reasonable, taking into consideration, among other things: (1) the nature of the uses; (2) the quantity supplied; and (3) the value of the service”; and
- Proposition 26, which declares that “a charge imposed for a specific government service or product provided directly to the payor shall not exceed the reasonable costs of providing the service or product to the payor.”

In September 2012, the Department received approval from this Board of the charges of the Incremental Electric Rate Ordinance. For this proposed rate action, LADWP will continue to adopt an electrical rate structure that preserves the 2008 rate structure, and layers incremental charges on top of applicable existing charges of the 2008 ordinance. Therefore, for purposes of the current rate action, LADWP proposes that the results of the cost of service studies and the impact of the new revenue requirements for power service be applied to only the proposed Ordinance. The proposed Ordinance replaces the existing Incremental Electric Rate Ordinance.

Specific Adjustment Factor Changes

In its proposed rate design, the Department aims to leave the structure of the electric rate ordinances largely unchanged. The proposed electric rate structure is presented in Figure 12 below.

Figure 12: LADWP Proposed Electric Rate Structure (Detail)

Over/Under Collection	Yes	Variable Energy Adjustment (VEA)	<ul style="list-style-type: none"> • Fuel costs (natural gas, coal, nuclear, hydro) • Non-RPS Purchase Power Agreements • Includes funds for “Base Rate Revenue Target Adjustment” 	Incremental Proposed Ordinance
	Yes	Variable Renewable Portfolio Standard Energy Adjustment (VRPSEA)	<ul style="list-style-type: none"> • Above minimum RPS purchases & market purchases for regulatory requirements 	
	Yes	Capped Renewable Portfolio Standard Energy Adjustment (CRPSEA)	<ul style="list-style-type: none"> • RPS O&M, RPS debt services & energy efficiency annual revenue requirement (regulatory asset) 	
	Yes	Incremental Reliability Cost Adjustment (IRCA)	<ul style="list-style-type: none"> • Additional funds to support the replacement/upgrade of Power System infrastructure (PSRP) 	
	Yes	Incremental Base	<ul style="list-style-type: none"> • Rebuilding of in-basin power plants • Base level of distribution/transmission costs • A&G costs 	
			<ul style="list-style-type: none"> • Energy Cost Adjustment (Fuel, RPS, DSM/EE, Revenue Transfer) • Base Rate • Reliability Cost Adjustment • Electricity Subsidy Adjustment 	“Capped” Ordinance as of November 3, 2010

In consideration of infrastructure and other major program investments and costs and input from the OPA / RPA, the following modifications to specific Incremental Electric Rate Ordinance rate components are proposed by LADWP:

- *Incremental Reliability Cost Adjustment (IRCA)*: The revised IRCA will provide the flexibility to reallocate funds between proximate years and within strict dollar limits to allow projects to continue uninterrupted while emergency or other unforeseen repairs are implemented. Separate Residential and General Service balancing accounts will be established. Projects (and associated spending) can be reallocated and reprioritized within fiscal years and between proximate fiscal years. Additionally, the General Service IRCA factor will have both a kW and kWh component. These provisions will allow the Department to recover adequate revenue for Power System infrastructure investments, while also accounting for any over or under-collection. As recommended by the RPA, the originally proposed cap to the kWh portion of this adjustment factor will be removed. LADWP will continue to seek annual approval from this Board for changes to this factor. As discussed below, metric performance reporting to the RPA and Board will be implemented to show LADWP's progress toward financial and operational targets associated with the IRCA and other adjustment factors.
- *Capped Renewable Portfolio Standard Energy Adjustment (CRPSEA)*: As recommended by the RPA, the cap to this adjustment factor will be also be removed. Since the CRPSEA accounts for costs associated with renewable generation and energy efficiency, this change will provide LADWP flexibility to fund investments associated with moving toward the higher 50 percent RPS by 2030 target that has recently been approved by the California Legislature and the Mayor's 15 percent energy efficiency target.

Key Rate Design Changes

The key proposed changes to the rate design include, but are not limited to, the following items:

- Realigning the corresponding revenue requirement among the customer classes based on the results of the marginal cost of service study over five years to moderate the impact on customers;
- Continuing and expanding utilization of the decoupling mechanism to better align actual costs and rates allowing the Department to recover costs fully while ensuring customers pay only the actual cost of service;
- Instituting a new Business Promotion Service Rider to encourage economic development in the Los Angeles area; and
- Implementing a monthly tiered Power Access Charge for Residential (R1A) customers in accordance with industry trends and based on specific customer usage levels.

A detailed summary of the proposed Residential and Commercial and Industrial rates is provided in Appendix 4.

Decoupling – Base Rate Revenue Target Adjustment (BRRTA)

Decoupling is a standard utility solution to ensure full recovery of largely fixed costs and protect customers from over-payment by separating cost recovery from the impact of

usage variations. Customer rates are typically set based on usage forecasts, which are subject to change with varying weather patterns, implementation of new technologies and actual customer consumption of power. If, after accounting for actual usage and revenue, costs are under-recovered, the decoupling mechanism adjusts rates to recover the shortfall. This type of adjustment works for over-collection as well; if usage exceeds forecasts, resulting in an over-recovery of costs, customers' overall rates are reduced.

The Department proposes to continue its current decoupling approach to account for the over or under-collection of costs associated with the adjustment factors in the proposed Ordinance. In addition, base rate revenue which largely pertains to the recovery of fixed costs is decoupled from usage through the base rate revenue target adjustment (BRRTA) embedded in the VEA. This approach will help ensure adequate funds for infrastructure investments, mandated renewable energy resources and repowering expenditures, new energy efficiency programs, and variable fuel costs.

Residential Power Access Charge

LADWP proposes to implement a new Power Access Charge for Residential customers tied to the level of individual consumption and guided by the results of the marginal cost of service study. Three tiers are proposed with the specific amount based on the customer's highest monthly consumption level in the prior year and temperature zone, as shown in Figure 13.

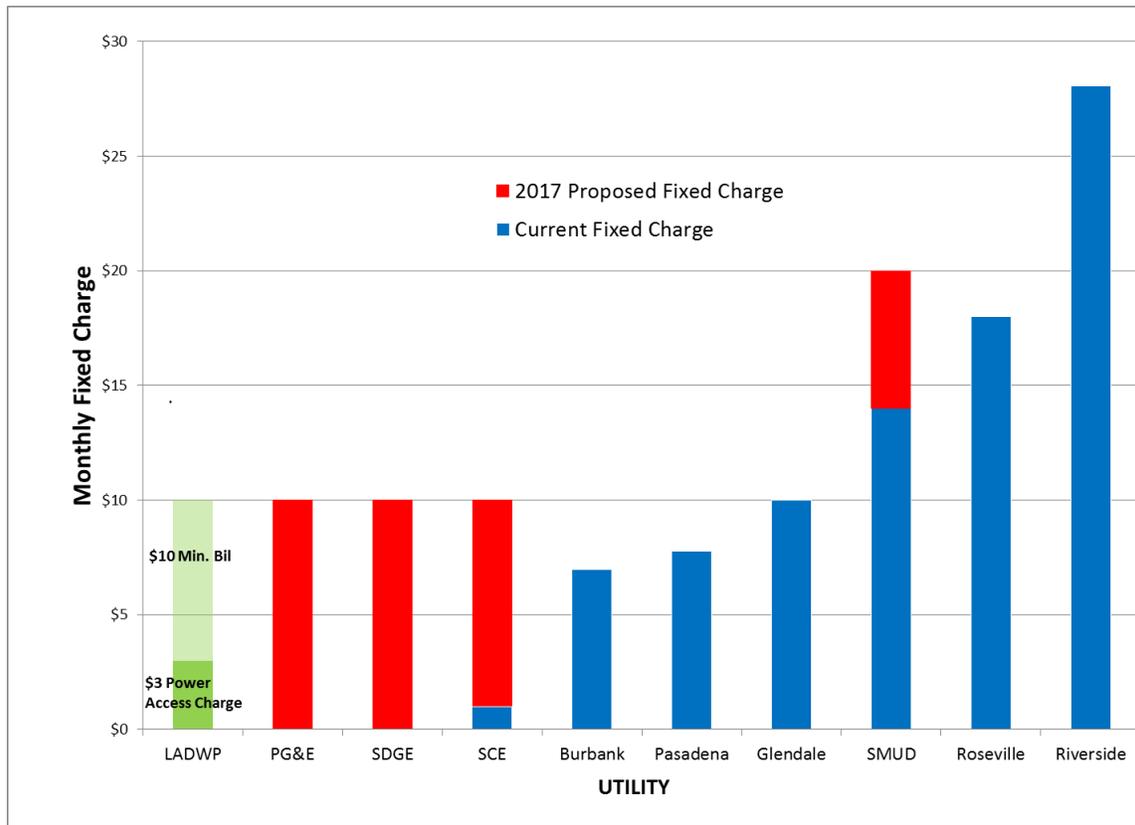
Figure 13: Proposed Thresholds for Residential Tiered Power Access Charge

	Zone 1 Monthly Usage (kWh)	Zone 2 Monthly Usage (kWh)
Tier 1	0 ≤ and ≤ 350	0 ≤ and ≤ 500
Tier 2	350 < and ≤ 1050	500 < and ≤ 1500
Tier 3	> 1050	> 1500

The proposed new Residential Power Access Charge is expected to provide the correct price signals for both conservation and sustainable technology adoption as well as limit the impact on customers with lower levels of consumption. The Power Access Charge will be phased in over five years to allow customers to adapt their usage patterns to the new structure.

This proposed Power Access Charge is consistent with proposals by other California utilities. Figure 14 provides a comparison of current or proposed utility Residential fixed or minimum charges in 2016 based on current rates or proposed rate changes that have already been announced. As shown by the chart, LADWP's proposed fixed charge for the average Residential customer will be the lowest among the peer utilities. Furthermore, LADWP's tiered mechanism is a more balanced approach to recovery of fixed costs while also providing increased conservation incentives, as higher usage customers receive a higher Power Access Charge.

Figure 14: Comparison of Peer Utility Residential Customer Fixed Charges (2016)¹⁰



Business Promotion Service Rider

Two of the overarching outcomes in the Mayor’s FY 2015-16 “Budget Policy and Goals” are to “Promote good jobs for Angelenos all across Los Angeles” and make it “easier to do business in Los Angeles”. Since electric service expenses can amount to a significant portion of a business’s total costs, reasonable electric rates targeted at new customers are an important tool to meet the Mayor’s outcomes.

Over the next ten years, LADWP’s resource planning suggests that additional generation capacity is expected to be available to serve new commercial customer load growth. Therefore, to attract new customers to Los Angeles, qualifying new commercial businesses that locate in the City and receive service under General Service Schedule A2, A3, or A4 with not less than 100 kW of load will be eligible to receive initial bill credit amounts that will be phased out over three years based on the marginal value of this capacity. The service rider will be limited to a total of 80 MW of customer load. The bill credits, as a percentage of the total bill, for those that qualify are outlined in Figure 15.

¹⁰ Includes both fixed charges and minimum bills.

Figure 15: Business Promotion Bill Credit by Year

Year of Location	Credit Amount
1 st Year	7.6%
2 nd Year	5.0%
3 rd Year	2.5%

Planned Investments

In developing this rate proposal, LADWP is committed to striking the right balance between continuing to meet regulatory requirements, providing reliable service, planning for a clean and reliable power supply, and maintaining reasonable rates. This section describes the nature, scope and importance of the key programs that contributed to the proposed costs, revenue requirements and rates. These programs include:

- Power System Reliability Program (PSRP);
- Power Supply Transformation:
 - Repowering Local Power Plants;
 - Expanding Renewable Energy;
 - Transitioning Off Coal;
- Customer Opportunities Programs:
 - Expansion of Energy Efficiency; and
 - Investing in Distributed Solar.

Figure 16 illustrates the five-year spending plan for these key programs as compared to historical spending. Additional information on each core initiative is included below.

Figure 16: Five-Year Spending Plan for Core Initiatives (O&M, Capital, and PPAs)

Historical Average (in millions) ¹¹	Core Initiative	5-Yr Average (in millions)	5-Yr Total (in millions)
\$525	Power System Reliability Program (PSRP)	\$850	\$4,249
\$800	Power Supply Transformation	\$1,057	\$5,286
\$120	Customer Opportunities Programs	\$261	\$1,307
\$1,445	Total	\$2,168	\$10,841

The Department is planning to spend a total of \$10,841 million on capital, O&M, and PPA expenses across all these major programs over the next five years, as shown in Figure 17, Figure 18, and Figure 19, respectively.

¹¹ Historical average based on last completed fiscal year, FY 2012-13, and FY 2013-14.

Figure 17: Summary of Budgeted Capital Costs by Program

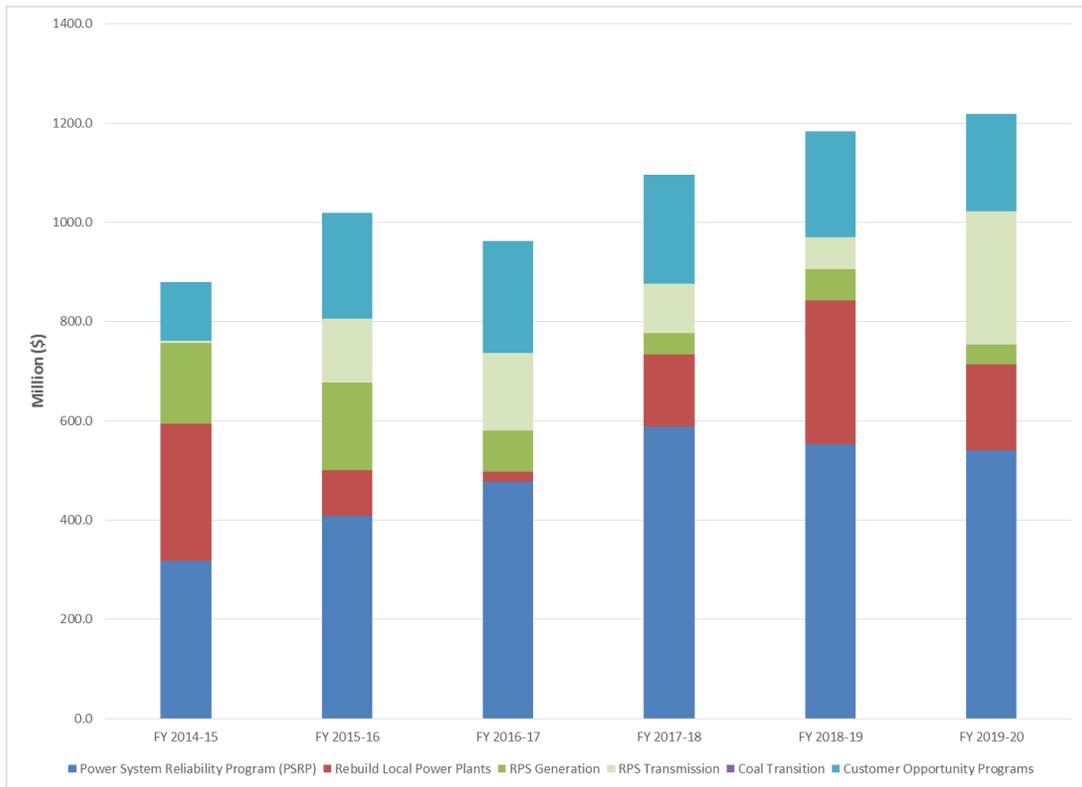


Figure 18: Summary of Budgeted O&M Costs by Program

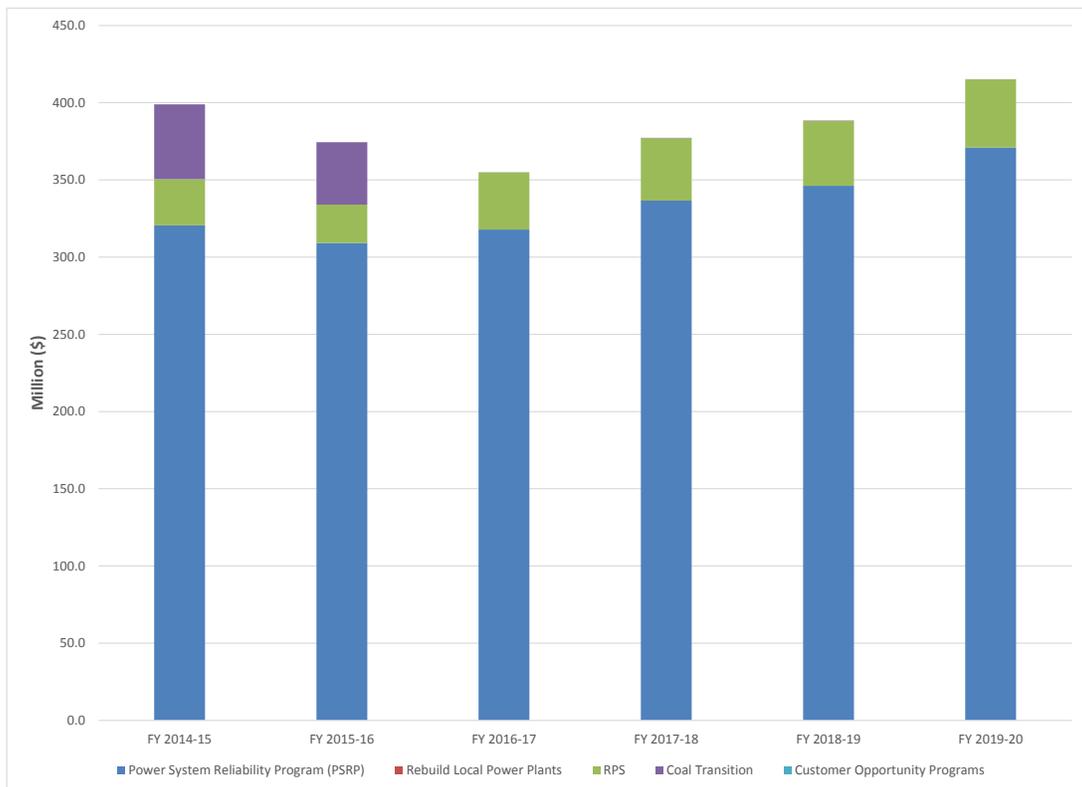
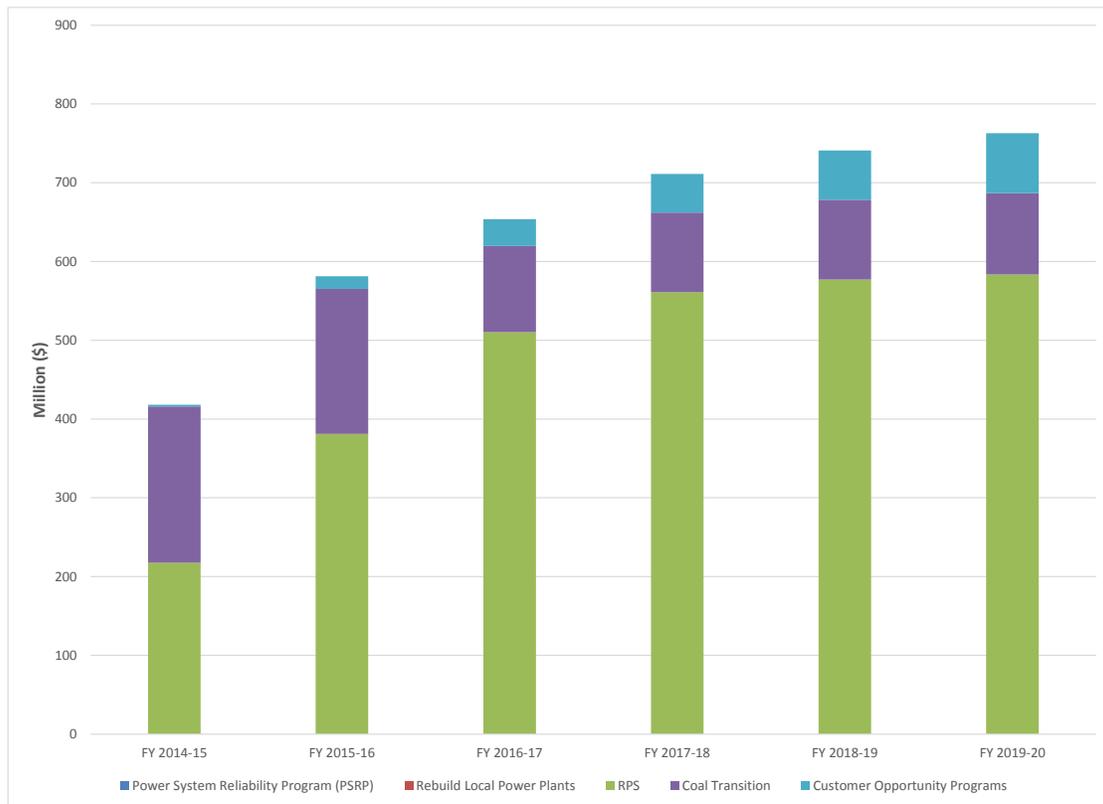


Figure 19: Summary of Budgeted PPA Cost by Program



Power System Reliability Program (PSRP)

The PSRP is a comprehensive, long-term Power System reliability initiative consisting of critical infrastructure upgrade and replacement programs that will take decades to complete. Large multi-year contracts typically provide the best terms for the Department but require sufficient funding to negotiate and execute contracts and cover any corresponding delays. The PSRP program includes the upgrade and replacement of generation, transmission and distribution assets in addition to investments in training and IT infrastructure critical to supporting continued reliable operations of the Power System. Specifically, these replacements and upgrades include, but are not limited to:

- 82 local substation transformers;
- 85 34.5 kV substation circuit breakers;
- 13 major inspections of thermal generating units;
- 10 underground transmission circuits;
- 22,500 poles;
- 44,000 crossarms;
- 274 miles of cables; and
- 3,700 distribution transformers.

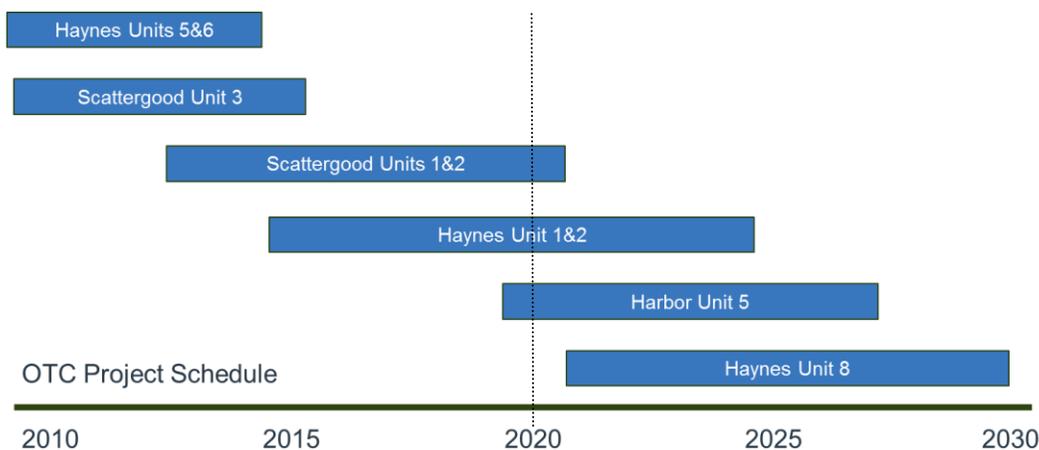
Over the five-year period, the PSRP budget includes \$2.57 billion in Capital and \$1.68 billion in O&M spending.

Power Supply Transformation Program

Repowering Local Power Plants to Eliminate Once Through Cooling (OTC)

OTC is the process where water is drawn from the ocean, is pumped through a generating station’s cooling system, and then is discharged back to the ocean. To be in compliance with federal and state regulation, LADWP must reduce or eliminate mortality due to impingement and entrainment of marine life. As a result, the Department has committed to complete elimination of OTC by 2029. During the next five years, \$721 million of capital investment will be made to replace OTC at Scattergood Units 1 and 2 and Haynes Unit 1 and 2. Figure 20 below provides the current OTC target schedule.

Figure 20: OTC Compliance Timeline



Expanding Renewable Energy Supply to Meet State-Mandated Renewable Portfolio Standard (RPS) Targets

Increasing the percentage of energy production from eligible renewable energy resources is a major environmental initiative and mandated in California by Senate Bill X1-2. Based on California Energy Commission (CEC) policy, the Department must meet renewable energy standard (RPS) procurement targets of 25 percent by December 31, 2016, 27 percent by 2017, 29 percent by 2018, 31 percent by 2019, and 33 percent by December 31, 2020. This significant transformation of the Department’s resource mix will require \$1.31 billion in capital, \$2.85 billion in PPAs and \$188 million in O&M expenses over the course of the proposed five-year rate period. In addition, the California Legislature has recently passed Senate Bill 350, increasing the renewable energy resource target to 50 percent by 2030, requiring LADWP to plan long-term to meet this new standard.

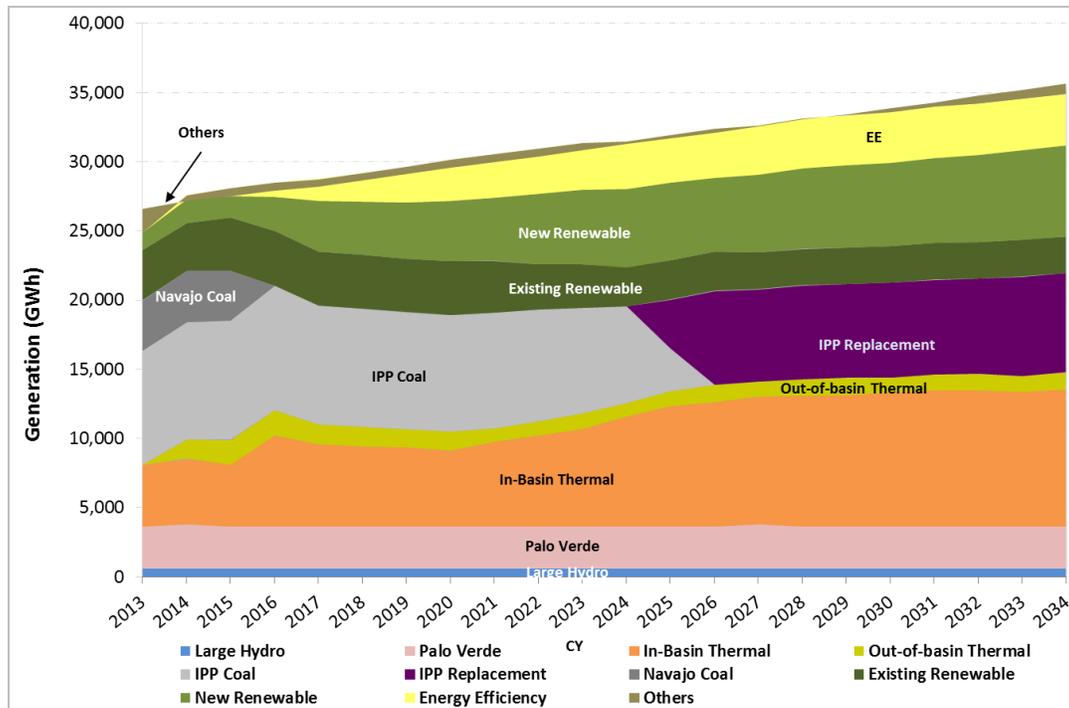
Transitioning off of Coal

LADWP is subject to complying with both Federal and State level environmental regulations that govern the acceptable GHG emissions levels emitted from Department owned generating facilities as well as power imported into the State. As a result, the Department is required to cease receiving power from two out of State coal-fired generating facilities – Navajo Generating Station (NGS) in Arizona and the Intermountain Power Plant (IPP) in Utah. In June 2015, this Board approved a contract amendment with the Intermountain Power Agency (IPA) that would enable the Department, as IPA’s operating agent, to repower IPP from being coal-fired to a smaller natural gas generating station by 2025. On June 26, 2015, the City Council approved a transaction agreement to divest LADWP’s 21 percent interest in the NGS by 2016. Through these actions, the City of Los Angeles became the first major city in the United States to commit to becoming coal free.

LADWP’s contracted capacity from these two generating facilities is approximately 1,677 MW. Replacing this considerable amount of base load requires careful resource planning to continue to meet electricity demand for the residents of Los Angeles. Substantial amounts of additional capacity will be replaced through energy efficiency and additional clean renewable resources, contributing to further reduction in GHG emissions and preserving air quality.

In addition, the Department has purchased the Apex natural gas combined cycle power plant in Nevada, which is financed through Southern California Public Power Authority (SCCPA). The Department projects spending approximately \$640 million on O&M and fuel associated with the Navajo/Apex generation transition over the five-year rate period. The Department’s coal transition plan represents a substantial operational shift in LADWP’s resource portfolio over time, as depicted below in Figure 21.

Figure 21: Projected Generation Breakdown through FY 2034¹²



Customer Opportunities Programs

Expansion of Energy Efficiency (EE) Portfolio

Energy Efficiency (EE) programs have been employed extensively by LADWP in recent years as a cost-effective means of reducing customer electricity usage, power supply expenditures and carbon emissions. In 2012, this Board adopted a 10 percent energy consumption reduction target through EE by 2020 and committed to exploring ways to achieve 15 percent reductions by 2020. In August of 2014, this Board approved a revised target to achieve 15 percent energy use reduction through EE for the ten-year period from FY 2010-11 through FY 2019-20. To meet these goals, the Department has budgeted capital expenditures for EE programs of \$879 million over the proposed five-year rate period.

Investing in Distributed Solar

LADWP continues to sponsor programs that encourage and incentivize installation of solar photovoltaic (PV) panels, including, but not limited to:

- Solar Incentive Program (SIP): Rebates to subsidize customer owned solar installations;
- Feed-In Tariff (FiT): Compensates owners of small scale solar facilities in the form of PPAs; and

¹² From 2014 LADWP Integrated Resource Plan (IRP).

- Utility Built Solar: Develops small-scale distributed solar installations on LADWP and City of Los Angeles owned properties.

Over the course of the five-year rate period, LADWP plans to invest \$427 million of Capital, O&M, and PPA funds to continue facilitating the proliferation of clean distributed solar power.

Fuel and PPA Expenses

Market forces govern the cost of fuel to operate generating facilities. In addition, the Department establishes PPAs with third parties to ensure resource adequacy to serve the electricity demand of Los Angeles. The cost of fuel is projected to be approximately \$1.17 billion with an additional \$6.66 billion of PPA expenditures expected during the next five years. To reduce the volatility in the price of natural gas, LADWP plans to use its financial and physical gas hedging program to minimize the rate impact of fuel cost fluctuations.

Customer Bill Impacts

The proposed Ordinance will result in an increase of \$5.85 to the average monthly power bill for the “typical” Residential customer (500 kWh/month) at the end of five years. This equates to an average monthly power bill increase of \$1.17, or 1.56 percent, each year.

The majority of customers will experience a rate increase that is lower than the 3.86 percent system average rate increase due to the larger rate increases for extremely high usage customers LADWP is proposing that encourage energy conservation. Furthermore, the proposed Water and Power System rates have a reduced impact on low-usage customers. A low-usage Residential customer (250 kWh/month and 8 HCF/month) will experience an average monthly bill increase of \$1.91, or 2.42 percent, for joint power and water service each year. Typical customer bill impacts for both water¹³ and power service are summarized in Figure 22.

¹³ Proposed Water System rates were previously approved by this Board in December 2015 as part of a separate Board letter.

Figure 22: Proposed Average Electric Rates by Customer Class

	Low-Use Residential	Typical Residential	High-Use Residential	Small Commercial ¹⁴	Medium Commercial ¹⁵	Large Commercial ¹⁶
Avg. Water Usage (HCF / month)	8	12	27	15	80	500
Avg. Power Usage (kWh / month)	250	500	900	1,000	12,250	100,000
Current Total Monthly Bill	\$74.97	\$130.67	\$276.03	\$235.32	\$2,320.19	\$17,457.88
Five-Year Average Annual Water Bill Change	\$1.07 (2.6%)	\$3.02 (4.8%)	\$11.05 (7.2%)	\$3.01 (3.8%)	\$10.14 (2.5%)	60.10 (2.3%)
Five-Year Average Annual Power Bill Change	\$0.84 (2.20%)	\$1.17 (1.56%)	\$5.26 (3.45%)	\$4.32 (2.54%)	\$76.46 (3.69%)	\$590.20 (3.66%)
Five-Year Average Annual Total Bill Change	\$1.91 (2.42%)	\$4.20 (3.02%)	16.31 (5.31%)	\$7.33 (2.94%)	\$86.60 (3.48%)	\$650.30 (3.47%)
Total Average Monthly Bill at the End of Five Years	\$85.59	\$153.84	\$361.51	\$271.97	\$2,753.21	\$20,709.37

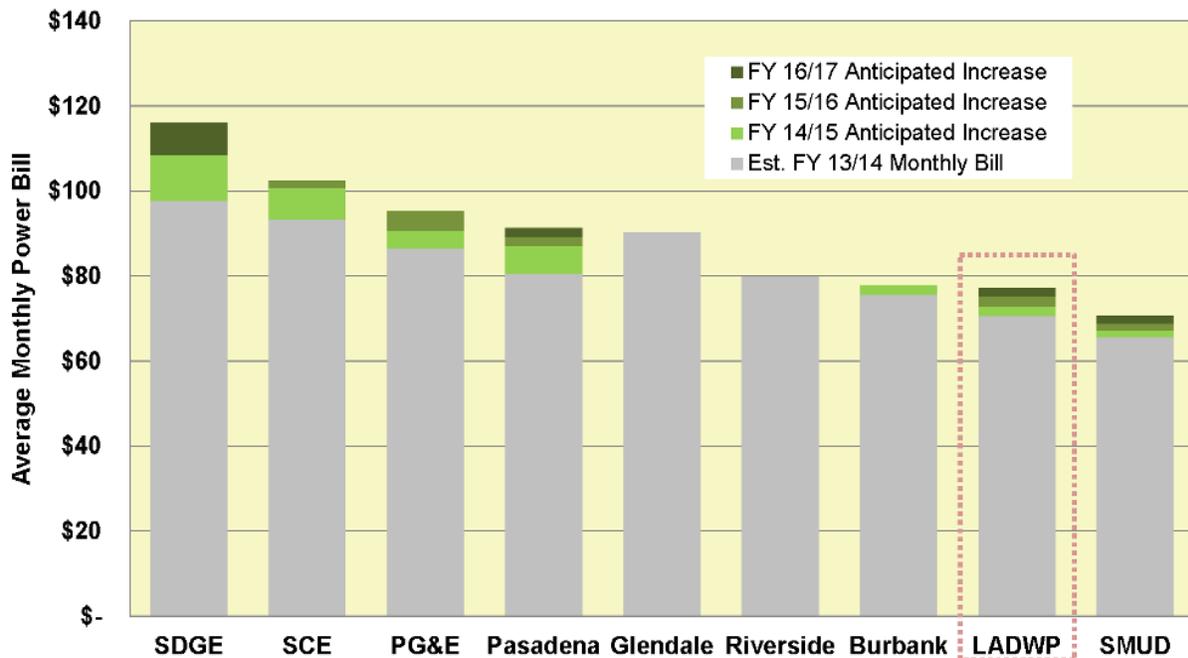
The typical Residential customer's power bill will remain highly competitive with other California utilities as illustrated in Figure 23. Additionally, many other peer utilities have announced proposals for similar or larger rate increases.

¹⁴ Estimated based on 0.15 load factor for small commercial customers.

¹⁵ Estimated based on 0.5 load factor for medium commercial customers.

¹⁶ Estimated based on 0.5 load factor for large commercial customers.

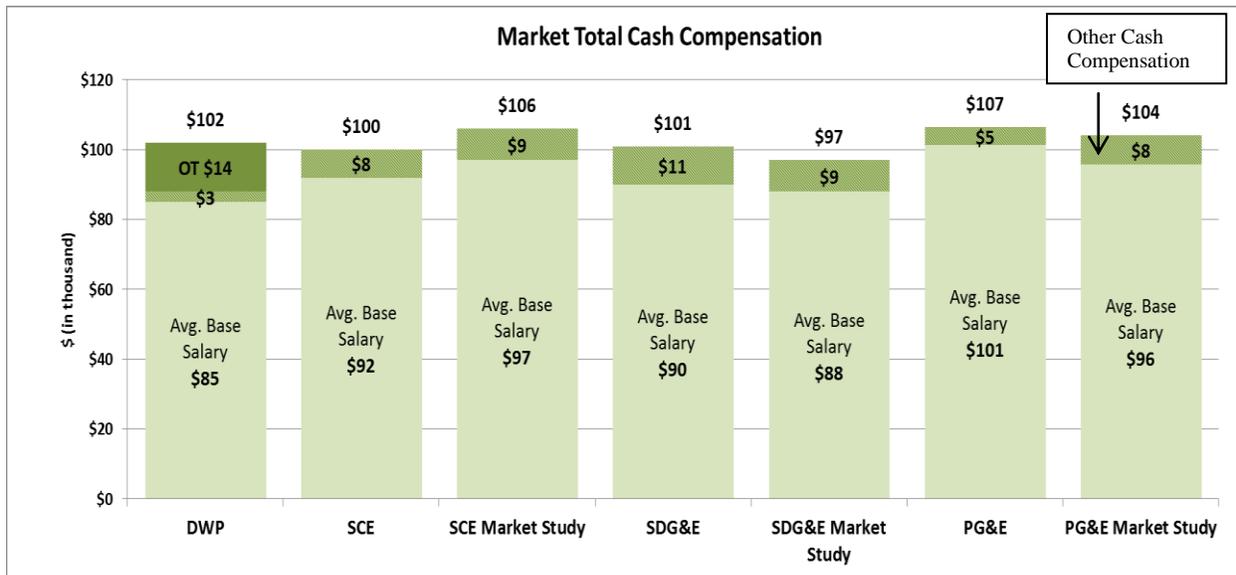
Figure 23: Comparison of Peer California Utility Average Residential Power Bills and Anticipated Increases



Comparison of Total Cash Compensation to Neighboring Investor Owned Utilities

Total cash compensation provides one useful measure to compare the LADWP to other similarly situated utilities. The LADWP and others in the utility industry are facing increasing challenges in recruiting and retaining skilled employees. This leads to increased competition for the employees possessing the necessary skills and training. The closest Investor Owned Utilities (IOUs) to LADWP are Southern California Edison (SCE) and San Diego Gas and Electric (SDG&E). As part of their recent rate case filings with the California Public Utilities Commission, both of these utilities were required to file a Total Compensation Study that included actual compensation and a market study of compensation levels for jobs within each of these utilities. While the comparison to data contained in these studies shown below in Figure 24 is not meant to be a comprehensive comparison, it does indicate that LADWP employee total cash compensation is in line with at least two of the large IOUs located in the Southern California area. LADWP intends to work collaboratively with the OPA and their outside expert consultants to perform the second phase of a planned three-phase benchmarking effort.

Figure 24: Total Cash Compensation Comparison



* 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, Workpapers Supporting Chapters 5-7, 2017 General Rate Case Total Compensation Study: Volume II - Supporting Documentation - Appendix D, Table D: PG&S Study SummaryL Aggregate Compensation Dollars (\$000s)
 * LADWP: use class average salary applied to sample of job classes

Cost of Service Study

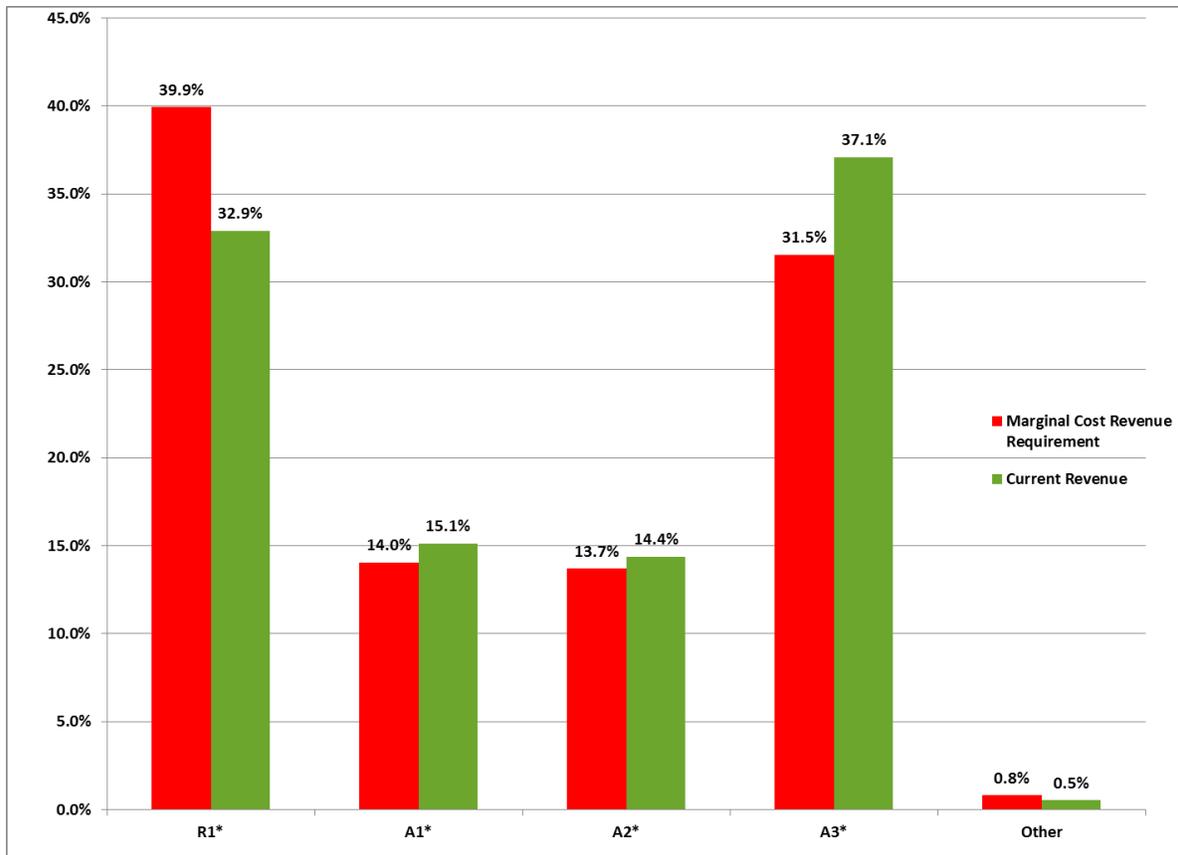
On October 2, 2012, the Council approved LADWP’s Incremental Electric Rate Ordinance No. 182273 to provide incremental rate adjustments for FY 2012-13 and FY 2013-14. In its action to approve LADWP’s power rates, the Council recommended that LADWP “conduct a new formal cost of service study in order to prepare for future power rate restructuring.” In accordance with this recommendation, LADWP has completed a new cost of service study for the Power System.

The marginal cost approach is an accepted methodology for utility cost of service studies in the United States and globally. A cost of service study which follows a marginal cost approach facilitates attaining the following objectives:

- Ensure rates for each major class of customers recover the costs associated with providing service to that class of customers;
- Allow for the development of rates that produce revenue to recover the costs of LADWP’s programs and services;
- Encourage efficient system expansion and the efficient use of utility facilities, and discourage wasteful use;
- Provide appropriate (and efficient) price and resource allocation signals (in tandem with the related cost-based rate design); and
- Provide defensible foundation for cost-based rates.

Figure 25 provides the comparisons among the marginal cost revenue requirement and current revenue percentages (based on the FY 2012-13 test year¹⁷) for each major customer class.

Figure 25 Comparison of Marginal Cost Revenue Requirement and Current Revenue by Customer Class



The results indicate that, by applying marginal costs to allocate the total Power System retail revenue requirement, the Residential (R1) customers would be allocated 39.9 percent of the revenue requirement instead of the current level of 32.9 percent. Conversely, the Large Commercial and Industrial (A3) customer class would be allocated a lower revenue requirement of 31.5 percent instead of the current level of 37.1 percent. These modifications have been reflected in the proposed base rates for each major customer class.

Major Power System Achievements

Since the last base rate action in 2012, the LADWP Power System has made noteworthy achievements in infrastructure investment, regulatory compliance, environmental stewardship, and operational cost reduction. These accomplishments are significant and include, but are not limited to, items under the following categories:

¹⁷ FY 2012-13 was the most currently available and audited accounting period when the cost of service study was conducted.

- Actions to reduce size of rate increases:
 - Cost Reduction Plan;
 - New labor agreement;
 - Benchmarking;
 - Financial planning considerations;
- Other major achievements:
 - Major Power System investments;
 - Greenhouse Gas Emissions (GHG) reductions;
 - Electric vehicles; and
 - Integrated Resource Plan (IRP).

Actions to Reduce Size of Rate Increases

LADWP has implemented several major cost reduction efforts to operate more efficiently and reduce the level of customer rate increases. To date, the Department has identified nearly \$1 billion worth of cost savings initiatives, which are summarized below.

Cost Reduction Plan

In 2011, the Department examined its portfolio of recurring and non-recurring projects to identify areas to reduce costs in the short term. This plan included savings in areas such as labor, operations and capital expenditures. The major components identified for the Department’s original cost reduction plan were as follows:

- Overtime reductions, vacancy and attrition-based labor cost savings;
- Non-labor operations savings; and
- Capital cost savings.

The plan was developed to ensure customer rates remained reasonable while moving forward with implementation of LADWP’s major Water and Power System initiatives. Over the three-year period ending in June 2014, LADWP has saved an estimated \$467 million across the entire Department, exceeding the original \$459 million target by \$7.8 million.¹⁸ Figure 26 illustrates the distribution of savings across the major areas in the cost reduction plan.

Figure 26: Cost Reduction Plan Current Results (Water and Power Systems combined)

Source	February 2011 - June 2014 Savings (\$M)
Labor	\$230.0
Non-Labor	\$142.8
Capital	\$94.1
Total	\$466.9

¹⁸ Cost reduction efforts have been developed and tracked on a Department wide basis, so the amounts shown represent total LADWP savings.

Though the cost reduction plan was designed as a three-year program, various initiatives have sustainable effects that LADWP expects to produce further savings in the future.

New Labor Agreement

In September 2013, LADWP implemented a revised labor contract, or Memorandum of Understanding (MOU), forecasted to save \$456 million from October 2013 to September 2017, as summarized in Figure 27. Under the MOU, the four-year package contains no cost-of-living increases for three years and then limits a cost-of-living increase to 2.0 percent in the final year, among other changes.

Figure 27: Key Components of the Labor MOU

Key MOU Components	Four-Year Savings Estimate (\$M)
Defer Cost of Living Adjustment (COLA) from 10/1/13 to 10/1/16	\$385.0
Entry Level Salary Reduction for 34 Common Classes	\$15.0
Sick Time Medical Certification Requirement	\$12.0
Contracting Out Overtime Restriction - Reduction from 10% to 5%	\$3.0
Retirement Plan Tier 2 For All New Hires	\$41.0
Total Estimated Savings Over Four Years	\$456.0

It is estimated the contract will result in a \$5 billion savings over 30 years with an estimated \$4.22 billion coming from salary savings.

LADWP identified a unique opportunity to place new hires in a new Tier 2 pension that provides for a reduced pension calculation. Given its current workplace demographic, over the next four years, this approach is estimated to save the Department \$41 million. Approximately 40 percent of the workforce will be eligible to retire in the next five years. Therefore, savings will be significant as more and more new hires take the place of retiring employees.

Benchmarking

In February 2015, the Department completed an initial high level benchmarking study in response to a Los Angeles City Council request made in September of 2012 as well as the Mayor’s letter sent in December of 2013 directing LADWP to engage a qualified outside consulting firm to conduct a benchmarking study. The study is the first of a three phase, comprehensive benchmarking analysis designed to evaluate LADWP’s performance relative to peer utilities from throughout the United States. The initial study, which ranked utilities from the 1st quartile being the “best” to the 4th quartile representing the “worst” performer, revealed favorable comparative performances in several areas of operational significance. These included Total Operations and Maintenance (O&M) costs metrics as well as reliability metrics measuring electric power

outages and planned/unplanned water service disruptions. Total O&M cost was an especially significant benchmark for the Department, given that over 70 percent of this metric is comprised of labor costs. Total O&M costs are expected to continue improving in the future as lower pension benefits implemented under the recently approved MOU should also help reduce LADWP's overall administrative and general functional costs as new Tier 2 employees replace the existing workforce, roughly 40 percent of whom are currently eligible to retire within the next five years.

The initial benchmarking study findings were also used as a "road map" to identify areas for more in-depth analysis as part of the Phase II study, which commenced in October 2015. The new study will delve more deeply into areas identified as having the highest potential for improvement with an initial focus on Customer Service Operations, including but not limited to Uncollectible Accounts and Energy Losses, both of which ranked in the 4th quartile.

In response to the aforementioned benchmark findings, tens of millions in sustained cost savings and revenue collections are expected to be realized and used to mitigate the need for future rate increases for LADWP customers.

Financial Planning Considerations

Financial leverage allows the costs of financed projects to be spread over the useful life of the projects, enables the recovery of costs from those customers that benefit from the projects, and mitigates the rate impacts that would result if this work was directly funded in full from customer rates. Given the substantial increase in capital spending levels that is anticipated, the Department has taken financial measures to minimize rate increases such as bond refinancing, regulatory asset treatment, and securing of State and Federal loans and grants for emerging technology deployment.

Other Major Achievements

Major Power System Investments

Critical investments have been made to improve the Power System operations in the areas of renewable energy supply, transitioning off coal, rebuilding local power plants, energy efficiency and local solar programs.

Greenhouse Gas (GHG) Emissions Reductions

Through the growth of renewable generation sources, the expansion of energy efficiency and customer solar programs, and several other key environmental initiatives such as electric vehicles, demand response, and smart metering, LADWP has made significant progress in reducing its environmental footprint. GHG emissions levels for 2013 were 14.3 million metric tons (MMT), which is 20 percent below 1990 levels.

Electric Vehicles

The Department's electric vehicle program, "Charge Up LA! - Home, Work, and On The Go" will have awarded approximately \$4 million in incentives by December 31, 2015 for electric vehicle charging station installations for Residential and Commercial customers throughout Los Angeles.

Integrated Resource Planning (IRP)

The IRP was updated in December 2015 and is intended to drive the priorities, financial planning, and budgeting effort for the Power System as it considers a 20-year planning horizon. Its overriding purpose is to provide a framework to assure the future energy needs of Department customers are met in a manner that balances superior reliability and supply of electric service, competitive electric rates consistent with sound business principles, responsible environmental stewardship exceeding all regulatory obligations, and a focus on the customer.

Office of Public Accountability / Ratepayer Advocate Report

During the development of the proposed rates, the Department has been working closely with Office of Public Accountability (OPA). Bi-weekly meetings have been held since July 2013. In these meetings, many major aspects of LADWP's financial plans and actions that require Board approval have been reviewed. Specific topics discussed pertaining to the Power System include, but are not limited to:

- Major initiatives and capital projects;
- Monthly cash/variance reports;
- Financial plans that may potentially be used in the rate action;
- Quarterly Board packages for major program expenditures;
- Marginal cost study results;
- Power rate design options; and
- Various sensitivity cases to stress test the revenue requirement (LADWP has worked with the RPA to develop long-term fiscal outlooks and stress test the proposed plan against dozens of different scenarios).

In July 2015, the Department provided a report to the OPA that summarized critical information, including financial plans and budget details supporting the current Power System rate proposal and rate design changes. A copy of this report is provided in Appendix 6. Subsequently, the OPA completed a comprehensive analysis of the proposed Power System rate action, which included a substantial amount of data requests and other follow up from the Department. At the request of the OPA, LADWP responded to 150 responses to requests for information in FY 2015-16 and provided an analysis of 64 additional financial sensitivity cases for power.

After performing a detailed review of the initial proposed rate plan, the OPA provided recommendations that the Department has incorporated into its revised financial plan¹⁹

¹⁹ The revised proposed financial plan is also referred to as Financial Plan Case No. 143.

and proposed rates. These items include an interim review after FY 2017-18 and a set of metrics to monitor LADWP's ongoing progress on key programs impacting specific rate elements.

Interim Review (Check-In)

LADWP's five-year rate plan is designed to provide funds to finance the key programs outlined in this Board Letter in an economical manner, provide rate certainty to customers and instill financial discipline for the Department. However, to provide further oversight of LADWP's rates during the five-year period, during FY 2018-19, the OPA will review the progress of key Department rate driver programs and overall revenue requirement. This process is designed to confirm that the proposed rates continue to be set appropriately. This review shall include: a revised five-year financial and performance outlook; consideration of revised base rate revenue targets; and the status of Departmental responses to any Mayoral and City Council requests for reports and recommendations made as part of this rate action.

Metric Reporting Process

Another key recommendation from the OPA was for the Department to include in the proposed Ordinance an initial set of specific key performance metrics, targets, and estimated potential variance ranges from the targets related to key components of the rates. The OPA also requested that the Department's performance against these metrics be reported to the Board and OPA on a regular basis. Therefore, the Department included in the proposed Ordinance metrics, which have been discussed with the OPA. The performance metrics will also inform the Board, Ratepayer Advocate and City Council about the work being performed. The establishment of the metrics process supports removal of caps on rate adjustment factors.²⁰

LADWP will report results to the OPA one month prior to providing the metric report to the Board. If performance is outside a pre-determined estimated potential variance range, LADWP will provide a variance explanation to the OPA and the Board for review. At the Board's discretion, subsequent adjustment factors or base rates can be set based on LADWP's actual performance.

Figure 28 presents the specific Power System reporting metrics and their corresponding rate components. LADWP is seeking Board approval of the related targets and acceptable variance ranges. These will be presented in a separate Board package prior to adoption of the proposed Ordinance by the Council.

²⁰ Based on recommendation from the OPA, the caps will be removed on the IRCA and CRPSEA adjustment factors.

Figure 28: OPA Proposed Power System Rate Component Metric Reporting

Factor	Metric	Definition
Energy Cost Adjustment Factor	Total Renewable Portfolio Standard (RPS) Ratio (%)	GWh from RPS resources/GWh of retail sales (State requirement)
	Total RPS cost (\$/MWh) vs. plan, by technology	Total RPS purchased power cost (\$/MWh) as compared to plan, by technology
	Green House Gas (GHG) emissions reduction ratio	GHG emission for current year/GHG emission in 1990 (in millions of metric tons)
Energy Cost Adjustment Factor	Energy Efficiency (EE) ratio (%)	GWh installed compared to the 2010 baseline/GWh for all customers
	Budget vs. actual (\$M) for the overall EE portfolio	Board Approved Annual Budget vs. Actual expenditures
	Levelized EE program costs (\$/kWh)	Cost per kWh over lifetime of installed energy efficiency solutions
	Average levelized cost of energy of purchased power agreements (PPAs) signed during the previous fiscal year	Cost per MWh for all PPAs
Reliability Cost Adjustment Factor	Budget vs. actual (\$M) for capital and operation and maintenance (O&M) expenses in the Generation budget	Board Approved Annual Budget vs. Actual expenditures
	Budget vs. actual (\$M) for capital and O&M expenses included in the Transmission budget	Board Approved Annual Budget vs. Actual expenditures
	Cost per mile of underground circuits	Cost per mile of underground circuits
	Budget vs. actual (\$M) for capital and O&M expenses in the Substation budget	Board Approved Annual Budget vs. Actual expenditures
	Budget vs. actual (\$M) for capital and O&M expenses in the Distribution budget	Board Approved Annual Budget vs. Actual expenditures
	Number of fixed assets replaced against plan for critical Distribution assets	Numbers of poles, crossarms, and transformers and miles of cable replaced against plan
	Average unit price for critical Distribution assets	Average unit price per pole, per crossarm, per mile of cable, and per transformer
	Average cost of Power System Training Plan per trainee	Average cost of training for Electric Distribution Mechanic Technician (EDMT) and Electrical Mechanic Technician (EMT) classifications per trainee that graduates from respective training program
	Number of trainee graduates against Power System Training Plan	Number of Electric Distribution Mechanic Technician (EDMT) and Electrical Mechanic Technician (EMT) trainees that graduate from each respective training program against the annual training plan

Several metrics for support service that apply to the Joint System, which assists both the Power and Water Systems, are also included in the reporting process as shown in Figure 29.

Figure 29: OPA Proposed Joint Metric Reporting

Factor	Metric	Definition
None	Human Resources Budget vs. actual (\$M)	Board Approved Annual Budget vs. Actual expenditures
	Human Resources Total Full Time Equivalent (FTEs) against plan	Total number of full time equivalent positions occupied vs. annual Authorized Personnel Resolution
	Financial and Human Resources Replacement Project total spending against plan	Board Approved Annual Budget vs. Actual expenditures
	Financial and Human Resources Replacement Project progress against schedule	Project milestones met in accordance with project schedule
	Number of new distribution infrastructure crews as compared to plan	Number of new crews dedicated to distribution infrastructure as compared to plan

The metrics, targets and estimated potential variance ranges will provide the OPA, Board and City Council additional oversight for LADWP’s progress. This process is designed to ensure that actual performance closely matches the budgeted expenditures and related operational targets underlying key rate drivers and rate components. In addition, this process provides the Department with some flexibility to ensure spending levels remain sufficient to meet the Department’s changing financial, operational or regulatory needs. Appendix 9 provides further detail on this reporting process.

Response to Council Recommendations

On September 19, 2012, the Los Angeles City Council (Council) Energy and Environment Committee adopted a report with ten recommendations associated with third-party review of LADWP’s Incremental Electric Rate Ordinance. Many of these recommendations stemmed from the recommendations found in Appendix E of the “Los Angeles Department of Water and Power (LADWP) - Power System Financial Review and Rate Restructuring Analysis” report issued to the City Council on August 23, 2012 (RPA Power Report) in accordance with Council action of April 8, 2011.

Programs or other activities have been developed to address all of the recommendations. While some activities are ongoing, LADWP has made significant progress in each area. In some cases, the nature of the recommendations and the activities to address them are long-term requiring continued efforts.

LADWP has been working collaboratively with the Ratepayer Advocate (RPA), Chief Legislative Analyst (CLA) and Chief Administrative Officer (CAO) to address these

recommendations. Programs or other activities have been developed to address all of the recommendations. While some activities are ongoing, LADWP has made significant progress in each area. However, in some cases, the nature of some of the recommendations and the activities to address them are long-term. The current status for each item is shown in Appendix 5.

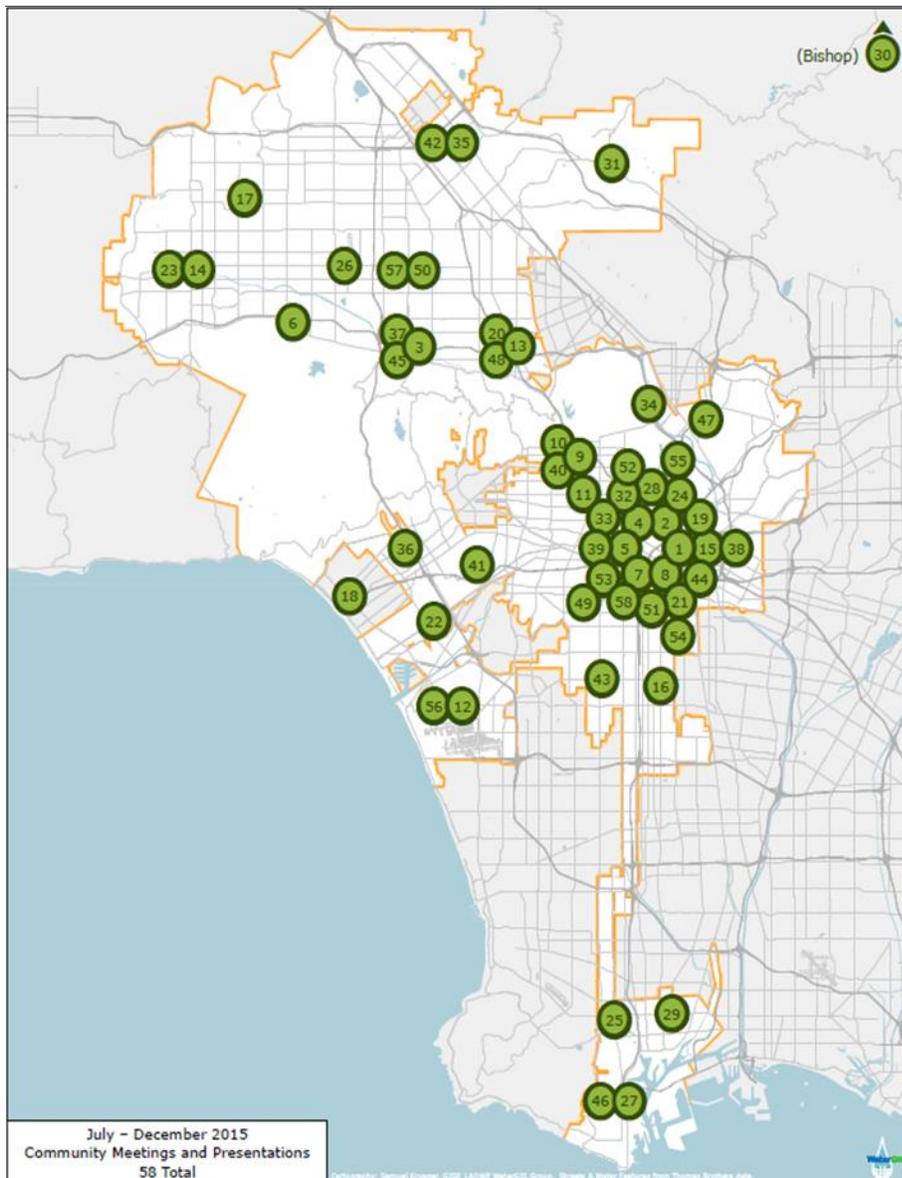
Public Outreach and Resulting Impact on Proposed Rates

LADWP is one of the few City departments that serves all of the residents and businesses in Los Angeles on a daily basis. As a provider of vital services and one of the economic drivers in Los Angeles, the Department fully understands the responsibility it has to all of its stakeholders.

Therefore, in addition to meeting regularly with the OPA, the City Administrative Officer, and the Chief Legislative Analyst, the Department has also made significant efforts to engage the public as represented by the Neighborhood Councils, Chambers of Commerce, other business groups, environmental groups, academic institutions and other key stakeholders.

In order to make information easily accessible as well as solicit feedback, the Department has reached out to its stakeholders through a variety of channels, including public meetings, webinars and videos. LADWP has held over 60 meetings with Neighborhood Councils, the business community, the environmental community, and other constituent groups to demonstrate the necessity for the rate increases and obtain valuable feedback, which assisted in the preparation of the proposed rates that are presented to the Board. More specifically, LADWP provided eighteen Community Collaboration Sessions across the City at the following locations: Downtown L.A., Crenshaw, Westchester, Canoga Park, South L.A., Wilmington, Owens Valley, Sunland/Tujunga, Griffith Park, Pacoima, West L.A., Glassell Park, North Hollywood, Van Nuys, Pico Union, and East Hollywood. LADWP also provided six Neighborhood Council Workshops at various locations. The locations of these various meetings are illustrated in Figure 30.

Figure 30: Public Outreach Summary of Meetings



LADWP has worked with the E&E Committee to provide customers living in the hotter temperature zone with programs and assistance to reduce energy usage and lower bill impacts. These efforts include plans to work with the LADWP Energy Efficiency group to identify high usage customers and proactively provide AC unit checkups to improve efficiency as well as offer incentives for installation of variable speed pool pumps.

Additionally, as a result of input from the Mayor, Energy and Environment (E&E) Committee Chair, and the Office of Public Accountability (OPA), LADWP has reduced its proposed rate increase by utilizing any actual amounts exceeding budgeted amounts for the following items to lower the Base Rate Revenue Target Adjustment (BRRTA):

- Net wholesale revenue; and

- CIAC, which are basically amounts paid by large customers for upgrades and equipment for new developments.

This is estimated to result in an approximately 0.51 percent lower system average annual rate increase and equates to a \$105 million lower revenue requirement over the five-year period. In the past, LADWP has utilized additional revenues from these sources to cash fund capital expenditures. At the suggestion of the previously mentioned parties, these funds will now be returned directly to customers in the form of lower rates. However, it is important to note that this requires the Department to borrow more money to fund capital projects and is somewhat offset by higher debt service costs.

A summary of feedback that the Department has incorporated from the OPA, E&E Committee, the Mayor and various public groups along with the resulting rates changes stemming from this input is presented in Figure 31.

Figure 31: Summary of Suggested Rate Changes Resulting from External Feedback

Change	Description
Performance-Based Rates	New metrics-based reporting to improve LADWP's performance, accountability and transparency (48 initial metrics). Using performance-based rates, the caps will be removed from pass-through adjustment factors.
Net Wholesale Revenue	Any actual net wholesale revenues in excess of the budgeted amounts will be used to reduce the BRRTA.
Contributions in Aid of Construction (CIAC)	Any actual amount paid by customers for upgrades and equipment for new developments that exceeds the budgeted amounts will be used to reduce the BRRTA.
Interim Rate Review	Institutes a "check-in period" within the five-year rate process, which includes: revised five-year financial and performance outlook and status of LADWP responses to Mayoral and City Council requests for reports and recommendations.
Modified Power Access Charge	Modified the Power Access Charge from charging for the energy to/from meter of residential service to only charging for the energy that flows into a metered residential service.
Reliability Program Spending Transparency / Over-collection Prevention	Creation of pass-through adjustment factors for both Water and Power System reliability programs increases transparency through periodic reporting and aligns revenues with spending.

Information related to the rate cases is also available to the public on the comprehensive website that the Department set up specifically to support the public outreach process.²¹

Power Adjustment Factor Expenditures

The attached Resolution, found in Appendix 2, approves expenditures for inclusion in the Energy Cost Adjustment (ECA) of the 2008 electric rate ordinance commencing April 1, 2016, based upon approval of the proposed Ordinance. Such expenditures are also used in the calculation of the VEA, VRPSEA, and CRPSEA rate components of the proposed Ordinance. The recovery of these factors funds renewable energy resources, energy efficiency, non-renewable resource PPAs and fuel costs. The VEA, VRPSEA

²¹ <http://www.myladwp.com/>

and CRPSEA factors will be adjusted every three months, based on changes in these costs, and all are subject to review by the Board and the OPA.

CITY COUNCIL APPROVAL

City Council approval of the proposed Ordinance is required.

CEQA

The approval of the rates in the proposed Ordinance is exempt from the requirements of the California Environmental Quality Act under the provisions of the Public Resources Code, Section 21080(b)(8). The proposed rates meet financial needs of the Department, including operating and capital expenses, as described in this letter and its Appendices.