Los Angeles Department of Water & Power

INFORMATIONAL BOARD LETTER

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DATE: July 30, 2019

SUBJECT: LADWP Rates and Equity Metrics Semi-Annual Report

SUMMARY

Attached is the semi-annual report on Rates Metrics and Equity Metrics.

Pursuant to Section 4 of the Water and Electric Rates Ordinances, LADWP shall provide a written report to the Board of Water and Power Commissioners (Board) on a semi-annual basis, commencing 2017. This report shall include:

- The Rates Metrics being monitored.
- The results for each metric.
- The target.
- The variance of actual performance from the target.
- Any proposed mitigation plans to address a variance.

The detail information is provided in this Informational Board Letter under section Rates Metrics.

On December 6, 2016, the Board approved Resolution No. 0171 07, finalizing the list of Equity Metrics for LADWP's Equity Metrics Data Initiative (EMDI). LADWP will report Equity Metrics to the Board on a semi-annual basis coinciding with Rates Metrics reporting to the Board. The detailed information is provided in this Informational Board Letter under section Equity Metrics.

RATES METRICS

Rates Metrics 2018-2019 (Fiscal-Year-To-Date April 2019)

The Rates Metrics currently include 20 for Water System, 28 for Power System, and 9 for Joint System. A summary of the fiscal-year-to-date April 2019 performance status of all these metrics is listed in the Rates Metrics Summary (Attachment I).

LADWP Rates Metrics Status (Fiscal Year to Date April 2019)		
Performance Status		**# Metrics**
Exceeds Target	Blue	**8**
Within Acceptable Variance	Green	**29**
Outside Acceptable Variance	Red	**15**
Needs Attention	Yellow	**0**
Information Only	White	**5**
	Total	**57**

For the period ending April 2019, 65 percent of the metrics are either within the acceptable variance or exceed the target.

Fifteen of the fifty-seven Rates Metrics are outside the acceptable variance. Explanations for metrics outside the acceptable variance are included in the follow table. Metric 51 is being updated with a new timeline.

Power System

Metric	Variance	Explanation
Average Cost Per Electric Distribution Mechanic Trainee	37.3% ($147.2K)	• The monthly cost per trainee calculation will vary from month to month based on factors such as class size, dropouts, terminations, the final number of graduates, and tools and materials purchased for subsequent classes. Training program changes are being made to reduce dropout rate.
Power System Reliability Program Transmission Capital (Budget vs. Actual)	65.1% ($43.9M)	• Expenditures contributing to the cost overrun include the placement of field crews on standby from December 2018 to March 2019 due to relocation of segments of the Scattergood-Airport Line 1 conduit by LA World Airports, accelerated construction schedule of the Sylmar Filter Replacement Project, work for the Ocean portion of the Electrode Circuit that was originally budgeted for FY 17/18, and insufficient budget for upgrade to Valley-Rinaldi 230kV Lines 1 and 2 and for Pacific DC Intertie Line insulator replacement. so normal project progress appears as an overrun. The budget has been re-estimated to $122.3 million.
Cost Per Circuit Mile for Underground Circuits	50% ($1.4M)	• Due to increased costs associated with the upgraded voltage and cable size for six of the circuit replacements from 138kV to 230kV. It is anticipated that the cumulative cost per mile will now be $4.4M for all ten circuits when completed in FY 20/21
Cable Replacement (Miles of Cable Replaced Against Plan)	-20.1% (-8.4 Miles)	• The variance is due to backlog in the paper work to close completed jobs. Management will work with Districts to expedite paperwork to acknowledge cable replaced.

Power System

Metric	Variance	Explanation
Average Unit Cost per Mile of Cable (Plan vs. Actual $/per mile)	83.3% ($707.9K)	• Due to Bureau of Engineering street restrictions, much of the construction has been conducted after hours, on weekends or round the clock adding to the labor cost per Memorandum of Understanding guidelines.

Water System

Metric	Variance	Explanation
Water Supply Costs Capital (Budget vs. Actual)	-26.8% ($-23.9M)	• The demand for residential and commercial water conservation rebates has decreased and are the main driver for the costs underrun.
Recycled Water Delivered	-38.9% (-3,885 Acre Feet)	• Terminal Island Water Reclamation Plant owned by LA Sanitation continues to experience challenges in delivering consistent flows due to the inability to meet discharge requirements. • A major customer was unable to take recycled water in early FY 18/19 due to their infrastructure failures. Repair work was completed in December 2018. • Higher than average rainfall in FY 18/19 has resulted in significantly less recycled water use for irrigation purposes.
LA Aqueduct Budget vs. Actual - Capital	-38.2% ($-7.7M)	• Delays in the Grant Lake Spillway Project due to environmental documentation, as well as the deferral of the Old Top Removal Project due to heavy snowpack are expected to leave this metric below budget by approximately $21M at fiscal year-end.
LA Aqueduct Budget vs. Actual – O&M	18.1% ($6.8M)	• Recent heavy snow storms have shifted priorities for the remainder of the fiscal year, thus O&M is expected to be above budgeted levels by approximately $12M. • Seasonal work to protect infrastructure and avoid flooding from the immense Sierra snowpack will be a focus for the remainder of the fiscal year.
Pump Stations Budget vs. Actual	-38.8% ($-4.1M)	• Van Norman Pump Station 1 Capital Improvement Program project was originally expected to be in construction during FY 18/19. Construction was pushed out due to commissioning delays in the LA Aqueduct Filtration UV Disinfection Plant Project. Budget will be revised to shift the construction cost to future years. • Actuals to date for pump station retrofit projects were less than expected due to resources being diverted to other higher priority projects.

Water System

Metric	Variance	Explanation
Mainline Replacement	-26.2% (-49,947 Feet)	• The Division is trying to make-up for impeded work due to previous months' inclement weather. The Division has also shifted its focus to address increasing demand for customer service jobs. It is anticipated that the fiscal year goal for mainline replacement will not be achieved.
Water Quality Budget vs. Actual - Capital	-23.7% ($-50.9M)	• Award of the Design-Build contract for San Fernando Ground Water Basin Remediation – North Hollywood Centralized Treatment and Tujunga Centralized Treatment was delayed. • Equipment purchases for North Hollywood West Wellhead Treatment have been delayed. • Construction activities for the River Supply Conduit 7 have been delayed by 6 months due to a requirement by the Los Angeles Bureau of Engineering to bypass the existing North Outfall Sewer.

Joint System

Metric	Variance	Explanation
Financial and Human Resources Replacement Project (Budget vs. Actual)	-26.4% ($-3.6M)	• Progress was temporarily delayed while LADWP reprioritized critical projects and continue to hire needed resources. • Program milestones and budgetary cash flows that reflect current strategy for sourcing and selection of software, system integrator services, and other support services will be available in quarter 2 of FY 19/20.
Energy Efficiency Portfolio (Budget vs. Actual)	15.1% ($18.9M)	• Increased program activities in the Home Energy Improvement Program (HEIP), Consumer Rebate Program, Residential and Commercial Lighting Programs. • Actual expenditures are expected to be within acceptable variance by the end of the fiscal year.

The Corporate Performance Group is working with the respective operating units to closely monitor the progress as they take steps to bring the metrics to within the acceptable variance range.

To the extent that more information is required beyond the high level summary dashboards, the LADWP can provide more detailed information as requested by the Board or the Office of Public Accountability/Ratepayer Advocate (OPA).

Rates Metrics Reporting Dashboards

A one-page dashboard for each of the metrics is created to provide concise and pertinent information on the status of the LADWP's work as represented by the Rates Metrics to the Mayor, City Council, Board, OPA, customers, and other stakeholders. For each metric, the corresponding dashboard provides the metric definition; the target for the fiscal year; performance/variance analysis and forecast; achievements/milestones met; and mitigation plans and/or recommendations to improve performance as necessary. The performance status of each Rate Metrics is reflected through the following colors:

- Blue: Exceeds Target
- Green: Within Acceptable Variance
- Yellow: Needs Attention
- Red: Outside Acceptable Variance

Each rate metric manager is responsible for providing the status update information and its accuracy in a timely manner to the Corporate Performance Group. The default status on Rates Metrics will either be green or red. The Corporate Performance Group, with the assistance from the Systems, will ascertain whether a different status, such as blue or yellow is warranted given additional information and/or detailed mitigation plans.

EQUITY METRICS

Background and Purpose

The Board approved Resolution No. 0171 07 on December 6, 2016, finalizing the list of Equity Metrics for LADWP's EMDI. The EMDI establishes the framework to compare demographics with ratepayer and service locations to determine whether geographic or other categorical disparities exist.

Status and Progress

Since the establishment of the EMDI, the LADWP has collected and mapped data for the 15 selected metrics in the four Equity Core Categories that helped facilitate meaningful efforts toward achieving equitable outcomes within those LADWP programs. The following are examples of managers incorporating equity considerations into their policy decision making and outreach:

- The Electric Vehicle (EV) Program budget was increased significantly to facilitate the goal of installing 10,000 chargers by 2022 in areas throughout the city where a gap in EV Charging infrastructure were identified.

- Energy Efficiency and Conservation has increased their program budget by $20 million per year for five years in order to meet the energy demand reduction which is a key component of the Integrated Resource Plan. New programing will initially target low income renters in multifamily housing and hard

to reach customer segments in order to improve equity. Management will be using the geographic distribution of program participation to target mailings and work with non-profit organizations to disseminate information and engage customers.

- The Human Resources Division has developed several diversity-targeted recruitment activities aimed at increasing female and minority candidates for Engineering Associates and Skilled Craft jobs.

Equity Research and Studies

In response to the feedback received from the Board and stakeholders at various community meetings recommending the LADWP work with academic and research institutions, Corporate Performance Group has embarked on the following:

- Continue to work with Loyola Marymount University (LMU) to participate in and receive data from the upcoming annual Los Angeles Public Opinion Survey conducted by their Thomas and Dorothy Leavey Center for the Study of Los Angeles (StudyLA). StudyLA develops and conducts innovative research in leadership studies, quality-of-life, and contemporary urban issues in the Los Angeles region. Each year StudyLA conducts the region's largest general social survey (Los Angeles Public Opinion Survey) on the residents of Los Angeles County to gauge their outlook for the year.

- Based on recommendations from a study recently completed for LADWP by Maroon Society, Corporate Performance Group will work with LMU to extract census data and organize and develop various base layer maps of language preference, housing types, education levels, and income levels. These maps will be layered over the LADWP services and rebate offerings for a deeper analysis of equity, and identify opportunities for improvement where gaps exist. This work will be done under the Memorandum of Agreement between LADWP and the University of California, Los Angeles.

FSO has allocated $500,000 over the next five years to partner with leading Los Angeles Academic Research Universities for research and studies that will further enhance the EMDI. This work will be done under the Memorandum of Agreement between LADWP and the University of California, Los Angeles.

Equity Metrics Reporting Dashboards

The Equity Metrics dashboards provide a high level citywide view of LADWP service, infrastructure improvement, and program participation.

The first iteration of the Equity Metrics was presented to the Board on March 7, 2017. The semi-annual update to these is now available on the DWPSTAT. The update for most of the metrics is based on November 2018 to April 2019 data.

A summary dashboard has been created for each Equity Metric providing the following information as applicable:

- The Equity Metric core category
- The responsible manager
- Criteria
- Achievements/Milestones
- Issues
- Outreach Strategy/Plan

Each equity metric manager is responsible for providing updated information and data in a timely manner to the Corporate Performance Group. The dashboards are in Attachment II.

We have made available on the LADWP website a pdf of each metric's heat map/chart/table at: https://www.ladwp.com/equitymetrics. For those metrics that are rebate related, there is a downloadable Excel spreadsheet containing data aggregated by zip code.

ATTACHMENTS

- Attachment I – Rates Metrics Summary FY 2018-19 *(July 2018 through April 2019)*
- Attachment II – Equity Metrics Data Initiative Dashboards

ATTACHMENT I
LADWP Rates Metrics Summary
Fiscal Year 2018 - 2019
(July 2018 through April 2019)

LADWP RATES METRICS SUMMARY

Related Rate Adjustment Factor	Category	#	Board Metric	Definition	FY 18/19 Target	Acceptable Variance	Responsible Manager	April 2019 Performance
Power (None)	Repowering/Once Through Cooling	1	Repowering/Once Through Cooling budget vs. actual ($M)	Board Approved Estimated Project Cost vs. Actual project costs	FY18/19 Board Approved Budget - May 2018	+/- 15%	Marcelo Di Paolo Silvia Lozano	-5.0%
	Repowering/Once Through Cooling	2	Once Through Cooling project milestones against compliance deadlines	Plant actual compliance dates against plan	OTC Compliance Date: Scattergood Unit 1&2: 2024 Haynes Unit 1&2: 2029 Harbor Unit 1&2: 2029 Haynes Unit 8: 2029	+/- 45 days	Marcelo Di Paolo Silvia Lozano	
Reliability Cost Adjustment Factor	Power System Training Plan	3	Average cost of Power System Training Plan per trainee	Average cost of training for Electric Distribution Mechanic Technician (EDMT) classification per trainee that graduates from respective training program	EDMT: $394.5K	+/- 15%	Brian Wilbur	37.3%
	Power System Training Plan	4	Average cost of Power System Training Plan per trainee	Average cost of training for Electrical Mechanic Technician (EMT) classification per trainee that graduates from respective training program	EMT: $481.1K	+/- 15%	Brian Wilbur	12.6%
	Power System Training Plan	5	Number of trainee graduates against Power System Training Plan	Number of Electric Distribution Mechanic Technician (EDMT) trainees that graduate from each respective training program against the annual training plan	EDMT: 20	+/- 15%	Brian Wilbur	15.0%
	Power System Training Plan	6	Number of trainee graduates against Power System Training Plan	Number of Electrical Mechanic Technician (EMT) trainees that graduate from each respective training program against the annual training plan	EMT: 34	+/- 15%	Brian Wilbur	20.6%
Energy Cost Adjustment Factor	Renewable Portfolio Standard (Owned)	7	Total Renewable Portfolio Standard (RPS) Ratio (%)	GWh from RPS plants/GWh for all customers (State requirement)	29% RPS for Calendar Year 2018	+/- 3% of each canlendar year's goal toward state law mandates	John Giese	-0.8%
	Renewable Portfolio Standard (Owned)	8	Total RPS cost ($/MWh) vs. plan, by technology (Wind)	Total RPS purchased power cost ($/MWh) as compared to plan, by technology (Wind)	Wind: $83.87/MWh	+/- 15%	Jan Lukjaniec	3.7%
	Renewable Portfolio Standard (Owned)	9	Total RPS cost ($/MWh) vs. plan, by technology (Solar)	Total RPS purchased power cost ($/MWh) as compared to plan, by technology (Solar)	Solar: $72.70/MWh	+/- 15%	Jan Lukjaniec	0.4%
	Renewable Portfolio Standard (Owned)	10	Total RPS cost ($/MWh) vs. plan, by technology (Geothermal)	Total RPS purchased power cost ($/MWh) as compared to plan, by technology (Geothermal)	Geothermal: $81.61/MWh	+/- 15%	Jan Lukjaniec	-2.3%

Within Acceptable Variance | Outside Acceptable Variance | Exceeds Target | Needs Attention

Related Rate Adjustment Factor	Category	#	Board Metric	Definition	FY 18/19 Target	Acceptable Variance	Responsible Manager	April 2019 Performance
	Renewable Portfolio Standard (Owned)	11	Total RPS cost ($/MWh) vs. plan, by technology (Biogas)	Total RPS purchased power cost ($/MWh) as compared to plan, by technology (Biogas)	Biogas: $84.36/MWh	+/- 15%	Jan Lukjaniec	-100.0%
Energy Cost Adjustment Factor	Renewable Portfolio Standard (Purchased)	12	Average levelized cost of energy of purchased power agreements (PPAs) signed during the previous fiscal year	Cost per MWh for all PPAs	$97.50/MWh	+/- 15%	Jan Lukjaniec	0.0%
Reliability Cost Adjustment Factor	Power System Reliability Program (Generation)	13	Budget vs. actual ($M) for capital in the Generation budget	Board Approved Annual Budget vs. Actual expenditures	FY18/19 Board Approved Budget - May 2018	+/- 15%	Robert Fick	-10.9%
	Power System Reliability Program (Transmission)	14	Budget vs. actual ($M) for capital included in the Transmission budget	Board Approved Annual Budget vs. Actual expenditures	FY18/19 Board Approved Budget - May 2018	+/- 15%	John Hormozi	65.1%
		15	Budget vs. actual ($M) for O&M expenses included in the Transmission budget	Board Approved Annual Budget vs. Actual expenditures	FY18/19 Board Approved Budget - May 2018	+/- 15%	Terry Jackson	4.6%
	Power System Reliability Program (Transmission)	16	Cost per mile of underground circuits	Cost per mile of underground circuits	$2.8 million	+/- 15%	Silvia Lozano	50.0%
	Power System Reliability Program (Substation)	17	Budget vs. actual ($M) for capital in the Substation budget	Board Approved Annual Budget vs. Actual expenditures	FY18/19 Board Approved Budget - May 2018	+/- 15%	Jeffrey Thornburg	12.4%
		18	Budget vs. actual ($M) for O&M expenses in the Substation budget	Board Approved Annual Budget vs. Actual expenditures	FY18/19 Board Approved Budget - May 2018	+/- 15%	David Haerle	11.0%
	Power System Reliability Program (Distribution)	19	Budget vs. actual ($M) for capital in the Distribution budget	Board Approved Annual Budget vs. Actual expenditures	FY18/19 Board Approved Budget - May 2018	+/- 15%	Sager Farraj	7.0%
		20	Budget vs. actual ($M) for O&M expenses in the Distribution budget	Board Approved Annual Budget vs. Actual expenditures	FY18/19 Board Approved Budget - May 2018	+/- 15%	Mike Barkhuff	10.7%
	Power System Reliability Program (Distribution)	21	Number of fixed assets replaced against plan for critical Distribution assets (Transformers)	Numbers of transformers replaced against plan	Transformer: 800	+/- 15%	Mike Barkhuff	58.3%
		22	Number of fixed assets replaced against plan for critical Distribution assets (Poles)	Numbers of poles replaced against plan	Pole: 3,500	+/- 15%	Mike Barkhuff	7.5%
		23	Number of fixed assets replaced against plan for critical Distribution assets (Crossarms)	Numbers of crossarms replaced against plan	Cross-arm: 10,000	+/- 15%	Mike Barkhuff	-3.1%
		24	Number of fixed assets replaced against plan for critical Distribution assets (Cable)	Numbers of miles of cable replaced against plan	Cable: 50 miles	+/- 15%	Sager Farraj	-20.1%

Within Acceptable Variance | Outside Acceptable Variance | Exceeds Target | Needs Attention

Related Rate Adjustment Factor	Category	#	Board Metric	Definition	FY 18/19 Target	Acceptable Variance	Responsible Manager	April 2019 Performance
	Power System Reliability Program (Distribution)	**25**	Average unit price for critical Distribution assets (Transformers)	Average unit price per transformer	Transformer: $15.2k	+/- 15%	William Herriott	**-48.0%**
		26	Average unit price for critical Distribution assets (Poles)	Average unit price per pole	Pole: $27.7k	+/- 15%	William Herriott	**-6.5%**
		27	Average unit price for critical Distribution assets (Cross-arms)	Average unit price per cross-arm	Cross-arm: $2.5k	+/- 15%	William Herriott	**-20.0%**
		28	Average unit price for critical Distribution assets (Cable)	Average unit price per mile of cable	Cable: $849.4k	+/- 15%	William Herriott	**83.3%**
Water (None)	Water System Staffing Program	**29**	Number of new distribution infrastructure crews as compared to plan	Number of new crews dedicated to distribution infrastructure as compared to plan	3 crews (24 employees)	N/A	Breonia Lindsey/Sandy Foster	**5.0%**
Water Supply Cost Adjustment Factor	Water Supply	**30**	Water supply costs budget vs. actual ($M) for capital	Board Approved Annual Budget vs. Actual expenditures	FY18/19 Board Approved Budget - May 2018	+/- 10%	Dora Maese	**-26.8%**
	Water Supply	**31**	Water supply costs budget vs. actual ($M) for O&M	Board Approved Annual Budget vs. Actual expenditures	FY18/19 Board Approved Budget - May 2018	+/- 10%	Dora Maese	**-6.7%**
	Water Supply	**32**	Annual quantity of purchased water in acre-feet (AF) against plan	AF of water purchased against plan	No Target	Info only	Dora Maese	**NA**
	Water Supply	**33**	Annual quantity of recycled water delivered against plan (AF)	AF of recycled water delivered against plan	12,000 AF	+/- 10%	W. Van Wagoner	**-38.9%**
	Water Supply	**34**	Stormwater system capacity milestones (AF) against plan	AF of stormwater system capacity as of a milestone date against plan	72,000 AF	+/- 10%	David Pettijohn	**4.2%**
	Water Supply	**35**	Annual groundwater production in Central Basin (AF) against plan	AF of Groundwater in Central Basin against plan	No Target	Info only	Steven Cole	**NA**
	Water Supply	**36**	Annual groundwater production in San Fernando Basin (AF) against plan	AF of Groundwater in San Fernando Basin against plan	No Target	Info only	Steven Cole	**NA**
	Capital Improvement Program	**37**	Budget vs. actual ($M) for Aqueduct refurbishment capital	Board Approved Annual Budget vs. Actual expenditures	FY18/19 Board Approved Budget - May 2018	+/- 10%	Daniel Raftevold	**-38.2%**
	Capital Improvement Program	**38**	Budget vs. actual ($M) for Aqueduct refurbishment O&M	Board Approved Annual Budget vs. Actual expenditures	FY18/19 Board Approved Budget - May 2018	+/- 10%	Daniel Raftevold	**18.1%**
	Water Supply	**39**	Level of water conservation against target (GPCD)	Gallons per capita per day (GPCD) of water conserved against target	106 Gallons	+/- 10%	Penny Falcon	**0.0%**

Within Acceptable Variance | Outside Acceptable Variance | Exceeds Target | Needs Attention

Related Rate Adjustment Factor	Category	#	Board Metric	Definition	FY 18/19 Target	Acceptable Variance	Responsible Manager	April 2019 Performance
Water Infrastructure Adjustment Factor	Capital Improvement Program	**40**	Budget vs. actual ($M) for fixed assets replacement	Board Approved Annual Budget vs. Actual expenditures	FY18/19 Board Approved Budget - May 2018	+/- 10%	Dora Maese	**-3.1%**
	Capital Improvement Program	**41**	Budget vs. actual ($M) for Pump Stations	Board Approved Annual Budget vs. Actual expenditures	FY18/19 Board Approved Budget - May 2018	+/- 10%	Susan Rowghani	**-38.8%**
	Capital Improvement Program	**42**	Budget vs. actual ($M) for Regulator/ Relief Station Retrofits	Board Approved Annual Budget vs. Actual expenditures	FY18/19 Board Approved Budget - May 2018	+/- 10%	Susan Rowghani	**13.7%**
	Capital Improvement Program	**43**	Assets replaced against plan	Feet of mainline replaced against plan	Mainline: 232,000 Feet	+/- 10%	**Mainline & Meters:** Breonia Lindsey/Sandy Foster	**-26.2%**
	Capital Improvement Program	**44**	Assets replaced against plan	Feet of trunkline replaced against plan	Trunkline: 7,700 Feet	+/- 10%	**Trunkline:** Susan Rowghani	**5.3%**
	Capital Improvement Program	**45**	Assets replaced against plan	Number of meters replaced against plan	Meters: 31,500	+/- 10%	**Mainline & Meters:** Breonia Lindsey/Sandy Foster	**-9.2%**
Water Quality Improvement Adjustment Factor	Water Quality Projects	**46**	Total Water Quality Budget vs. actual ($M) for capital	Board Approved Annual Budget vs. Actual expenditures	FY18/19 Board Approved Budget - May 2018	+/- 10%	Susan Rowghani	**-23.7%**
Water Quality Improvement Adjustment Factor	Water Quality Projects	**47**	Total Water Quality Budget vs. actual ($M) for O&M	Board Approved Annual Budget vs. Actual expenditures	FY18/19 Board Approved Budget - May 2018	+/- 10%	Steven Cole	**9.1%**
Owens Valley Regulatory Adjustment Factor	Owens Valley	**48**	Budget vs. actual for Owens Lake O&M ($M)	Board Approved Annual Budget vs. Actual expenditures	Target Suspended	Info only	Michael Grahek	**NA**
	Human Resources	**49**	Human Resources Total FTEs against plan	Total number of full time equivalent positions occupied vs. annual Authorized Personnel Resolution	FY18/19 Board Approved Annual Authorized Personnel Resolution - May 2018	+/- 15%	Shannon Pascual	**-8.0%**
	Financial and Human Resources Replacement Project	**50**	Financial and Human Resources Replacement Project total spending against plan	Board Approved Annual Budget vs. Actual expenditures	FY18/19 Board Approved Budget - May 2018	+/- 20%	Flora Chang	**-26.4%**

Within Acceptable Variance **Outside Acceptable Variance** **Exceeds Target** **Needs Attention**

Related Rate Adjustment Factor	Category	#	Board Metric	Definition	FY 18/19 Target	Acceptable Variance	Responsible Manager	April 2019 Performance
Joint (None)	Financial and Human Resources Replacement Project	**51**	Financial and Human Resources Replacement Project progress against schedule	Project milestones met against project schedule	Budget System Replacement Project (BSR) BSR - Award BSR Implementation Contract - 9/30/18 BSR - Complete BSR Development/Begin Testing - 4/1/19 BSR - BSR Go Live - 10/1/19 Enterprise Resource Plan (ERP) ERP - Approve ERP Program Charter and Project Mgmt Plan - 7/1/18 ERP - Award RFP for Enterprise Technology Advisory Services - 9/25/18 ERP - Award RFP for Organizational Change Mgmt Services Contract - 6/30/19 ERP - Advertise RFP for Software Vendor - 9/1/18 ERP - Award RFP for Software Vendor - 8/31/19 ERP - Advertise for System Integrator - 1/1/19 ERP - Award for System Integrator - 1/31/20 ERP - Advertise IV&V Services RFP - 1/1/19 ERP - Award IV&V Services RFP - 1/31/20	+/- 60 Days based on DWP Project Plan TBD	Flora Chang	
	LADWP Employee Cost	**52**	LADWP Employee Cost Budget vs. Actual ($M)	LADWP total employee costs (including regular labor, overtime, pension and healthcare, excluding daily exempt and Utility Pre-Craft Trainees) Budget vs. Actual	FY18/19 Board Approved Budget - May 2018	+/- 15%	LADWP Senior Management	**-4.2%**
	LADWP Employees per Customer Meter	**53**	Total Number of Water and Power Employees per Customer Meter	Total number of water and power employees (excluding daily exempt and Utility Pre-Craft Trainees) per water and power meters	No Target	Info only	Corporate Performance	**NA**
Energy Cost Adjustment Factor	Renewable Portfolio Standard (Owned)	**54**	Green House Gas (GHG) emissions reduction ratio	GHG emission for current year/GHG emission in 1990 (in millions of metric tons)	55%	+/- 5%	Mark Sedlacek	**53.0%**
Energy Cost Adjustment Factor	Energy Efficiency	**55**	Energy Efficiency (EE) ratio (%)	GWh installed compared to the 2010 baseline/GWh for all customers	1.75%	+/- 15%	David Jacot	**19.5%**
	Energy Efficiency	**56**	Budget vs. actual ($M) for the overall EE portfolio	Board Approved Annual Budget vs. Actual expenditures	FY18/19 Board Approved Budget - May 2018	+/- 15%	David Jacot	**15.1%**
	Energy Efficiency	**57**	Levelized EE program costs ($/kWh)	Cost per kWh over lifetime of installed energy efficiency solutions	Annual metric: Levelized Cost $0.0671/kWh	+/- 15%	David Jacot	

Within Acceptable Variance **Outside Acceptable Variance** **Exceeds Target** **Needs Attention**

Power System

LADWP RATES METRIC – Once Through Cooling, Capital (Power)

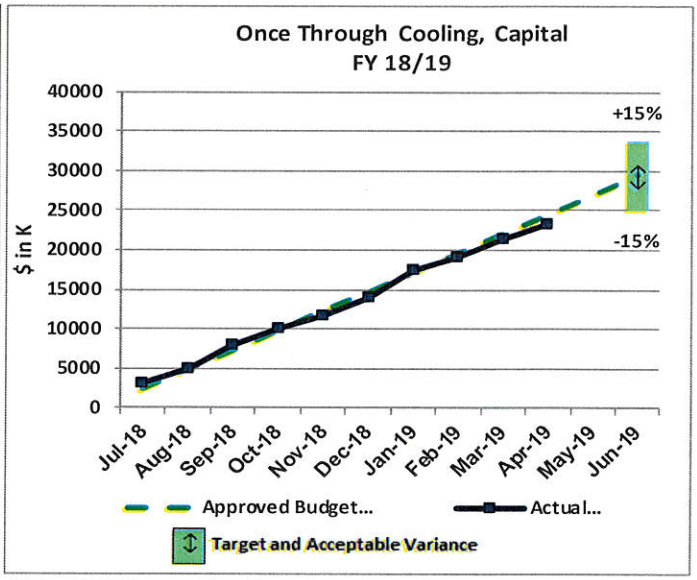
RESPONSIBLE MANAGER: Marcelo Di Paolo and Silvia Lozano, Power Planning, Development, and Engineering Division **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Board Approved FY 18/19 Budget vs. Actual Expenditures For Once Through Cooling/Repowering, Capital

TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = $29,420K; Acceptable Variance = ± 15%

STATUS: Within Acceptable Variance

FYTD as of:	Approved Budget ($ in K)	Actual ($ in K)	Variance		Re-Estimate
			$ in K	%	
Jul-18	2,451.7	3,191.0	739.3	30.2%	
Aug-18	4,903.3	5,051.0	147.7	3.0%	
Sep-18	7,355.0	8,020.0	665.0	9.0%	
Oct-18	9,806.7	9,983.0	176.3	1.8%	
Nov-18	12,258.3	11,557.0	(701.3)	-5.7%	
Dec-18	14,710.0	14,076.0	(634.0)	-4.3%	
Jan-19	17,161.7	17,423.0	261.3	1.5%	
Feb-19	19,613.3	19,116.0	(497.3)	-2.5%	
Mar-19	22,065.0	21,410.0	(655.0)	-3.0%	
Apr-19	24,516.7	23,294.0	(1,222.7)	-5.0%	
May-19	26,968.3				23,522.0
Jun-19	29,419.5				24,578.0
Acceptable Variance			± 15%		-16.5%
SGS Repowering Phase I Project Total*				$1,067M	12/31/2016
SGS Repowering Phase II Project Total*				$660M	12/31/2021
Haynes Repowering Project Total				$701M	6/30/2025
OTC Projects Total				$2,428M	6/30/2025



*Note: SGS Repowering Phase I consists of Job O1195; SGS Phase II consists of Jobs O9790, O9778, and O9782

SOURCE OF DATA: FI 21165 and FI 21150 (KPI # 01.03.01.05)

Total Project Approved From Inception to FY26/27	$1,932.5 M
Projects Approved to Date	$1,182.4 M
Project Actuals to Date	$1,028.1 M
Total OTC Program Variance	-13.1%

*Total Project Cost approved values have been revisited. July to November 2018 had excluded allocations.

1. BACKGROUND / PURPOSE

- This is a summary of expenditures for capital projects per the State Water Resources Control Board's 2010 Statewide Once-Through Cooling (OTC) Policy to eliminate ocean water cooling.

2. ACHIEVEMENTS / MILESTONES MET

- Haynes (HnGS) Units 3 - 6 Demolition - The demolition contractor, TRC Solutions, Inc. was given the Notice to Proceed and a kickoff meeting with the contractor and all stakeholders were held on April 17, 2019. (Apr. 2019)
- Haynes (HnGS) Units 3 - 6 Demolition - The demolition contract was awarded by the Board on March 12, 2019. (Mar. 2019)
- Haynes (HnGS) Units 3 - 6 Demolition - Electrical Construction completed installation of all circuits for the duct bank reroute and placed it back into service. (Mar. 2019)
- Scattergood (SGS) Unit 3 Demolition - Contractor completed hydro test of the high density polyethylene line (HDPE) to carry effluent from Unit 3 sump to Unit 1 & 2 stop log. (Mar. 2019)
- Haynes (HnGS) Units 3 - 6 Demolition - The Recommendation of Award Package for the demolition contract was approved by management. (Feb. 2019)
- Haynes (HnGS) Units 3 - 6 Demolition - Electrical Construction completed the C-Street duct bank reroute. (Feb. 2019)
- Scattergood (SGS) Unit 3 Demolition - Contractor completed the HDPE line to carry effluent from Unit 3 sump to Unit 1 & 2 stop log. (Feb. 2019)
- Haynes (HnGS) Units 3 - 6 Demolition - Finalized agreement for the demolition contract and submitted Recommendation of Award Package for management approval. (Jan. 2019)
- Haynes (HnGS) Units 3 - 6 Demolition - Relocation of salvaged Generator Step-up (GSU) transformers beyond the demolition boundary was completed .(Jan. 2019)
- Haynes (HnGS) Units 3 - 6 Demolition Project received Regional Water Quality Control Board approval for the ground water dewatering permit. (Dec. 2018)

- Haynes (HnGS) Units 3 - 6 Demolition Project began work on the critical path electrical vault replacement and duct bank re-route. (Dec. 2018)
- Scattergood (SGS) Unit 3 Demolition contractor completed permanent wall installations including trims and roll-up doors. (Nov. 2018)
- Haynes (HnGS) Units 3 - 6 Demolition initiated clarification and negotiations with the highest rated proposer. (Nov. 2018)
- Haynes (HnGS) Units 3 - 6 Demolition Project completed cutover work for the Outside Station Service and Bus 2 clearance. (Nov. 2018)
- Scattergood (SGS) Unit 3 Demolition contractor completed painting of the south exterior walls. (Oct. 2018)
- Haynes (HnGS) Units 3 - 6 Demolition Project completed evaluation of four proposals for the advertised Request for Proposal (RFP). (Oct. 2018)
- Haynes (HnGS) Units 3 - 6 Demolition Project completed temporary cable pulls. (Oct. 2018)

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- Variance in actual expenditure is due to:
  - Delay with the SGS U1&2 Modernization which necessitated additional punchlist items and a permanent wall to be constructed rather than a temporary wall to ensure more permanent facility safeguards. Consequently, the option to install the SGS Unit 1 south wall was exercised under Job O9790 resulting in the cost variance.
  - Supply Chain Services reprioritized HnGS RFP advertisement date. Recommendation of award was scheduled for the March 2019 Board date and consequently, the Notice to Proceed (NTP) was in April.
  - Budget was re-estimated to adjust expected expenditure for the deferred award of the Haynes Demolition Contract and NTP.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- There is no mitigation plan at this time.
- The OTC Capital Construction Projects are currently on hold pending detailed transmission system studies on alternatives to repowering and pivot to the Clean Grid LA initiatives.
- The OTC projects are required to be completed by the December 2024 (SGS Repowering) and December 2029 (HnGS Repowering) deadlines to replace power generation capabilities at critical locations within the LADWP Power System that will be shutdown to comply with the California state mandate to eliminate ocean cooling at industrial facilities. Not meeting the OTC deadlines will compromise the LADWP power grid due to the loss of 297 megawatts of power from the SGS facility and 1,050 megawatts of power from the HnGS facility.

LADWP RATES METRIC – *Once Through Cooling, Project Milestones (Power)*

RESPONSIBLE MANAGER: Marcelo Di Paolo and Silvia Lozano, Power Planning, Development, and Engineering Division **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Repowering Project/ Once Through Cooling Project Milestones vs. Compliance Deadlines
TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = Compliance deadlines and plants in-service dates against plans; Acceptable Variance ±45 days

STATUS Within Acceptable Variance

Task	Planned	Actual	Acceptable Variance (+/-45 Days from	
HAYNES (HnGS) DEMOLITION – MANDATORY BIDDERS CONFERENCE	07/19/18	07/19/18	N/A	N/A
HnGS DEMOLITION – BIDDER PROPOSALS DUE	09/05/18	09/05/18	N/A	N/A
SCATTERGOOD (SGS) DEMOLITION – UNIT 1 SOUTH WALL INSTALLATION	10/01/18	11/27/18	N/A	N/A
HnGS DEMOLITION – NOTICE TO PROCEED	01/02/19	04/17/19	N/A	N/A
HnGS DEMOLITION – SITE MOBILIZATION	03/04/19		N/A	N/A
SGS REGULATORY COMPLIANCE	12/31/24	X	02/14/25	11/16/24
HnGS REGULATORY COMPLIANCE	12/31/29	X	02/14/30	11/16/29

SOURCE OF DATA: Integrated Resources Plan/Graph (KPI # 04.02.05.03)

1. **BACKGROUND / PURPOSE**
   - Compliance with State Water Resources Board deadlines for Once-Through Cooling (OTC) units, December 2024 for Scattergood (SGS) and December 2029 for Haynes (HnGS).

2. **ACHIEVEMENTS / MILESTONES MET**
   - Haynes (HnGS) Units 3 - 6 Demolition - The demolition contractor, TRC Solutions, Inc. was given the Notice to Proceed and a kickoff meeting with the contractor and all stakeholders were held on April 17, 2019. (Apr. 2019)
   - Haynes (HnGS) Units 3 - 6 Demolition – The demolition contract was awarded by the Board on March 12, 2019. (Mar. 2019)
   - Haynes (HnGS) Units 3 - 6 Demolition – Electrical Construction completed installation of all circuits for the duct bank reroute and placed it back into service. (Mar. 2019)
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   - Haynes (HnGS) Units 3 - 6 Demolition - The Recommendation of Award Package for the demolition contract was approved by management. (Feb. 2019)
   - Haynes (HnGS) Units 3 - 6 Demolition - Electrical Construction completed the C-Street duct bank reroute. (Feb. 2019)

- Scattergood (SGS) Unit 3 Demolition - Contractor completed the high density polyethylene line to carry effluent from Unit 3 sump to Unit 1 & 2 stop log. (Feb. 2019)
- Haynes (HnGS) Units 3 - 6 Demolition - Finalized agreement for the demolition contract and submitted Recommendation of Award Package for management approval. (Jan. 2019)
- Haynes (HnGS) Units 3 - 6 Demolition - Relocation of salvaged Generator Step-up (GSU) transformers beyond the demolition boundary was completed. (Jan. 2019)
- Haynes (HnGS) Units 3 - 6 Demolition Project received Regional Water Quality Control Board approval for the ground water dewatering permit. (December 2018)
- Haynes (HnGS) Units 3 - 6 Demolition Project began work on the critical path electrical vault replacement and duct bank re-route. (December 2018)
- Scattergood (SGS) Unit 3 Demolition contractor completed permanent wall installations including trims and roll-up doors. (November 2018)
- Haynes (HnGS) Units 3 - 6 Demolition initiated clarification and negotiations with the highest rated proposer. (November 2018)
- Haynes (HnGS) Units 3 - 6 Demolition Project completed cutover work for the Outside Station Service and Bus 2 clearance. (November 2018)
- Scattergood (SGS) Unit 3 Demolition contractor completed painting of the south exterior walls. (October 2018)
- Haynes (HnGS) Units 3 - 6 Demolition Project completed evaluation of four proposals for the advertised Request for Proposal (RFP). (October 2018)
- Haynes (HnGS) Units 3 - 6 Demolition Project completed temporary cable pulls. (October 2018)

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- The OTC Capital Construction Projects are currently on hold pending detailed transmission system studies on alternatives to repowering and pivot to the Clean Grid LA initiatives.
- Supply Chain Services reprioritized HnGS RFP advertisement date. Recommendation of award was scheduled for the March 2019 Board date and consequently, the Notice to Proceed (NTP) was in April.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- Monitoring schedule critical paths closely to ensure compliance with milestone targets.

Within Acceptable Variance | Outside Acceptable Variance | Exceeds Target | Needs Attention

LADWP RATES METRIC – *Average Cost per Electric Distribution Mechanic Trainee (Power)*

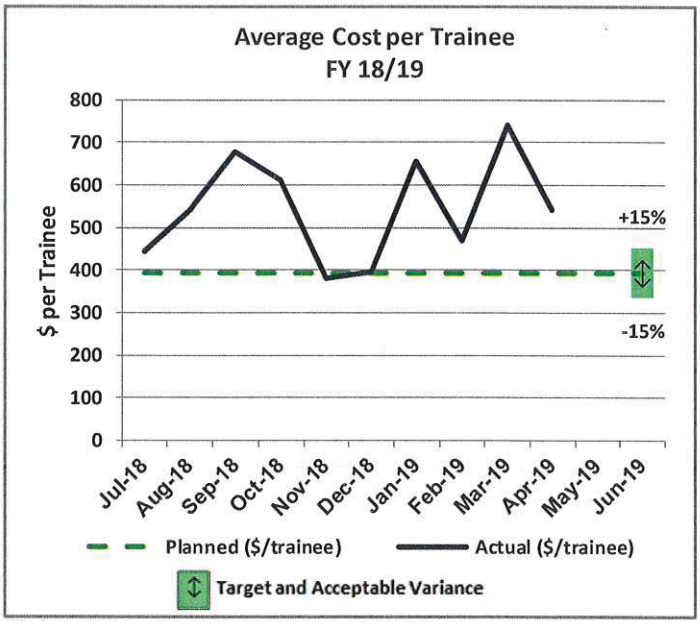
RESPONSIBLE MANAGER: Nazir Fazli, Power System Safety and Training **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Average cost of training for Electric Distribution Mechanic Trainee (EDMT) classification per trainee that graduates from the training program

TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = $394.5K per EDMT; Acceptable Variance = ± 15%

STATUS: Outside Acceptable Variance

FYTD as of:	Planned ($/trainee)	Actual ($/trainee)	Variance		Re-Estimate
			$	%	
Jul-18	394.5	443.4	48.9	12.4%	
Aug-18	394.5	540.8	146.3	37.1%	
Sep-18	394.5	676.5	282.0	71.5%	
Oct-18	394.5	612.5	218.0	55.3%	
Nov-18	394.5	379.6	(14.9)	-3.8%	
Dec-18	394.5	395.5	1.0	0.3%	
Jan-19	394.5	655.8	261.3	66.2%	
Feb-19	394.5	467.8	73.3	18.6%	
Mar-19	394.5	740.2	345.7	87.6%	
Apr-19	394.5	541.7	147.2	37.3%	
May-19	394.5				375.2
Jun-19	394.5				375.2
Acceptable Variance			± 15%		-4.9%



SOURCE OF DATA: Jobs X7922/X7999/X7955 (KPI # 04.01.02.10)

1. BACKGROUND / PURPOSE

- To effectively calculate a monthly cost per trainee for an Electric Distribution Mechanic (EDM) completing a 42 month on-the-job and classroom training program.

2. ACHIEVEMENTS / MILESTONES MET

- The March 2019 (ALM/ACS 16) class produced a total of 12 graduates. One additional is pending for June bringing the total to 13 graduates.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- The monthly cost per trainee calculation will vary from month to month. It's based on a number of factors which include the adjusted class size, dropouts, terminations and the final number of graduates.
- The cost per trainee is lower this month because of the decreased actuals with the Jobs X7922/X7999/X7955 as compared to the month of March.
- Annualized Job totals for (X7922/X7999/X7955) vary depending on the tools and materials purchased for subsequent new classes.
- The Re-Estimate ($/trainee) of $375.2k was calculated using the final figures of the related Jobs (X7922/X7999/X7955) for the entire fiscal year 17/18 with the 12 month average trainee occupancy.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- The screening process is continually being reviewed in an effort to increase the quality of candidates and to reduce the dropout rate. Overhead and underground disciplines are no longer separated and all future trainees are cross-trained in both. EDM trainee candidates are now required to complete two performance tests during the initial certification interviews.

LADWP RATES METRIC – *Average Cost per Electrical Mechanic Trainee (Power)*

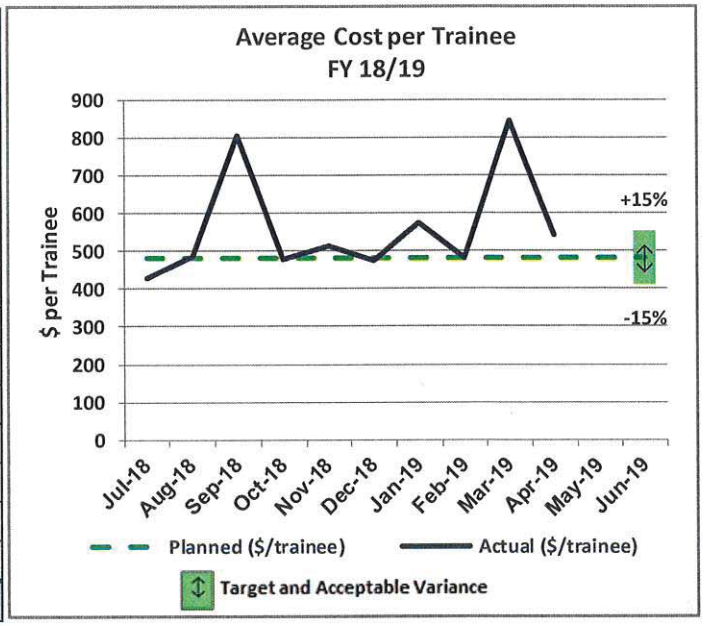
RESPONSIBLE MANAGER: Nazir Fazli, Power System Safety and Training **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Average cost of training for Electrical Mechanic Trainee (EMT) classification per trainee that graduates from the training program

TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = $481.1K per EMT; Acceptable Variance = ± 15%

STATUS: Within Acceptable Variance

FYTD as of:	Planned ($/trainee)	Actual ($/trainee)	Variance $	Variance %	Re-Estimate
Jul-18	481.1	426.8	(54.3)	-11.3%	
Aug-18	481.1	483.0	1.9	0.4%	
Sep-18	481.1	805.9	324.8	67.5%	
Oct-18	481.1	476.9	(4.2)	-0.9%	
Nov-18	481.1	511.7	30.6	6.4%	
Dec-18	481.1	472.6	(8.5)	-1.8%	
Jan-19	481.1	573.9	92.8	19.3%	
Feb-19	481.1	481.7	0.6	0.1%	
Mar-19	481.1	843.6	362.5	75.3%	
Apr-19	481.1	541.5	60.4	12.6%	
May-19	481.1				481.5
Jun-19	481.1				481.5
Acceptable Variance			± 15%		0.1%



SOURCE OF DATA: Jobs X7923/X7926/X7955 (KPI # 04.01.02.11)

1. BACKGROUND / PURPOSE

- To effectively calculate a monthly cost per trainee for an Electrical Mechanic (EM) completing a 40-month on-the-job and classroom training program.

2. ACHIEVEMENTS / MILESTONES MET

- The January 2019 (19A) class produced 21 graduates.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- The monthly cost per trainee calculation will vary from month to month. It's based on a number of factors which include the adjusted class size, dropouts, terminations and the final number of graduates.
- The cost per trainee is lower this month mainly due to decreased actuals in the Jobs X7923/X7926/X7955 as compared to the month of March.
- Annualized Job totals for (X7923/X7926/X7955) vary depending on the tools and materials purchased for subsequent new classes.
- The Re-Estimate ($/trainee) of $481.5k was calculated using the final figures of the related Jobs (X7923/X7926/X7955) for the entire fiscal year 17/18 with the 12 month average trainee occupancy.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- The screening process and all recruitment activities are continually being reviewed in an effort to increase the quality of candidates and to reduce the dropout rate. The Truesdale Training Center staff now works with the Personnel Department to evaluate potential new EM trainee candidates.

LADWP RATES METRIC – *EDMT Graduates (Power)*

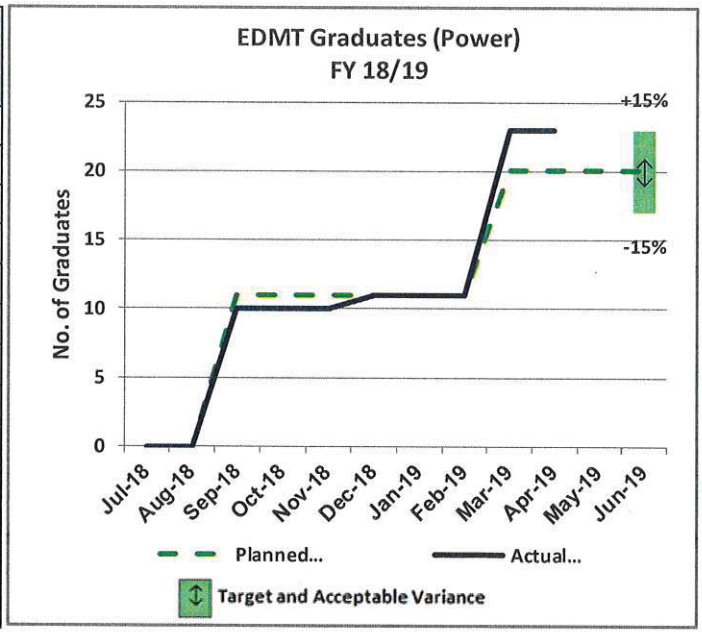
RESPONSIBLE MANAGER: Nazir Fazli, Power System Safety & Training **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Electrical Distribution Mechanic Trainee (EDMT) Graduates Against Training Plan

TARGET & ACCEPTABLE VARIANCE (FY 17/18): Target = 20 graduates; Acceptable Variance = ± 15%

STATUS: Within Acceptable Variance

FYTD as of:	Planned (No. of Grads.)	Actual (No. of Grads.)	Variance		Re-Estimate
			No.	%	
Jul-18	0	0	0	0.0%	
Aug-18	0	0	0	0.0%	
Sep-18	11	10	-1	9.1%	
Oct-18	11	10	-1	9.1%	
Nov-18	11	10	-1	9.1%	
Dec-18	11	11	0	0.0%	
Jan-19	11	11	0	0.0%	
Feb-19	11	11	0	0.0%	
Mar-19	20	23	3	15.0%	
Apr-19	20	23	3	15.0%	
May-19	20				23
Jun-19	20				24
Acceptable Variance			± 15%		20.0%



SOURCE OF DATA: Monthly updates provided by the training superintendents. (KPI # 04.01.02.08)

1. BACKGROUND / PURPOSE

- Power System Safety and Training (PSST) provides the Department with an in-house training operation designed to produce highly qualified Electric Distribution Mechanic (EDMs) to fill the needs of the Power Transmission and Distribution Division. Retirements, promotions, and expected growth in this classification are the basis for hiring practices and training plans.

2. ACHIEVEMENTS / MILESTONES MET

- The March 2019 (ALM/ACS 16) class produced a total of 12 graduates. One additional is pending for June bringing the total to 13 graduates.
- The past classes average success rates are as follows:
  - 2014 to 2015: 58%
  - 2016 to 2017: 59%
  - 2018 to 2019: 65%

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- Due to the modified screening process, there has been an increase in the quality of candidates who have entered the training program, yielding a higher graduation rate.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- The screening process is continually being reviewed in an effort to increase the quality of candidates and to reduce the dropout rate. Overhead and underground disciplines are no longer separated and all future trainees are cross-trained in both. EDM trainee candidates are now required to complete two performance tests during the initial certification interviews.

LADWP RATES METRIC – *EMT Graduates (Power)*

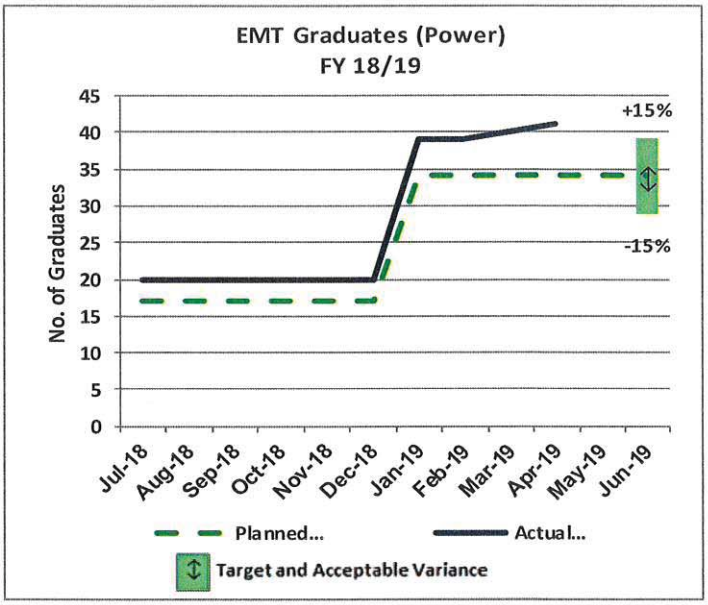
RESPONSIBLE MANAGER: Nazir Fazli, Power System Safety & Training **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Electrical Mechanic Trainee (EMT) Graduates Against Training Plan

TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = 34 graduates; Acceptable Variance = ± 15%

STATUS: Exceeds Target

FYTD as of:	Planned (No. of Grads.)	Actual (No. of Grads.)	Variance		Re-Estimate
			No.	%	
Jul-18	17	20	3	17.6%	
Aug-18	17	20	3	17.6%	
Sep-18	17	20	3	17.6%	
Oct-18	17	20	3	17.6%	
Nov-18	17	20	3	17.6%	
Dec-18	17	20	3	17.6%	
Jan-19	34	39	5	14.7%	
Feb-19	34	39	5	14.7%	
Mar-19	34	40	6	17.6%	
Apr-19	34	41	7	20.6%	
May-19	34				41
Jun-19	34				41
Acceptable Variance			± 15%		



SOURCE OF DATA: Monthly updates provided by the training superintendents. (KPI # 04.01.02.09)

1. BACKGROUND / PURPOSE

- Power System Safety & Training (PSST) provides the Department with an in-house training program designed to produce highly qualified Electrical Mechanics (EMs) to fill the needs of the Power Construction & Maintenance (PC&M) Division. Retirements, promotions, and expected growth in this classification are the basis for hiring practices and training plans. To offset the hiring deficiencies of previous years, the plan is to increase trainees being hired over the next five years (2019 - 2024), and to streamline the training program to meet the goals of the Power System and PC&M Division.

2. ACHIEVEMENTS / MILESTONES MET

- The January 2019 (19A) class produced 21 graduates.
- The past classes average success rates are as follows:
  - 2014 to 2015: 70%
  - 2016 to 2017: 85%
  - 2018 to 2019: 89%

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- Hiring deficiencies from 2010 through 2013 have resulted in minimal numbers of graduates in recent years.
- Due to the modified screening process, there has been an increase in the quality of candidates who have entered the training program, yielding a higher graduation rate.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- There is an aggressive hiring plan to add approximately 60 EMTs per year over the next five years (2019 - 2024) to meet PC&M's Integrated Human Resource Plan staffing goals. Restructuring of the Training Program and an increase in training staff has enabled PSST to move forward with this hiring plan while still maintaining the quality and integrity of the program.

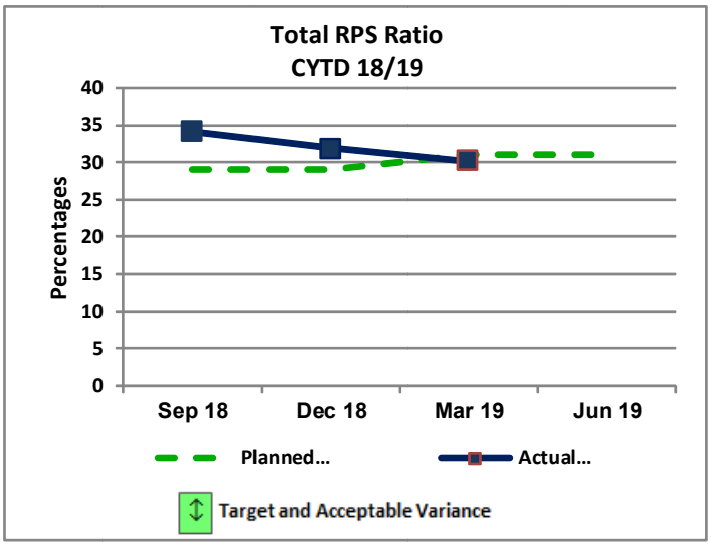
LADWP RATES METRIC – *Total Renewable Portfolio Standard (Power)*

RESPONSIBLE MANAGER: John Giese, Power External Energy Resources **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: GWH from RPS Resource/GWH of Retail Sales (State Requirement), In Percentages (%)
TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = 29% for calendar year 2018 and 31% for calendar year 2019; Acceptable Variance = ± 3%

STATUS: Within Acceptable Variance

CYTD as of:	Planned (%)	Actual (%)	Variance %	Re-Estimate (If Applicable)
Sep 18	29.0	34.2	5.2%	
Dec 18	29.0	31.9	2.9%	
Mar 19	31.0	30.2	-0.8%	
Jun 19	31.0			31.0
Acceptable Variance		± 3%		0.0%



SOURCE OF DATA: Wholesale Energy Resource Management Group (KPI # 05.01.01.01)

1. BACKGROUND / PURPOSE

- Los Angeles Department of Water and Power (LADWP) is on target to meet the 33% Renewable Portfolio Standard (RPS) ratio requirement in 2020 and 50% in 2030, as required by the California Energy Commission (CEC).
- RPS portfolio includes Wind, Solar, Geothermal, and Small Hydro.
- To comply with the CEC, RPS percentages are calculated over four years (Compliance Period), not fiscal year or fiscal year-to-date basis.
- There are other RPS-related Rates Metric Reports for Wind, Solar, Biogas, and Geothermal.
- The Biogas contract was cancelled in May 2018.

2. ACHIEVEMENTS / MILESTONES MET

- RPS actuals are currently estimated at 0.8% below target.
- Actual for December 2018 was changed from 32.1% to 31.9% due to adjustments in total customer sales and reconciliation activities.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- When adjusting for the CEC's RPS compliance accounting, rollover Renewable Energy Credits (RECs) add 0.8% to our March 2019 calculation, bringing us to 31%.
- Actuals for the third quarter are typically the lowest for the fiscal year.
- Actuals for the fourth quarter of FY 18/19 will be available in August 2019.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- Uncertainty in performance of renewable resources, evolving accounting methods, changing regulations, and transmission disruptions are risk factors that can impact the performance of this metric.
- To meet the RPS goals and avoid the risk of non-compliance with the CEC's RPS requirement, LADWP uses targets (forecasts) above the CEC's RPS ratio requirement. This will provide a hedge against the above-mentioned risk factors.
- Excess RECs from one compliance period can be rolled over into the next compliance period.
- Current Year 2019 soft target per the CEC is 31%. LADWP's RPS compliance percentage is calculated over four years (2017-2020).

LADWP RATES METRIC – *Total RPS Cost vs. Plan, By Wind (Power)*

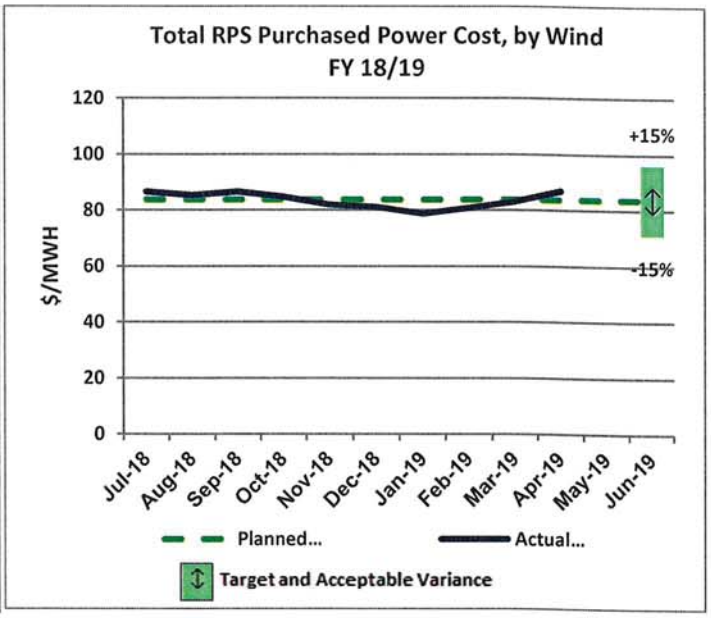
RESPONSIBLE MANAGER: Jan Lukjaniec, Power External Energy Resources **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Total RPS Purchased Power Cost ($/MWH), Per Power Purchase Agreements (PPA), As Compared To Plan, By Wind

TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = $83.87/MWH; Acceptable Variance = ± 15%

STATUS: Within Acceptable Variance

FYTD as of:	Planned ($/MWH)	Actual ($/MWH)	Variance		Re-Estimate
			$	%	
Jul-18	83.87	86.63	2.76	3.3%	
Aug-18	83.87	85.38	1.51	1.8%	
Sep-18	83.87	86.58	2.71	3.2%	
Oct-18	83.87	84.87	1.00	1.2%	
Nov-18	83.87	81.95	-1.92	-2.3%	
Dec-18	83.87	81.17	-2.70	-3.2%	
Jan-19	83.87	78.73	-5.14	-6.1%	
Feb-19	83.87	80.84	-3.03	-3.6%	
Mar-19	83.87	83.12	-0.75	-0.9%	
Apr-19	83.87	86.97	3.10	3.7%	
May-19	83.87				83.87
Jun-19	83.87				83.87
Acceptable Variance			± 15%		0.0%



SOURCE OF DATA: Monthly energy invoice per PPA (KPI # 01.03.01.06)

1. BACKGROUND / PURPOSE

- PPA = Power Purchase Agreement. The energy cost is calculated at plant's "bus-bar", in dollars per mega-watt-hour ($/MWH), per executed PPA.
- The aggregated energy costs are the weighted average of seven wind PPAs for which the $/MWH cost is determined by the seven individual PPAs, but the energy outputs are a function of the individual project's capacity and wind resource availability, which is variable.
- Wind energy supports meeting Renewable Portfolio Standard (RPS) goals. Wind energy is currently estimated to represent 31% of the Calendar Year 2019 RPS portfolio.
- Contributing Projects and Contracted Price:
  - Pleasant Valley $63.00 /MWh
  - Willow Creek $102.32/MWh
  - Pebble Springs $69.21 /MWh
  - Milford Phase I $81.27/MWh*
  - Milford Phase II $95.61/MWh*
  - Windy Flats $98.87/MWh*
  - Manzana $82.50/MWh

*Value includes prepay and excess energy cost

2. ACHIEVEMENTS / MILESTONES MET

- PPA projects are performing as expected.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- Performance of the PPA projects is regularly monitored.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- There is no mitigation plan needed at this time.

Within Acceptable Variance | Outside Acceptable Variance | Exceeds Target | Needs Attention

LADWP RATES METRIC – *Total RPS Cost vs. Plan, By Solar (Power)*

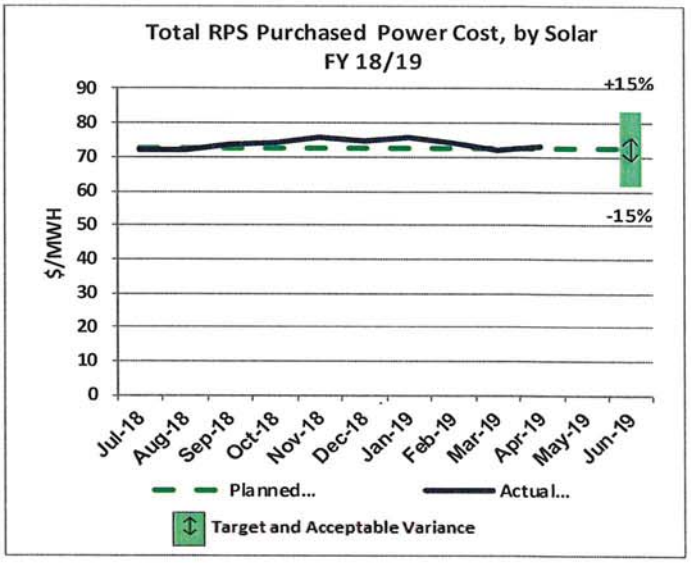
RESPONSIBLE MANAGER: Jan Lukjaniec, Power External Energy Resources **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Total RPS Purchased Power Cost ($/MWH), Per Power Purchase Agreements (PPA), As Compared To Plan, By Solar

TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = $72.70/MWH; Acceptable Variance = ± 15%

STATUS: Within Acceptable Variance

FYTD as of:	Planned ($/MWH)	Actual ($/MWH)	Variance		Re-Estimate
			$	%	
Jul-18	72.70	72.22	-0.48	-0.7%	
Aug-18	72.70	72.04	-0.66	-0.9%	
Sep-18	72.70	73.84	1.14	1.6%	
Oct-18	72.70	73.99	1.29	1.8%	
Nov-18	72.70	75.58	2.88	4.0%	
Dec-18	72.70	74.80	2.10	2.9%	
Jan-19	72.70	75.75	3.05	4.2%	
Feb-19	72.70	74.15	1.45	2.0%	
Mar-19	72.70	72.08	-0.62	-0.9%	
Apr-19	72.70	72.99	0.29	0.4%	
May-19	72.70				72.70
Jun-19	72.70				72.70
Acceptable Variance			± 15%		0.0%



SOURCE OF DATA: Monthly energy invoice per PPA (KPI # 01.03.01.17)

1. BACKGROUND / PURPOSE

- PPA = Power Purchase Agreement. The energy cost is calculated at plant's "bus-bar", in dollars per mega-watt-hour ($/MWH), per executed PPA.
- The aggregated energy costs are the weighted average of the solar PPAs for which the $/MWH cost is fixed by individual PPAs, but the energy outputs are a function of the individual project's capacity and solar resource availability, which is variable.
- Solar energy supports meeting Renewable Portfolio Standard (RPS) goals. Solar energy is currently estimated to represent 39% of the Calendar Year 2019 RPS portfolio.
- Contributing Projects and Contracted Price:
  - Copper Mountain Solar 3 $95.75 /MWh
  - Springbok 1 Solar $68.60/MWh
  - Springbok 2 Solar $58.65 /MWh
  - RE Barren Ridge $65.83/MWh
  - Moapa Southern Paiute $87.69/MWh
  - Beacon Solar 1 $50.61/MWh
  - Beacon Solar 2 $56.06/MWh
  - Beacon Solar 3 $49.47/MWh
  - Beacon Solar 4 $50.61/MWh
  - Beacon Solar 5 $57.35/MWh

2. ACHIEVEMENTS / MILESTONES MET

- PPA projects are performing as expected.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- Performance of the PPA projects is regularly monitored.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- There is no mitigation plan at this point.

Within Acceptable Variance | Outside Acceptable Variance | Exceeds Target | Needs Attention

LADWP RATES METRIC – *Total RPS Cost vs. Plan, By Geothermal (Power)*

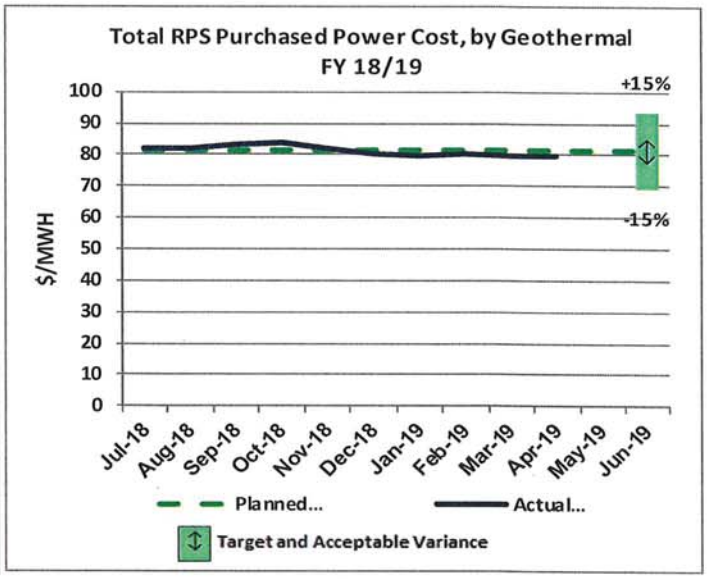
RESPONSIBLE MANAGER: Jan Lukjaniec, Power External Energy Resources **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Total RPS Purchased Power Cost ($/MWH), Per Power Purchase Agreements (PPA), As Compared To Plan, By Geothermal

TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = $81.61/MWH; Acceptable Variance = ± 15%

STATUS: Within Acceptable Variance

FYTD as of:	Planned ($/MWH)	Actual ($/MWH)	Variance		Re-Estimate
			$	%	
Jul-18	81.61	82.11	0.50	0.6%	
Aug-18	81.61	81.96	0.35	0.4%	
Sep-18	81.61	83.05	1.44	1.8%	
Oct-18	81.61	83.70	2.09	2.6%	
Nov-18	81.61	81.74	0.13	0.2%	
Dec-18	81.61	80.47	-1.14	-1.4%	
Jan-19	81.61	79.70	-1.91	-2.3%	
Feb-19	81.61	80.19	-1.42	-1.7%	
Mar-19	81.61	79.91	-1.70	-2.1%	
Apr-19	81.61	79.74	-1.87	-2.3%	
May-19	81.61				81.61
Jun-19	81.61				81.61
Acceptable Variance				± 15%	0.0%



SOURCE OF DATA: Monthly energy invoice per PPA (KPI # 01.03.01.18)

1. BACKGROUND / PURPOSE

- PPA = Power Purchase Agreement. The energy cost is calculated at plant's "bus-bar", in dollars per mega-watt-hour ($/MWH), per executed PPA.
- The aggregated energy costs are the weighted average of six geothermal PPAs for which the $/MWH cost is fixed for firm and imbalance energy. However, the energy outputs are a function of the individual project's capacity and geothermal resource availability, which is variable.
- Geothermal energy supports meeting Renewable Portfolio Standard (RPS) goals. Geothermal energy currently represents 24% of the Calendar Year 2019 RPS portfolio.
- Contributing Projects and Contracted Price:
  - Don A Campbell Phase 1 $99.00/MWh
  - Don A Campbell Phase 2 $81.25/MWh
  - Hudson Ranch $85.29/MWh
  - Heber 1 $81.20/MWh
  - Ormesa Geo Complex $77.25/MWh
  - ONNGP $75.50/MWh

2. ACHIEVEMENTS / MILESTONES MET

- PPA projects are performing as expected.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- Performance of the PPA projects is regularly monitored.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- There is no mitigation plan at this time.

Within Acceptable Variance | Outside Acceptable Variance | Exceeds Target | Needs Attention

LADWP RATES METRIC – *Total RPS Cost vs. Plan, By Biogas (Power)*

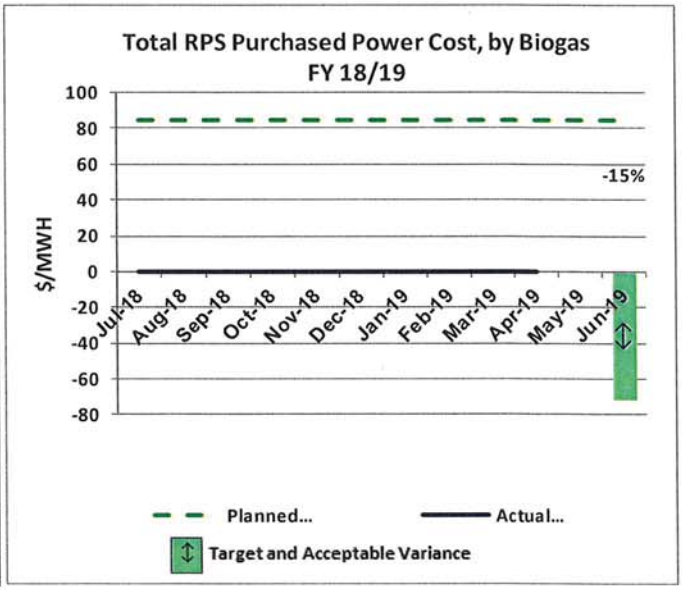
RESPONSIBLE MANAGER: Jan Lukjaniec, Power External Energy Resources JL **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Total RPS Purchased Power Cost ($/MWH), Per Power Purchase Agreements (PPA), As Compared To Plan, By Biogas

TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = $84.36/MWH; Acceptable Variance = ± 15%

STATUS: Exceeds Target

FYTD as of:	Planned ($/MWH)	Actual ($/MWH)	Variance		Re-Estimate
			$	%	
Jul-18	84.36	0	-84.36	-100.0%	
Aug-18	84.36	0	-84.36	-100.0%	
Sep-18	84.36	0	-84.36	-100.0%	
Oct-18	84.36	0	-84.36	-100.0%	
Nov-18	84.36	0	-84.36	-100.0%	
Dec-18	84.36	0	-84.36	-100.0%	
Jan-19	84.36	0	-84.36	-100.0%	
Feb-19	84.36	0	-84.36	-100.0%	
Mar-19	84.36	0	-84.36	-100.0%	
Apr-19	84.36	0	-84.36	-100.0%	
May-19	84.36				0.00
Jun-19	84.36				0.00
Acceptable Variance			± 15%		0.0%



SOURCE OF DATA: Monthly energy invoice per PPA (KPI # 01.03.01.19)

1. BACKGROUND / PURPOSE

- Biogas fuel supports meeting Renewable Portfolio Standards (RPS) goals.
- Biogas fuel is currently estimated to represent 0% of the Calendar Year 2018 RPS portfolio.
- The contract for Biogas was cancelled effective May 1, 2018. All actuals after May 1, 2018, will be zero.
- The decision to end this contract results in a gross savings of $90 million to ratepayers.

2. ACHIEVEMENTS / MILESTONES MET

- No fuel was purchased or delivered since May 2018.
- Currently, there are no plans to enter into future biogas contracts.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- Actuals will remain at zero.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- There is no mitigation plan at this time.

LADWP RATES METRIC – *Average Levelized Cost of Energy For Purchased Power Agreements (Power)*

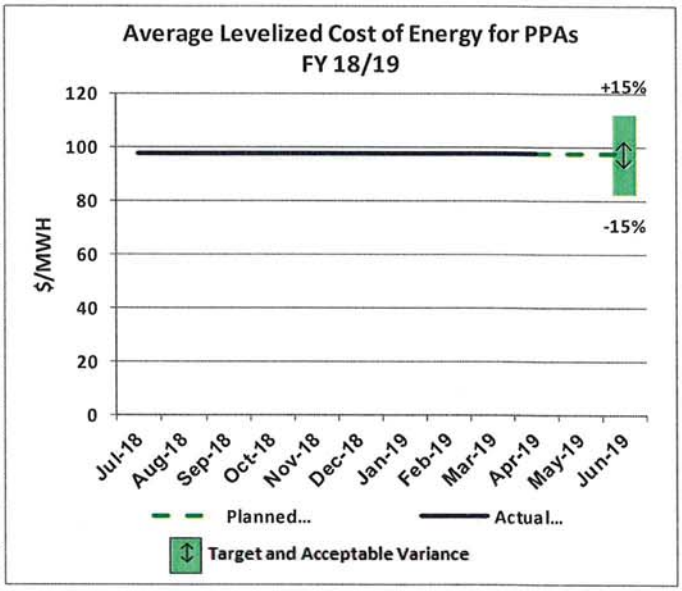
RESPONSIBLE MANAGER: Jan Lukjaniec, Power External Energy Resources JL **REPORTING PERIOD**: April 2019

DEFINITION OF RATES METRIC: Cost Per MWH For All Power Purchase Agreements (PPA) Signed During The Previous Fiscal Year

TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = $97.50/MWH; Acceptable Variance = ± 15%

STATUS: Within Acceptable Variance

FYTD as of:	Planned ($/MWH)	Actual ($/MWH)	Variance		Re-Estimate
			$	%	
Jul-18	97.50	97.50	0.00	0.0%	
Aug-18	97.50	97.50	0.00	0.0%	
Sep-18	97.50	97.50	0.00	0.0%	
Oct-18	97.50	97.50	0.00	0.0%	
Nov-18	97.50	97.50	0.00	0.0%	
Dec-18	97.50	97.50	0.00	0.0%	
Jan-19	97.50	97.50	0.00	0.0%	
Feb-19	97.50	97.50	0.00	0.0%	
Mar-19	97.50	97.50	0.00	0.0%	
Apr-19	97.50	97.50	0.00	0.0%	
May-19	97.50				97.50
Jun-19	97.50				97.50
Acceptable Variance			± 15%		0.0%



SOURCE OF DATA: Monthly RPS Report from "RPS Development Group" (KPI # 01.03.01.07)

1. BACKGROUND / PURPOSE

- PPA = Power Purchase Agreement. The energy cost is calculated at plant's "bus-bar", in dollars per mega-watt-hour ($/MWH), per executed PPA.
- The PPAs support meeting RPS goals.

2. ACHIEVEMENTS / MILESTONES MET

- During Fiscal Year 17/18, one Biomass PPAs was executed on April 30, 2018 – American Renewable Power (ARP) - Loyalton Biomass Project. The project allowed LADWP to meet the requirements of Senate Bill 859, which mandates the use of biomass energy.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- PPA project is performing as expected.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- The metric will not change on a monthly basis as it is a comparison of the weighted average of prices of PPAs signed in individual fiscal years, and therefore, a monthly mitigation plan is not necessary.
- Once future fiscal years occur, a comparison of the weighted average of prices of PPAs signed in individual fiscal years can be performed and potential recommendations will be made.

LADWP RATES METRIC – *Power System Reliability Program*
Generation, Capital (Power)

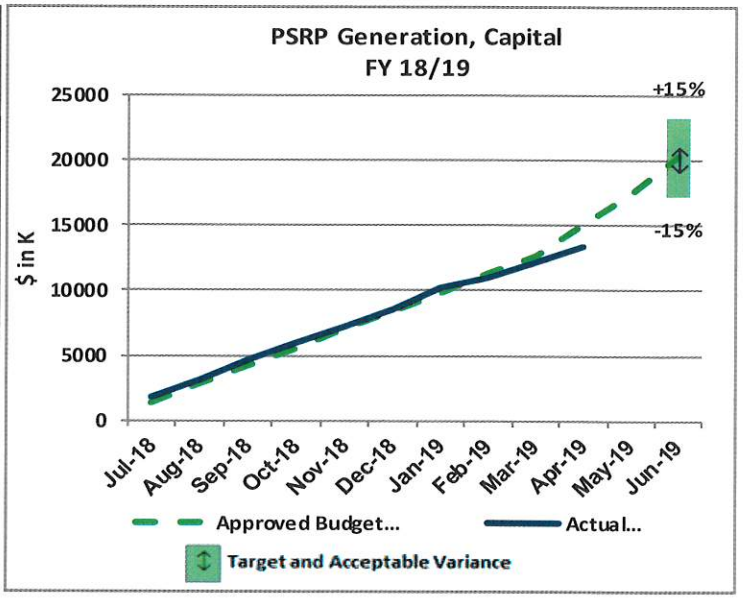
RESPONSIBLE MANAGER: Robert Fick, Power Supply Operations **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Board Approved Annual Budget vs. Actual Expenditures For PSRP Generation, Capital

TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = $20,262.2K; Acceptable Variance = ± 15%

STATUS: Within Acceptable Variance

FYTD as of:	Approved Budget ($ in K)	Actual ($ in K)	Variance		Re-Estimate (If Applicable)
			$ in K	%	
Jul-18	1,400.0	1,853.0	453.0	32.4%	
Aug-18	2,800.0	3,193.0	393.0	14.0%	
Sep-18	4,200.0	4,715.0	515.0	12.3%	
Oct-18	5,600.0	6,016.0	416.0	7.4%	
Nov-18	7,000.0	7,204.0	204.0	2.9%	
Dec-18	8,400.0	8,630.0	230.0	2.7%	
Jan-19	9,800.0	10,267.0	467.0	4.8%	
Feb-19	11,200.0	11,030.0	-170.0	-1.5%	
Mar-19	12,600.0	12,167.0	-433.0	-3.4%	
Apr-19	15,000.0	13,369.0	-1,631.0	-10.9%	
May-19	17,400.0				22,351.0
Jun-19	20,262.2				24,384.0
Acceptable Variance			± 15%		14.2%



SOURCE OF DATA: FI 21186 (KPI # 01.03.01.08)

1. BACKGROUND / PURPOSE

- This metric measures the planned vs. actual expenditures for Generation capital activities, including major unit overhauls, transformer replacements, and replacement of a 6MW hydro power plant. These activities will ensure safety and maximize reliability, availability, efficiency, and extend the life of generating assets.

2. ACHIEVEMENTS / MILESTONES MET

- Castaic Power Plant (CPP) – Unit 2 overhaul work completed and in service in March. Unit 4 – work continues, including reassembly of the main unit and turbine generator. 72% complete.
- CPP Units 1 & 2 Main Bank Transformers – Unit 2- Assembly and oil filling was completed in January. Diagnostic and wiring testing was completed in February, and placed in service in March. Unit 1 - Generation Engineering is working on the as-built drawings and turnover package. 98% complete.
- CPP Station Service Transformer (SST) 2 & 3 – Both transformers were delivered on April 12th; Power Construction & Maintenance (PCM) General Construction (GC) poured the concrete pad for SST3 and placed on the pad on April 23rd. SST2 was placed on a spare pad and is being prepared for long-term storage. 45% complete.
- San Fernando Power Plant Generator Step-Up Transformer – The second transformer had its oil processed and is scheduled for diagnostic testing in May 2019. The replacement has moved to July 2019 due to delays with obtaining oil processing equipment and delivery delays of the third transformer to the repair shop. 44% complete.
- Haynes Generating Station (HnGS) Unit 2 Main Bank Digester Gas Analyzers (DGA) – Electrical Construction completed the equipment installation of the DGA. 90% complete.
- HnGS Unit 1, 8, 9, & 10 Main Bank DGA– Engineering is completed and construction is scheduled to begin next fiscal year, with Unit 1 to begin January 2020, and the other units to begin October 2019. 71% complete.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- The FI is currently within the acceptable variance range.
- The $1.6M cost underrun is driven in large part by the Power System Reliability Program Emergency Repairs and San Fernando Power Plant Project, which has been delayed pending availability of labor support from PCM GC. The restoration of Unit 1 at San Fernando is also delayed due to lack of engineering resources. The Major Inspection Overhauls of Pump Storage (CPP) is also contributing to the overall cost underrun as labor support from PCM GC and Electrical Repair Services was over estimated and full funding for this project is not required.
- The cost underrun is partially offset by cost overrun of $1.9M in the Transformer Replacement project. The overrun is mainly due to under budgeting of preliminary estimates, such as rentals, other outside services, and fleet costs, which were not adjusted during the budget preparation.

Total Project Approved From Inception to FY26/27	$344.3M
Total Project Estimates	$249.7M
Projects Approved to Date*	$83.0M
Project Actuals to Date	$70.8M

*Total Project Cost approved values have been revisited. July to November 2018 had excluded allocations.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- Division continues to coordinate with Mechanical Repair Services for CPP Unit Overhaul work.

LADWP RATES METRIC – *PSRP Transmission, Capital (Power)*

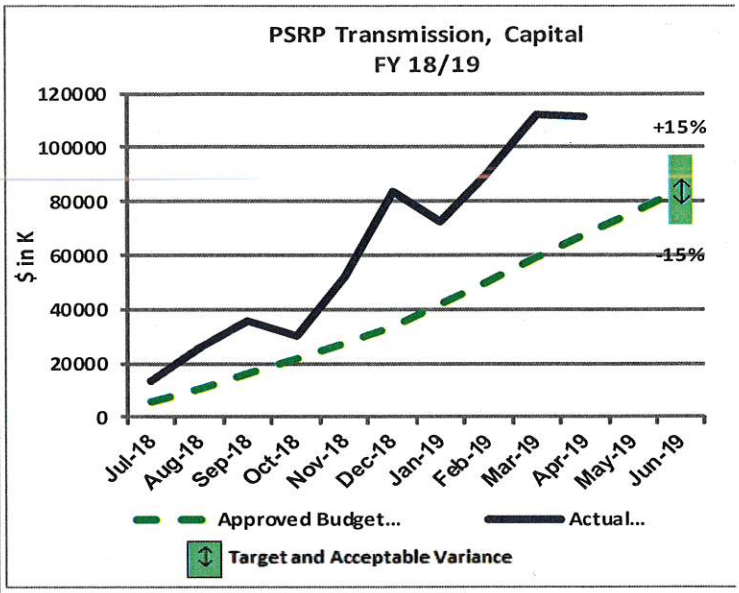
RESPONSIBLE MANAGER: John Hormozi, Power Transmission & Distribution Division **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Board Approved Annual Budget vs. Actual Expenditures For PSRP Transmission, Capital

TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = $84,368.6K; Acceptable Variance = ± 15%

STATUS: Outside Acceptable Variance

FYTD as of:	Approved Budget ($ in K)	Actual ($ in K)	Variance		Re-Estimate
			$ in K	%	
Jul-18	5,484.0	13,252.0	7,768.0	141.6%	
Aug-18	10,968.0	25,755.0	14,787.0	134.8%	
Sep-18	16,452.0	35,737.0	19,285.0	117.2%	
Oct-18	21,936.0	30,178.0	8,242.0	37.6%	
Nov-18	27,420.0	51,517.0	24,097.0	87.9%	
Dec-18	33,747.6	83,769.0	50,021.4	148.2%	
Jan-19	42,184.5	72,764.0	30,579.5	72.5%	
Feb-19	50,621.4	90,307.0	39,685.6	78.4%	
Mar-19	59,058.2	111,912.0	52,853.8	89.5%	
Apr-19	67,495.0	111,456.0	43,961.0	65.1%	
May-19	75,931.8				118,000.0
Jun-19	84,368.6				122,295.0
Acceptable Variance			± 15%		45.0%



SOURCE OF DATA: FI 21212 (KPI # 01.03.01.10).

1. **BACKGROUND / PURPOSE**
   Expenditures for various Power System Reliability Program transmission capital projects. Includes overhead and underground transmission projects and annual improvements.
2. **ACHIEVEMENTS / MILESTONES**
   - 138-kV Fairfax-Olympic Cable B replacement in-service 7/2018; Cable A in-service 11/2018; Scattergood-Airport Line 1 replacement in-service 4/2019.
   - 230-kV Scattergood-Olympic Cable A in-service 7/2018.
   - Sylmar Ground Return System Replacement Project in-service 11/2018.
3. **PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION**
   - Includes charges for work on Jobs O1373 (Sylmar Filter Replacement Project) & B1220 (Sylmar Ground Return System Replacement Project), which are 60% reimbursable by others. Since reimbursements come in some time after LADWP sends out invoices for work already performed, monthly net expenditures on these two jobs do not necessarily reflect work performed in that given month.
   - On B1220, some expenditures are for work originally budgeted for FY 17/18; most of this is for contract deliverables for the Ocean portion of the Electrode circuit. The job is essentially complete, so after all pending reimbursements are received, the budget should "catch up" with actual net expenditures by the end of FY 18/19.
   - On O1373, accelerated construction efforts have brought the job back on schedule as of the end of December 2018, but at increased overtime expense.
   - Money not sufficiently budgeted for O9805 (Upgrade Valley-Rinaldi 230-kV Lines 1 and 2), so normal project progress appears as an overrun. The same goes for O9806 (Upgrade Valley-Toluca 230-kV Lines 1 and 2).
   - Pacific DC Intertie Line Insulator Replacement Program currently charged to Job B9011 (Improvements to PDCI Line), an Annual Job not specifically budgeted for this one-time project.
   - Crews placed on paid standby as L.A. World Airports relocated a segment of Scattergood-Airport Line 1 conduit. Also, remaining oil-filled 138-kV circuits are being replaced with 230-kV cable. This affects spending on Job B1062 (138-kV Cable Replacements).
   - The individual Job Managers have re-estimated their FY 18/19 expenditures to a new aggregate of $140.1M for the FI as a whole; however, no re-estimates can be entered into budget system since it is locked.
   - FI 21212 includes Annual (perpetual) jobs, so a single FI Estimated Lifetime Expenditure does not apply.

Total Project Approved From Inception to FY 26/27	$1,514.9M*
Projects Approved to Date	$985.4M
Project Actuals to Date	$749.9M

Amounts include AFUDC but exclude REIMB.
*Total Project Cost approved values have been revisited. July to November 2018 had excluded allocations.

4. **MITIGATION PLAN AND / OR RECOMMENDATIONS**
   - Continue to support progress on these jobs according to the respective job managers' milestone schedules for this FY; re-estimate if necessary.

Within Acceptable Variance | Outside Acceptable Variance | Exceeds Target | Needs Attention

LADWP RATES METRIC – PSRP Transmission, O&M (Power)

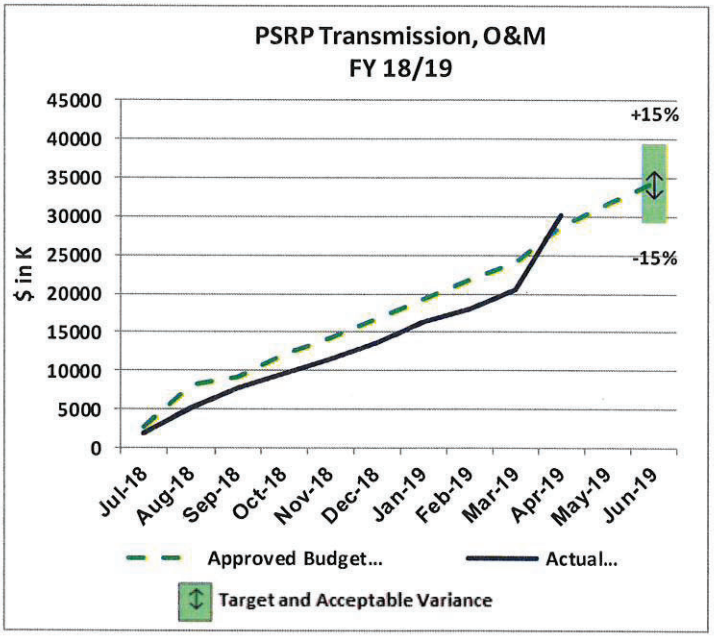
RESPONSIBLE MANAGER: David Siewert, Power Transmission and Distribution **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Board Approved Annual Budget vs. Actual Expenditures For PSRP Transmission, O&M

TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = $34,299K; Acceptable Variance = ± 15%

STATUS: Within Acceptable Variance

FYTD as of:	Approved Budget ($ in K)	Actual ($ in K)	Variance		Re-Estimate
			$ in K	%	
Jul-18	2,789	1,888	-901.0	-32.3%	
Aug-18	8,095	5,227	-2,868.0	-35.4%	
Sep-18	9,284	7,832	-1,452.0	-15.6%	
Oct-18	12,184	9,738	-2,446.0	-20.1%	
Nov-18	14,313	11,551	-2,762.0	-19.3%	
Dec-18	16,836	13,563	-3,273.0	-19.4%	
Jan-19	19,190	16,256	-2,934.0	-15.3%	
Feb-19	21,756	18,001	-3,755.0	-17.3%	
Mar-19	24,017	20,634	-3,383.0	-14.1%	
Apr-19	28,788	30,126	1,338.0	4.6%	
May-19	31,622				31,183
Jun-19	34,299				32,239
Acceptable Variance			± 15%		-6.0%



SOURCE OF DATA: FI 301-3132 (KPI # 01.03.01.11)

1. BACKGROUND / PURPOSE

- To maintain facilities generally consisting of overhead and underground high voltage electric circuitry used to transport electricity in bulk quantities from generation facilities to distribution facilities over long distances for system reliability. Power Transmission & Distribution (PTD) operates and maintains overhead transmission lines extending over 6,400 circuit miles throughout the Western United States and another 120 miles of underground transmission in the Los Angeles area.

2. ACHIEVEMENTS / MILESTONES MET

- Power System Reliability Program (PSRP) aids in the hardening and replacement of critical infrastructure.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- This KPI is within its 15% threshold set for its goal. Currently, the FI is projected to be within the acceptable variance threshold of the re-estimated budget, $32,239, by FYE.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- There is not mitigation plan at this time.

LADWP RATES METRIC – *Cost Per Circuit Mile For Underground Circuits (Power)*

RESPONSIBLE MANAGER: Silvia Lozano Silvia Lozano
Power Planning, Development, and Engineering Division

REPORTING PERIOD: April 2019

DEFINITION OF RATES METRIC: Cost Per Circuit Mile For Underground Circuits

TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = $2.8M per mile; Acceptable Variance = ± 15%

STATUS Outside Acceptable Variance

	Start	Finish	4Q FY17/18	1Q FY18/19	2Q FY18/19	3Q FY18/19	4Q FY18/19
Fairfax-Olympic Cable A	7/23/2018	11/18/2018					
Scattergood-Airport Line 1	11/19/2018	4/7/2019					
Fairfax-Airport Line 1*	4/8/2019	6/8/2019					

* Scattergood-Airport Line 2 postponed until October 2019. Fairfax-Airport Line 1 has been moved up instead.

SOURCE OF DATA: Job B1062 (KPI # 01.03.01.12)

1. BACKGROUND / PURPOSE

- This is a 5-year project to replace ten (10) aging 138-kV underground transmission circuits for power system reliability. The cost of the project includes the contract price to replace the ten (10) circuits by contractors and the cost of two stations per circuit installed by in-house crew. The contract price for the circuit replacement varies from $2.2 to $4.5 million (M)/mile excluding contingencies, and the length of each circuit ranges from 2.5 to 5.9 miles. The ten (10) circuits included in this project are:
  - Fairfax-Airport Line 1, 2.56 miles (Scheduled for 4/8/19 to 6/8/19)*
  - Fairfax-Airport Line 2, 2.52 miles
  - Fairfax-Gramercy Line 1, 5.59 miles (Completed in FY16/17)
  - Fairfax-Gramercy Line 2, 5.6 miles (Completed in FY17/18)
  - Fairfax-Olympic Cable A, 5.89 miles (Completed FY18/19)
  - Fairfax-Olympic Cable B, 5.87 miles (Completed in FY18/19)
  - Scattergood-Airport Line 1, 5.05 miles (Completed in FY18/19)
  - Scattergood-Airport Line 2, 5.04 miles*
  - Tarzana-Olympic Line 1A, 3.21 miles
  - Tarzana-Olympic Line 1B, 3.21 miles

2. ACHIEVEMENTS / MILESTONES MET

- Fairfax-Olympic Cable A was energized on November 18, 2018.
- Scattergood-Airport Line 1 was energized on April 7 18, 2019.
- Replacement for Fairfax-Airport Line 1 started on 4/8/19 with an estimated in-service date of 5/8/19. 62.9% of Fairfax-Airport Line 1 has been completed to date.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

	Types	Target	Actuals/ Trending Cost[2]	Variance (%)
FY16/17	Contract Cost	$2.7M/mile[1]	$2.6M/mile	-3.7%
	Station Cost	-	$0.6M/mile	-
FY17/18	Contract Cost	$2.5M/mile	$2.3M/mile	+12%
	Station Cost		$0.5M/mile	
FY18/19 (YTD)	Contract Cost	$2.8M/mile	$3.7M/mile[2]	+50%
	Station Cost		$0.5M/mile[2]	
Cumulative Cost	Contract Cost	$4.4M/mile[3]	$3.0M/mile	-20.5%
	Station Cost		$0.5M/mile	

1. $2.7M/mile target was based on the total contract cost for the replacement of 10 circuits. It was reforecast to $2.9M/mile due to the use of larger cable to increase the line operating capacity.
2. Trending costs are costs incurred year-to-date while the circuit replacement is still on-going.
3. Target cumulative cost is updated from $3.2M/mile to $4.4M/mile in April 2019 reporting due to upgrade from 138kV to 230kV rated cable.

- Because the actual cost per circuit mile will only be available upon completion of the circuit replacement, which may not fall within the current fiscal year, "trending costs" are provided if the final actuals are not available.
- The actual cost per circuit mile may vary significantly each year depending on the circuits to be replaced and the need to use the contingency provisions of the contract.
- Contract invoices totaling $7.1M were paid in April, bringing the current trending cost for FY 18/19 to approximately $4.2M/mile.
- Due to the Mayor's declaration on February 12, 2019, that three (3) of the in-basin coastal plants will not be repowered, LADWP will complete a total of six (6) cable replacements (starting with Fairfax-Airport Line 1) at the upgraded voltage of 230-kV instead. As the upgrades must be done in pairs, Scattergood-Airport Line 1 (completed in April 2019) will be upgraded to 230-kV to match Scattergood-Line 2. The upgraded voltage will improve reliability and increase circuit rating by 80 percent. This upgrade will provide the capability to support system demands, maintain grid

reliability, and will be in line with the Clean Grid LA initiatives.

- Due to the upgraded voltage and cable size for six (6) of the circuit replacements, it is anticipated that the actual cumulative cost per mile will now be $4.4M for all ten (10) circuits when they are completed in FY20/21. This cost will be applicable once the contract amendment is approved (tentative Board date of June 2019).

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- There is no mitigation plan at this time.

LADWP RATES METRIC – *PSRP Substation, Capital (Power)*

RESPONSIBLE MANAGER: Jason Hills
Power Planning, Development, and Engineering Division

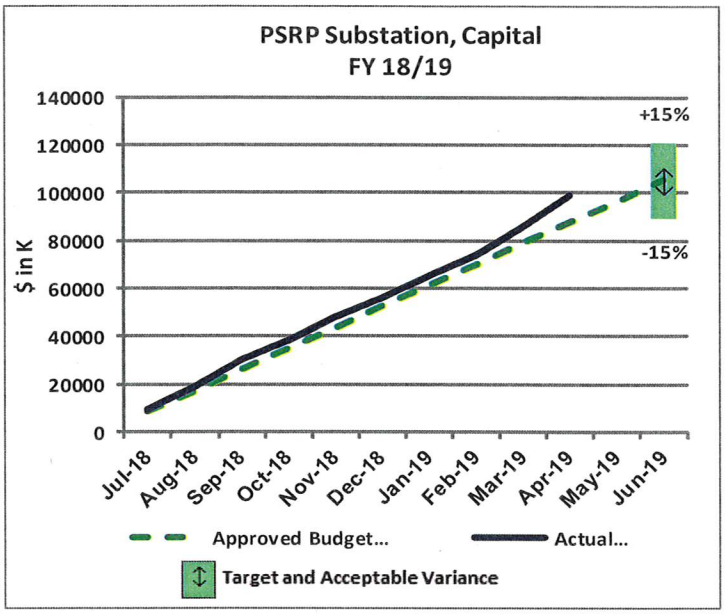
REPORTING PERIOD: April 2019

DEFINITION OF RATES METRIC: Board Approved Annual Budget vs. Actual Expenditures For PSRP Substation, Capital

TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = $105,309K; Acceptable Variance = ± 15%

STATUS: Within Acceptable Variance

FYTD as of:	Approved Budget ($ in K)	Actual ($ in K)	Variance		Re-Estimate ($ in K)
			$ in K	%	
Jul-18	8,776.0	9,154.0	378.0	4.3%	
Aug-18	17,551.5	19,303.0	1,751.5	10.0%	
Sep-18	26,327.2	30,199.0	3,871.8	14.7%	
Oct-18	35,103.0	38,301.0	3,198.0	9.1%	
Nov-18	43,878.8	48,003.0	4,124.2	9.4%	
Dec-18	52,654.5	55,979.0	3,324.5	6.3%	
Jan-19	61,430.2	65,351.0	3,920.8	6.4%	
Feb-19	70,206.0	73,651.0	3,445.0	4.9%	
Mar-19	78,981.8	86,040.0	7,058.2	8.9%	
Apr-19	87,757.5	98,614.0	10,856.5	12.4%	
May-19	96,533.2				104,130.5
Jun-19	105,309.0				109,647.0
Acceptable Variance			± 15%		4.1%



SOURCE OF DATA: FI 21195 (KPI # 01.03.01.13).

1. BACKGROUND / PURPOSE

- Substation life extension, expansions, upgrades and equipment replacements (transformers, circuit breakers, batteries, etc.) to improve substation reliability, availability and capacity.

2. ACHIEVEMENTS / MILESTONES

- Completed station work for Scattergood-Olympic Cable A in July.
- Completed 18 feeder jobs – 4 feeders in July; 3 in September; 2 in October; 2 in December; 1 in February; 4 in March; 2 in April.
- Completed 6 Distributing Station (DS) transformer bank life extensions - DS-107 Bank 1 in July; DS-107 Bank 2 and DS-20 Bank 1 in September; DS-57 Bank 1 in December; DS26 Bank 2 and DS-39 Bank 3 in January.
- Completed 153 34.5kV Circuit Breaker (CB) life extensions - 10 34.5kV CB life extensions in July; 19 in August; 16 in September; 4 in October; 10 in November; 12 in December; 9 in January; 27 in February; 31 in March; 15 in April.
- Completed 12 34.5kV CB replacements – 1 34.5kV CB replacement in August; 2 in September; 2 in October, 2 in November; 2 in December; 1 in January; 1 in February; 1 in March.
- Completed 11 4.8kV CB replacements – 2 in October; 2 in November; 1 in December; 1 in January; 1 in February; 2 in March; 2 in April.
- Completed 5 DS bank replacements - DS-82 Bank 2 in November; DS-17 Bank 1 in December; DS-28 Bank 1 in February; DS-32 Bank 1 and DS-107 Bank 2 in April.
- Completed 1 new DS transformer bank installation to accommodate load growth – DS-80 Bank 4 in January.
- Completed 2 DS transformer bank upgrades to accommodate load growth – DS-39 Bank 2 in March; DS-67 Bank 1 in April.
- Completed Receiving Station (RS) H Bank D replacement in August.
- Completed RS-Halldale Bank A replacement in March.
- Completed RS-E Spare Phase transformer replacement in April.
- Issued Construction Work Packages (CWPs) for 60 4.8kV CB replacements – 1 4.8kV CB replacement at DS-5; 28 at DS-74 in September; 30 at DS-133 in December; 1 at DS-71 in April.
- Issued CWPs for 10 34.5kV replacements – 8 in December; 1 in January; 1 in February.
- Issued 9 CWPs for DS bank replacements and upgrades - DS-2 Bank 3 replacement and DS-39 Bank 2 upgrade in October; DS-67 Bank 1 upgrade and DS-107 Bank 2 replacement in December; DS-101 Bank 3 replacement in February; DS-23 Bank 2 upgrade, DS-32 Bank 1 replacement, and DS-100 Bank 2 replacement in March, DS-27 Bank 3 Replacement in April.
- Issued CWPs for RS-E new shunt reactor in October.
- Issued 2 CWPs for RS-E Bank H (C-phase) replacement – 1 CWP for equipment, conduit, and grounding work in October; 1 CWP for wiring work in January.
- Issued CWPs for Bank F replacement and 287kV equipment upgrade to 300kV in December.
- Issued CWP for the construction of a new 34.5kV Rack A in April.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- This Functional Item (FI) continues to have a Fiscal Year End overrun largely due to the unbudgeted Substation Automation Systems (SAS) work. The variance increased by 3.5% over last month primarily due to an increased effort to replace Distributing Station transformer banks ahead of the anticipated high summer loading.
- The overrun is offset by the underrun caused by the bank replacement delays at RS-E, RS-B, and RS-M, and bank replacement jobs are deferred at RS-K and RS-N due to limited construction labor resources. The current labor resources are insufficient to support station bank and CB replacements at the original projected timeline.
- FI 211-95 includes Annual (perpetual) jobs, so single estimated lifetime expenditure does not apply.

Total Project Approved From Inception to FY26/27	$2,403.8M
Project Approved to Date	$1,250.3M
Project Actuals to Date	$1,133.5M

* Total Project Cost approved values have been revisited. July to November 2018 had excluded allocations.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- Convened bi-monthly Power System Resiliency planning, design, construction, and commissioning meetings necessary to elevate priority of substation reliability jobs.
- Continue to progress most other Substation Power System Reliability Program jobs as resources allow.

LADWP RATES METRIC – PSRP Substation, O&M (Power)

06-07-19

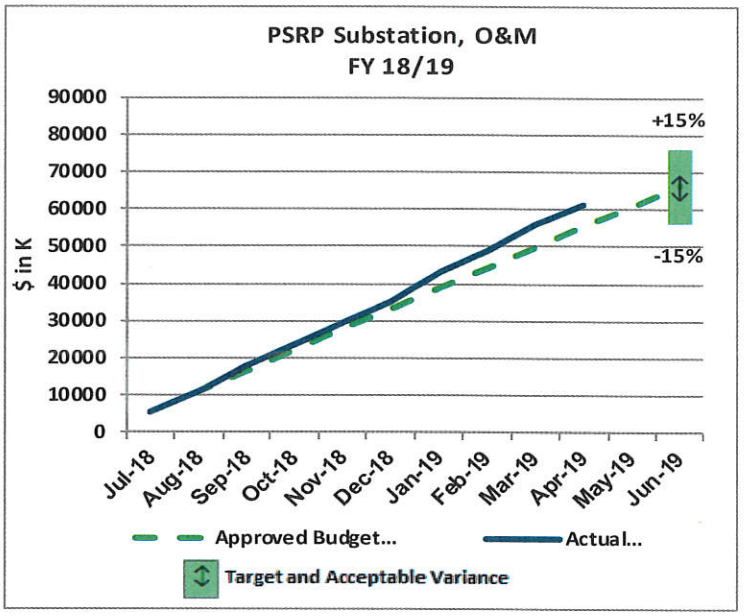
RESPONSIBLE MANAGER: Marciano Navar, Power Construction & Maintenance **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Budget Approved Annual Budget vs. Actual Expenditures For PSRP Substation, O&M

TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = $66,290K; Acceptable Variance = ± 15%

STATUS: Within Acceptable Variance

FYTD as of:	Approved Budget ($ in K)	Actual ($ in K)	Variance		Re-Estimate
			$ in K	%	
Jul-18	5,524.00	5,631.0	107.0	1.9%	
Aug-18	11,048.40	11,165.0	116.6	1.1%	
Sep-18	16,572.60	17,794.0	1,221.4	7.4%	
Oct-18	22,096.80	23,557.0	1,460.2	6.6%	
Nov-18	27,621.00	29,170.0	1,549.0	5.6%	
Dec-18	33,145.20	35,336.0	2,190.8	6.6%	
Jan-19	38,689.40	42,932.0	4,242.6	11.0%	
Feb-19	44,193.60	48,704.0	4,510.4	10.2%	
Mar-19	49,717.80	55,930.0	6,212.2	12.5%	
Apr-19	55,242.00	61,333.0	6,091.0	11.0%	
May-19	60,766.20				70,393.6
Jun-19	66,290.40				76,793.0
Acceptable Variance			± 15%		15.8%



SOURCE OF DATA: FI 301-3201 (KPI # 01.03.01.14)

1. BACKGROUND/PURPOSE

- Substation operations and maintenance (O&M) activities are a critical component in the Department's ability to provide continued safe and reliable power. This metric measures the planned vs. actual expenditures for O&M activities for Substation Operations in the Metro, West Los Angeles/South Los Angeles, and Valley areas, including the switching and maintenance of communication equipment.

2. ACHIEVEMENTS/MILESTONES MET

- See attached Supplemental Summary for the monthly breakdown of restorations and work completed.
- Electrical Station Maintenance (ESM) serves as facility manager of over 5,000 facilities in the Los Angeles basin and is responsible for maintenance and for staying in compliance with California Public Utility Commission (CPUC) regulatory obligations. As part of this compliance, ESM performs inspections for all facilities as required by CPUC. For example, CPUC General Order 174 requires that ESM perform monthly inspections on all Distributing Stations on a monthly basis.

3. PERFORMANCE/VARIANCE ANALYSIS & YEAR END PROJECTION

- Overspending for the month of July was due to the quarterly inventory of Sulfur Hexafluoride (SF6) gas. The California Air Resource Board (CARB) requires that SF6, a regulated gas, be inventoried and reported on a quarterly basis. ESM is responsible for the gas quantity for LADWP at the equipment level and at the ESM facility storage level. This inventory is reported quarterly for key performance indicators and to insure compliance.
- Overspending in August was reduced by 0.8%. This is mainly due to no quarterly regulatory work scheduled for August.
- Overspending in September was primarily due to emergency responses and maintenance activities at several Distribution Stations (DS). ESM responded to three separate transformer relay incidents; DS-10 Bank 3, DS-12 Banks 1 & 2, and Receiving Station (RS)-C Bank B. ESM also spent a significant amount of time performing maintenance and repair work on the main air systems at several DS. In September, Electrical Mechanic Trainees (EMTs) assigned to the ESM spent an increased amount of time working on O&M projects over Capital work.
- Overspending in October was primarily due to emergency responses and maintenance activities at Distribution Stations. ESM responded to a transformer relay at RS-D and a flashover incident at DS-25. ESM also increased Station Battery

testing. In October, EMTs in ESM continued to spend an increased amount of time working on O&M projects over Capital work.

- Overspending in November was primarily due to emergency responses and maintenance activities at Distribution Stations. ESM responded to a flashover incident on Bank 2 at DS-23. ESM also began identifying 34.5kV "U" bushings on our Distribution Station main transformer banks.
- Overspending in December continued due to several larger scale O&M projects; RS-U Bank E oil leak repair, and the annual SF6 inventory. Additionally ESM received 10 probationary Electrical Mechanics in December.
- Overspending in January increased due to emergency response to several outages during the heavy rain storm. ESM responded to flashover events at 3 different DS. ESM also responded to 6 customer stations (IS) outages during the heavy rain storm. The outages were caused by water intrusion resulting in flashover damage at the stations. In January, ESM replaced 1 transformer at an IS.
- Overspending in February continued due to several issues. ESM responded and repaired a 138kV capacitor rack that relayed off line, two customer station outages caused by flashover events, and equipment failure at a customer station associated with LAX. In addition, ESM spent considerable time troubleshooting and repairing voltage fluctuation after a relay operation on a DS transformer; and repaired 7 circuit breakers, 2 ground switches, and 2 line indication issues. ESM also received 10 new probationary Journeymen.
- Overspending in March continued mainly due to oil leak repair on Bank B at RS-U. Bank B consist of 3 single phase transformers. Other maintenance activities requiring considerable time include; RS-B Bank F sudden pressure repair, DS 28 main air system repair, 1 Receiving Station Transformer Load Tap Changer overhaul, 4 Transmission Circuit Breaker repairs, 2 Customer Station flashover repairs, and 1 large scale Customer Station Scheduled Inspection and Repair.
- Overspending in April continued mainly due to emergency response to flash over events at 3 stations; RS-T 138kV reactor flash over, DS-53 Bank 3 flash over, and DS-67 4.8kV bus flash over. Additional O&M activities requiring significant time include; RS-E 69kV circuit breaker repair, RS-N 138kV disconnect repair, and DS-47 direct current ground repair.

4. MITIGATION PLAN AND/OR RECOMMENDATIONS

- Re-estimates were made to the budget to account for the emergencies caused by weather conditions.

ACHIEVEMENTS / MILESTONES MET

The following table details the monthly breakdown of Substation O&M activity since JULY 2018.

	JULY 2018	AUG 2018	SEPT 2018	OCT 2018	NOV 2018	DEC 2018	JAN 2019	FEB 2019	MAR 2019	APR 2019	MAY 2019	JUNE 2019	TOTAL
NO. OF RESTORATIONS OF CUSTOMER CIRCUITS:													
Receiving Stations (RS) Circuit Outages	58	47	36	45	42	35	38	35	50	36			**422**
Distributing Station (DS) Circuit Outages	113	76	64	90	82	90	64	111	103	153			**946**
5-kV Circuit Grounds	76	44	23	65	46	79	92	123	70	64			**682**
NO. OF INSULATOR WASHINGS:													
Generating Stations	0	0	0	0	1	0	0	0	0	0			**1**
Receiving Stations	4	7	8	5	5	7	4	7	6	6			**59**
Distributing Stations	7	7	7	10	9	7	12	10	11	8			**88**

*Scattergood GS 230-kV equipment was washed in July 2017.

LADWP RATES METRIC – *PSRP Distribution, Capital (Power)*

RESPONSIBLE MANAGER: Sager Farraj
Power Planning, Development, and Engineering Division

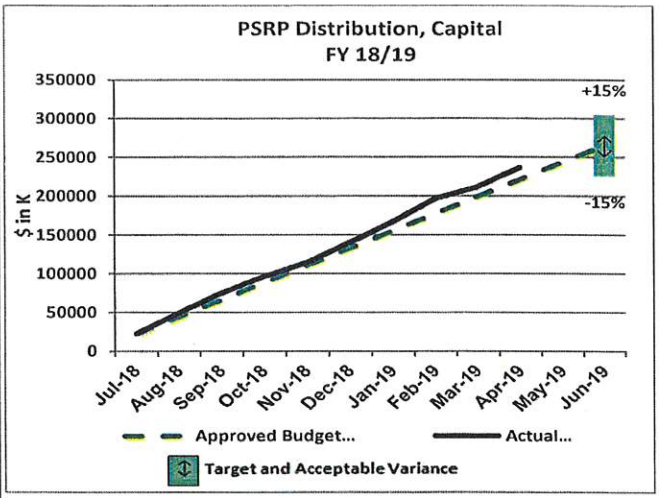
REPORTING PERIOD: April 2019

DEFINITION OF RATES METRIC: Board Approved Annual Budget vs. Actual Expenditures For PSRP Distribution, Capital

TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = $265,222.4K; Acceptable Variance = ± 15%

STATUS: Within Acceptable Variance

FYTD as of:	Approved Budget ($ in K)	Actual ($ in K)	Variance		Re-Estimate
			$ in K	%	
Jul-18	22,101.8	22,774.0	672.2	3.0%	
Aug-18	44,203.6	49,129.0	4,925.4	11.1%	
Sep-18	66,305.4	74,825.0	8,519.6	12.8%	
Oct-18	88,407.2	96,083.0	7,675.8	8.7%	
Nov-18	110,509.1	114,219.0	3,709.9	3.4%	
Dec-18	132,611.0	139,802.1	7,191.1	5.4%	
Jan-19	154,712.9	166,332.0	11,619.1	7.5%	
Feb-19	176,814.8	196,530.0	19,715.2	11.2%	
Mar-19	198,916.7	211,584.0	12,667.3	6.4%	
Apr-19	221,018.6	236,551.0	15,532.4	7.0%	
May-19	243,120.5				295,131.0
Jun-19	265,222.4				353,711.0
Acceptable Variance			± 15%		33.4%



SOURCE OF DATA: FI 21190 (KPI # 01.03.01.15)

1. BACKGROUND / PURPOSE

- Table above is a summary of expenditures for all Power System Reliability Program distribution capital projects.
- Below is the approved budget % of four major functions:
  - Transformers: 6% (Jobs P6309 & P6394)
  - Poles: 34% (Job P6322)
  - Crossarms: 9% (Job P6318)
  - Cables: 14% (Job P6306)

  *Percentage breakdown updated with the latest numbers.

2. ACHIEVEMENTS / MILESTONES MET

- The Distribution Reliability spent 107% of the budget through the month of April to complete the following:
  - New rack & bank installation RS-Rinaldi, RS-H & RS-B
  - 1,108 transformer installations
  - 3,139 pole replacements
  - 8,034 deteriorated crossarm replacements
  - 33.4 circuit-miles of cable replacements
  - 7,491 FIX-IT tickets (Jobs P6318, P6322, P6394, P6306, P6309 & O1357)
  - Work continued on Owens Valley-overhead/underground installations & removals, asbestos removals, trouble ticket repairs & service restorations due to outages

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- Variance through the month of April is $15,532K, 7.0% over budget. This overrun is primarily caused by the electric service restoration resulted from the July heat wave and the February rain storm as well as the accelerated work on cable replacements and pole replacements from the Power System Reliability Program (PSRP) distribution capital projects.
- FY 18/19 expenditures have been re-estimated to a new aggregate of $353.7M for the FI as a whole.

Total Project Approved From Inception to FY26/27	5,426.1M
Projects Approved to Date	2,525.5M
Project Actuals to Date	2,378.9M

*Total Project Cost approved values have been revisited. July to November 2018 had excluded allocations.
Note: The total project estimates cannot be calculated as this is an ongoing project.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- No mitigation plan at this point.

Within Acceptable Variance | Outside Acceptable Variance | Exceeds Target | Needs Attention

LADWP RATES METRIC – PSRP Distribution, O&M (Power)

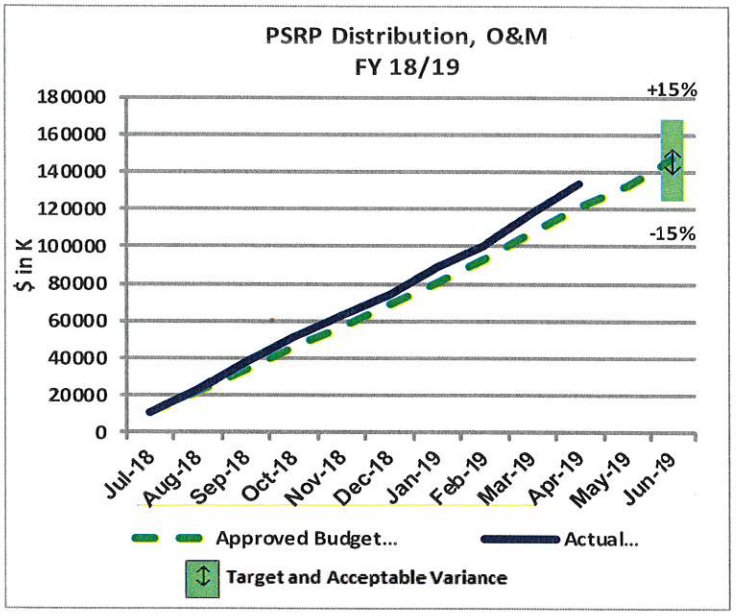
RESPONSIBLE MANAGER: Arthur Johnson, Power Transmission and Distribution **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Board Approved Annual Budget vs. Actual Expenditures For PSRP Distribution, O&M

TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = $147,021K; Acceptable Variance = ± 15%

STATUS: Within Acceptable Variance

FYTD as of:	Approved Budget ($ in K)	Actual ($ in K)	Variance		Re-Estimate (If Applicable)
			$ in K	%	
Jul-18	11,285	10,889	-396.0	-3.5%	
Aug-18	22,302	23,734	1,432.0	6.4%	
Sep-18	34,221	38,028	3,807.0	11.1%	
Oct-18	46,083	51,800	5,717.0	12.4%	
Nov-18	56,871	62,836	5,965.0	10.5%	
Dec-18	68,790	74,623	5,833.0	8.5%	
Jan-19	81,045	88,540	7,495.0	9.2%	
Feb-19	93,104	100,692	7,588.0	8.2%	
Mar-19	107,519	118,049	10,530.0	9.8%	
Apr-19	120,893	133,870	12,977.0	10.7%	
May-19	133,257				134,704
Jun-19	147,021				148,468
Acceptable Variance			± 15%		1.0%



SOURCE OF DATA: FI 301-3104 (KPI # 01.03.01.16)

1. BACKGROUND / PURPOSE

- To maintain Distribution-voltages of 34.5 kV and below on overhead and underground facilities which carries electricity from Receiving Stations (RS) and Distributing Stations (DS) to the customers for system reliability. There are over 6,800 miles of overhead and 3,597 miles of underground distribution facilities.

2. ACHIEVEMENTS / MILESTONES MET

- Power System Reliability Program (PSRP) aids in the hardening and replacement of critical infrastructure.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- This KPI is within its 15% threshold set for its goal. Currently, the FI is projected to be within the acceptable variance threshold of the approved budget, $147,021, by FYE.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- There is no mitigation plan at this time.

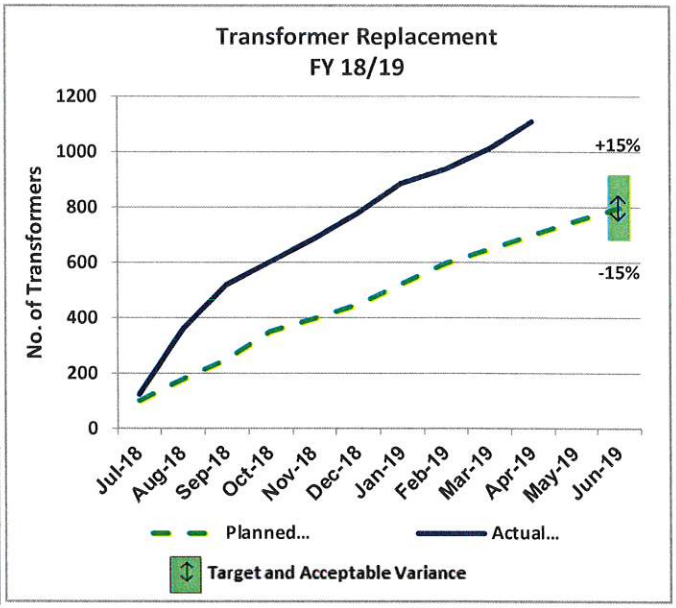
LADWP RATES/EQUITY METRIC – *Transformer Replacement (Power)*

RESPONSIBLE MANAGER: Arthur Johnson, Power Transmission and Distribution **REPORTING PERIOD:** April 2019
EQUITY CORE CATEGORY: Water and Power Infrastructure Investment

DEFINITION OF RATES METRIC: Number of Transformers Replaced Against Plan
TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = 800; Acceptable Variance = ± 15%

STATUS: Exceeds Target

FYTD as of:	Planned (No.)	Actual (No.)	Variance		Re-Estimate
			No.	%	
Jul-18	100	126	26	26.0%	
Aug-18	180	363	183	101.7%	
Sep-18	250	518	268	107.2%	
Oct-18	350	602	252	72.0%	
Nov-18	400	687	287	71.8%	
Dec-18	450	780	330	73.3%	
Jan-19	525	885	360	68.6%	
Feb-19	600	936	336	56.0%	
Mar-19	650	1,013	363	55.8%	
Apr-19	700	1,108	408	58.3%	
May-19	750				750
Jun-19	800				800
Acceptable Variance			± 15%		0.0%



SOURCE OF DATA: Jobs P6394 and P6309 (KPI # 04.01.01.02)

1. BACKGROUND / PURPOSE

- Replace 800 distribution transformers to increase reliability and maintain compliance with California Public Utilities Commission (CPUC) General Order 165- Inspection Cycles for Electric Distribution Facilities. Power Transmission and Distribution (PTD) maintains more than 126,000 distribution transformers. This work is required to provide customers reliable power and a better customer experience. Work is completed by Distribution Construction & Maintenance (DC&M) district or contract crews and is related to Power System Reliability Program (PSRP).
- The Transformer Replacement target of 800 reflects the planned transformer replacement for job P6394 (Identify and Replace Distribution Transformers and Related Equipment). Additionally, there is a planned replacement of 50 transformers under job P6309 (System Transformer Installation/Upgrades). The actual transformer replacements reflect the transformers replaced under both Job P6394 and Job P6309.

2. CRITERIA

- Transformer replacements are identified through DC&M inspection programs or due to transformer failures or are at risk of failing.

3. ACHIEVEMENTS / MILESTONES MET

- To date, the target was to replace 700 transformers and the current actual number of transformers replaced is 1,108.

4. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- The actual number of transformers replaced exceeds the 15% threshold set for the monthly target.
- The variance overrun is due to a large number of incident-driven transformer replacements and replacing aged transformers identified by engineering.

5. MITIGATION PLAN AND / OR RECOMMENDATIONS

- Due to the replacements largely being incident driven, there is no mitigation plan at this time.

6. OUTREACH STRATEGY / PLAN

- PTD utilizes poster boards at job locations indicating why work is being performed.
- PTD conducts presentations at Community Council meetings describing PSRP work.
- PTD crew leaders notify customers in person when planning access to facilities for transformer replacements.

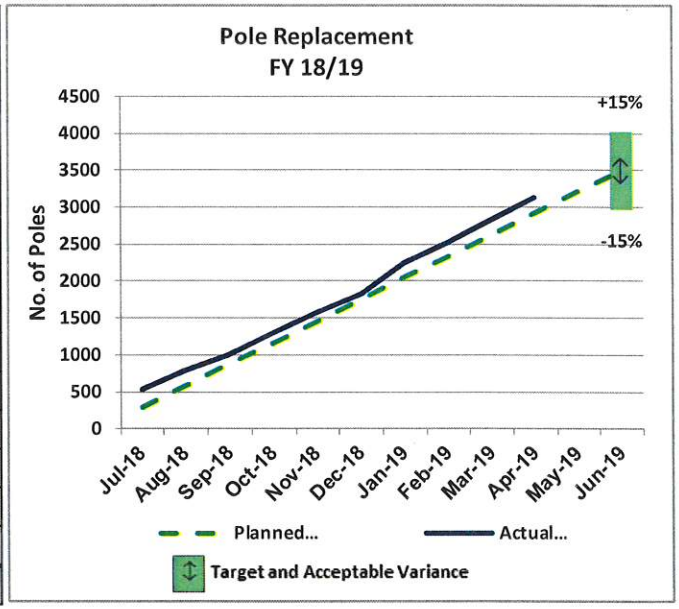
LADWP RATES/EQUITY METRIC – *Pole Replacement (Power)*

RESPONSIBLE MANAGER: Arthur Johnson, Power Transmission and Distribution **REPORTING PERIOD:** April 2019
EQUITY CORE CATEGORY: Water and Power Infrastructure Investment

DEFINITION OF RATES METRIC: Number of Poles Replaced Against Plan
TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = 3,500; Acceptable Variance = ± 15%

STATUS: Within Acceptable Variance

FYTD as of:	Planned (No.)	Actual (No.)	Variance		Re-Estimate
			No.	%	
Jul-18	292	529	237	81.2%	
Aug-18	584	803	219	37.5%	
Sep-18	876	1,009	133	15.2%	
Oct-18	1,168	1,309	141	12.1%	
Nov-18	1,460	1,579	119	8.2%	
Dec-18	1,752	1,823	71	4.1%	
Jan-19	2,044	2,251	207	10.1%	
Feb-19	2,336	2,527	191	8.2%	
Mar-19	2,628	2,833	205	7.8%	
Apr-19	2,920	3,139	219	7.5%	
May-19	3,212				3,212
Jun-19	3,500				3,500
Acceptable Variance			± 15%		0.0%



SOURCE OF DATA: Jobs P6322 (KPI # 04.01.01.03)

1. BACKGROUND / PURPOSE

- Replace 3,500 deteriorated poles due to age or other damage. Power Transmission and Distribution (PTD) maintains approximately 321,000 poles in its system. These poles have an average life span of fifty years. These poles support switches, light fixtures, transformers, and underground cables transitioning to an overhead termination, communication cables, crossarms and conductors at different voltage levels. Work is completed by Distribution Construction & Maintenance (DC&M) district and contract crews. This work is required to maintain compliance with California Public Utilities Commission (CPUC) General Order 165- Inspection Cycles for Electric Distribution Facilities, and our Power System Reliability Program (PSRP).

2. CRITERIA

- Poles for replacement were identified through the DC&M Inspection program.

3. ACHIEVEMENTS / MILESTONES MET

- To date, the target was to replace 2,920 poles and the current actual number of poles replaced was 3,139.

4. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- The actual number of poles replaced is within the 15% threshold target.

5. MITIGATION PLAN AND / OR RECOMMENDATIONS

- No mitigation plan is necessary at this time.

6. OUTREACH STRATEGY / PLAN

- PTD utilizes poster boards at job locations indicating why work was being performed.
- PTD conducts presentations at Community Council meetings describing PSRP work.
- PTD crew leaders notify customers in person when planning access to facilities for pole replacements.

LADWP RATES METRIC – Crossarm Replacement (Power)

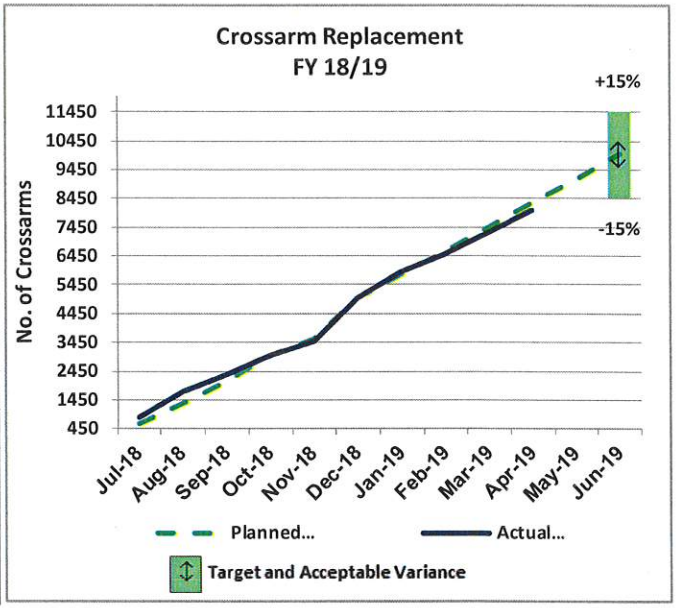
RESPONSIBLE MANAGER: Arthur Johnson, Power Transmission and Distribution **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Number of Crossarms Replaced Against Plan

TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = 10,000; Acceptable Variance = ± 15%

STATUS: Within Acceptable Variance

FYTD as of:	Planned (No.)	Actual (No.)	Variance		Re-Estimate
			No.	%	
Jul-18	600	841	241	40.2%	
Aug-18	1,350	1,723	373	27.6%	
Sep-18	2,100	2,337	237	11.3%	
Oct-18	3,000	2,983	-17	-0.6%	
Nov-18	3,550	3,487	-63	-1.8%	
Dec-18	5,000	4,996	-4	-0.1%	
Jan-19	5,800	5,893	93	1.6%	
Feb-19	6,630	6,521	-109	-1.6%	
Mar-19	7,460	7,286	-174	-2.3%	
Apr-19	8,290	8,034	-256	-3.1%	
May-19	9,120				9,095
Jun-19	10,000				10,000
Acceptable Variance			± 15%		0.0%



SOURCE OF DATA: Jobs P6318 (KPI #04.01.01.21)

1. BACKGROUND / PURPOSE

- Replace 10,000 deteriorated crossarms due to age or other damage. Power Transmission and Distribution (PTD) maintains approximately 321,000 poles that usually support one or more crossarms. These crossarms support conductors at different voltage levels, transformers, switches, light fixtures, communication cables, etc. Work is done by Distribution Construction & Maintenance (DCM) district and contract crews. This work is required to maintain compliance with California Public Utilities Commission (CPUC) General Order 165- Inspection Cycles for Electric Distribution Facilities, and our Power System Reliability Program (PSRP).

2. ACHIEVEMENTS / MILESTONES MET

- To date, the target was to replace 8,290 crossarms and the current actual number of crossarms replaced is 8,034.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- The actual number of crossarms replaced is within the ±15% threshold target.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- No mitigation plan at this time.

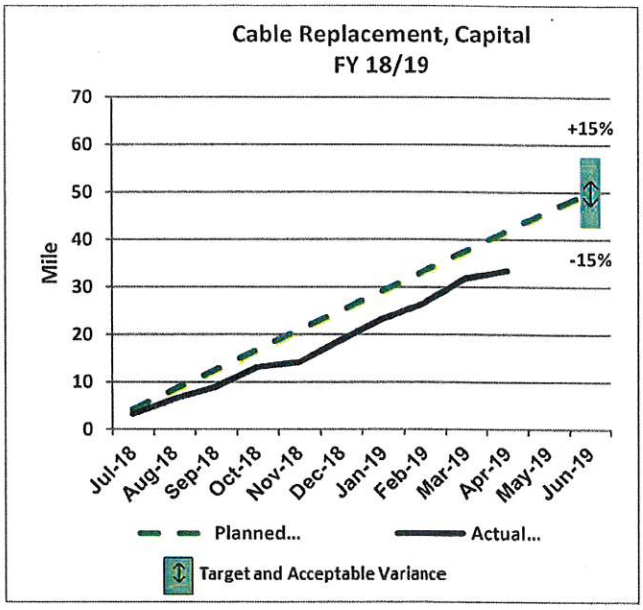
LADWP RATES/EQUITY METRIC – *Cable Replacement (Power)*

RESPONSIBLE MANAGER: Sager Farraj
Power Planning, Development, and Engineering Division
REPORTING PERIOD: April 2019
EQUITY CORE CATEGORY: Water & Power Infrastructure Investment

DEFINITION OF RATES METRIC: No. of Miles of Cable Replaced Against Plan
TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = 50 miles; Acceptable Variance = ±15%

STATUS: **Outside Acceptable Variance**

FYTD as of:	Planned (Mile)	Actual (Mile)	Variance		Re-Estimate
			Mile	%	
Jul-18	4.2	3.2	-1.0	-23.8%	
Aug-18	8.4	6.4	-2.0	-23.8%	
Sep-18	12.6	8.9	-3.7	-29.4%	
Oct-18	16.8	13.1	-3.7	-22.0%	
Nov-18	21.0	14.1	-6.9	-32.9%	
Dec-18	25.0	18.8	-6.2	-24.8%	
Jan-19	29.2	23.3	-5.9	-20.2%	
Feb-19	33.4	26.6	-6.8	-20.4%	
Mar-19	37.6	31.8	-5.8	-15.4%	
Apr-19	41.8	33.4	-8.4	-20.1%	
May-19	46.0				46.0
Jun-19	50.0				50.0
Acceptable Variance			± 15%		0.0%



SOURCE OF DATA: FI 21190, Job P6306 (KPI # 04.01.01.70)

1. **NARRATIVE / BACKGROUND**
   - Cable replacement of 4.8-kV and 34.5-kV cables for additional system reliability due to deterioration, overload, obsolescence and damage.

2. **CRITERIA**
   - Frequency of failures
   - Cable age
   - Physical deteriorations: cracks, bulging

3. **ACHIEVEMENTS**
   - Through the month of April, Distribution Construction & Maintenance completed 33.4 circuit-miles. The key performance goal is 50 circuit-miles for fiscal year 18/19.

4. **PERFORMANCE/VARIANCE ANALYSIS & YEAR END PROJECTION**
   - Variance through the month of April is 8.4 circuit-miles, 20% below target. This is due to Districts being behind with paper work. A number of cable replacement jobs haven't been closed even though the work is done.
   - Fiscal Year to date (FYTD) actual is $19.8M over budget due to Districts focusing on this work.

5. **MITIGATION/RECOMMENDATION**
   - Continue to work with Districts to have the completed cable replacement jobs close.

6. **OUTREACH STRATEGY / PLAN**
   - Neighborhood Council request for meeting on outages
   - Available information on the web site: http://prp.ladwp.com

Within Acceptable Variance | Outside Acceptable Variance | Exceeds Target | Needs Attention

LADWP RATES METRIC – Average Unit Cost per Transformer [Power]

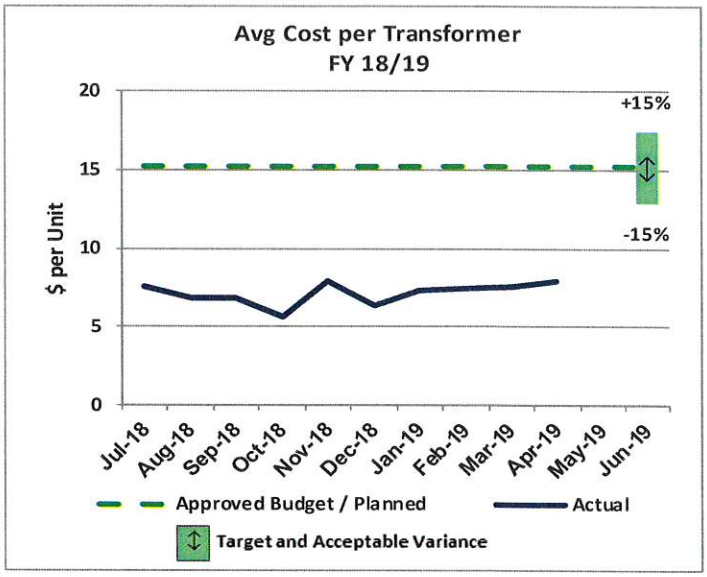
RESPONSIBLE MANAGER: Walter Rodriguez, Power Transmission and Distribution **REPORTING PERIOD**: April 2019

DEFINITION OF RATES METRIC: Average Unit Cost per Transformer

TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = $15.2K per transformer: Acceptable Variance = ± 15%

STATUS: Exceeds Target

FYTD as of:	Approved Budget / Planned	Actual	Variance		Re-Estimate (If Applicable)
			Unit or $	%	
Jul-18	15.2	7.6	(7.6)	-50.0%	
Aug-18	15.2	6.8	(8.4)	-55.3%	
Sep-18	15.2	6.9	(8.3)	-54.6%	
Oct-18	15.2	5.6	(9.6)	-63.2%	
Nov-18	15.2	7.9	(7.3)	-48.0%	
Dec-18	15.2	6.4	(8.8)	-57.9%	
Jan-19	15.2	7.3	(7.9)	-52.0%	
Feb-19	15.2	7.4	(7.8)	-51.3%	
Mar-19	15.2	7.6	(7.6)	-50.0%	
Apr-19	15.2	7.9	(7.3)	-48.0%	
May-19	15.2				7.5
Jun-19	15.2				7.5
Acceptable Variance			± 15%		-50.7%



SOURCE OF DATA: Jobs P6394/P6309 (KPI # 04.01.01.71)

1. BACKGROUND / PURPOSE

- Identify and replace 800 distribution transformers to increase reliability and maintain compliance with California Public Utilities Commission (CPUC) General Order 165-Inspection Cycles for Electric Distribution Facilities. Power Transmission and Distribution set target is re-estimated to $9.0K per unit cost of average replacement.

2. ACHIEVEMENTS / MILESTONES MET

- As of April 30, the target was to replace 700 transformers at 88% of the FY goal. Current replacement is 1,108 transformers which is 139% over our FY goal.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- Before the start of the new FY, PTD requested a correction on the approved cost per unit (CPU) from 15.2K to 9K which was determined to be more realistic. At this time, based on the past 8-month performance the CPU should be readjusted to 7.5K for the approved budget plan (ABP).
- If the ABP was 7.5K per unit we would maintain a CPU within an acceptable variance.
- Since this work is incident driven we don't have complete control over the excess of units replaced beyond our internal goal.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- Power New Business Development and Technical Application business group (PNBDTA) continues to make advancements on a strategic goal to improve Work Management Information System (WMIS) mapping of Accelerated Code (AC) jobs. As improvements are implemented, reduction of unit replacement cost should be noticeable.
- We will continue to work with PNBDTA on refining the mapping of AC jobs and providing the most accurate cost per unit on all metrics like this one.
- We will continue to monitor and provide recommendations as needed.

LADWP RATES METRIC – Average Unit Cost per Pole (Power)

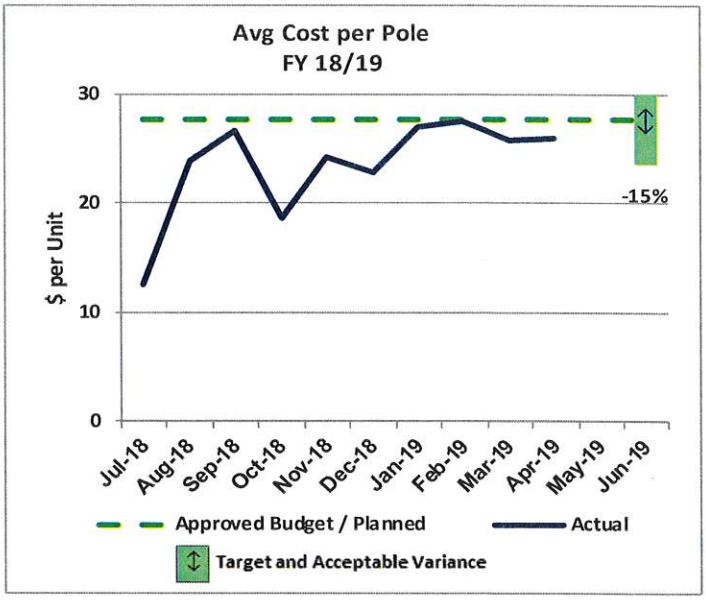
RESPONSIBLE MANAGER: Walter Rodriguez, Power Transmission and Distribution **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Average Unit Cost per Pole

TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = $27.7K per pole: Acceptable Variance = ± 15%

STATUS: Within Acceptable Variance

FYTD as of:	Approved Budget / Planned	Actual	Variance		Re-Estimate (If Applicable)
			Unit or $	%	
Jul-18	27.7	12.5	(15.2)	-54.9%	
Aug-18	27.7	23.8	(3.9)	-14.1%	
Sep-18	27.7	26.7	(1.0)	-3.6%	
Oct-18	27.7	18.7	(9.0)	-32.5%	
Nov-18	27.7	24.3	(3.4)	-12.3%	
Dec-18	27.7	22.8	(4.9)	-17.7%	
Jan-19	27.7	27	(0.7)	-2.5%	
Feb-19	27.7	27.6	(0.1)	-0.4%	
Mar-19	27.7	25.7	(2.0)	-7.2%	
Apr-19	27.7	25.9	(1.8)	-6.5%	
May-19	27.7				27.7
Jun-19	27.7				27.7
Acceptable Variance			± 15%		0.0%



SOURCE OF DATA: Jobs P6322 (KPI # 04.01.01.72)

1. BACKGROUND / PURPOSE

- Replace 3,500 deteriorated power poles due to age or other damage. Power Transmission and Distribution (PTD) maintains approximately 321,000 poles in its system. Power poles have an average life span of fifty years. Power poles support switches, light fixtures, transformers, and underground cables transitioning to an overhead termination, communication cables, crossarms and conductors at different voltage levels. PTD has a target replacement cost of $27.7K per unit.

2. ACHIEVEMENTS / MILESTONES MET

- As of April 30, our current to date target was a replacement of 2,920 power poles at 83% of the FY goal. PTD has completed replacement of 3,139 power poles which is 90% of the FY goal with current average cost of 25.9K per unit.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- PTD and Contract Operations personnel continue to exceed estimated projections and this job is currently on track for meeting year end expectations for replacements.
- PTD is working with Work Management Information System administrators on refining how pole replacement costs are captured and continues to affect the cost per unit and is the reason the cost per unit average is 6.5% below estimated unit cost on this Multi-Year Expenditure.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- PTD will continue to monitor and audit unit costs as we work with PNBDTA to refine accounting for these jobs.

LADWP RATES METRIC – Average Unit Cost per Crossarm (Power)

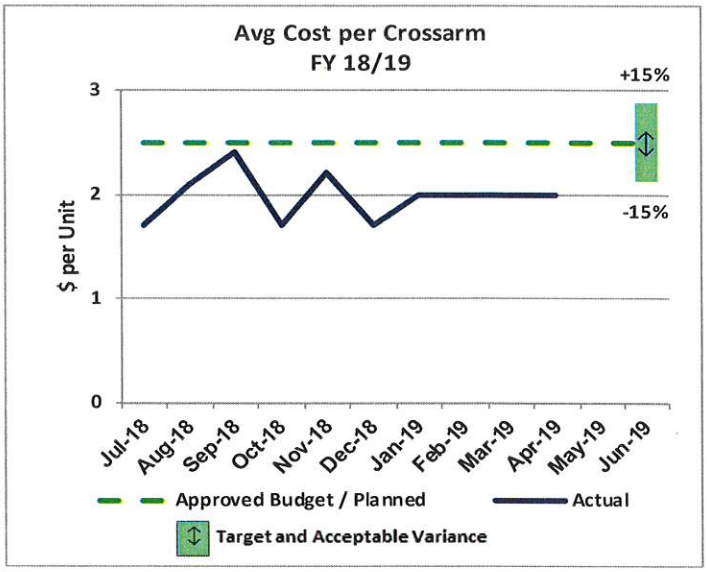
RESPONSIBLE MANAGER: Walter Rodriguez, Power Transmission and Distribution **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Average Unit Cost per Crossarms

TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = $2.5K per crossarm: Acceptable Variance = ± 15%

STATUS: Exceeds Target

FYTD as of:	Approved Budget / Planned	Actual	Variance		Re-Estimate (If Applicable)
			Unit or $	%	
Jul-18	2.5	1.7	(0.8)	-32.0%	
Aug-18	2.5	2.1	(0.4)	-16.0%	
Sep-18	2.5	2.4	(0.1)	-4.0%	
Oct-18	2.5	1.7	(0.8)	-32.0%	
Nov-18	2.5	2.2	(0.3)	-12.0%	
Dec-18	2.5	1.7	(0.8)	-32.0%	
Jan-19	2.5	2	(0.5)	-20.0%	
Feb-19	2.5	2	(0.5)	-20.0%	
Mar-19	2.5	2	(0.5)	-20.0%	
Apr-19	2.5	2	(0.5)	-20.0%	
May-19	2.5				2.5
Jun-19	2.5				2.5
Acceptable Variance			± 15%		0.0%



SOURCE OF DATA: Jobs P6318 (KPI # 04.01.01.73)

1. BACKGROUND / PURPOSE

- Replace 10,000 deteriorated crossarms due to age or other damage. Power Transmission and Distribution (PTD) maintains approximately 321,000 poles that usually support one or more crossarms. These crossarms support conductors at different voltage levels, transformers, switches, light fixtures, communication cables, etc. PTD has a target replacement cost $2.5K per unit.

2. ACHIEVEMENTS / MILESTONES MET

- To date, the target was to replace 8,290 crossarms which is 83% of FY goal. Actual replacements total 8,034 crossarms which is 80% of the FY goal.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- PTD is currently exceeding target expectations at $2K per unit which is -20% below targeted cost per unit.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- PTD will continue to monitor and work with Power New Business Development and Technical Application business group on the Work Management Information System (WMIS) mapping of work requests targeting this job.

Within Acceptable Variance | Outside Acceptable Variance | Exceeds Target | Needs Attention

LADWP RATES METRIC – Average Unit Cost per Mile of Cable [Power]

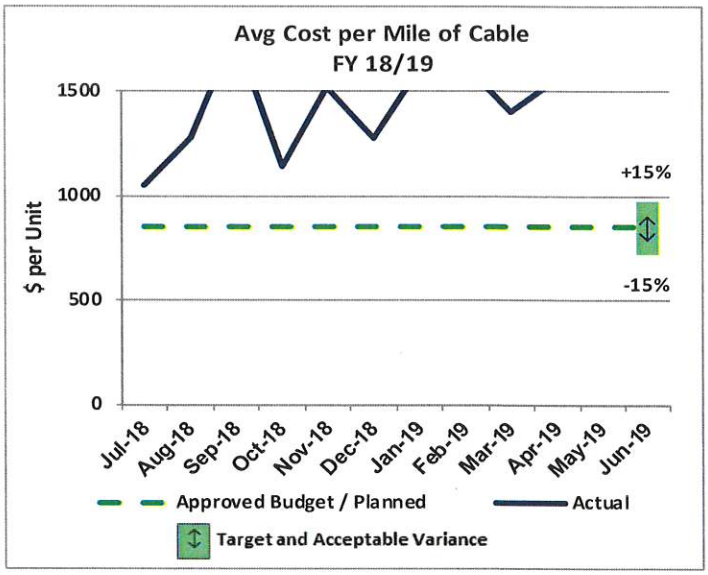
RESPONSIBLE MANAGER: Walter Rodriguez, Power Transmission and Distribution **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Average unit cost per mile of cable replaced

TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = $849.4 per mile of cable replaced; : Acceptable Variance = ± 15%

STATUS: Outside Acceptable Variance

FYTD as of:	Approved Budget / Planned	Actual	Variance		Re-Estimate (If Applicable)
			Unit or $	%	
Jul-18	849.4	1045.5	196.1	23.1%	
Aug-18	849.4	1274.3	424.9	50.0%	
Sep-18	849.4	1778.2	928.8	109.3%	
Oct-18	849.4	1143.1	293.7	34.6%	
Nov-18	849.4	1515.4	666.0	78.4%	
Dec-18	849.4	1276.2	426.8	50.2%	
Jan-19	849.4	1603.9	754.5	88.8%	
Feb-19	849.4	1635.9	786.5	92.6%	
Mar-19	849.4	1399.2	549.8	64.7%	
Apr-19	849.4	1557.3	707.9	83.3%	
May-19	849.4				849.4
Jun-19	849.4				849.4
Acceptable Variance			± 15%		0.0%



SOURCE OF DATA: Jobs P6306 (KPI # 04.01.01.74)

1. BACKGROUND / PURPOSE

- Replace 50 miles of 4.8KV and 34.5KV underground (4.8-kV and 34.5-kV) distribution cables that require periodic upgrading because of load growth, failures due to storm damage, accidents, inherent defects, deterioration, age or advancements in materials and in power distribution techniques. Power Transmission and Distribution (PTD) has a target replacement cost of $849.4K per mile.

2. ACHIEVEMENTS / MILESTONES MET

- The current month's target was a year to date replacement of 41.8 miles of cable. The actual cable replacement accounted for totals 33.4 miles.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- The current information regarding average cost per mile of cable indicates 83.3% within the planned cost per mile.
- Due to Bureau of Engineering street restrictions much of the construction has been conducted after hours, on weekends or round the clock adding to the labor cost per Memorandum of Understanding guidelines.
- Since actual cable replacement mileage is only accounted for upon the completion of task 145 in WMIS while labor is accounted for daily and materials are accounted for through Supply Chain entries after the completion of Requests Material Services (RMS), the variances may fluctuate greatly with total cost taking several weeks or months to come in line.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- PTD will continue to monitor job performance and ensure that time materials and labor are being accounted for accurately and appropriately.
- PTD will continue to work with Power New Business Development and Technical Application business group to ensure all work and costs are accounted for with the highest accuracy possible.

Within Acceptable Variance | Outside Acceptable Variance | Exceeds Target | Needs Attention

Water System

LADWP RATES METRIC – NEW DISTRIBUTION INFRASTRUCTURE CREWS (WATER)

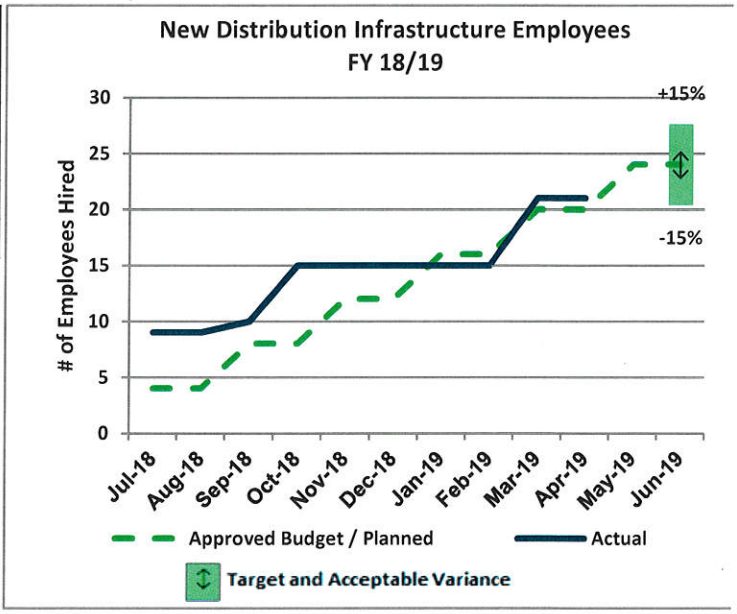
RESPONSIBLE MANAGER: Breonia Lindsey/Sandra Foster **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Number of employees for new crews dedicated to distribution infrastructure as compared to plan.

TARGET & ACCEPTABLE VARIANCE (FY 18/19): 24 employees, ±15%

STATUS: Within Acceptable Variance

FYTD as of:	Approved Budget / Planned	Actual	Variance		Re-Estimate (If Applicable)
			# Emp	%	
Jul-18	4	9	5	125.0%	
Aug-18	4	9	5	125.0%	
Sep-18	8	10	2	25.0%	
Oct-18	8	15	7	87.5%	
Nov-18	12	15	3	25.0%	
Dec-18	12	15	3	25.0%	
Jan-19	16	15	-1	-6.3%	
Feb-19	16	15	-1	-6.3%	
Mar-19	20	21	1	5.0%	
Apr-19	20	21	1	5.0%	
May-19	24				
Jun-19	24				
Acceptable Variance			± 15%		



SOURCE OF DATA: Hiring Plan/Annual Personnel Resolution

1. BACKGROUND / PURPOSE

- Distribution infrastructure crews are necessary to meet mainline replacement and other infrastructure goals.

  *The target is three crews totaling 24 employees for mainline replacement.

2. ACHIEVEMENTS/MILESTONES MET

- No new mainline crews hired during this reporting period. To date, the Division has hired a total of 21 mainline positions for this fiscal year.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- The Division is in the process of filling three vacant mainline Water Utility Supervisor positions by May 2019. The Division is still on track to meeting or exceeding its goal of hiring 24 new employees for distribution infrastructure crews.

4. MITIGATION PLAN AND/OR RECOMMENDATIONS

- The division is continuing its hiring efforts to fill new positions for the current fiscal year in order to meet its overall mainline replacement goal.

Within Acceptable Variance | Outside Acceptable Variance | Exceeds Target | Needs Attention

LADWP RATES METRIC – WATER SUPPLY COST BUDGET VS ACTUAL- CAPITAL (Water)

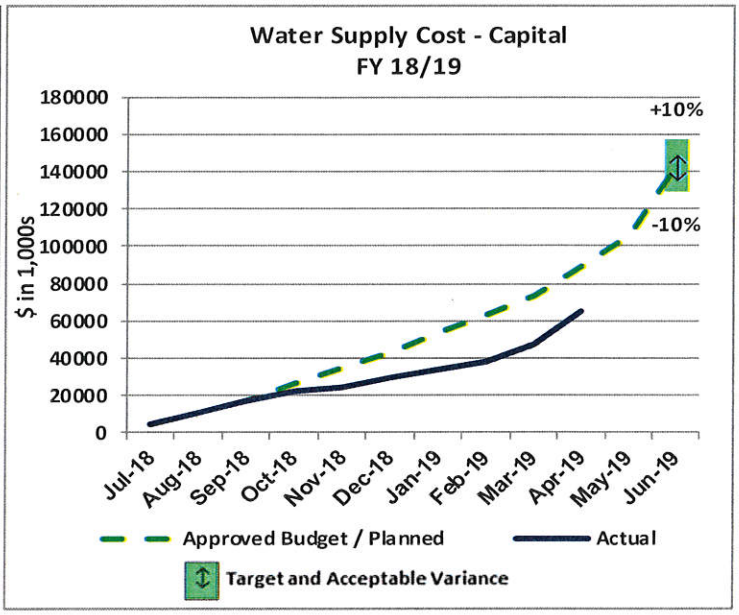
RESPONSIBLE MANAGER: April Thang **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Board approved annual budget vs actual expenditures.

TARGET & ACCEPTABLE VARIANCE (FY 18/19): $143,035K , 10 percent

STATUS: Outside Acceptable Variance

FYTD as of:	Approved Budget / Planned	Actual	Variance		Re-Estimate (If Applicable)
			Unit or $	%	
Jul-18	4,752	4,751	-1	0.0%	
Aug-18	10,712	10,711	-1	0.0%	
Sep-18	16,562	16,562	0	0.0%	
Oct-18	25,983	21,885	-4,098	-15.8%	
Nov-18	34,493	24,231	-10,262	-29.8%	
Dec-18	43,244	29,779	-13,465	-31.1%	
Jan-19	53,406	33,367	-20,039	-37.5%	
Feb-19	63,172	38,017	-25,155	-39.8%	
Mar-19	72,945	47,762	-25,183	-34.5%	
Apr-19	89,321	65,358	-23,963	-26.8%	
May-19	105,609				
Jun-19	143,035				
Acceptable Variance			± 10%		



SOURCE OF DATA: FIs 22130, 22140, 22150, 23150, 24315, 24318, and 28204.

1. BACKGROUND / PURPOSE

- Water supply costs include both current supply of water and the development of future supplies necessary to make more resilient and reliable sources of water.
- In addition, water supply costs-capital include capital expenditures from LA Aqueduct A&B South and North, Eastern Sierra Environmental, Water Recycling, Groundwater Management, Watershed-Stormwater Capture, and Water Conservation.

2. ACHIEVEMENTS / MILESTONES MET

- In April 2019, resumed recycled water deliveries to the Dominguez Gap Barrier from the Terminal Island Water Recycling Plant, with deliveries reaching up to 6.5 MGD
- Construction of Machado Lake Pipeline Project Eastern Reach (MLPPER) began in December 2018.
- Executed a 30-year Service Agreement with Water Replenishment District on December 12, 2018 to increase delivery of recycled water to the Dominguez Gap Barrier.
- Executed an MOU with Forest Lawn on October 11, 2018 to partner in the design of a 3-million gallon tank.
- Completed construction of Machado Lake Phase 1 in October 2018.

3. **PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION**

- The demand for residential and commercial Water Conservation rebates has decreased. The job is underspent by $14.4M.
- Heavy runoff has prevented crews from performing Aqueduct capital improvement and shifted priorities to critical maintenance jobs, leaving FI 22130 and 22140 underspent.
- The Groundwater Production Well projects have been delayed, leaving FI 24315 underspent. Groundwater management is still working on getting a drilling contract in place.

4. **MITIGATION PLAN AND / OR RECOMMENDATIONS**

- Continue ongoing work as planned

LADWP RATES METRIC – WATER SUPPLY COSTS BUDGET VS ACTUAL-O&M (Water)

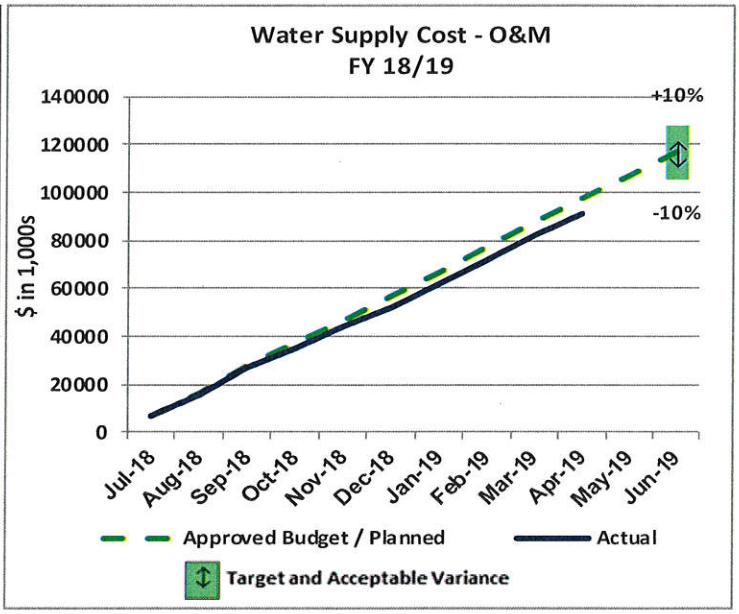
RESPONSIBLE MANAGER: April Thang **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Board approved annual budget vs actual expenditures.

TARGET & ACCEPTABLE VARIANCE (FY 18/19): $116,711K , 10 percent

STATUS: Within Acceptable Variance

FYTD as of:	Approved Budget / Planned	Actual	Variance		Re-Estimate (If Applicable)
			Unit or $	%	
Jul-18	6,557	6,563	6	0.1%	
Aug-18	16,464	15,349	-1,115	-6.8%	
Sep-18	27,682	27,062	-620	-2.2%	
Oct-18	37,205	34,835	-2,370	-6.4%	
Nov-18	46,820	44,056	-2,764	-5.9%	
Dec-18	56,694	52,095	-4,599	-8.1%	
Jan-19	67,067	62,049	-5,018	-7.5%	
Feb-19	77,403	71,812	-5591	-7.2%	
Mar-19	87,629	82,298	-5331	-6.1%	
Apr-19	97,328	90,834	-6494	-6.7%	
May-19	106,998				
Jun-19	116,711				
Acceptable Variance			± 10%		



SOURCE OF DATA: FIs 3022001, 3022005, 3022015, 3022025, 3022035, 3022037, 3051000, 3052000, 3112009, 3112200, 3122240, 3222507, 4013005, 4053010, and 4092023.

1. BACKGROUND / PURPOSE

- Water supply costs include both current supply of water (excluding Purchased Water cost) and the development of future supplies necessary to make more resilient and reliable sources of water.
- In addition, water supply costs-O&M include operation and maintenance expenditures from LA Aqueduct Operations North and South, LA Aqueduct Maintenance South and North, Resources Management, Stormwater Management, Water Conservation, Water Recycling, Groundwater Pump O&M North, LA Groundwater Pump & SRCE Facility, Pump Booster, Hazardous Substance Management Program, Eastern Sierra Environmental, Groundwater O&M, and Southern District Engineering & Operations.

2. ACHIEVEMENTS / MILESTONES MET

- This year's above average precipitation results in a higher than normal export of water from the Northern Aqueduct Section to the City.
- From January 2019 to April 2019, 195 preventative maintenance tasks for 96 pump station facilities and 61 regulatory bi-weekly maintenance on 45 emergency backup IC Engine units located throughout the Water System were completed.
- Mt. Washington Unit 2 pump was overhauled and returned back to service in April 2019.
- Buena Vista Pump Station Unit 2 was refurbished and placed into service in March 2019.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- Current Aqueduct water projections exceed average expected deliveries.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- Aqueduct is working diligently to manage above average run-off conditions, with a goal to export water to reduce in-basin purchases of water. Reduced water purchases improve the Water System O&M spending plan.
- Continue to monitor the water supply expenditure carefully to ensure it is in line with the approved budget.

LADWP RATES METRIC – Purchased Water (Water)

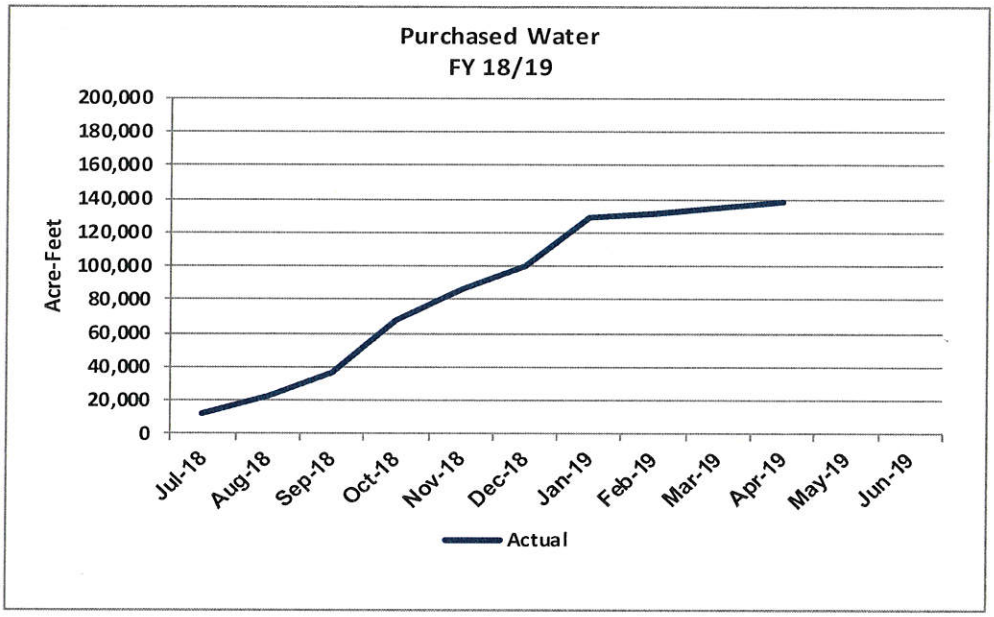
RESPONSIBLE MANAGER: April Thang **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Annual quantity of purchased water in acre-feet (AF). Information only.

TARGET & ACCEPTABLE VARIANCE (FY 18/19): N/A - for information only

STATUS: **Information Only**

FYTD as of:	Actual
Jul-18	11,415
Aug-18	22,668
Sep-18	36,845
Oct-18	67,587
Nov-18	85,824
Dec-18	100,417
Jan-19	128,445
Feb-19	131,390
Mar-19	134,762
Apr-19	138,479
May-19	
Jun-19	



SOURCE OF DATA: Monthly Metropolitan Water District invoices.

1. BACKGROUND / PURPOSE

- Purchased water from Metropolitan Water District is an important source of water for our overall water supply portfolio and makes it more resilient.
- The Mayor's long term plan is to reduce dependency on purchased water supply.

2. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- During normal weather conditions annual amount of purchased water is 150,808 AF.
- During the summer months, the Water System maximized water deliveries from the Los Angeles Aqueduct (LAA). This reduced the amount of purchased water in the beginning of the fiscal year.

3. MITIGATION PLAN AND / OR RECOMMENDATIONS

- 20% conservation has reduced the overall water use, minimizing purchased water.
- San Fernando Basin groundwater production has been increased to mitigate total purchased water numbers (Purchased water decreased since January due to recent heavy run-off).
- As of March 28, 2019, the combined average of LADWP's Eastern Sierra snow courses was 183 percentage of normal with water content measuring 41.5 inches.

LADWP RATES METRIC – RECYCLED WATER DELIVERED (Water)

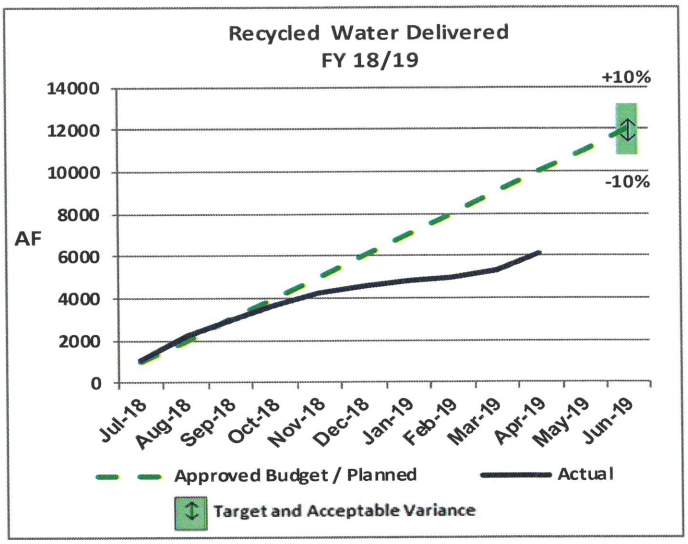
RESPONSIBLE MANAGER: William T. Van Wagoner **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Annual quantity of recycled water delivered in acre-feet (AF) against plan.

TARGET & ACCEPTABLE VARIANCE (Fiscal Year FY 18/19): 12,000 AF, 10%

STATUS: Outside Acceptable Variance

FYTD as of:	Approved Budget / Planned	Actual	Variance		Re-Estimate (If Applicable)
			AF	%	
Jul-18	1,000	1,066	66	6.6%	
Aug-18	2,000	2,206	206	10.3%	
Sep-18	3,000	2,970	-30	-1.0%	
Oct-18	4,000	3,688	-312	-7.8%	
Nov-18	5,000	4,229	-771	-15.4%	
Dec-18	6,000	4,547	-1453	-24.2%	
Jan-19	7,000	4,814	-2186	-31.2%	
Feb-19	8,000	4,997	-3003	-37.5%	
Mar-19	9,000	5,281	-3719	-41.3%	
Apr-19	10,000	6,115	-3885	-38.9%	
May-19	11,000				
Jun-19	12,000				
Acceptable Variance			± 10%		



SOURCE OF DATA: Customer Recycled Water Meter Reads

1. BACKGROUND / PURPOSE

- Recycled water is one of the local supply strategies to meet the Mayor's Sustainable City pLAn to reduce dependency on imported water.

2. ACHIEVEMENTS / MILESTONES MET

- Delivered 6,115 AF of recycled water, which is approximately 39% below the planned goal for FY 18-19.
- In March 2019, Albion Riverside Park recycled water service was turned on. This site will use 20 acre-feet of recycled water per year for irrigation.
- In August 2018, Playa Vista Hayden Housing Development recycled water service was turned on. This site will use 5 acre-feet of recycled water per year for irrigation.
- In July 2018, Playa Vista Cleo and Playa Vista Mason Parkway Irrigation recycled water services were turned on. These sites will use 4 acre-feet of recycled water per year for irrigation.
- In July 2018, Playa Vista Street Parkway Irrigation Parcel 6 (Connection 12) recycled water service was turned on. This site will use 2 acre-feet of recycled water per year for irrigation.
- In July 2018, Playa Vista Street Parkway Irrigation Parcel 6 (Connection 5) recycled water service was turned on. This site will use 2 acre-feet of recycled water per year for irrigation.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- Terminal Island Water Reclamation Plant owned by LA Sanitation continues to experience challenges in delivering consistent flows in FY 18-19 due to their inability to meet discharge requirements.
- Major customer (Dominguez Gap Seawater Intrusion Barrier) was unable to take recycled water in early FY 18-19 due to their infrastructure failures. Infrastructure repair work was completed in December 2018.
- Higher than average rainfall in FY 18-19 has resulted in significantly less recycled water use for irrigation purposes.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- Continue to connect new recycled water customers where recycled water is available and can be supplied at a reasonable cost.

LADWP RATES METRIC – STORMWATER CAPACITY (Water)

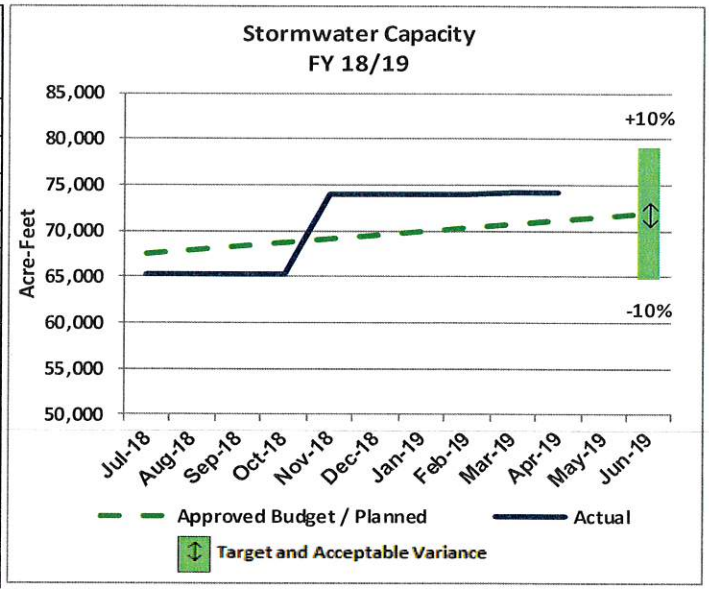
RESPONSIBLE MANAGER: David Pettijohn **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Stormwater system capacity milestones in acre-feet (AF) against plan.

TARGET & ACCEPTABLE VARIANCE (FY 18/19): 72,000 AFY; 10% variance

STATUS: Within Acceptable Variance

FYTD as of:	Approved Budget / Planned	Actual	Variance		Re-Estimate (If Applicable)
			Unit or $	%	
Jul-18	67,417	65,321	-2,096	-3.1%	
Aug-18	67,834	65,321	-2,513	-3.7%	
Sep-18	68,251	65,321	-2,930	-4.3%	
Oct-18	68,668	65,321	-3,347	-4.9%	
Nov-18	69,085	74,082	4,997	7.2%	
Dec-18	69,502	74,082	4,580	6.6%	
Jan-19	69,919	74,082	4,163	6.0%	
Feb-19	70,336	74,082	3,746	5.3%	
Mar-19	70,753	74,177	3,424	4.8%	
Apr-19	71,170	74,177	3,007	4.2%	
May-19	71,587				
Jun-19	72,000				
Acceptable Variance			± 10%		



SOURCE OF DATA: Summary of Major Stormwater Capture Projects Report

1. BACKGROUND / PURPOSE

- Projects to meet the Mayor's Sustainability pLAn, 2015 Urban Water Management Plan and LADWP's Stormwater Capture Master Plan.
- Replenishment of the San Fernando Groundwater Basin is vital to sustain the long-term native safe yield of the City's local groundwater supply.

2. ACHIEVEMENTS / MILESTONES MET

- Completed projects include:
  - Van Nuys Boulevard Great Street (95 AFY).
- Projects in construction include:
  - Tujunga Spreading Grounds (8,000 AFY) is 63% complete.
- Projects in Design/Planning include:
  - Lankershim Boulevard Great Street (51 AFY) 100% design.
  - San Fernando Regional Park Stormwater Capture Project (200 AFY) 50% design plans completed.
  - San Fernando Valley Distributed Stormwater Capture Projects: Victory Goodland Median Stormwater Capture Project (97 AFY), Glenoaks & Filmore Stormwater Capture Project (86 AFY), Agnes Avenue Stormwater Capture Project (60 AFY), contract award notices issued.
  - Silver Lake Reservoir Stormwater Capture Project (159 AFY), surveying and geotechnical testing in progress.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- On target.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- Continue ongoing work as planned.

Within Acceptable Variance | Outside Acceptable Variance | Exceeds Target | Needs Attention

LADWP RATES METRIC – ANNUAL GROUNDWATER PRODUCTION CENTRAL BASIN (Water)

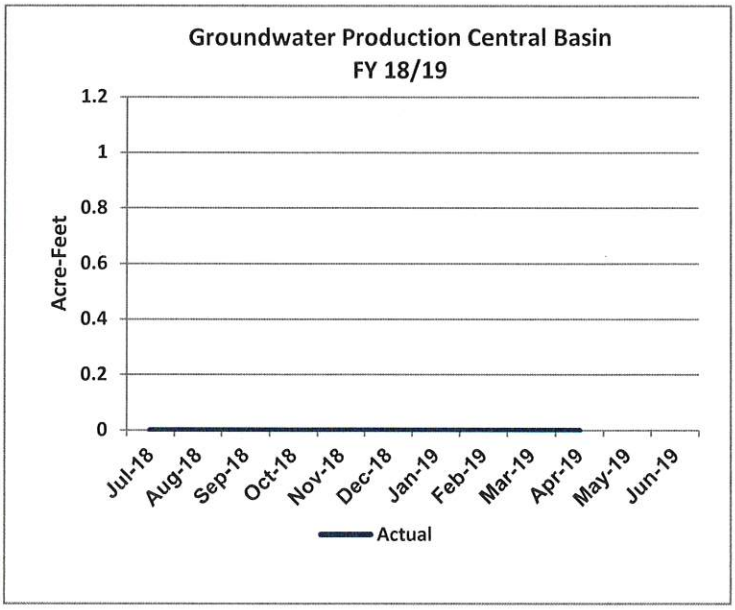
RESPONSIBLE MANAGER: Evelyn Cortez-Davis ECD **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Annual groundwater production in the Central Basin in acre-feet (AF) against the plan. Information only

TARGET & ACCEPTABLE VARIANCE (FY18/19): N/A for information only.

STATUS: Information Only

FYTD as of:	Actual
Jul-18	0
Aug-18	0
Sep-18	0
Oct-18	0
Nov-18	0
Dec-18	0
Jan-19	0
Feb-19	0
Mar-19	0
Apr-19	0
May-19	
Jun-19	



SOURCE OF DATA: Well Metered Reads

1. BACKGROUND / PURPOSE

- City of Los Angeles water rights in Central Basin is 16,546 AF/Y.
- Pumping goal is set at 9,668 AF (58% of water rights), due to limited groundwater pumping and distribution capacity.
- Pumping Central Basin groundwater can reduce purchases of imported water at a cost less than $400 per AF, saving nearly $600 per AF as compared with Tier 1 treated water purchased from MWD.

2. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- Manhattan Well Field was turned off on February 27, 2017 to maximize the usage of Aqueduct water. This well field remains off due to issues with the sump.
- The 99th St Well Field was turned off on May 16, 2016 due to water quality issues related to elevated levels of naturally occurring iron and manganese in the Watts and Green Meadows areas. The discoloration issue has been closed. However, the wells will remain off line until the new chloramination station and new iron/manganese filtration removal systems are constructed.

3. MITIGATION PLAN AND / OR RECOMMENDATIONS

- The project to construct iron/manganese filtration removal systems for the 99th St Well Field is currently in the design phase. The anticipated in-service date is mid-2020.

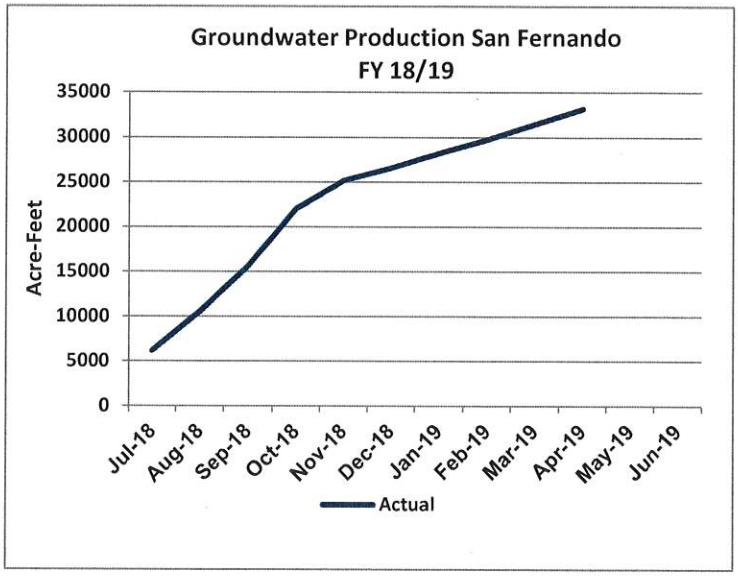
LADWP RATES METRIC – ANNUAL GROUNDWATER PRODUCTION
SAN FERNANDO (Water)

RESPONSIBLE MANAGER: Evelyn Cortez-Davis ECD **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Annual groundwater production in the San Fernando in acre-feet (AF) against the plan. Information only.
TARGET & ACCEPTABLE VARIANCE (FY 18/19): N/A for information only.

STATUS: Information Only

FYTD as of:	Actual
Jul-18	6,166
Aug-18	10,529
Sep-18	15,597
Oct-18	22,021
Nov-18	25,132
Dec-18	26,560
Jan-19	28,208
Feb-19	29,729
Mar-19	31,469
Apr-19	33,182
May-19	
Jun-19	



SOURCE OF DATA: Well Metered Reads

1. BACKGROUND / PURPOSE

- City of Los Angeles water rights in San Fernando Basin is 87,000 AF
- Pumping goal is set at 65,132 AF is based on groundwater quality and its depth.

2. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- As of February 2019, groundwater well production is based on maximizing the usage of Aqueduct water and operational needs.

3. MITIGATION PLAN AND / OR RECOMMENDATIONS

- Local groundwater water is used conjunctively with lower cost Los Angeles Aqueduct water and can be stored for future use.

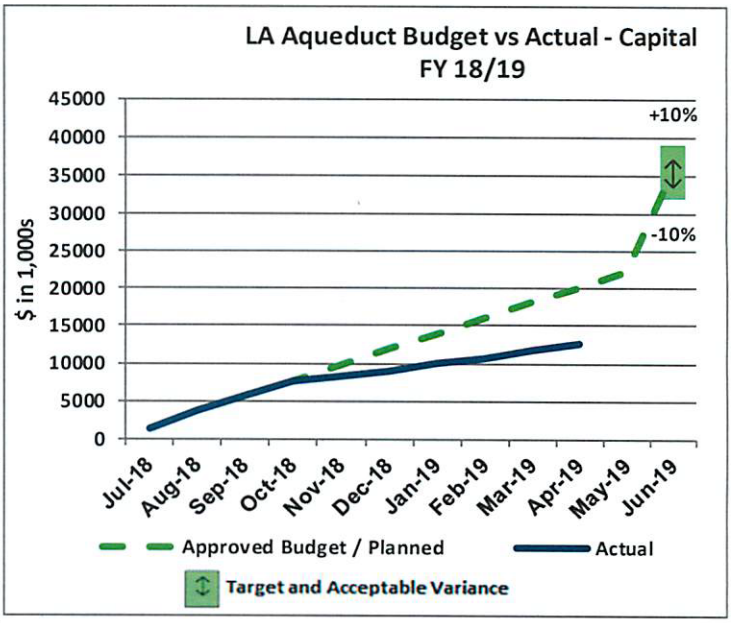
LADWP RATES METRIC – LA AQUEDUCT BUDGET VS ACTUAL - CAPITAL (Water)

RESPONSIBLE MANAGER: Daniel Raftevold **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Board approved annual budget vs actual expenditures.
TARGET & ACCEPTABLE VARIANCE (FY 18/19): $35,501K , 10 percent

STATUS: Outside Acceptable Variance

FYTD as of:	Approved Budget / Planned	Actual	Variance		Re-Estimate (If Applicable)
			$	%	
Jul-18	1,345	1,345	0	0.0%	
Aug-18	3,810	3,810	0	0.0%	
Sep-18	5,633	5,633	0	0.0%	
Oct-18	7,716	7,517	-199	-2.6%	
Nov-18	9,800	8,276	-1524	-15.5%	
Dec-18	11,883	9,008	-2875	-24.2%	
Jan-19	13,996	10,023	-3973	-28.4%	
Feb-19	16,049	10,609	-5440	-33.9%	
Mar-19	18,132	11,662	-6470	-35.7%	
Apr-19	20,215	12,491	-7724	-38.2%	
May-19	22,298				13,600
Jun-19	35,501				14,600
Acceptable Variance			± 10%		



SOURCE OF DATA: FIs 22130, 22140, and 22150.

1. BACKGROUND / PURPOSE

- The Los Angeles Aqueduct is an important source of non-purchased water. During times of low flow in the Aqueduct, infrastructure projects are completed (this cannot be done during high flow periods).

2. ACHIEVEMENTS / MILESTONES MET

- A significant amount of work has been completed on the South Haiwee Tower, Elizabeth Tunnel seismic risk mitigation/HDPE pipe installation project, and Sag Pipe re-coating projects year-to-date.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- Delays in the Grant Lake Spillway Project due to environmental documentation, as well as the deferral of the Old Top Removal Project due to heavy snowpack are expected to leave this item below budget by approximately $21 M at fiscal year-end.

- Capital and O&M combined cost was still within the acceptable variance at 1.5% below target.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- Focus for the remainder of the fiscal year will primarily be on O&M to handle the heavy run-off.

LADWP RATES METRIC – LA AQUEDUCT BUDGET VS ACTUAL – O&M (Water)

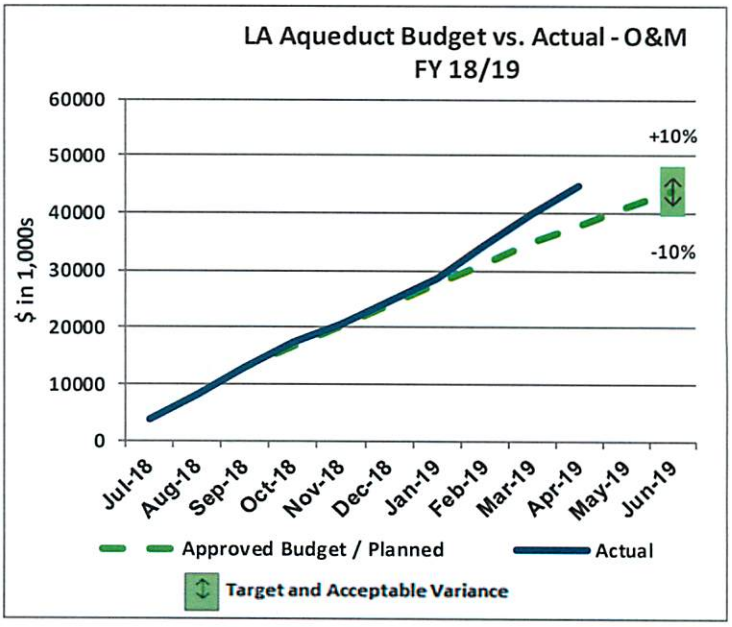
RESPONSIBLE MANAGER: Daniel Raftevold **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Board approved annual budget vs actual expenditures.

TARGET & ACCEPTABLE VARIANCE (FY 18/19): $43,934K , 10 percent

STATUS: Outside Acceptable Variance

FYTD as of:	Approved Budget / Planned	Actual	Variance		Re-Estimate (If Applicable)
			$	%	
Jul-18	3,743	3,743	0	0.0%	
Aug-18	8,278	8,278	0	0.0%	
Sep-18	13,080	13,080	0	0.0%	
Oct-18	16,726	17,347	621	3.7%	
Nov-18	20,372	20,678	306	1.5%	
Dec-18	24,018	24,664	646	2.7%	
Jan-19	27,664	28,707	1043	3.8%	
Feb-19	31,273	34,455	3182	10.2%	
Mar-19	34,872	39,974	5102	14.6%	
Apr-19	37,944	44,824	6881	18.1%	
May-19	40,987				50,800
Jun-19	43,934				56,300
Acceptable Variance			± 10%		28.1%



SOURCE OF DATA: FIs 3022001, 3022005, 3022015, 3022025, 3022035, 3112009, 3222507, 4013005, and 4092023.

1. BACKGROUND / PURPOSE

- The Los Angeles Aqueduct is an important source of non-purchased water. During times of low flow in the Aqueduct (as per the first six months of the year), preventative maintenance is completed (this cannot be done during high flow periods).

2. ACHIEVEMENTS / MILESTONES MET

- Significant facility maintenance in the Southern District, and substantial maintenance on dams in the Northern District has been completed year-to-date.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- Recent heavy snow storms have shifted priorities for the remainder of the fiscal year, thus O&M is expected to be above budgeted levels by approximately $12M.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- The aforementioned maintenance on dams (particularly at Long Valley Dam), was in preparation for a Dept. of Safety of Dams (DSOD) mandated inspection.

- Seasonal work to protect infrastructure and avoid flooding from the immense Sierra snowpack will be a focus for the remainder of the fiscal year. The overage in O&M will be offset by an underrun in capital expenditures.

LADWP RATES METRIC – GALLONS PER CAPITA PER DAY (GPCD)(Water)

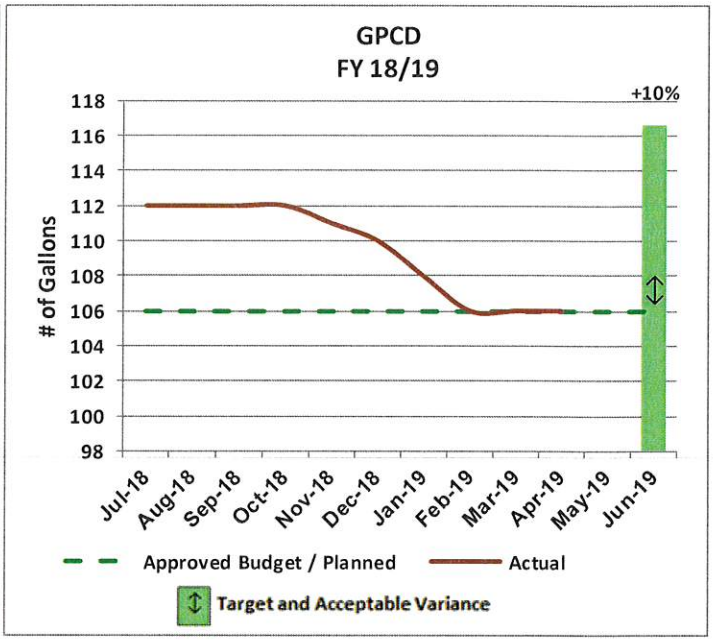
RESPONSIBLE MANAGER: Terrence McCarthy **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Level of water conservation against target GPCD.

TARGET & ACCEPTABLE VARIANCE (FY 18/19): 106 GPCD & 10% Acceptable Variance

STATUS: Within Acceptable Variance

FYTD as of:	Approved Budget / Planned	Actual	Variance		Re-Estimate of Budget/Planned
			GPCD	%	
Jul-18	106	112	6	5.7%	
Aug-18	106	112	6	5.7%	
Sep-18	106	112	6	5.7%	
Oct-18	106	112	6	5.7%	
Nov-18	106	111	5	4.7%	
Dec-18	106	110	4	3.8%	
Jan-19	106	108	2	1.9%	
Feb-19	106	106	0	0.0%	
Mar-19	106	106	0	0.0%	
Apr-19	106	106	0	0.0%	
May-19	106				
Jun-19	106				
Acceptable Variance			± 10%		



SOURCE OF DATA: Water Operations Monthly Supply Tracking

1. BACKGROUND / PURPOSE

- Gallons per capita per day (GPCD) is a measure of the City's progress in water conservation. The Mayor's Sustainable City pLAn set GPCD reduction goals of 20, 22.5, and 25 percent by 2017, 2025, and 2035, respectively.

2. ACHIEVEMENTS / MILESTONES MET

- On January 1, 2017, LADWP met the pLAn goal of 20 percent reduction in GPCD and is currently sustaining this milestone.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- Customer water use has increased with the warmer and drier weather experienced in April, but the 12-month rolling average GPCD has remained steady at 106.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- LADWP will continue to support customer water use efficiency practices through its rebate programs, conservation messaging, educational programs, and other innovative solutions. These efforts will continue to help the City achieve its long-term water use reduction goals identified in the Sustainable City pLAn.

LADWP RATES METRIC – FIXED ASSETS REPLACEMENT BUDGET VS ACTUAL (Water)

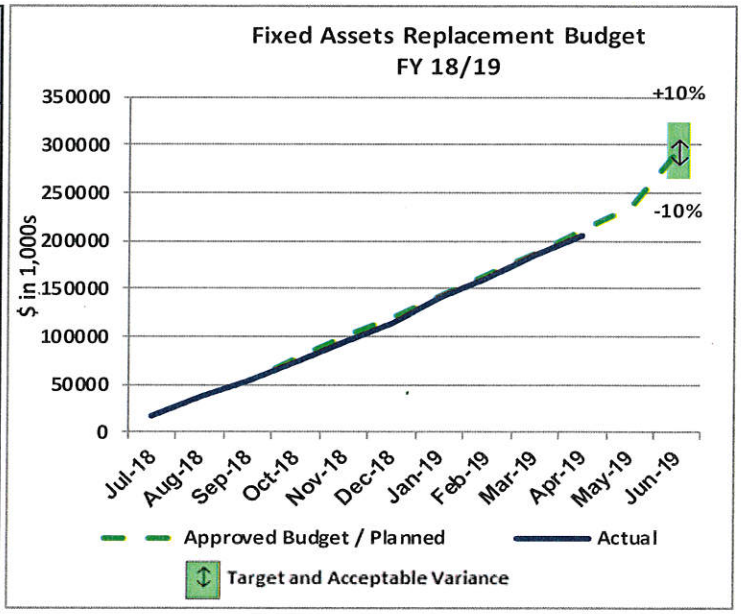
RESPONSIBLE MANAGER: April Thang **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Board approved annual budget vs actual expenditures.

TARGET & ACCEPTABLE VARIANCE (FY 18/19): $294,530K , 10 percent

STATUS: Within Acceptable Variance

FYTD as of:	Approved Budget / Planned	Actual	Variance		Re-Estimate (If Applicable)
			$	%	
Jul-18	16,768	16,769	1	0.0%	
Aug-18	36,486	36,487	1	0.0%	
Sep-18	53,707	53,706	-1	0.0%	
Oct-18	76,788	74,652	-2,136	-2.8%	
Nov-18	99,607	94,314	-5,293	-5.3%	
Dec-18	121,277	113,433	-7,844	-6.5%	
Jan-19	143,180	139,622	-3,558	-2.5%	
Feb-19	164,850	159,894	-4,956	-3.0%	
Mar-19	187,267	184,190	-3,077	-1.6%	
Apr-19	211,390	204,908	-6,482	-3.1%	
May-19	235,513				
Jun-19	294,530				
Acceptable Variance			± 10%		



SOURCE OF DATA: FIs 23220, 23290, 24150, 26220, 26331, 27210, 29140, and 29328.

1. BACKGROUND / PURPOSE

- This metric tracks the Water System's overall infrastructure replacement program. Expenditures include mainline replacement, trunk line replacement, pump stations, regulator stations, tanks and other key Water System facilities.

2. ACHIEVEMENTS / MILESTONES MET

- As of April 30, 2019, installed 140,714 feet of mainline.
- As of April 30, 2019, installed 4,595 feet of the open trench portion of the 54-inch diameter steel pipe, Foothill TL Unit 3 Phase I and 2,437 feet of open trench portion of 54-inch diameter earthquake resistant pipe Foothill TL Unit 3 Phase II.
- Elizabeth Tunnel Seismic Enhancement project was completed 30% of design as of October 31, 2018 and is anticipated to complete 60% by June 2019.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- On target.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- Continue hiring staff to accomplish the Water Infrastructure Plan goals.

Within Acceptable Variance | Outside Acceptable Variance | Exceeds Target | Needs Attention

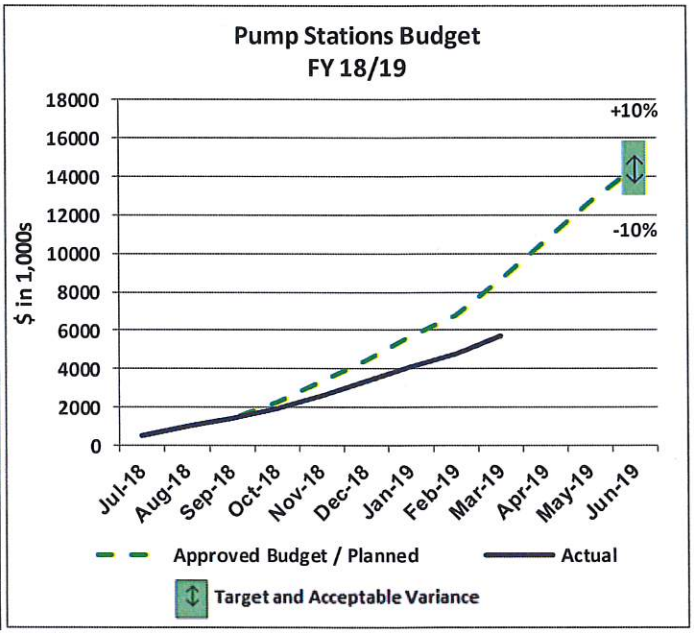
LADWP RATES METRIC – PUMP STATIONS BUDGET VS ACTUAL (Water)

RESPONSIBLE MANAGER: Andrew Linard **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Board approved annual budget vs actual expenditures.
TARGET & ACCEPTABLE VARIANCE (FY 18/19): $14,440K, 10 percent

STATUS: Outside Acceptable Variance

FYTD as of:	Approved Budget / Planned	Actual	Variance		Re-Estimate (If Applicable)
			$	%	
Jul-18	541	541	0	0.0%	
Aug-18	1,038	1,038	0	0.0%	
Sep-18	1,400	1,400	0	0.0%	
Oct-18	2,241	1,956	-285	-12.7%	
Nov-18	3,358	2,586	-772	-23.0%	
Dec-18	4,474	3,331	-1,143	-25.5%	
Jan-19	5,713	4,147	-1,566	-27.4%	
Feb-19	6,829	4,756	-2,073	-30.4%	
Mar-19	8,639	5,744	-2,895	-33.5%	
Apr-19	10,635	6,504	-4,131	-38.8%	
May-19	12,631				
Jun-19	14,440				
Acceptable Variance			± 10%		



SOURCE OF DATA: FI 23220, Pump Stations

1. BACKGROUND / PURPOSE

- The Pump Station Functional Item includes pump and motor replacement projects, pump station retrofit projects, and pump station facility upgrade Capital Improvement Program (CIP) projects.
- The goal for pump and motor replacement for FY18/19 is to replace twelve pumps and/or motors.

2. ACHIEVEMENTS / MILESTONES MET

- Through April 2019, eleven pumps and/or motors have been replaced out of the twelve planned for the FY18/19.
- Penstock Pump Station and Van Norman Pump Station #2 CIP Project completed 50% construction in February 2019.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR-END PROJECTION

- Van Norman Pump Station #1 CIP Project was originally expected to be in construction during FY18/19. Construction was pushed out due to commissioning delays in the LA Aqueduct Filtration UV Disinfection Plant Project. Budget will be revised to shift the construction cost to future years.
- Actuals to date for pump station retrofit projects were less than expected due to resources being diverted to other higher priority projects.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- Garvanza Pump Station CIP Project will be ramping up to remain in service for emergency backup.
- Penstock Pump Station and Van Norman Pump Stations #2 CIP Project is expected to resume with PLC control system upgrades in FY19/20.

LADWP RATES METRIC – REGULATOR/RELIEF STATION RETROFITS BUDGET VS ACTUAL (Water)

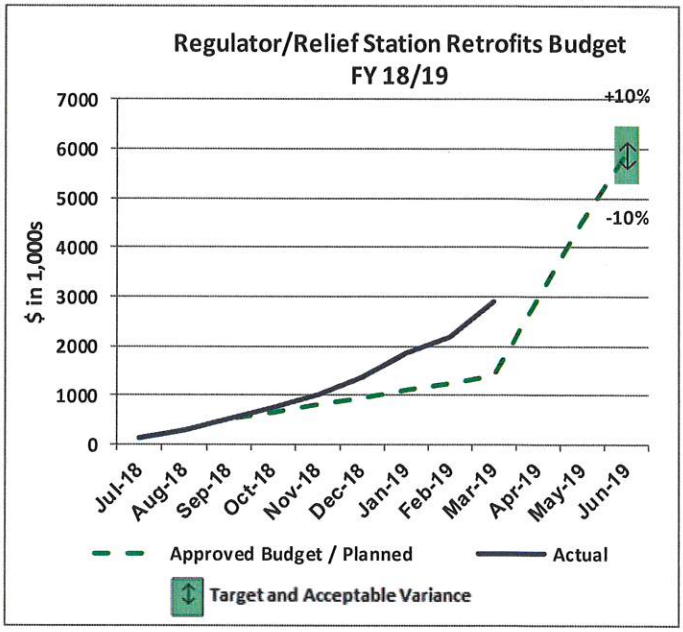
RESPONSIBLE MANAGER: Susan Rowghani **REPORTING PERIOD: April 2019**

DEFINITION OF RATES METRIC: Board approved annual budget vs actual expenditures.

TARGET & ACCEPTABLE VARIANCE (FY 18/19): $5,897K, 10 percent

STATUS: Exceeds Target

FYTD as of:	Approved Budget / Planned	Actual	Variance		Re-Estimate (If Applicable)
			$	%	
Jul-18	118	118	0	0.0%	
Aug-18	283	283	0	0.0%	
Sep-18	510	510	0	0.0%	
Oct-18	659	746	88	13.3%	
Nov-18	807	1,013	206	25.5%	
Dec-18	956	1,382	427	44.6%	
Jan-19	1,104	1,856	752	68.1%	
Feb-19	1,253	2,186	934	74.5%	
Mar-19	1,401	2,903	1,502	107.2%	
Apr-19	2,966	3,373	407	13.7%	
May-19	4,532				
Jun-19	5,897				
Acceptable Variance			± 10%		



SOURCE OF DATA: FI 24150 (Includes Repair and Construction as well as CIP projects)

1. BACKGROUND / PURPOSE

- Regulator/Relief Stations are necessary to maintain reliable supply and pressure through much of the water distribution system.
- Regulator Station Retrofit goals for this fiscal year are to replace or rehabilitate four Pressure Regulating Stations.

2. ACHIEVEMENTS / MILESTONES MET

- Through April 2019, the fiscal year goals of replacing/rehabilitating four regulator stations have been achieved.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR-END PROJECTION

- Final planning on Horner Holt Regulator Station project has been put on hold. The project will be reassessed in the future.
- Construction on Lucile & Inglewood Regulator Station is on hold until mid-2020. Trunk Line Construction is currently prioritizing rehabilitations for 3rd & Van Ness, Rinaldi-Balboa, & 4th & Detroit.
- More effort on A&Bs projects for repair and construction work to rebuild, retrofit or replace equipment is being spent than originally estimated.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- Exceeds target.

Within Acceptable Variance | Outside Acceptable Variance | Exceeds Target | Needs Attention

LADWP RATES METRIC – MAINLINE REPLACEMENT (Water)

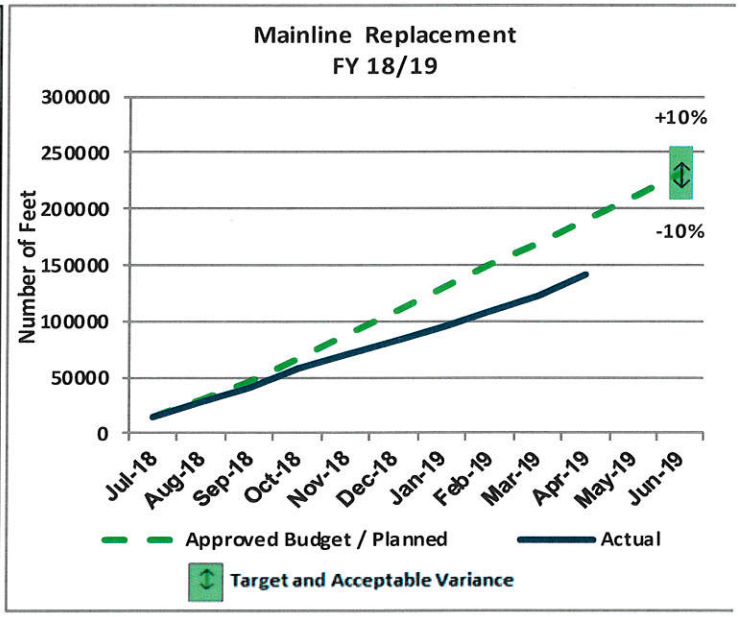
RESPONSIBLE MANAGER: Breonna Lindsey/Sandra Foster **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Feet of mainline replaced against plan.

TARGET & ACCEPTABLE VARIANCE (FY 18/19): 232,000 feet, ±10%

STATUS: **Outside Acceptable Variance**

FYTD as of:	Approved Budget / Planned	Actual	Variance		Re-Estimate (If Applicable)
			Feet	%	
Jul-18	14,888	13,740	-1148	-7.7%	
Aug-18	29,888	28,189	-1699	-5.7%	
Sep-18	45,150	40,823	-4327	-9.6%	
Oct-18	66,665	57,872	-8793	-13.2%	
Nov-18	87,331	69,336	-17995	-20.6%	
Dec-18	107,997	82,481	-25516	-23.6%	
Jan-19	128,663	94,591	-34072	-26.5%	
Feb-19	149,329	108,259	-41070	-27.5%	
Mar-19	169,995	122,226	-47769	-28.1%	
Apr-19	190,661	140,714	-49947	-26.2%	
May-19	211,327				
Jun-19	232,000				
Acceptable Variance			± 10%		



SOURCE OF DATA: FI 26331, Job 30067

1. BACKGROUND / PURPOSE

- Mainline replacement is a portion of the Water System's strategy to maintain reliability, to reduce leaks and minimize interruptions and damage to the community.

2. ACHIEVEMENTS / MILESTONES MET

- 140,714 feet of mainline have been installed.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- The rate of mainline replacement for this reporting period is again outside the acceptable variance range. The Division is still trying to make-up for impeded work due to previous months' inclement weather. The Division has also shifted its focus to address increasing demand for customer service jobs. It is anticipated that the fiscal year goal for mainline replacement will not be achieved.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- Continue with planned hiring and training for mainline crews to reach the replacement rate of 300,000 feet of pipe per year, resulting in a replacement cycle of 120 years.

LADWP RATES METRIC – TRUNK LINE REPLACEMENT (Water)

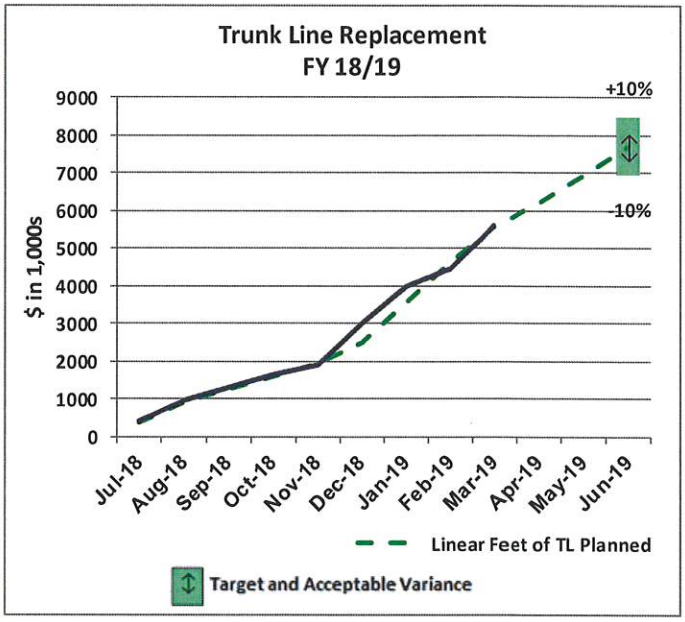
RESPONSIBLE MANAGER: Susan Rowghani **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Feet of trunk line replaced against the plan.

TARGET & ACCEPTABLE VARIANCE (FY 18/19): 7,700 feet, 10 percent

STATUS: Within Acceptable Variance

FYTD as of:	Linear Feet of TL Planned	Actual Linear Feet of TL Replaced	Variance		Re-Estimate (If Applicable)
			ft	%	
Jul-18	357	401	44	12.3%	
Aug-18	929	973	44	4.7%	
Sep-18	1,285	1,329	44	3.4%	
Oct-18	1,622	1,669	47	2.9%	
Nov-18	1,970	1,904	-66	-3.3%	
Dec-18	2,510	3,008	498	19.9%	
Jan-19	3,556	3,983	427	12.0%	
Feb-19	4,611	4,457	-154	-3.3%	
Mar-19	5,552	5,629	77	1.4%	
Apr-19	6,186	6,512	326	5.3%	
May-19	6,923				7,832
Jun-19	7,700				8,776
Acceptable Variance			± 10%		14.0%



SOURCE OF DATA: FI 23150 - Job 51054; FI 23222 - Jobs 23204, 23117; FI 26220 - Jobs 23137, 23549; FI 29130 - Jobs 20058, 23202; FI 29140 - Job 41026

1. BACKGROUND / PURPOSE

- Trunk Lines are a major component of the Water System infrastructure system. Rehabilitation and replacement are necessary to maintain reliable supply and safe operation of the system.

2. ACHIEVEMENTS / MILESTONES MET

- Construction of Phase I of the Fletcher Pump Station Suction Line Replacement project has been completed as of March 2019.
- Western Trunk Line and City Trunk Line Project Unit 1 completed 30% design as of February 2019.
- City Trunk Line unit 2 completed 60% design as of February 2019.
- City Trunk Line South Unit 3 bid opening occurred January 2019.
- Installation of Trunk Line on the Green Verdugo Reservoir Floating Cover has started in January 2019.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR-END PROJECTION

- The construction start for Phase II of Fletcher Pump Station Suction Line Replacement project has been postponed from April 2019 to January 2020. In order to execute Phase II, the Fletcher Pump Station has to be taken out of service for up to three months. LADWP needs to keep the Fletcher Pump Station in service to support changes in operational needs. Therefore, none of the scheduled construction will take place until January 2020.
- Contract for City Trunk Line South Unit 3 was awarded in May 2019.
- A larger amount of pipe installation on the Machado Lake Pipeline project and the LA Reservoir UV Disinfection Plant project than was originally estimated has increased the overall Fiscal Year goal.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- Within acceptable variance.

Within Acceptable Variance | Outside Acceptable Variance | Exceeds Target | Needs Attention

LADWP RATES METRIC – METER REPLACEMENT (Water)

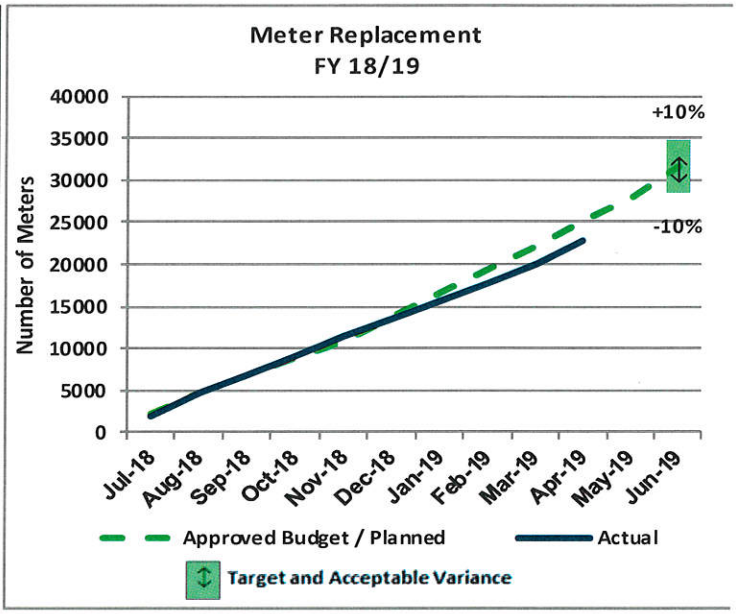
RESPONSIBLE MANAGER: Breonia Lindsey/Sandra Foster **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Number of meters replaced against plan.

TARGET & ACCEPTABLE VARIANCE (FY 18/19): 31,500 meters, ±10%

STATUS: Within Acceptable Variance

FYTD as of:	Approved Budget / Planned	Actual	Variance		Re-Estimate (If Applicable)
			Meters	%	
Jul-18	2,050	2,005	-45	-2.2%	
Aug-18	4,675	4,619	-56	-1.2%	
Sep-18	6,725	6,693	-32	-0.5%	
Oct-18	8,775	9,097	322	3.7%	
Nov-18	10,825	11,449	624	5.8%	
Dec-18	13,665	13,630	-35	-0.3%	
Jan-19	16,505	15,682	-823	-5.0%	
Feb-19	19,345	17,676	-1669	-8.6%	
Mar-19	22,185	20,114	-2071	-9.3%	
Apr-19	25,025	22,711	-2314	-9.2%	
May-19	27,865				
Jun-19	31,500				
Acceptable Variance			± 10%		



SOURCE OF DATA: FI 27215, Job 30053

1. BACKGROUND / PURPOSE

- Accurate meter reading is necessary to ensure reliable and accurate billing. This metric measures both the replacement of infrastructure assets and our commitment to accurate meter reading and billing.

2. ACHIEVEMENTS / MILESTONES MET

- 22,711 meters of the 31,500 fiscal year goal have been replaced.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- The rate of meter replacement for this reporting period is still within the acceptable variance range. However, the goal for the month was not achieved due to staffing shortage and high demand for service disconnects. At this rate, the Division anticipates not meeting its fiscal year goal of replacing 31,500 meters.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- The goal was increased to ensure the ability to meet CISCON settlement requirements and industry standards on meter life cycle.

LADWP RATES METRIC – WATER QUALITY CAPITAL BUDGET VS ACTUAL (Water)

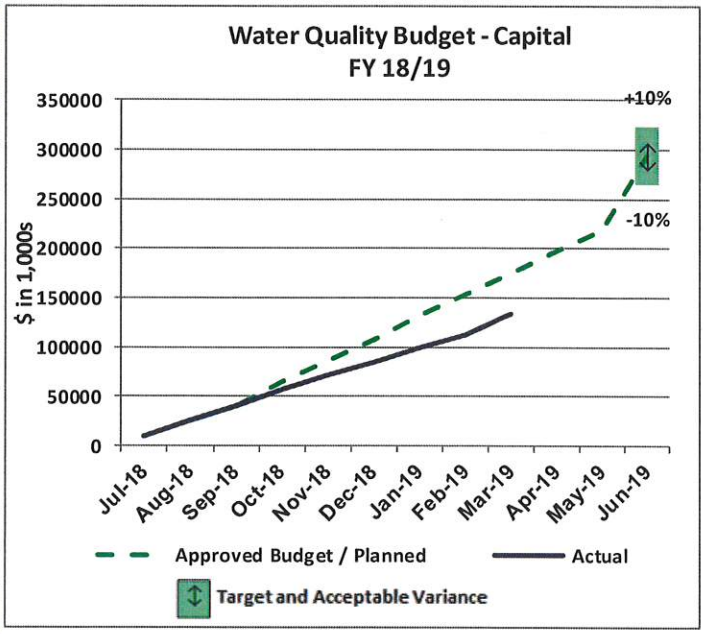
RESPONSIBLE MANAGER: Susan Rowghani **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Board approved annual budget vs actual expenditures.

TARGET & ACCEPTABLE VARIANCE (FY 18/19): $293,823K, 10 percent

STATUS: Outside Acceptable Variance

FYTD as of:	Approved Budget / Planned	Actual	Variance		Re-Estimate (If Applicable)
			$	%	
Jul-18	9,064	9,062	-2	0.0%	
Aug-18	25,731	25,730	-1	0.0%	
Sep-18	41,368	41,368	0	0.0%	
Oct-18	64,679	56,744	-7,935	-12.3%	
Nov-18	85,962	71,330	-14,632	-17.0%	
Dec-18	107,588	85,355	-22,233	-20.7%	
Jan-19	131,269	100,019	-31,250	-23.8%	
Feb-19	152,619	112,527	-40,092	-26.3%	
Mar-19	174,268	132,984	-41,284	-23.7%	
Apr-19	196,667	145,729	-50,938	-23.7%	
May-19	217,803				
Jun-19	293,821				
Acceptable Variance			± 10%		



SOURCE OF DATA: FIs 23222, 24130, 24310, 24316, 27215, and 29130.

1. BACKGROUND / PURPOSE

- This metric measures the Water System's progress towards meeting mandated water quality regulations.

2. ACHIEVEMENTS / MILESTONES MET

- Fairmont Sedimentation Plant reached 30% Design as of January 2019.
- LA Reservoir UV Disinfection Plant reached 50% Construction in January 2019.
- Construction on the LAAFP Oxygen Generation System Upgrade project started in January 2019.
- CEQA Documentation was completed on the SFGBR – North Hollywood Centralized Treatment project in December 2018.
- Construction started on RSC Upper Reach Unit 7 in December 2018.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR-END PROJECTION

- Award of the Design-Build contract for SFGBR – North Hollywood Centralized Treatment and Tujunga Centralized Treatment was delayed.
- Equipment purchases for North Hollywood West Wellhead Treatment have been delayed.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- Construction on the large SFGBR – North Hollywood Centralized Treatment project is expected to start in March 2020.
- Construction Activities for the RSC 7 have been delayed by 6 months due to a requirement by the Los Angeles Bureau of Engineering (BOE) to bypass the existing North Outfall Sewer (NOS). LADWP received the requirement from BOE to bypass the NOS after the RSC 7 contract had been awarded.

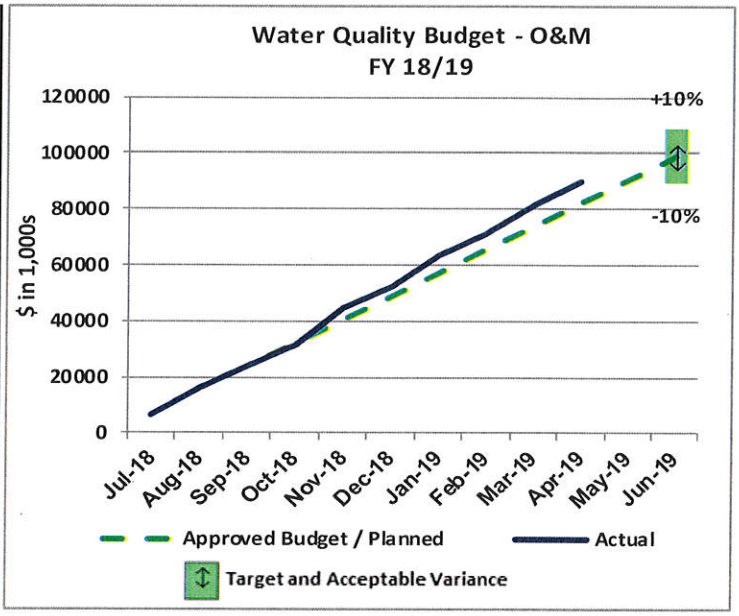
LADWP RATES METRIC – WATER QUALITY BUDGET VS ACTUAL-O&M (Water)

RESPONSIBLE MANAGER: Evelyn Cortez-Davis **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Board approved annual budget vs actual expenditures.
TARGET & ACCEPTABLE VARIANCE (FY 18/19): $99,257K, 10 percent

STATUS: Within Acceptable Variance

FYTD as of:	Approved Budget / Planned	Actual	Variance		Re-Estimate (If Applicable)
			$	%	
Jul-18	6,772	6,772	0	0.0%	
Aug-18	16,162	16,162	0	0.0%	
Sep-18	23,871	23,870	-1	0.0%	
Oct-18	32,248	31,704	-544	-1.7%	
Nov-18	40,624	44,381	3,757	9.2%	
Dec-18	49,000	52,144	3,144	6.4%	
Jan-19	57,376	63,683	6,307	11.0%	
Feb-19	65,753	71,092	5,339	8.1%	
Mar-19	74,129	81,437	7,308	9.9%	
Apr-19	82,506	90,008	7,503	9.1%	
May-19	90,882				
Jun-19	99,257				
Acceptable Variance			± 10%		



SOURCE OF DATA: FIs 3212500, 3212520, 3212530, 3212540, 3212585, 3233150, 3352200 and 4010602.

1. BACKGROUND / PURPOSE

- This metric measures the Water System's ongoing efforts to continue to meet mandated water quality regulations.

2. ACHIEVEMENTS / MILESTONES MET

- Distribution Treatment Operations – Chlorine reduction at the Los Angeles Reservoir is at 95%.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- In December 2018, the Distribution Reservoir O&M paid $5.1M for environmental mitigation credits pursuant to a settlement with the Environmental Protection Agency (EPA).

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- Expenditure progress will continue to be carefully monitored through the Water System monthly financial and variance reports.

Within Acceptable Variance | Outside Acceptable Variance | Exceeds Target | Needs Attention

LADWP RATES METRIC – BUDGET VS ACTUAL FOR OWENS LAKE O&M [Water]

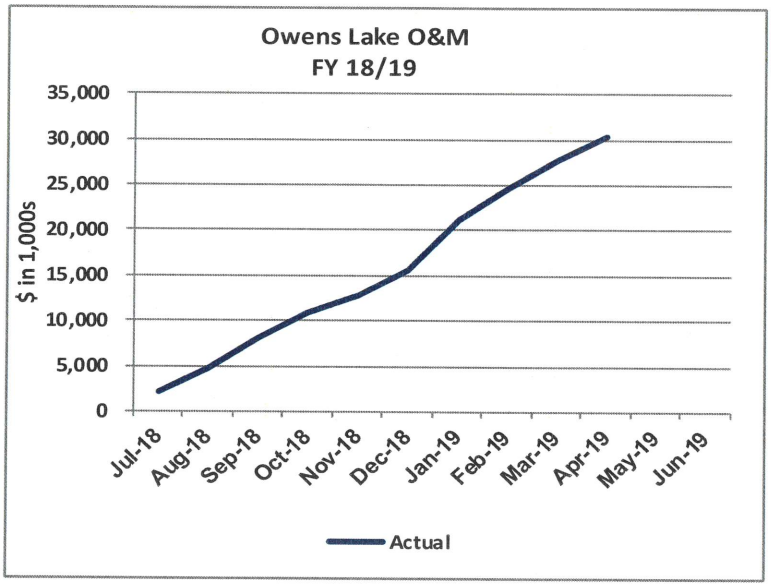
RESPONSIBLE MANAGER: Gregory A. Loveland REPORTING PERIOD: April 2019

DEFINITION OF RATES METRIC: Board approved annual budget vs. actual expenditures

TARGET & ACCEPTABLE VARIANCE (FY 18/19): N/A – for information only

STATUS: Information Only

FYTD as of:	Actual
Jul-18	2,079
Aug-18	4,629
Sep-18	8,074
Oct-18	10,922
Nov-18	12,801
Dec-18	15,533
Jan-19	21,098
Feb-19	24,529
Mar-19	27,762
Apr-19	30,294
May-19	
Jun-19	



SOURCE OF DATA: FIs 3022002 and 4013006

1. BACKGROUND / PURPOSE

- Proper operation and maintenance of dust control facilities at Owens Lake is necessary to comply with regulatory requirements. Dust control is a regulatory mandate to ensure air quality in the area.

2. ACHIEVEMENTS / MILESTONES MET

- Crews completed 5 miles of road maintenance work.
- Crews removed 10 miles of emergency flood protection installed in 2017 to protect infrastructure from possible flood damage. Retilled area T-16 as part of required maintenance.
- Crews completed installed protection berms in T-29-3 and T-11 to enhance water savings.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- On target

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- Staff will continue to monitor O&M expenditures to ensure efficient operations of dust control activities and appropriate Capital vs O&M expenditures.
- Continue to hire staff.

Within Acceptable Variance | Outside Acceptable Variance | Exceeds Target | Needs Attention

Joint System

LADWP RATES METRIC – *Total FTEs Against Plan*

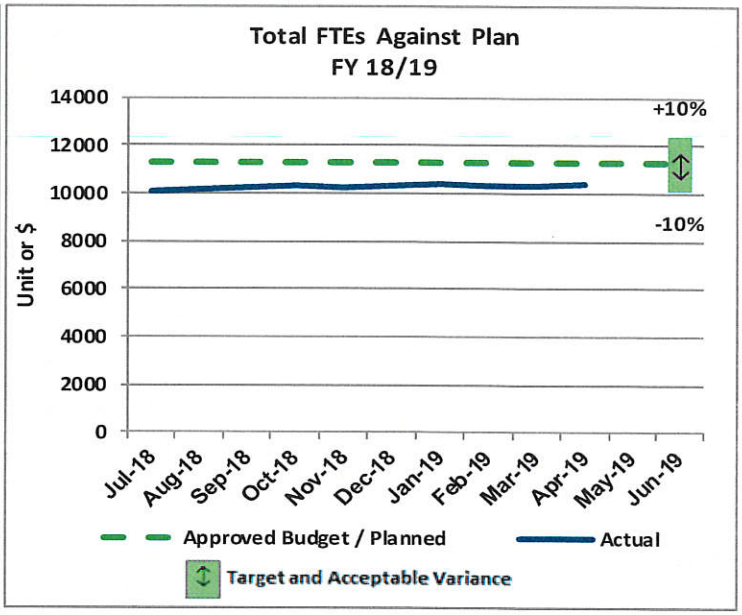
RESPONSIBLE MANAGER: Shannon C. Pascual **REPORTING PERIOD: April 2019**

DEFINITION OF RATES/EQUITY METRIC: Total number of occupied full-time equivalent (FTE) positions vs. annual Authorized Personnel Resolution

TARGET & ACCEPTABLE VARIANCE (FY 18/19): +/- 10%

STATUS: **Within Acceptable Variance**

FYTD as of:	Approved Budget / Planned	Actual	Variance		Re-Estimate (If Applicable)
			Unit or $	%	
Jul-18	11,265	10,096	-1169	-10.4%	
Aug-18	11,265	10,172	-1093	-9.7%	
Sep-18	11,265	10,213	-1052	-9.3%	
Oct-18	11,265	10,301	-964	-8.6%	
Nov-18	11,265	10,284	-981	-8.7%	
Dec-18	11,265	10,349	-916	-8.1%	
Jan-19	11,265	10,370	-895	-7.9%	
Feb-19	11,265	10,294	-971	-8.6%	
Mar-19	11,265	10,321	-944	-8.4%	
Apr-19	11,265	10,369	-896	-8.0%	
May-19	11,265				
Jun-19	11,265				
Acceptable Variance			± 10%		



SOURCE OF DATA: Monthly Staffing Report

1. BACKGROUND / PURPOSE

HR will track LADWP's progress in achieving the staffing levels necessary to accomplish the strategic goals set forth in the Water and Power Rate Ordinances.

2. ACHIEVEMENTS / MILESTONES MET

- External Hires = 101
- Attrition = 45
- Net New Employees = 56

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

LADWP's staffing level is within acceptable limits again this month. HR expects this to continue until the year-end.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

N/A

Within Acceptable Variance | Outside Acceptable Variance | Exceeds Target | Needs Attention

LADWP RATES METRIC – *Financial and Human Resources Replacement Project Total Spending Against Plan (Joint)*

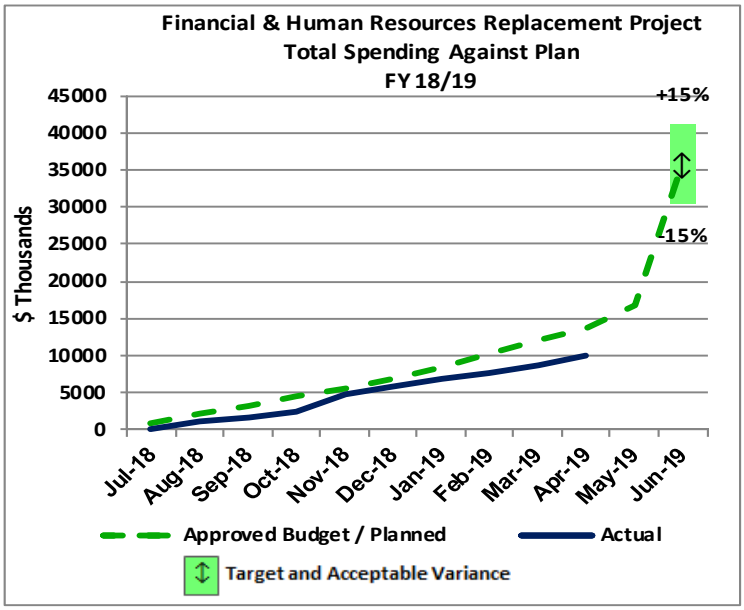
RESPONSIBLE MANAGER: FLORA CHANG **REPORTING PERIOD:** Thru April, 2019

DEFINITION OF RATES METRIC: Board approved annual budget vs. actual expenditures ($ thousand)

TARGET & ACCEPTABLE VARIANCE (FY 18/19): +/-20% of FY 18/19 Board Approved Budget

STATUS: **Outside Acceptable Variance**

FYTD as of:	Approved Budget / Planned	Actual	Variance		Re-Estimate (If Applicable)
			Unit or $	%	
Jul-18	811.0	192.9	-618	**-76.2%**	
Aug-18	2,209.0	1,067.6	-1141	**-51.7%**	
Sep-18	3,304.0	1,637.5	-1667	**-50.4%**	
Oct-18	4,454.1	2,424.8	-2029	**-45.6%**	
Nov-18	5,654.1	4,902.7	-751	**-13.3%**	
Dec-18	6,854.1	5,802.7	-1051	**-15.3%**	
Jan-19	8,554.1	6,982.6	-1572	**-18.4%**	
Feb-19	10,254.1	7,674.0	-2580	**-25.2%**	
Mar-19	11,954.1	8,658.3	-3296	**-27.6%**	
Apr-19	13,654.1	10,049.8	-3604	**-26.4%**	
May-19	16,754.1				
Jun-19	35,768.6				15
Acceptable Variance			± 15%		-100.0%



SOURCE OF DATA: FI 29401 (Job Z4905 and various other Job IDs) and FI 289-74 (Job U2295)

1. BACKGROUND / PURPOSE

- This program is to modernize technology and business processes according to leading practices and replace legacy systems supporting financial services, human resources management, procurement, and inventory management.
- This report provides visibility for program performance to ensure this multi-year system replacement project will complete within the Board-approved budget.
- The Budget System Replacement (BSR) Project will provide an early and interim implementation of a budget and decision support solution, but it is not necessarily the final solution. Despite the limitations to capture transactions and perform analysis using the existing mainframe financial applications, this interim solution is a first step towards integrating the budget system, financial planning, and rates models established during the 2016 rate action. This will enable LADWP to more efficiently and effectively evaluate and communicate its implementation of the 2016 rate action, and to establish the basis for the next rate case to ensure continued financial stability.

2. ACHIEVEMENTS / MILESTONES MET

- ERP: Enterprise Technology Advisory Services request for qualifications was released on January 11, 2018. Recommendation of Qualification Award anticipated July 2019.
- ERP: Gartner conducted approximately 15 workshops with staff to update business capabilities, technical, and security requirements for the ERP. Gartner is working with staff and Nossaman to prepare the draft RFP solicitation documents and contract templates for ERP software. Target RFP issue date is September 2019
- BSR: Software and System Integration Contract will be scheduled to go to Board in May 2019.
- **PROGRAM HIRING:** As of January 31, 2019 – 42 of 69 authorized positions have been filled. Hiring is underway to appoint additional personnel to ITS and SCS. For BSR, approved positions have been filled in the Budget Office (2.5 authorized positions) and ITS (one authorized position).

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- Progress was temporarily delayed while LADWP reprioritized critical projects and continue to hire needed resources. Therefore actual spending on both projects will be well below $35 million approved for FY 18/19.
- DWP is working on issuing the Software Procurement RFP first. The system integration RFP is being worked on while DWP works in hiring adequate resources to ensure a successful project implementation.
- ERP: Steering Committee Meeting is scheduled on 6/20/2019 to provide a high-level timeline for Software RFP and the System Integration RFP.
- ERP labor expenditures are below approved budgets as hiring is ongoing to fill 69 newly authorized positions.
- BSR: Expenditures are below target due to delays in negotiating and awarding the BSR contract. FSO is spearheading collaborative efforts with ITS, Water, Power & Joint Division representatives to prepare the project team for upcoming work with the Systems Integrator.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- Program milestones and budgetary cash flows that reflect current strategy for sourcing and selection of software, system integrator services, and other support services (OCM, technical, and IV&V). These updates will be available for the Q2 2019 report.
- BSR: Software and System Integration Contract will be scheduled to go to Board in May 2019.

LADWP RATES METRIC – *Financial and Human Resources Replacement Project Progress Against Schedule (Joint)*

RESPONSIBLE MANAGER: FLORA CHANG **REPORTING PERIOD:** thru April 30, 2019

DEFINITION OF RATES METRIC: FS & HRMS Project Milestones vs. Compliance Deadlines

TARGET & ACCEPTABLE VARIANCE (FY 18/19): +/- 60 days from planned due date for each milestone

STATUS **Within Acceptable Variance**

MILESTONE/DEADLINE DESCRIPTION	PLANNED	ACTUAL	ACCEPTABLE VARIANCE (+/- 60 DAYS FROM PLANNED)	
BSR - Complete Planning	3/31/17	**05/15/17**	5/30/17	1/30/17
BSR - Define Approach, Governance & Logistics	3/31/17	**05/15/17**	5/30/17	1/30/17
BSR - Define Requirements & Differentiation Demos	9/30/17	**10/25/2017**	11/29/17	8/1/17
BSR – Sourcing, Complete Board Package & Contract Approval	3/31/18	**IN PROGRESS**	5/30/18	1/30/18
BSR - Finish Implementation Phase 1	12/31/18		3/1/19	11/1/18
BSR- Finish Implementation Phase 2	6/30/19		8/29/19	5/1/19
BSR - Go-Live	7/1/19		8/30/19	5/2/19

SOURCE OF DATA: FI 294-01 (Job Z4905 and various other Job IDs) and FI 289-74 (Job U2295)

1. BACKGROUND / PURPOSE

- This program is to modernize technology and business processes according to leading practices and replace legacy systems supporting financial services, human resources management, procurement, and inventory management.
- This report provides visibility for program performance to ensure this multi-year system replacement project will complete within the Board-approved budget.
- The Budget System Replacement (BSR) Project will provide an early and interim implementation of a budget and decision support solution, but it is not necessarily the final solution. Despite the limitations to capture transactions and perform analysis using the existing mainframe financial applications, this interim solution is a first step towards integrating the budget system, financial planning, and rates models established during the 2016 rate action. This will enable LADWP to more efficiently and effectively evaluate and communicate its implementation of the 2016 rate action, and to establish the basis for the next rate case to ensure continued financial stability.

2. ACHIEVEMENTS / MILESTONES MET

- ERP: Enterprise Technology Advisory Services request for qualifications was released on January 11, 2018. Recommendation of Qualification Award anticipated July 2019.
- ERP: Steering Committee Meeting is scheduled on 6/20/2019 to provide a high-level timeline for Software RFP and the System Integration RFP.
- ERP: Gartner conducted approximately 15 workshops with staff to update business capabilities, technical, and security requirements for the ERP. Gartner is working with staff, and Nossaman to prepare the draft RFP solicitation documents and contract templates for ERP software. Target RFP issue date is September 2019.
- BSR: Software and System Integration Contract will be scheduled to go to Board in May 2019.
- **PROGRAM HIRING:** As of January 31, 2019, 42 of 69 authorized positions have been filled.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- ERP Progress was temporarily delayed while LADWP reprioritized critical projects and continued to hire needed resources.
- DWP is working on issuing the Software Procurement RFP first. The system integration RFP is being worked on while DWP works in hiring adequate resources to ensure a successful project implementation.
- ERP labor expenditures are below approved budgets as hiring is ongoing to fill 69 newly authorized positions.
- BSR: Software and System Integration Contract will be scheduled to go to Board in May 2019.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- Program milestones and budgetary cash flows will be updated reflect current strategy for

sourcing and selection of software, system integrator services, and other support services (OCM, technical, and IV&V). These updates will be available for the Q2 2019 report.

- ERP: Continue working with Gartner, and Nossaman to Institute to prepare the draft RFP solicitation documents and contract templates to purchase ERP software and services.
- BSR: Software and System Integration Contract will be scheduled to go to Board in May 2019.

LADWP RATES METRIC – *LADWP EMPLOYEE COST BUDGET VS. ACTUAL (LADWP)*

RESPONSIBLE MANAGER: LADWP Senior Management **REPORTING PERIOD: April 2019**

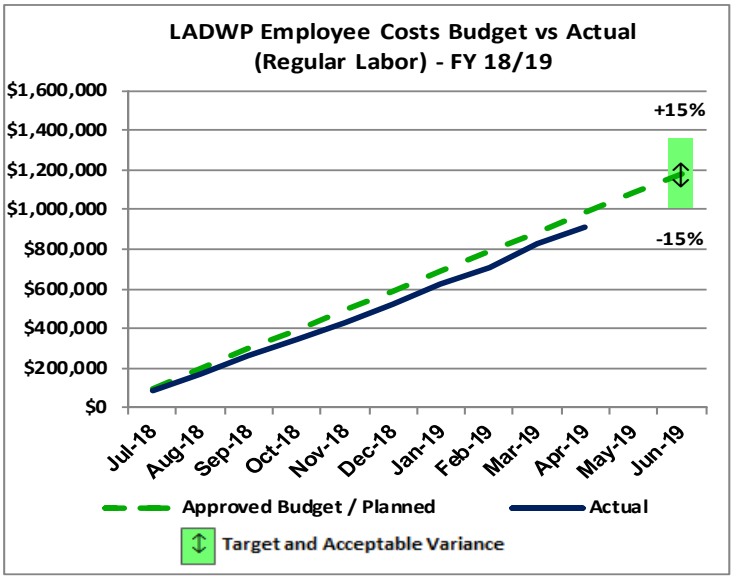
DEFINITION OF RATES METRIC: LADWP employee costs (including regular labor, overtime, pension and healthcare, excluding daily exempt and Utility Pre-Craft Trainee) budget vs. actual ($M)

TARGET & ACCEPTABLE VARIANCE (FY 18/19): +/- 15%

SOURCE OF DATA: Budget Reporting System (BRS) - Rates Metrics Report

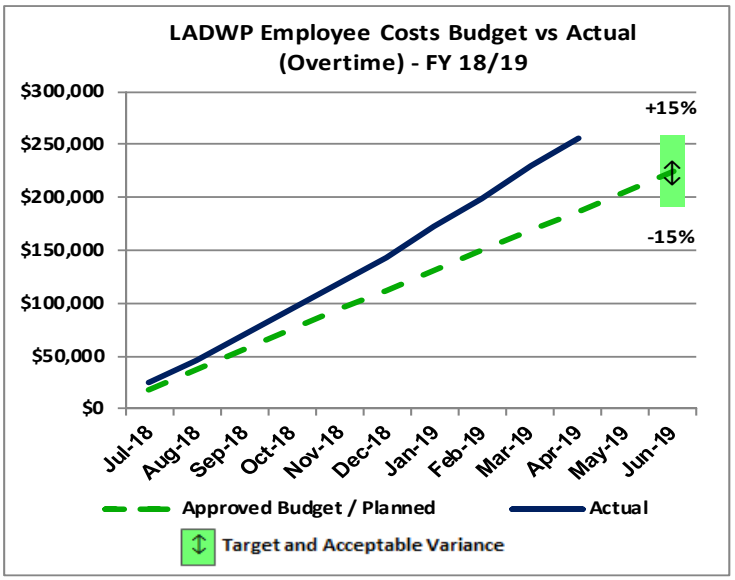
REGULAR LABOR STATUS: **Within Acceptable Variance**

FYTD as of:	Approved Budget / Planned	Actual	Variance		Re-Estimate (If Applicable)
			Unit or $	%	
Jul-18	98,489	84,950	-13,539	-13.7%	
Aug-18	196,978	167,616	-29362	-14.9%	
Sep-18	295,467	262,057	-33410	-11.3%	
Oct-18	393,956	350,359	-43597	-11.1%	
Nov-18	492,445	431,281	-61164	-12.4%	
Dec-18	590,934	520,915	-70019	-11.8%	
Jan-19	689,423	622,585	-66838	-9.7%	
Feb-19	787,912	711,750	-76163	-9.7%	
Mar-19	886,401	824,056	-62345	-7.0%	
Apr-19	984,890	914,137	-70753	-7.2%	
May-19	1,083,379				
Jun-19	1,181,868				
Acceptable Variance			± 15%		



OVERTIME STATUS: **Outside Acceptable Variance**

FYTD as of:	Approved Budget / Planned	Actual	Variance		Re-Estimate (If Applicable)
			Unit or $	%	
Jul-18	18,713	25,474	6,761	36.1%	
Aug-18	37,426	44,915	7489	20.0%	
Sep-18	56,139	69,757	13618	24.3%	
Oct-18	74,852	94,056	19203	25.7%	
Nov-18	93,565	118,121	24556	26.2%	
Dec-18	112,279	143,812	31534	28.1%	
Jan-19	130,992	172,219	41227	31.5%	
Feb-19	149,705	198,937	49233	32.9%	
Mar-19	168,418	230,794	62376	37.0%	
Apr-19	187,131	255,189	68058	36.4%	
May-19	205,844				
Jun-19	224,557				
Acceptable Variance			± 15%		



	YTD as of April 2019				
Employee Cost Category	**Budget**	**Actual**	**Variance**	**Variance %**	**FY 18/19 Approved**
Regular Labor	984,890	914,137	-70,753	-7.2%	1,181,868
Overtime	187,131	255,189	68,058	36.4%	224,557
Regular Labor + Overtime	**1,172,021**	**1,169,326**	**-2,695**	**-0.2%**	**1,406,425**
Health Care Allocation	278,136	268,006	-10,130	-3.6%	333,763
Retirement & Death Benefit	442,814	375,509	-67,305	-15.2%	531,377
Total	**1,892,971**	**1,812,841**	**-80,130**	**-4.2%**	**2,271,565**

Within Acceptable Variance | Outside Acceptable Variance | Exceeds Target | Needs Attention

LADWP RATES METRIC – *Total Number of Water and Power Employees per Customer Meter (Joint)*

RESPONSIBLE MANAGER: Corporate Performance **REPORTING PERIOD:** April 2019

DEFINITION OF RATES METRIC: Total number of water and power employees (excluding daily exempt and utility pre-craft trainees) per water and power meters

TARGET & ACCEPTABLE VARIANCE (FY 18/19): No Target

STATUS: **Information Only**

SOURCE OF DATA: LADWP Monthly Staffing Report, Customer Care and Billing (CCB) System

1. BACKGROUND / PURPOSE

On May 5, 2017, the Board of Water and Power Commissioners approved Resolution 017252 adding the Total Number of Water and Power Employees per Customer Meter metric to the LADWP Rates Metrics. This metric measures the total number of water and power employees (excluding daily exempt and utility pre-craft trainees) per water and power meter. This metric does not have a target and is provided as Information Only.

2. ACHIEVEMENTS / MILESTONES MET

Data for the number Total Number of Water and Power Employees is obtained from the LADWP Monthly Staffing Report provided by Human Resources Division.

Data for the total number of water and power meters is obtained through a query of the CCB system and provided by Information Technology Services. It is important to note that the data for total number of water and power meters is point-in-time which means that the data represents the number of meters at the exact date and time the query was executed. Additionally, data for the number of water and power meters cannot be obtained for past dates and times. An automated query captures this data on the last date of every month.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

As of April 2019:
Total Number of Water and Power Employees per Customer Meter 10,369/2,288,974 = .0045

Total Number of Water and Power Employees (excluding daily exempt and utility pre-craft trainees) as of April 2019.

System	Occupied
Power	4,256
Water	2,062
Joint	4,051
Total	10,369

Total Number of Water and Power Meters as of April 30, 2019.

	Total	No. Meter On	No. Meter Off
Power	1,581,987	1,545,301	36,686
Water	706,987	683,099	23,888
Total	2,288,974	2,228,400	60,574

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

Continue to provide this dashboard to the Board of Water and Power Commissioners and the Office of Public Accountability for review.

LADWP RATES METRIC – GHG Emissions Reduction Ratio (Joint)

RESPONSIBLE MANAGER: Mark Sedlacek **REPORTING PERIOD:** As of April 2019

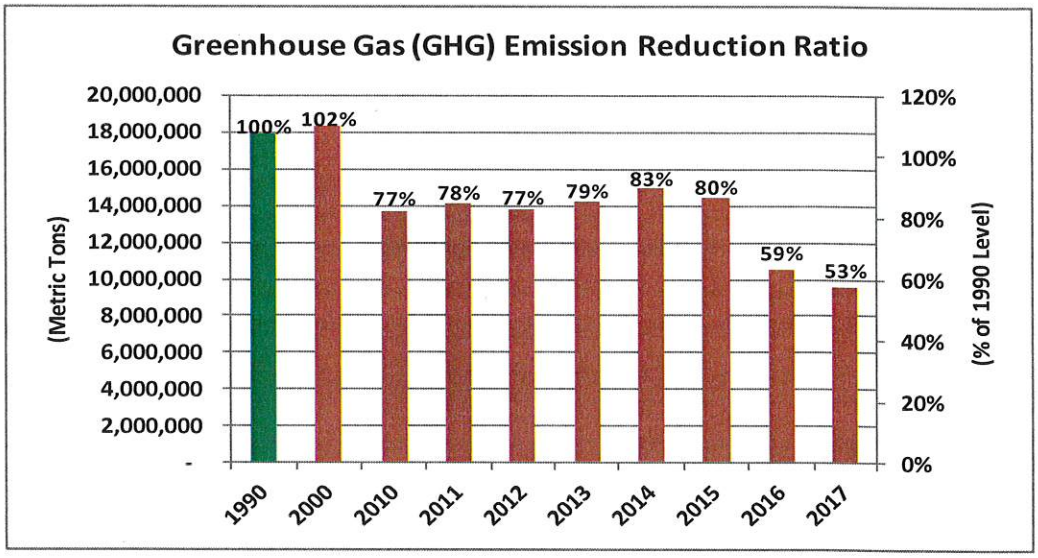
DEFINITION OF RATES METRIC: Current Year GHG Emissions /1990 GHG Emissions

TARGET & ACCEPTABLE VARIANCE (CY 2017): 70%; +5%

STATUS: Exceeds Target

- CY 2017 Target: 70% of 1990 GHG Emission level
- CY 2017 Acceptable Variance: + 5%

Historical Trend:		
CY	CO2 Emissions (Metric Tons)	% of 1990 CO2 Emission Level
1990	17,925,410	100%
2000	18,373,127	102%
2010	13,715,553	77%
2011	14,070,732	78%
2012	13,796,930	77%
2013	14,185,254	79%
2014	14,911,781	83%
2015	14,422,532	80%
2016	10,566,904	59%
2017	9,554,443	53%



SOURCE OF DATA: Federal and state mandatory reporting compliance reports

1. BACKGROUND / PURPOSE

- The State of California has adopted targets to reduce GHG emissions to 1990 levels by 2020 and to ultimately achieve an 80% reduction from 1990 levels by 2050. GHG reduction efforts from the electricity sector, including LADWP, are a critical component in meeting these targets.

2. ACHIEVEMENTS / MILESTONES MET

- Early divestiture of Navajo Generating Station in July 2016.
- Beginning January 1, 2016, incorporated carbon cost when determining optimal economic dispatch for individual generating units, which increased use of natural gas over coal resources.
- LADWP's electricity supply in 2017 included 30% renewable energy.
- LADWP's 2017 emissions are 47 percent below its 1990 emissions baseline.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- No variance explanation needed.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

- No mitigation needed. 2017 emissions were significantly reduced as a result of measures listed under #2.

LADWP RATES METRIC – *Energy Savings Variance Report (Joint)*

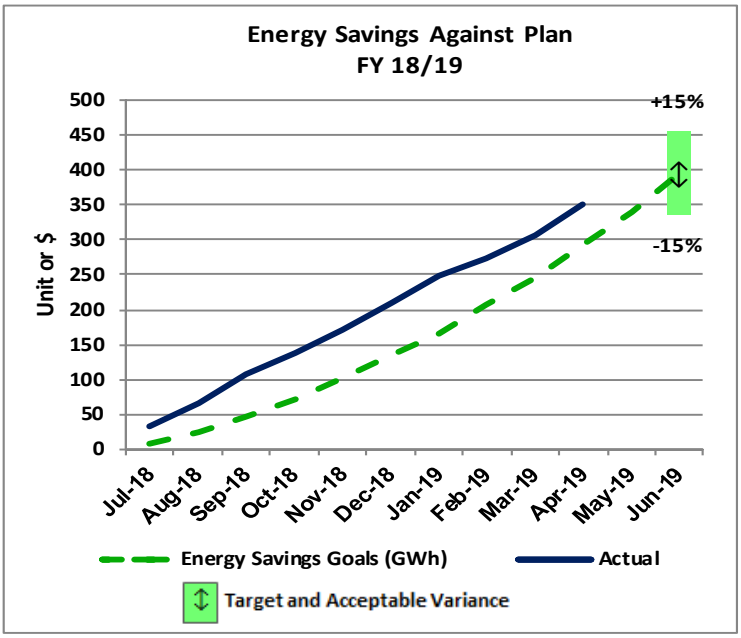
RESPONSIBLE MANAGER: David Jacot **REPORTING PERIOD: July thru April 2019**

DEFINITION OF RATES METRIC: Energy Savings Against Plan

TARGET & ACCEPTABLE VARIANCE (FY 18/19): GWh Installed Compared to the 210 baseline/GWh for all customers. 15%

STATUS: **Exceeds Target**

FYTD as of:	Energy Savings Goals (GWh)	Actual	Variance		Re-Estimate (If Applicable)
			Unit or $	%	
Jul-18	8	32.6	25	**312.7%**	
Aug-18	24	65.9	42	**176.9%**	
Sep-18	48	107.6	60	**126.5%**	
Oct-18	71	139	68	**95.0%**	
Nov-18	103	171.4	68	**66.4%**	
Dec-18	135	210.1	76	**56.1%**	
Jan-19	166	247.5	81	**48.8%**	
Feb-19	206	273.5	68	**32.8%**	
Mar-19	246	307	62	**25.1%**	
Apr-19	293	350.2	57	**19.5%**	
May-19	341				
Jun-19	396				15
Acceptable Variance			± 15%		-96.2%



SOURCE OF DATA: Efficiency Solutions KPI FY 18-19 Report

1. **BACKGROUND / PURPOSE**

Efficiency Solutions' (ES) energy savings goals are a key performance metric related to the Energy Cost Adjustment Factor, a critical power rate component. Energy Savings are compiled monthly into a Key Performance Indicators database encompassing measures installed by participants in ES programs and initiatives. The OPA has requested this metric be reported to the Board and the OPA on a regular basis, ensuring actual savings are tracking established targets.

2. **ACHIEVEMENTS / MILESTONES MET**

Direct Install Programs, Commercial Lighting, New Construction, HVAC Optimization and other Commercial /Industrial programs all delivered energy savings considerably above projections through the first quarter. A generous new residential Insulation rebate offer was added to the Consumer Rebate Program (CRP) in September 2018, targeting older, poorly insulated residential buildings. Participation in CRP, HVAC Optimization, and the Refrigerator Exchange programs is robust, driving higher than projected savings in the Residential program sector for the second quarter.

3. **PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION**

FY 17-18 cumulative energy savings exceeded the annual target. FY 18-19 savings are expected to continue this trend, as indicated by the second quarter results.

4. **MITIGATION PLAN AND / OR RECOMMENDATIONS**

ES staffing vacancies continue to be filled in FY 2018-19, ensuring that incentive delivery will keep pace with participant demand and new programs will proceed into the delivery pipeline.

LADWP RATES METRIC – *BUDGET VARIANCE ENERGY EFFICIENCY (JOINT)*

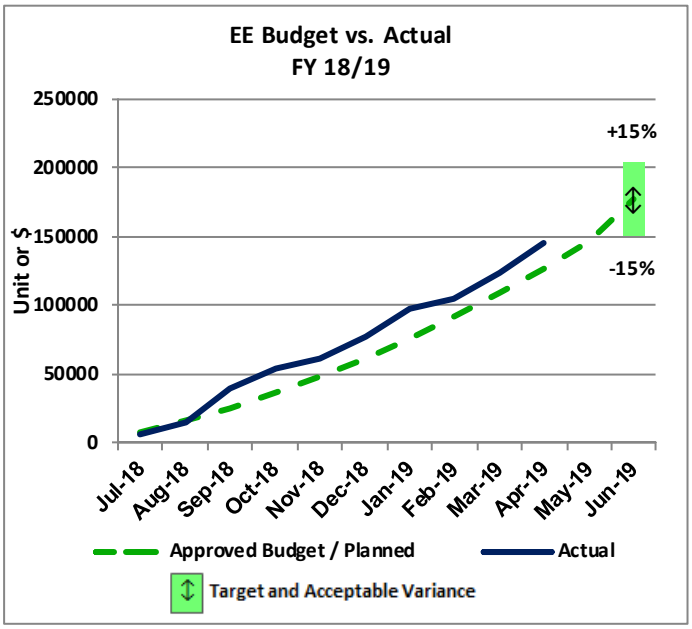
RESPONSIBLE MANAGER: David Jacot **REPORTING PERIOD: April 2019**

DEFINITION OF RATES METRIC: Budget vs. Actual for the overall Energy Efficiency Portfolio

TARGET & ACCEPTABLE VARIANCE (FY 18/19): +/- 15%

STATUS: **Outside Acceptable Variance**

FYTD as of:	Approved Budget / Planned	Actual	Variance		Re-Estimate (If Applicable)
			Unit or $	%	
Jul-18	7,751	6,719	-1033	**-13.3%**	
Aug-18	16,608	15,400	-1208	**-7.3%**	
Sep-18	25,464	39,504	14040	**55.1%**	
Oct-18	36,531	53,584	17054	**46.7%**	
Nov-18	47,597	60,941	13344	**28.0%**	
Dec-18	60,874	77,451	16577	**27.2%**	
Jan-19	76,361	96,907	20546	**26.9%**	
Feb-19	91,848	104,199	12351	**13.4%**	
Mar-19	108,440	123,552	15112	**13.9%**	
Apr-19	126,137	145,129	18992	**15.1%**	
May-19	147,150				
Jun-19	177,106				
Acceptable Variance			± 15%		



SOURCE OF DATA:

1. BACKGROUND / PURPOSE

Efficiency Solutions' (ES) energy savings goals are a key performance metric related to the Energy Cost Adjustment Factor, a critical power rate component. Energy Savings are compiled monthly into a Key Performance Indicator (KPI) database encompassing measures installed by participants in ES programs and initiatives. A budget is established annually, in support of energy efficiency programs, and actual spending is also compiled monthly into the KPI database, to track spending and energy savings. The OPA has requested this metric be reported to the Board and the OPA on a regular basis, ensuring actual spending meets established targets.

2. ACHIEVEMENTS / MILESTONES MET

There have been increased program activities in the Home Energy Improvement Program (HEIP), Consumer Rebate Program, Residential and Commercial Lighting Programs. The LAUSD Direct Install Program has been extended.

3. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

Energy efficiency program expenditures are not straight-lined. Total expenditures by the end of the fiscal year are expected to be close to the approved budget.

4. MITIGATION PLAN AND / OR RECOMMENDATIONS

Energy efficiency programs continue to accelerate. There will be new programs that will be launched such as the Upstream Commercial Food service Program. Expenditures on direct install programs are expected to ramp up in the next two quarters. Vacancies and new positions will be filled to fully support energy efficiency program efforts.

LADWP RATES METRIC – *Levelized EE Program Costs ($/KWH) (Joint)*

RESPONSIBLE MANAGER: David Jacot **REPORTING PERIOD: July thru March 2019**

DEFINITION OF RATES METRIC: Cost per kWh over lifetime of installed energy efficiency solutions or measures.
TARGET & ACCEPTABLE VARIANCE (FY 17/18): Annual metric: Levelized Cost $.0.082 +/- 15%

STATUS **Within Acceptable Variance**

SOURCE OF DATA: E3 Report for FY 16/17

1. **BACKGROUND / PURPOSE**

Efficiency Solutions' (ES) Levelized EE Program costs ($/kWh) are a key performance metric related to the Energy Cost Adjustment Factor, a key rate component. The OPA has requested this metric be reported to the Board and the OPA on a regular basis, ensuring actual Levelized EE Program costs are tracking established targets.

Life of efficiency measures vary from one to thirty years. The Levelized cost of LADWP's efficiency program portfolio is calculated once per year (the most recent is FY 16-17) using the Energy Efficiency Reporting Tool developed by Environmental Economics (E3) and KEMA and is used by all SCPPA members in reporting annual energy savings and expenditures to the California Energy Commission (CEC).

2. **ACHIEVEMENTS / MILESTONES MET**

The Levelized cost of LADWP's energy efficiency portfolio for FY 16-17 was $0.0242 per kWh saved resulting in a variance of -70.5% from the established $0.082 FY 16-17 target.

3. **PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION**

LADWP's portfolio of energy efficiency programs has historically been very cost effective.
For FY 18-19 we expect our EE Program portfolio Levelized cost to increase as our spending on upstream and direct install programs increase. We expect it to come in well below the $0.082 target.

4. **MITIGATION PLAN AND / OR RECOMMENDATIONS**

Continue ramp up of planned EE programs, including Phase II of the Residential Insulation Program and a launch of the Upstream Commercial Food Service Program.

ATTACHMENT II
LADWP Equity Metrics Data Initiative (EMDI) Dashboards

Equity Metrics Data Initiative

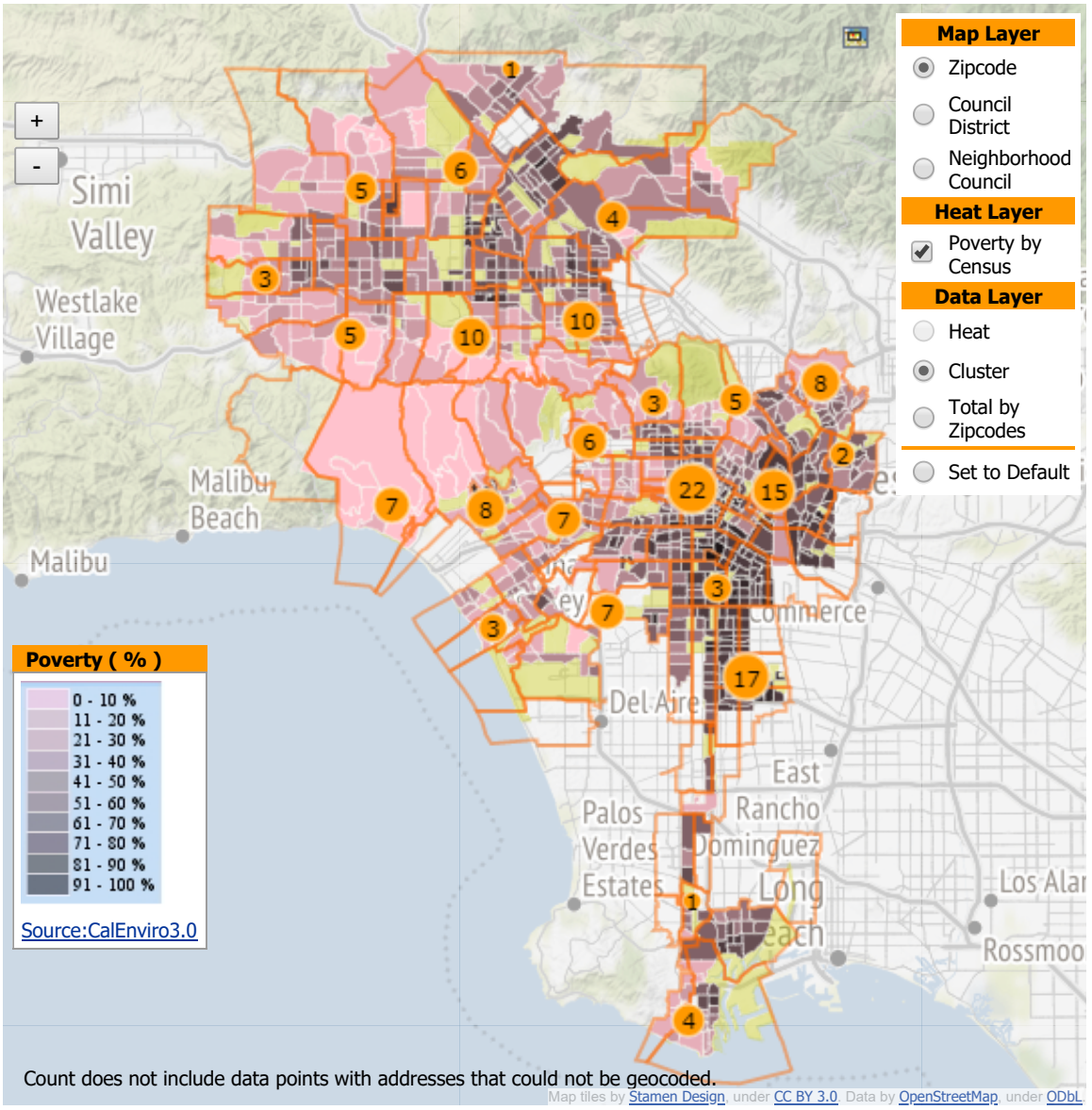
LADWP EMDI - Water & Power Infrastructure Investment

RESPONSIBLE MANAGER:Serge Haddad

REPORTING PERIOD: Nov 2018 - Apr 2019

Water Quality Complaints

The numbers shown on the map are the water quality complaints based on color, taste and odor that helps assist with evaluating trends or identifying potential system issues.



LADWP EQUITY METRIC – *Water Quality Customer Complaints*

RESPONSIBLE MANAGER: Serge Haddad **REPORTING PERIOD: Oct 2018 - Apr 2019**
EQUITY CORE CATEGORY: Responding to Customer Complaints Before the End of the Next Business Day

1. NARRATIVE / BACKGROUND

During the period November 2018 to April 2019, a total of 321 water quality complaints were received by the Water Quality Division including 79 complaints for taste and/or odor and 83 for discolored water.

2. CRITERIA

- Taste/Odor complaints
- Discolored water complaints

3. ACHIEVEMENTS

- Continue to consistently meet Mayor's Customer Bill of Rights goal of responding to water quality complaint calls by the end of the next business day.
- A transactional survey was launched in February 2019 to gauge customer satisfaction with service provided by Water Quality Customer Care. Customer response has been very favorable.

4. ISSUES

- A breakdown of the data for taste and/or odor and discolored water complaints for the period indicate that 28% of the complaints are attributed to customer plumbing issues, 38% are attributable to the water supply, and 34% are of unknown cause. Cloudy water caused by seasonal temperature variations is the primary source of the complaints attributable to the water supply.

5. OUTREACH STRATEGY / PLAN

- Water Quality staff will review complaint data quarterly to identify the source of customer complaints.
- Water Quality is participating in initiatives to make drinking water more available and promote tap water through the installation of hydration stations throughout the City. The Division is working with the Department of General Services, Department of Recreation and Parks, and the Mayor's Office to retrofit/install hydration stations at public buildings, including LADWP Customer Service Centers, and parks as part of the Mayor's Green pLAn.

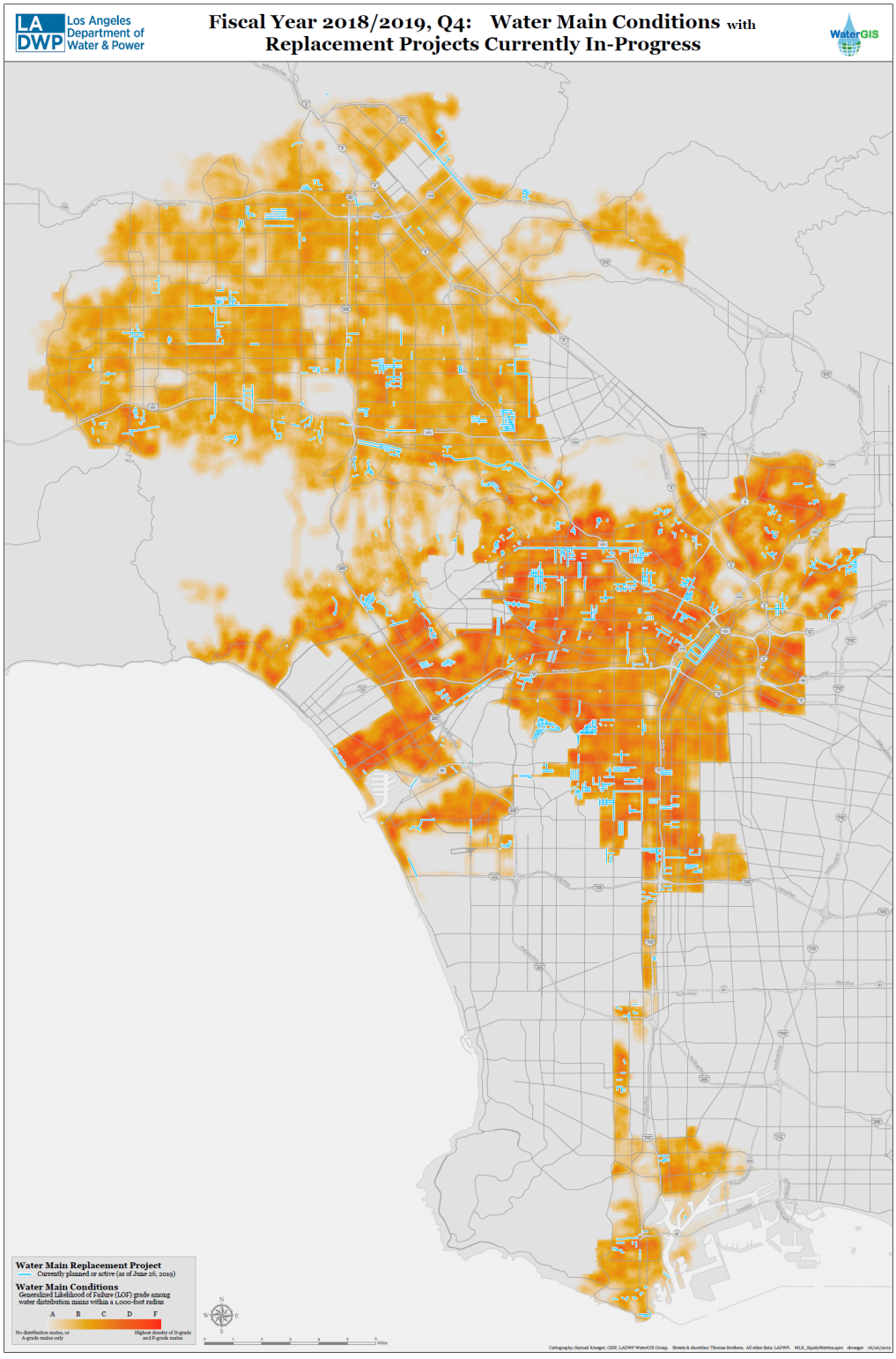
LADWP EMDI - Water & Power Infrastructure Investment

RESPONSIBLE MANAGER:Alvin Bautista REPORTING PERIOD: Nov 2018 - Apr 2019

Mainline Replacement

Mainline replacement is a portion of the Water System's strategy to maintain reliability, to reduce leaks, and minimize interruptions and damage to the community. By mapping the geographic location of these replacements against the mainlines' likelihood of failure heat map provides a visual indicator of how well the Department is addressing the replacement of mainlines most at risk of failure.

Decisions to replace Water Mainlines take into consideration the Mainlines' Likelihood of Failure (LOF) Grade. The factors that contribute to the LOF Grade are: Leaks, Age, Material, Diameter, Pressure, Elevation, Soil Corrosiveness, Hillside/ground Movement.



LADWP EQUITY METRIC – *Water System Probability of Failure & Planned Replacements (Water)*

RESPONSIBLE MANAGER: Alvin Bautista **REPORTING PERIOD: Nov 2018 – Apr 2019**
EQUITY CORE CATEGORY: Water Infrastructure Investment

1. NARRATIVE / BACKGROUND

There are approximately 6,700 miles of water mains (pipes less than 24 inches in diameter) throughout the City. Water mains are the backbone of the City's water distribution system. The Water System has prioritized mainline that are in the highest risk of failure for replacement. Pipes that are targeted for replacement are typically corroded cast-iron pipes that are in poor condition and demonstrate frequent leaks and/or breaks.

2. CRITERIA

- Leak history (quantity, frequency)
- Soil condition
- Pipe age
- Risk of service interruption and community disruption

3. ACHIEVEMENTS

- Replaced over 1.7 million feet of mainline since Mainline Replacement Program inception (2006)
- Met and exceeded mainline replacement footage goals during last three fiscal years ending in Fiscal Year 2017-18
- Maintained a leak rate that is below the national industry average
- Consistently maintained highest levels of water reliability to customers
- Updated Water Distribution Division Five-Year Action Plan
- Developed and commenced mainline replacement operations at Hollywood Laydown Yard

4. ISSUES

As of April 2019, mainline replacement was substantially below the goal, which was 232,000 feet for Fiscal Year 2018/19. Primary contributing factors included shortage in labor staffing and impact of weather (rain days) that curtailed replacement production.

5. OUTREACH STRATEGY / PLAN

- Aggressively seek eligible candidates to hire and fill vacant and open positions
- Continue to provide and promote safety and training to all existing and newly-hired employees
- Continue to develop LADWP-owned properties to strategically place construction crews close to planned mainline replacement projects
- Work and collaborate with other City departments to streamline permitting process/project execution
- Review and update Five-Year Action Plan to set and communicate achievable goals for mainline replacement footage (goal is to ultimately achieve a replacement cycle that is compatible with expected life of the asset)

LADWP EMDI - Water & Power Infrastructure Investment

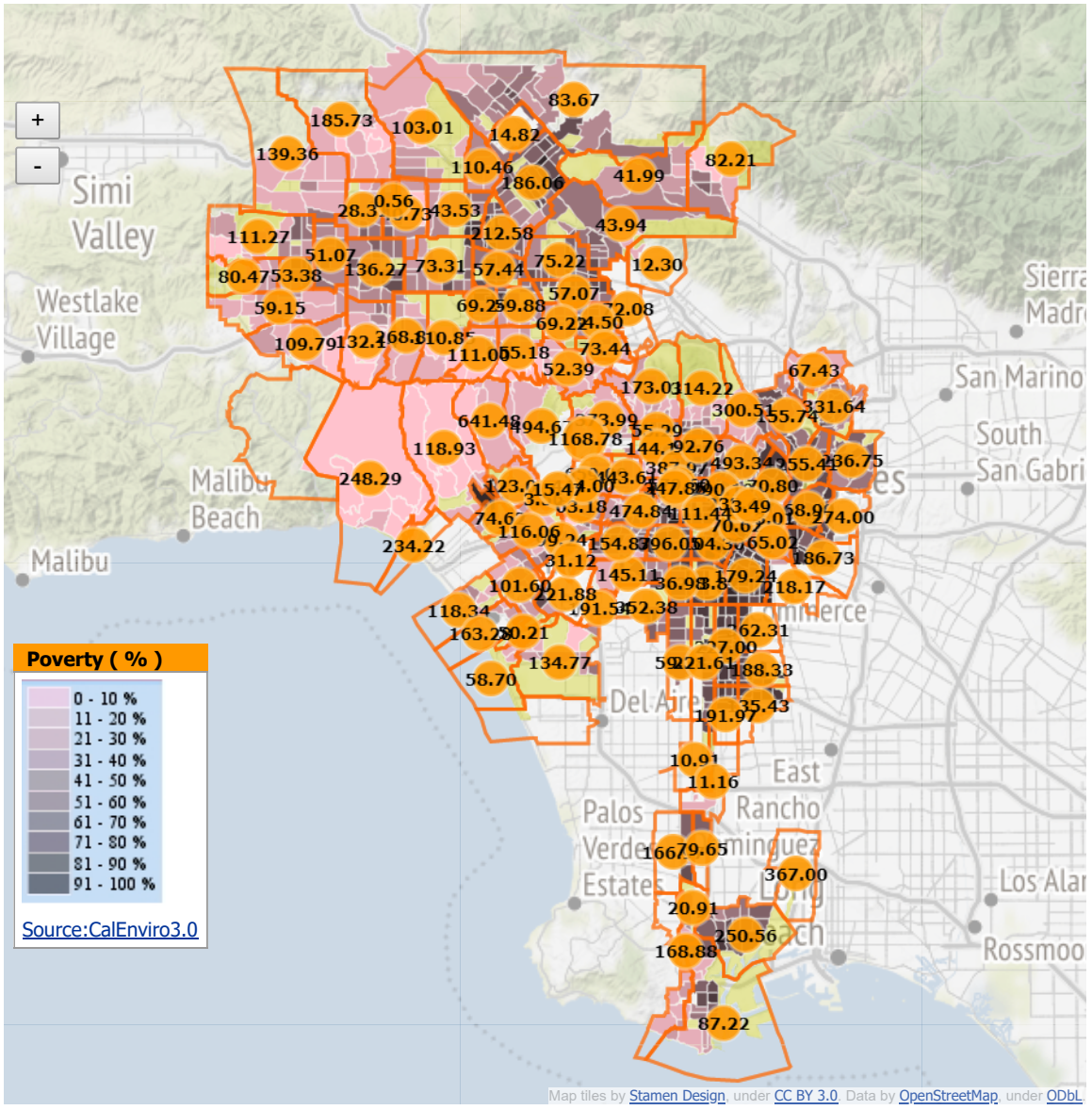
RESPONSIBLE MANAGER:Herman Cheng REPORTING PERIOD: May 2018 - Apr 2019

SAIDI

The following reliability indices are used to measure the reliability performance of LADWP's distribution system in a 12-month rolling average:

- **System Average Interruption Duration Index (SAIDI):** Average # of minutes a customer power is out in a year for the system

The numbers shown on the map are the average number of minutes a customer's power is out in a year for the system by geographic area.



LADWP EMDI - Water & Power Infrastructure Investment

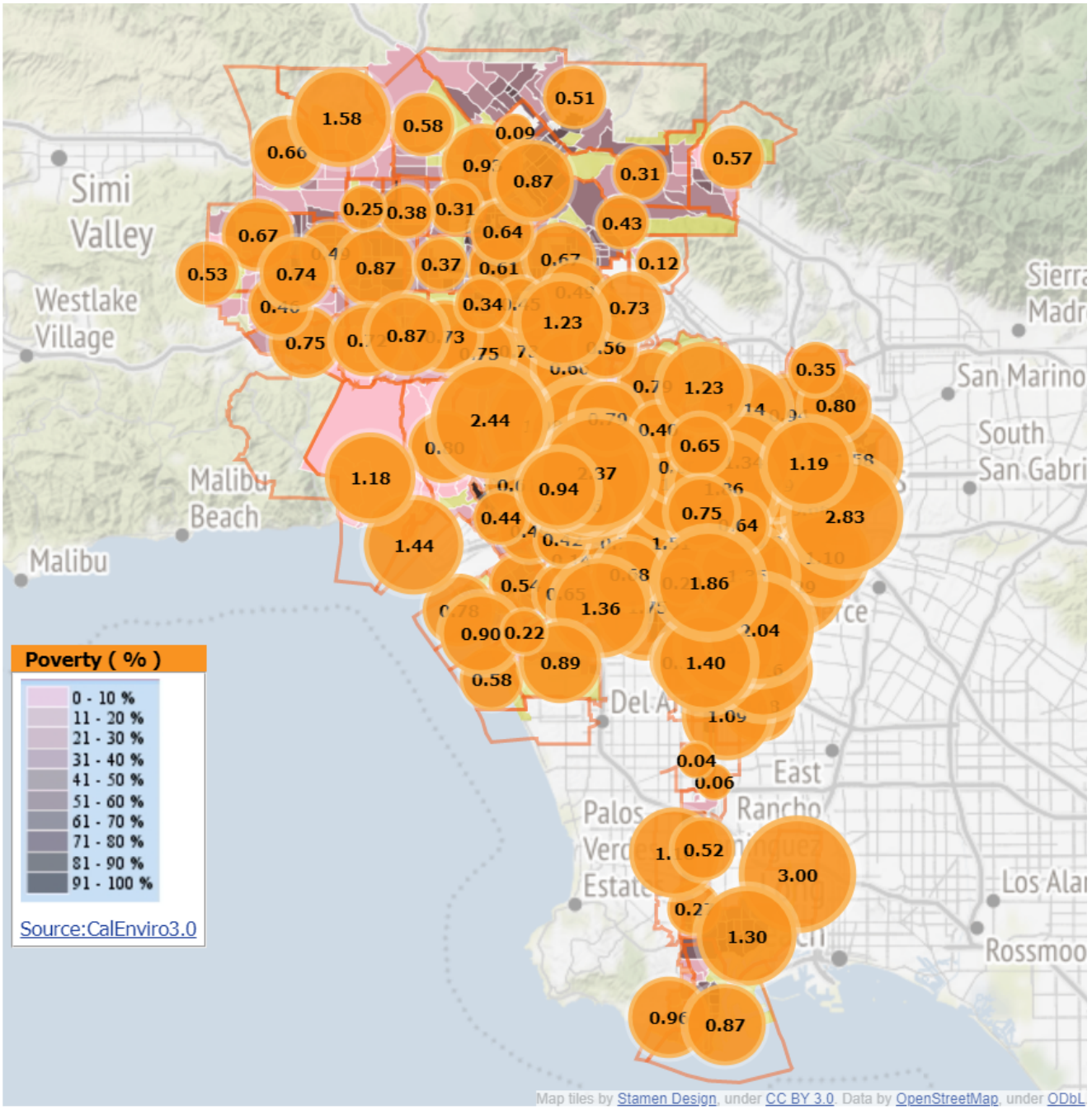
RESPONSIBLE MANAGER:Herman Cheng REPORTING PERIOD: May 2018 - Apr 2019

SAIFI

The following reliability indices are used to measure the reliability performance of LADWP's distribution system in a 12-month rolling average: (Map below based on one month data)

- **System Average Interruption Frequency Index (SAIFI):** Average # of interruptions per year for the system

The numbers shown on the map are the average number of interruptions per year for the system by geographic area.



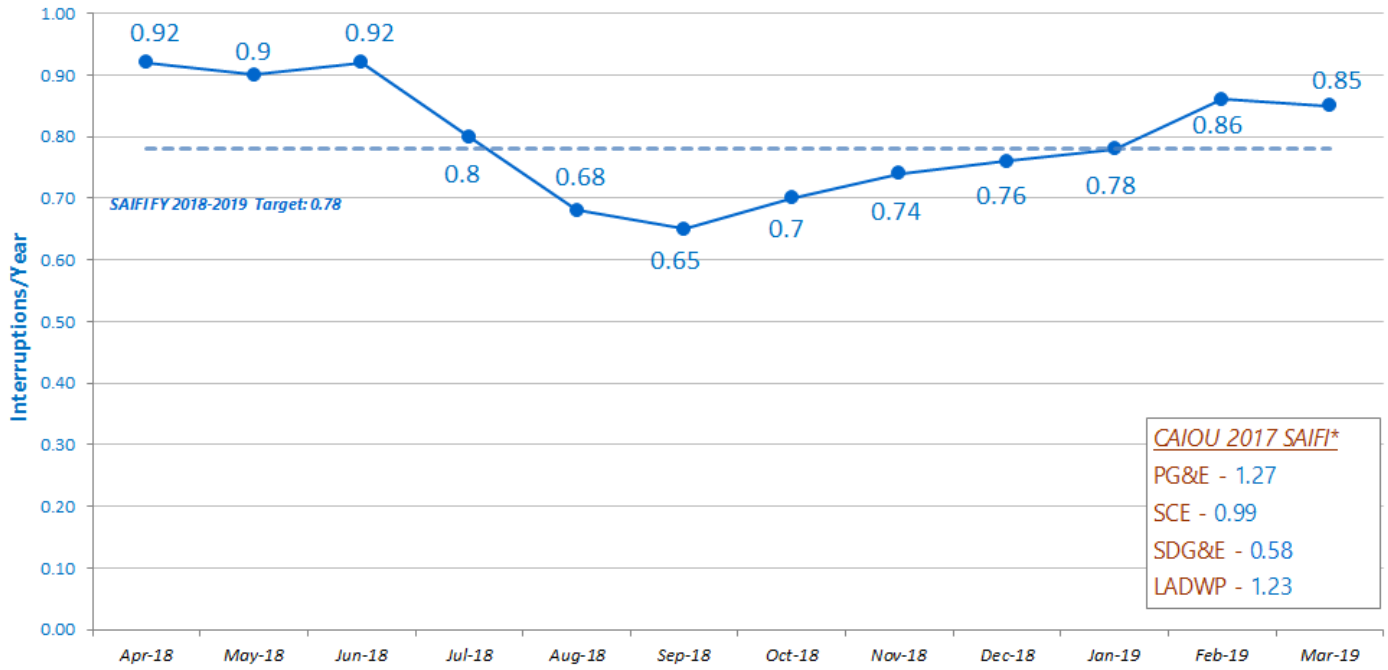
LADWP EQUITY METRIC – *SAIFI AND SAIDI (POWER)*

RESPONSIBLE MANAGER: Herman Cheng
EQUITY CORE CATEGORY: Water and Power Infrastructure Investment

REPORTING PERIOD: Apr 2019 **(**Rolling Data Ending Mar 2019)

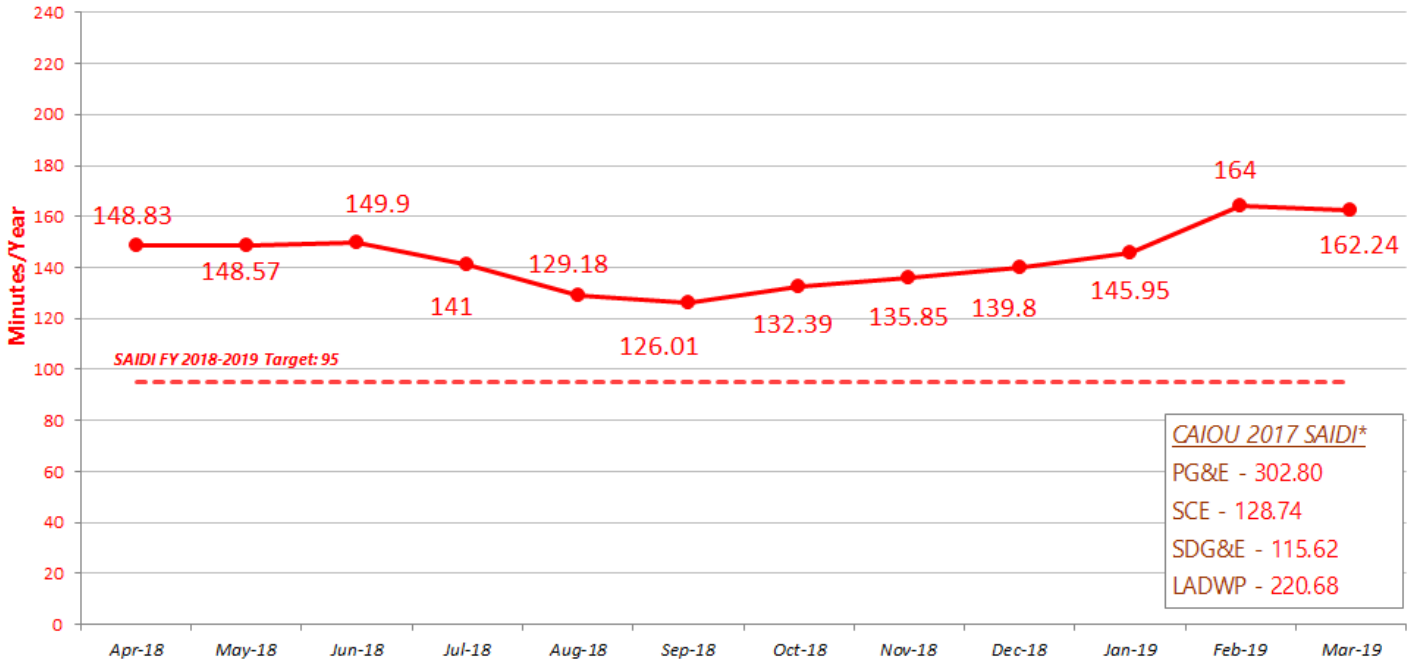
Power Distribution Service Reliability Indices

System Average Interruption Frequency Index (SAIFI)



Power Distribution Service Reliability Indices

System Average Interruption Duration Index (SAIDI)



***CPUC is the source of CAIOU data (http://www.cpuc.ca.gov/General.aspx?id=4529).**
The monthly SAIFI/SAIDI indices for the ZIP codes are listed in Attachment A.

1. NARRATIVE / BACKGROUND

SOURCE OF DATA: KPI No. 04.01.01.06 and 04.01.01.07

- SAIFI is the System Average Interruption Frequency Index, which is the number of interruptions experienced by the average customer. It is measured as the average number of sustained interruptions per year for each customer served during the 12-month period ending with the indicated month. Sustained interruptions are 5 minutes or more in duration.

- SAIDI is the System Average Interruption Duration Index, which is the interruption time (measured in minutes) that an average customer experiences. It is measured as the average duration of sustained interruptions per year for each customer served during the 12-month period ending with the indicated month. Sustained interruptions are 5 minutes or more in duration.

- SAIFI and SAIDI reliability indices are being analyzed to assess maintenance and equipment replacement efforts to optimize system performance. Unanticipated outages can cost significantly in equipment damage, reduced revenue, costly lawsuits, and poor customer perceptions.

- SAIFI and SAIDI have to be combined together to accurately reflect the reliability performance of the distribution system.

- Updates to historical outage information during the preceding 12-month period may result in slight changes to SAIFI and SAIDI.

- Several high profile outages in 2006 alerted LADWP's awareness in improving our reliability performance. LADWP requested Electric Power Research Institute (EPRI) to perform a distribution reliability study. The study outlined LADWP's reliability performance with detailed assessment of equipment maintenance, asset management, and project prioritization.

- As a result of this study, the Power Reliability Program (PRP) and Power System Reliability Program (PSRP) were enacted in 2007 and 2014, respectively, to assess LADWP's reliability performance through strategic replacement and maintenance of various assets. In addition to distribution assets, the PSRP also expanded the infrastructure replacement to include generation, transmission, and substation assets.

2. CRITERIA

- Quantitative analysis of outage statistics to identify equipment failures which contribute to outage frequency and duration.

- Assessment of equipment failure trends to prioritize equipment replacement efforts and maintenance activities.

3. ACHIEVEMENTS

- Based on the System Reliability, Restoration, and Response Report (SR3) conducted by PA Consulting Group, LADWP's 5-Year Average SAIFI (excluding Major Event Days) was ranked in the 1st quartile at 0.68 for Calendar Years 2013 to 2017 when compared to other investor-owned utilities.

4. ISSUES

- The reliability indices for March 2019 are SAIFI at 0.85 and SAIDI at 162.24 minutes.

- SAIFI and SAIDI are higher than normal due to severe weather events causing outages for prolonged durations. There were heavy rainstorms and wind gusts in October, December 2018 and January, February 2019, and there was a prolonged heat wave in July 2018.

- Approximately 114,000 customers were affected during the July 6-10, 2018 heat wave. Average daily high temperatures reached 117°F in the San Fernando Valley, and peak load reached 6,256 MW on July 6, 2018, the highest ever for a July day.

- Circuit Breaker (CB) failures, due to aging equipment and maintenance efforts continue to be a problem since 2014.

- Balloon-related outages are on a steady rise since 2014, with nearly 500 outages in 2017. Assembly Bill (AB) 2450 was introduced on February 14, 2018 and was approved by the Governor on September 5, 2018. AB 2450 requires manufacturers of metallic balloons to put a warning label that warns the consumer about the dangerous risk of fire if the balloon comes in contact with an electrical power line.

5. RECOMMENDATIONS

- Accelerate CB replacement as CB failures affect a large number of customers and have a cascading effect that could cause widespread collateral damage to other station equipment.

- Accelerate cross arms and underground cable replacement.

- Repair temporary fixes in a timely manner.

6. MANAGEMENT COMMENTS ON STATUS

- Replacement of aging assets will reduce the risks of outages due to their vulnerability during adverse weather conditions.

7. OUTREACH STRATEGY / PLAN

- The reliability indices can be accessed by the public via link http://prp.ladwp.com.

- LADWP has reached out to customers, such as Westwood Neighborhood Council (NC), Silver Lake NC, Venice NC, Crestview Neighborhood Association (NA), Larchmont-Windsor Square, Bel-Air Beverly Crest NC, and Doheny-Sunset NA on reliability performance issues and improvement plans. LADWP has also conducted workshops for Key Accounts customers to educate them about our power reliability programs.

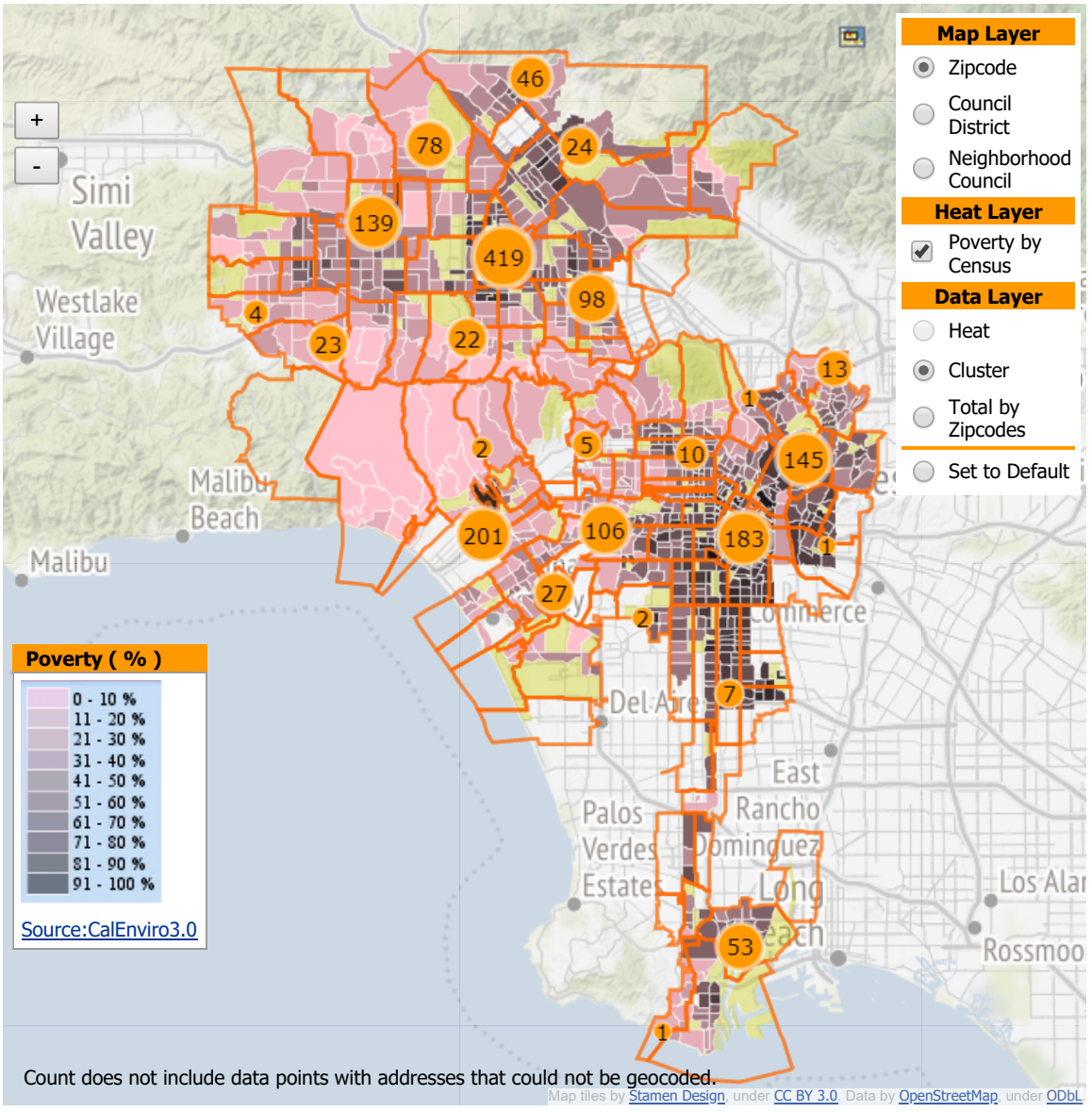
LADWP EMDI - Water & Power Infrastructure Investment

RESPONSIBLE MANAGER:Arthur Johnson

REPORTING PERIOD: Nov 2018 - Apr 2019

PSRP – Pole Replaced

The Department's PSRP pole replacement work is done in compliance with California Public Utilities Commission (CPUC) General Order 165 – Inspection Cycles for Electric Distribution Facilities. Poles are identified for replacement through the Power System's aggressive Inspection Program. The overhead power system has approximately 321,000 poles. By mapping the geographic location of these replacements against the Cal-Enviro 3.0 Poverty Indicator we can see both the geographic and demographic distribution of the Department's pole replacement work.
The numbers shown on the map are the number of poles replaced by geographic area.



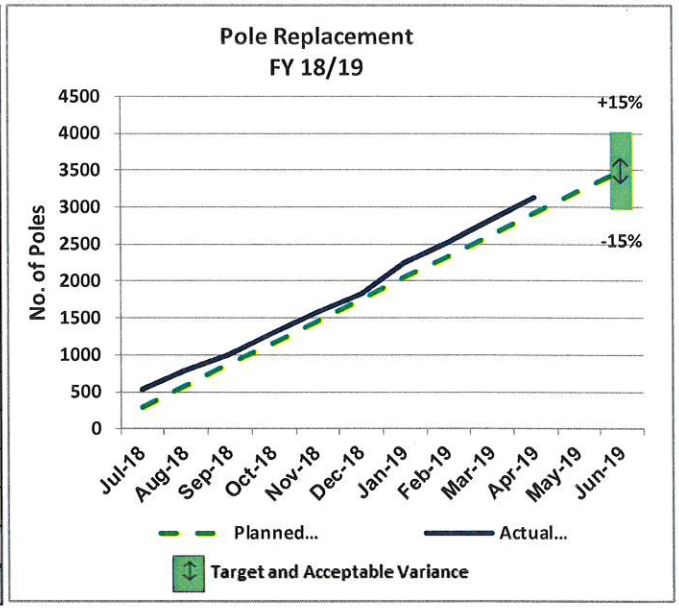
LADWP RATES/EQUITY METRIC – *Pole Replacement (Power)*

RESPONSIBLE MANAGER: Arthur Johnson, Power Transmission and Distribution **REPORTING PERIOD:** April 2019
EQUITY CORE CATEGORY: Water and Power Infrastructure Investment

DEFINITION OF RATES METRIC: Number of Poles Replaced Against Plan
TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = 3,500; Acceptable Variance = ± 15%

STATUS: Within Acceptable Variance

FYTD as of:	Planned (No.)	Actual (No.)	Variance		Re-Estimate
			No.	%	
Jul-18	292	529	237	81.2%	
Aug-18	584	803	219	37.5%	
Sep-18	876	1,009	133	15.2%	
Oct-18	1,168	1,309	141	12.1%	
Nov-18	1,460	1,579	119	8.2%	
Dec-18	1,752	1,823	71	4.1%	
Jan-19	2,044	2,251	207	10.1%	
Feb-19	2,336	2,527	191	8.2%	
Mar-19	2,628	2,833	205	7.8%	
Apr-19	2,920	3,139	219	7.5%	
May-19	3,212				3,212
Jun-19	3,500				3,500
Acceptable Variance			± 15%		0.0%



SOURCE OF DATA: Jobs P6322 (KPI # 04.01.01.03)

1. BACKGROUND / PURPOSE

- Replace 3,500 deteriorated poles due to age or other damage. Power Transmission and Distribution (PTD) maintains approximately 321,000 poles in its system. These poles have an average life span of fifty years. These poles support switches, light fixtures, transformers, and underground cables transitioning to an overhead termination, communication cables, crossarms and conductors at different voltage levels. Work is completed by Distribution Construction & Maintenance (DC&M) district and contract crews. This work is required to maintain compliance with California Public Utilities Commission (CPUC) General Order 165- Inspection Cycles for Electric Distribution Facilities, and our Power System Reliability Program (PSRP).

2. CRITERIA

- Poles for replacement were identified through the DC&M Inspection program.

3. ACHIEVEMENTS / MILESTONES MET

- To date, the target was to replace 2,920 poles and the current actual number of poles replaced was 3,139.

4. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- The actual number of poles replaced is within the 15% threshold target.

5. MITIGATION PLAN AND / OR RECOMMENDATIONS

- No mitigation plan is necessary at this time.

6. OUTREACH STRATEGY / PLAN

- PTD utilizes poster boards at job locations indicating why work was being performed.
- PTD conducts presentations at Community Council meetings describing PSRP work.
- PTD crew leaders notify customers in person when planning access to facilities for pole replacements.

Within Acceptable Variance | Outside Acceptable Variance | Exceeds Target | Needs Attention

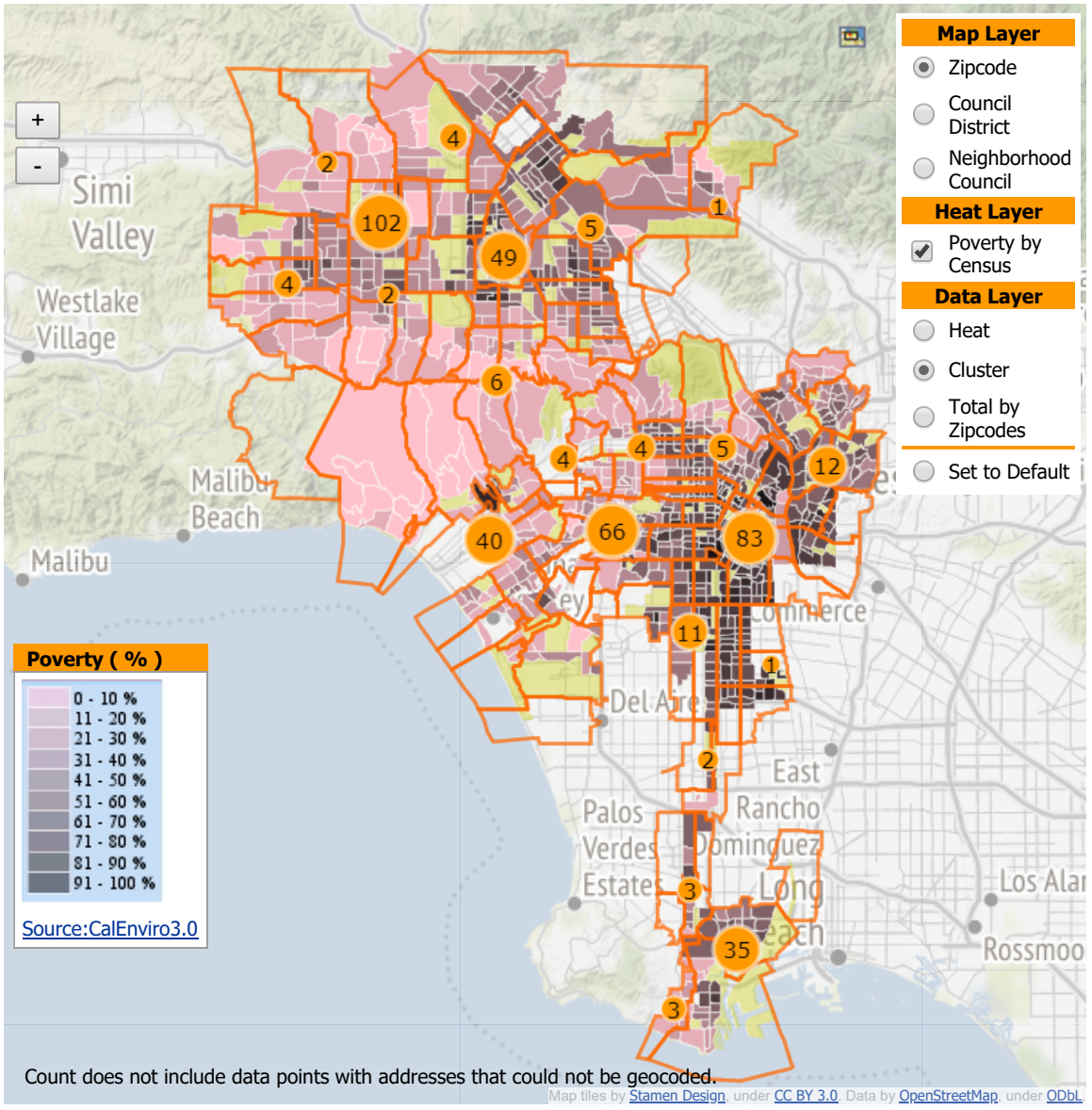
LADWP EMDI - Water & Power Infrastructure Investment

RESPONSIBLE MANAGER:Arthur Johnson

REPORTING PERIOD: Nov 2018 - Apr 2019

PSRP – Transformers Replaced

The Department's PSRP transformer replacement work addresses reliability improvements by monitoring, reviewing, and inspecting over 126,000 transformers in service, and then replacing those that fail and are at highest risk of in-service failures. By mapping the geographic location of these replacements against the Cal-Enviro 3.0 Poverty Indicator we can see both the geographic and demographic distribution of the Department's transformer replacement work. The numbers shown on the map are the number of transformers replaced by geographic area



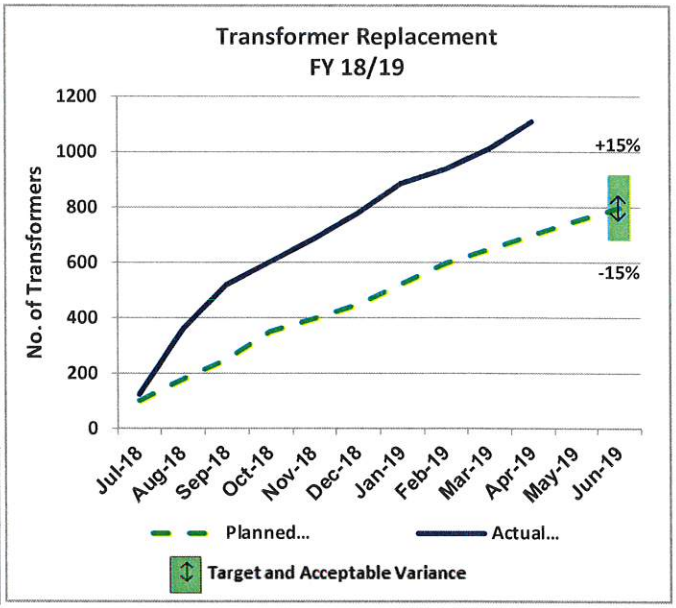
LADWP RATES/EQUITY METRIC – *Transformer Replacement (Power)*

RESPONSIBLE MANAGER: Arthur Johnson, Power Transmission and Distribution **REPORTING PERIOD:** April 2019
EQUITY CORE CATEGORY: Water and Power Infrastructure Investment

DEFINITION OF RATES METRIC: Number of Transformers Replaced Against Plan
TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = 800; Acceptable Variance = ± 15%

STATUS: Exceeds Target

FYTD as of:	Planned (No.)	Actual (No.)	Variance		Re-Estimate
			No.	%	
Jul-18	100	126	26	26.0%	
Aug-18	180	363	183	101.7%	
Sep-18	250	518	268	107.2%	
Oct-18	350	602	252	72.0%	
Nov-18	400	687	287	71.8%	
Dec-18	450	780	330	73.3%	
Jan-19	525	885	360	68.6%	
Feb-19	600	936	336	56.0%	
Mar-19	650	1,013	363	55.8%	
Apr-19	700	1,108	408	58.3%	
May-19	750				750
Jun-19	800				800
Acceptable Variance			± 15%		0.0%



SOURCE OF DATA: Jobs P6394 and P6309 (KPI # 04.01.01.02)

1. BACKGROUND / PURPOSE

- Replace 800 distribution transformers to increase reliability and maintain compliance with California Public Utilities Commission (CPUC) General Order 165- Inspection Cycles for Electric Distribution Facilities. Power Transmission and Distribution (PTD) maintains more than 126,000 distribution transformers. This work is required to provide customers reliable power and a better customer experience. Work is completed by Distribution Construction & Maintenance (DC&M) district or contract crews and is related to Power System Reliability Program (PSRP).
- The Transformer Replacement target of 800 reflects the planned transformer replacement for job P6394 (Identify and Replace Distribution Transformers and Related Equipment). Additionally, there is a planned replacement of 50 transformers under job P6309 (System Transformer Installation/Upgrades). The actual transformer replacements reflect the transformers replaced under both Job P6394 and Job P6309.

2. CRITERIA

- Transformer replacements are identified through DC&M inspection programs or due to transformer failures or are at risk of failing.

3. ACHIEVEMENTS / MILESTONES MET

- To date, the target was to replace 700 transformers and the current actual number of transformers replaced is 1,108.

4. PERFORMANCE / VARIANCE ANALYSIS & YEAR END PROJECTION

- The actual number of transformers replaced exceeds the 15% threshold set for the monthly target.
- The variance overrun is due to a large number of incident-driven transformer replacements and replacing aged transformers identified by engineering.

5. MITIGATION PLAN AND / OR RECOMMENDATIONS

- Due to the replacements largely being incident driven, there is no mitigation plan at this time.

6. OUTREACH STRATEGY / PLAN

- PTD utilizes poster boards at job locations indicating why work is being performed.
- PTD conducts presentations at Community Council meetings describing PSRP work.
- PTD crew leaders notify customers in person when planning access to facilities for transformer replacements.

Within Acceptable Variance | Outside Acceptable Variance | Exceeds Target | Needs Attention

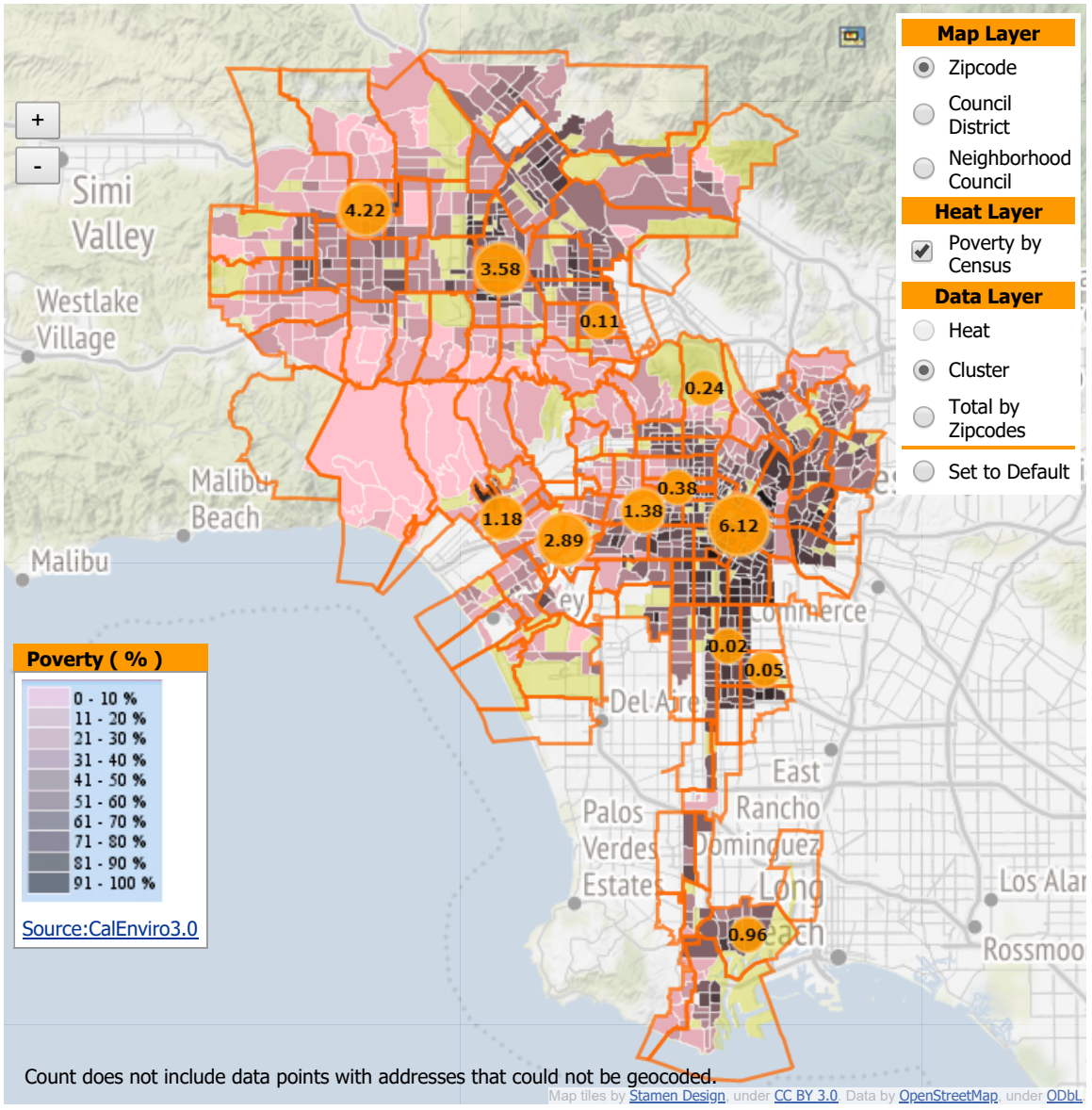
LADWP EMDI - Water & Power Infrastructure Investment

RESPONSIBLE MANAGER:Sager Farraj

REPORTING PERIOD: Nov 2018 - Apr 2019

PSRP – Cable Replaced

The Department's PSRP cable replacement work addresses reliability improvements replacing cable that is at high risk of failure due to deterioration, overload, obsolescence and damage. By mapping the geographic location of these replacements against the Cal-Enviro 3.0 Poverty Indicator we can see both the geographic and demographic distribution of the Department's cable replacement work.
The numbers shown on the map are the number of circuit miles of cable replaced by geographic area.



LADWP RATES/EQUITY METRIC – *Cable Replacement (Power)*

SIF 12

RESPONSIBLE MANAGER: Sager Farraj
Power Planning, Development, and Engineering Division

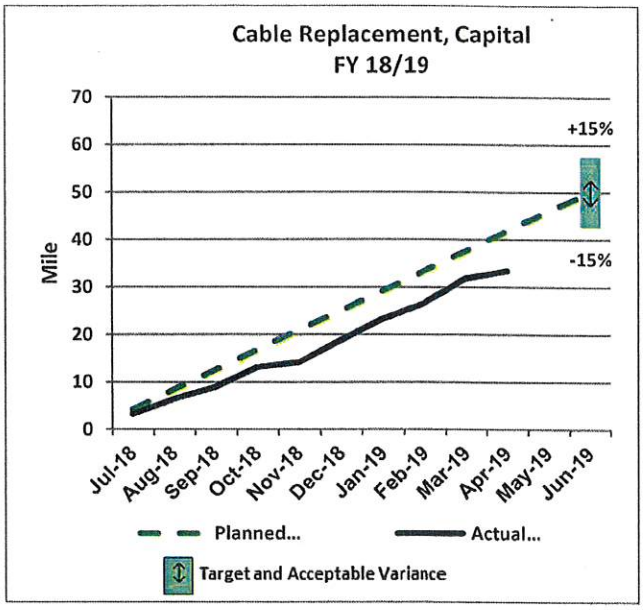
REPORTING PERIOD: April 2019

EQUITY CORE CATEGORY: Water & Power Infrastructure Investment

DEFINITION OF RATES METRIC: No. of Miles of Cable Replaced Against Plan
TARGET & ACCEPTABLE VARIANCE (FY 18/19): Target = 50 miles; Acceptable Variance = ±15%

STATUS: Outside Acceptable Variance

FYTD as of:	Planned (Mile)	Actual (Mile)	Variance		Re-Estimate
			Mile	%	
Jul-18	4.2	3.2	-1.0	-23.8%	
Aug-18	8.4	6.4	-2.0	-23.8%	
Sep-18	12.6	8.9	-3.7	-29.4%	
Oct-18	16.8	13.1	-3.7	-22.0%	
Nov-18	21.0	14.1	-6.9	-32.9%	
Dec-18	25.0	18.8	-6.2	-24.8%	
Jan-19	29.2	23.3	-5.9	-20.2%	
Feb-19	33.4	26.6	-6.8	-20.4%	
Mar-19	37.6	31.8	-5.8	-15.4%	
Apr-19	41.8	33.4	-8.4	-20.1%	
May-19	46.0				46.0
Jun-19	50.0				50.0
Acceptable Variance			± 15%		0.0%



SOURCE OF DATA: FI 21190, Job P6306 (KPI # 04.01.01.70)

1. **NARRATIVE / BACKGROUND**
   - Cable replacement of 4.8-kV and 34.5-kV cables for additional system reliability due to deterioration, overload, obsolescence and damage.

2. **CRITERIA**
   - Frequency of failures
   - Cable age
   - Physical deteriorations: cracks, bulging

3. **ACHIEVEMENTS**
   - Through the month of April, Distribution Construction & Maintenance completed 33.4 circuit-miles. The key performance goal is 50 circuit-miles for fiscal year 18/19.

4. **PERFORMANCE/VARIANCE ANALYSIS & YEAR END PROJECTION**
   - Variance through the month of April is 8.4 circuit-miles, 20% below target. This is due to Districts being behind with paper work. A number of cable replacement jobs haven't been closed even though the work is done.
   - Fiscal Year to date (FYTD) actual is $19.8M over budget due to Districts focusing on this work.

5. **MITIGATION/RECOMMENDATION**
   - Continue to work with Districts to have the completed cable replacement jobs close.

6. **OUTREACH STRATEGY / PLAN**
   - Neighborhood Council request for meeting on outages
   - Available information on the web site: http://prp.ladwp.com

Within Acceptable Variance | Outside Acceptable Variance | Exceeds Target | Needs Attention

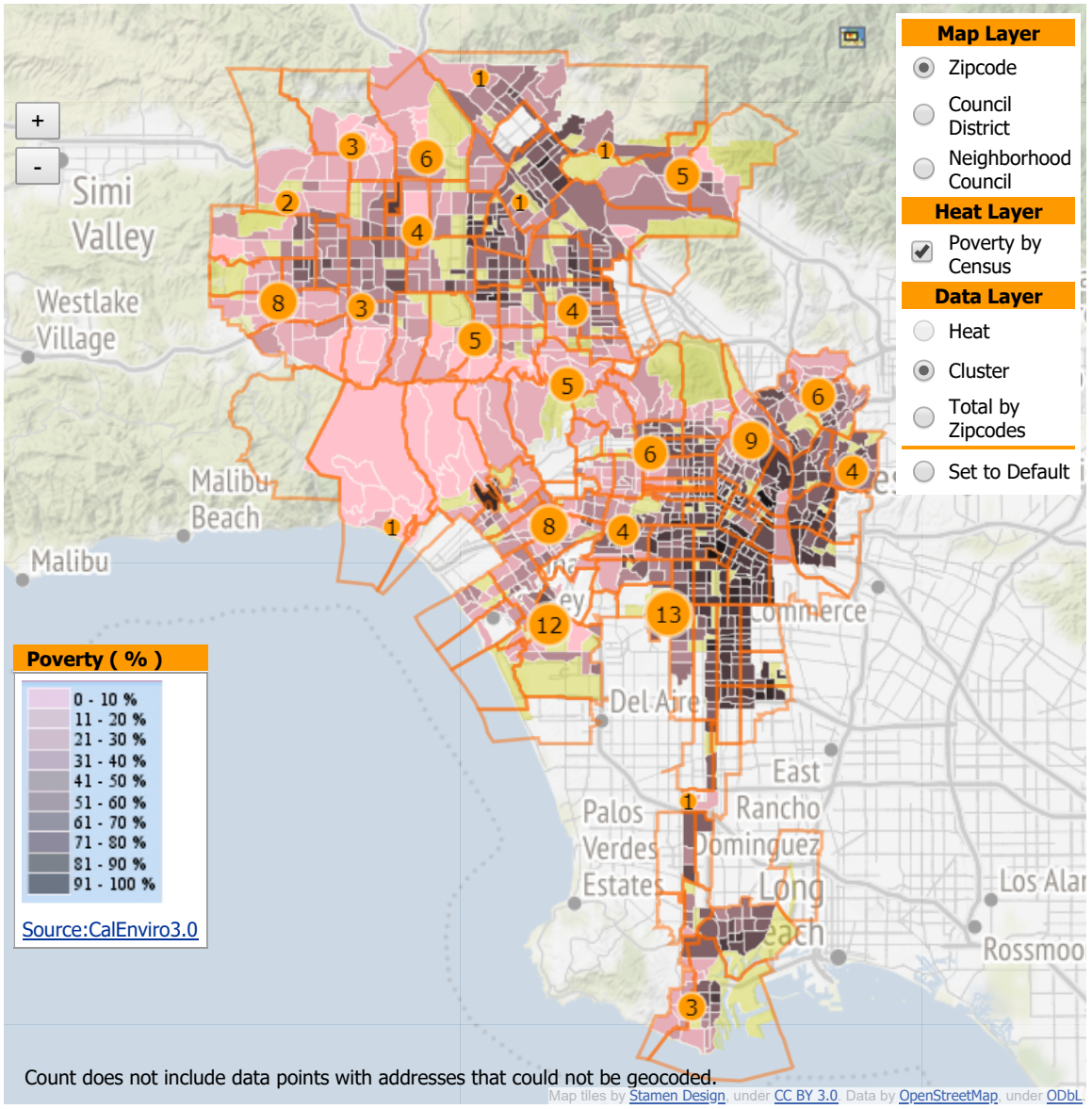
LADWP EMDI - Customer Incentive Programs/Services

RESPONSIBLE MANAGER:Terrence McCarthy

REPORTING PERIOD: Nov 2018 - Apr 2019

Rain Barrel Rebates

LADWP provides residential customers rebates for up to two 50-gallon rain barrels or one cistern.



Count does not include data points with addresses that could not be geocoded.

LADWP EQUITY METRIC – *Rain Barrel Cistern Rebates (Water System)*

RESPONSIBLE MANAGER: Terrence McCarthy **REPORTING PERIOD: January 2018 – April 2019**
EQUITY CORE CATEGORY:

1. NARRATIVE / BACKGROUND

As part of its 2015 Urban Water Management Plan, LADWP adopted ambitious long-term goals of increasing local water supplies to fifty-percent (50%) of our supply portfolio by 2035. LADWP offers rain barrel and cistern rebates to customers to help reach this goal through increased stormwater capture and rainwater harvesting.

2. CRITERIA

Rain Barrel and Cistern Rebate criteria:

- Customers receive a rebate for up to $50/rain barrel (min 50 gals), limit 2
- Customers receive a rebate for up to $500 per cistern (min 200 gals), limit 1

3. ACHIEVEMENTS

- Total Rebates
  - Rebated 401 rain barrels
  - Rebated 126 cisterns

4. ISSUES

- None

5. OUTREACH STRATEGY / PLAN

- LADWP encourages customers to purchase and install rain barrels and cisterns through offering rebates. We promote our rebate programs through community events, social media, etc. Customers can access a video on proper rain barrel installation on the Department's YouTube Sustainable Landscaping playlist.

- LADWP also partners with non-profit organizations and external organizations to promote sustainable landscaping practices, such as stormwater capture at Hands on Workshops, California Friendly Landscape Training classes, and Turf Removal classes.

- LADWP created a stormwater capture photo gallery on our California Friendly Landscaping website to assist customers in complying with sustainable landscaping rebate requirements. http://www.ladwp.cafriendlylandscaping.com/GWImage.php?index=5&source=gg

- Through our One Water LA partnership, the Los Angeles Bureau of Sanitation (LASAN) promotes our rain barrel and cistern rebate program at their community events, social media, etc.

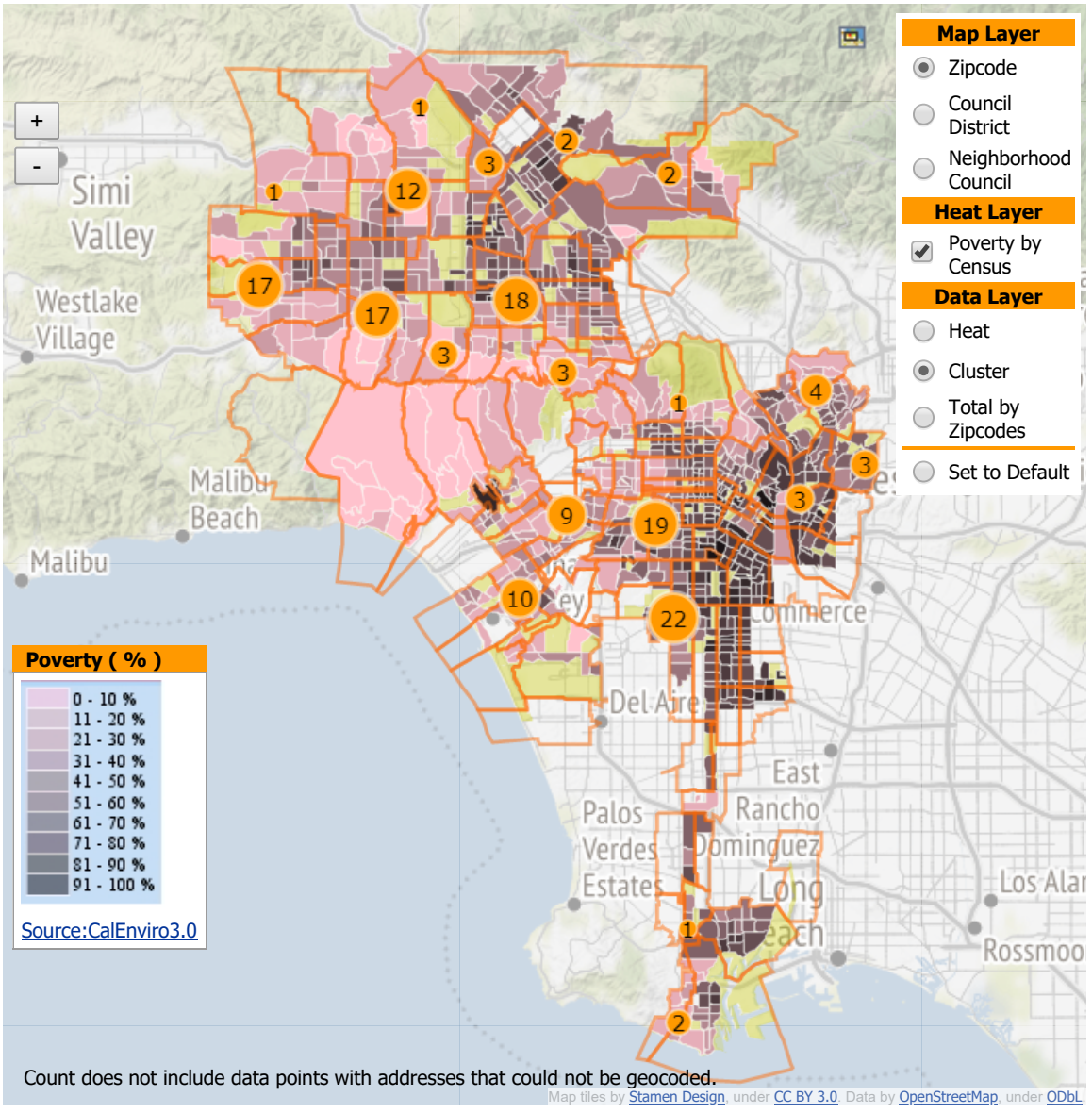
LADWP EMDI - Customer Incentive Programs/Services

RESPONSIBLE MANAGER:Terrence McCarthy

REPORTING PERIOD: Nov 2018 - Apr 2019

Turf Removal Rebates

LADWP provides turf removal rebates to residential and commercial customers that replace turf with California Friendly and native plants. In addition to adding mulch, increasing permeability and grading to capture rain water, customers are encouraged to create sustainable landscapes that maximize the benefits of the air, water and soil relationship. The program is a great way for customers to save money and, more importantly, save water.



LADWP EQUITY METRIC – *Turf Removal Rebates (Water System)*

RESPONSIBLE MANAGER: Terrence McCarthy **REPORTING PERIOD: January 2018 – April 2019**
EQUITY CORE CATEGORY:

1. NARRATIVE / BACKGROUND

As part of its 2015 Urban Water Management Plan, LADWP adopted ambitious long-term goals of reducing per capita use by 22.5 percent by 2025 and 25 percent by 2035. To help meet these goals, LADWP offers a generous turf removal rebate to encourage customers to switch to sustainable landscaping by installing California friendly plants and capturing rainwater.

In July 2018, Metropolitan Water District (MWD) resumed funding to member agencies to encourage turf replacement. LADWP adopted the "Turf Replacement Program" name in continuity with MWD's naming convention. In April 2019, MWD doubled their financial contribution toward each square foot of turf removed.

2. CRITERIA

- Residential Turf Removal Rebate:
  Before 04/01/2019
  - $2.00 per square foot (up to a maximum of 1,500 square feet)

  After 04/01/2019
  - $3.00 per square foot (up to a maximum of 5,000 square feet)
- Commercial Turf Removal Rebate
  Before 07/01/2018
  - $1.00 per square foot for 250 to 10,000 square feet removed
  - $0.50 per square foot for 10,001 to 43,560 square feet removed

  Between 07/01/2018 and 04/01/2019
  - $2.00 per square foot for 250 to 10,000 square feet removed

  After 04/01/2019
  - $3.00 per square foot for 250 to 50,000 square feet removed
  - $1.00 per square foot for 50,001 to 7 acres removed

3. ACHIEVEMENTS

- Residential Turf Removed
  - 657,760 square feet of turf
- Commercial Turf Removed
  - 53,544 square feet of turf

4. ISSUES

- None

5. OUTREACH STRATEGY / PLAN

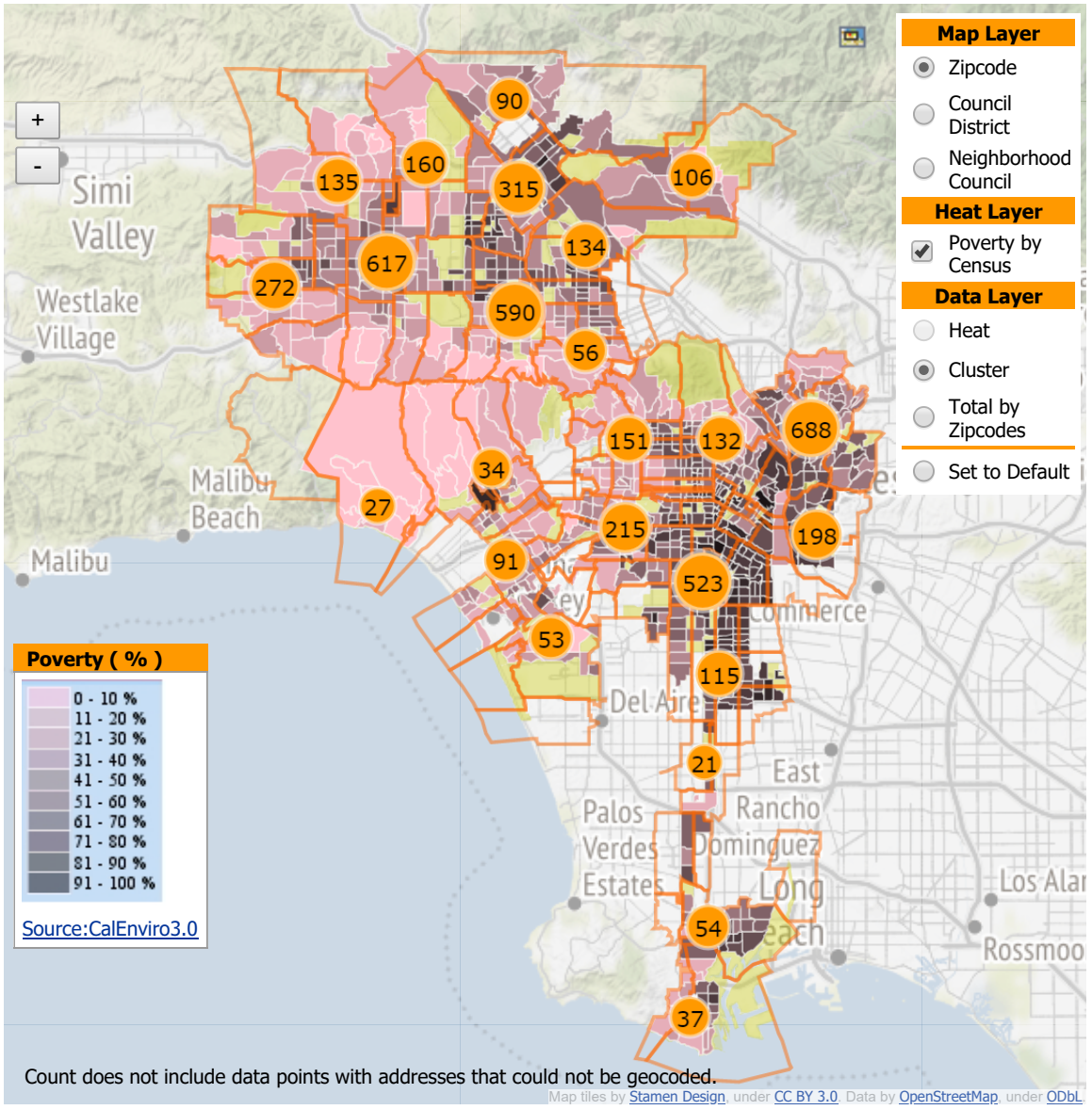
- In addition to providing continued messaging through the Save the Drop campaign, LADWP sponsors community partnership grants for non-profit organizations to promote outdoor water conservation through pilot sustainable landscape maintenance classes and videos promoting sustainable landscaping practices.
- LADWP authorized work to begin on nine 2-day Hands on Workshops providing education to customers on how to remove turf, grade for rainwater capture, group plants together based on watering needs, and install drip irrigation. These classes will make it easier for customers to transform their existing turf into sustainable landscapes.
- LADWP offers planting templates, individual plant profiles and virtual tours of sustainable landscaping. The newly added Lawn-to-Garden Transformation Section provides customers with design suggestions and installation instructions.
- LADWP adopted the program name "Landscape Transformation Program" in continuity with MWD's naming convention and public outreach campaign which started on July 1st.

LADWP EMDI - Customer Incentive Programs/Services

RESPONSIBLE MANAGER:Craig Tranby REPORTING PERIOD: Nov 2018 - Apr 2019

Tree Canopy Program

Continuing its extensive tree planting involvement since 1998, LADWP recently signed an agreement with the Los Angeles City Plants program to fund 42,000 additional trees to be planted throughout the City of Los Angeles over the next two years. City Plants addresses the low tree canopy cover in the City, which averages 21%, well below the national average of 27%.
The numbers shown on the map are the number of trees planted by geographic area.



LADWP EQUITY METRIC – *Tree Program – City Plants (Joint)*

RESPONSIBLE MANAGER: Craig Tranby **REPORTING PERIOD: 10/18 – 4/19**
EQUITY CORE CATEGORY: Customer Incentive Program/Services

1. NARRATIVE / BACKGROUND

This program is critical to achieving the cumulative 15 percent energy savings target for LADWP adopted by the Board, as it allows LADWP to partner with City Plants to prioritize and accelerate implementation of energy savings opportunities through tree planting. City Plants focuses on low-canopy communities, promoting healthy living and creating jobs. In addition, the LADWP partnership has focused on potential energy savings resulting from trees shading buildings.

2. CRITERIA

- City of Los Angeles residents and businesses are eligible for free trees
- Trees are selected and located to maximize energy savings and minimize water use
- Includes both street trees and yard trees
- Low canopy and low-income areas targeted
- Coordinates with LADWP Community Affairs and Council Offices to schedule distribution events in areas of need

3. ACHIEVEMENTS

- Successfully completed 2017-18 MOU; in approval process 2019-21 MOU.
- Over 42,000 trees were planted/distributed under 2017-18 MOU, with a similar amount planned for the new MOU.
- Program continues to leverage CalFire grants to fund watering, pavement cuts, and additional plantings. LASan recently received one for $1.5 million using LADWP trees as a match.
- Energy savings of about 6 GWh annually
- Many successful tree planting events involving communities throughout the City

4. ISSUES

- City has hired City Forest Officer to lead on planning better urban forest management and to coordinate efforts among City departments and partners.
- Disease, particularly shothole borer related, remains a central concern among urban forest professionals. The local USFS research center continues to focus research on the problem and potential mitigations.
- Easy opportunities for placing trees have become less frequent. Additional marketing and data-driven efforts have begun.

5. OUTREACH STRATEGY / PLAN

- Developed new co-branded collateral and event materials with LADWP
- Coordination with LADWP efficiency programs and outreach grantees
- Coordination with partners and elected offices
- Events
- Website/Social Media
- Advertising
- Canvassing

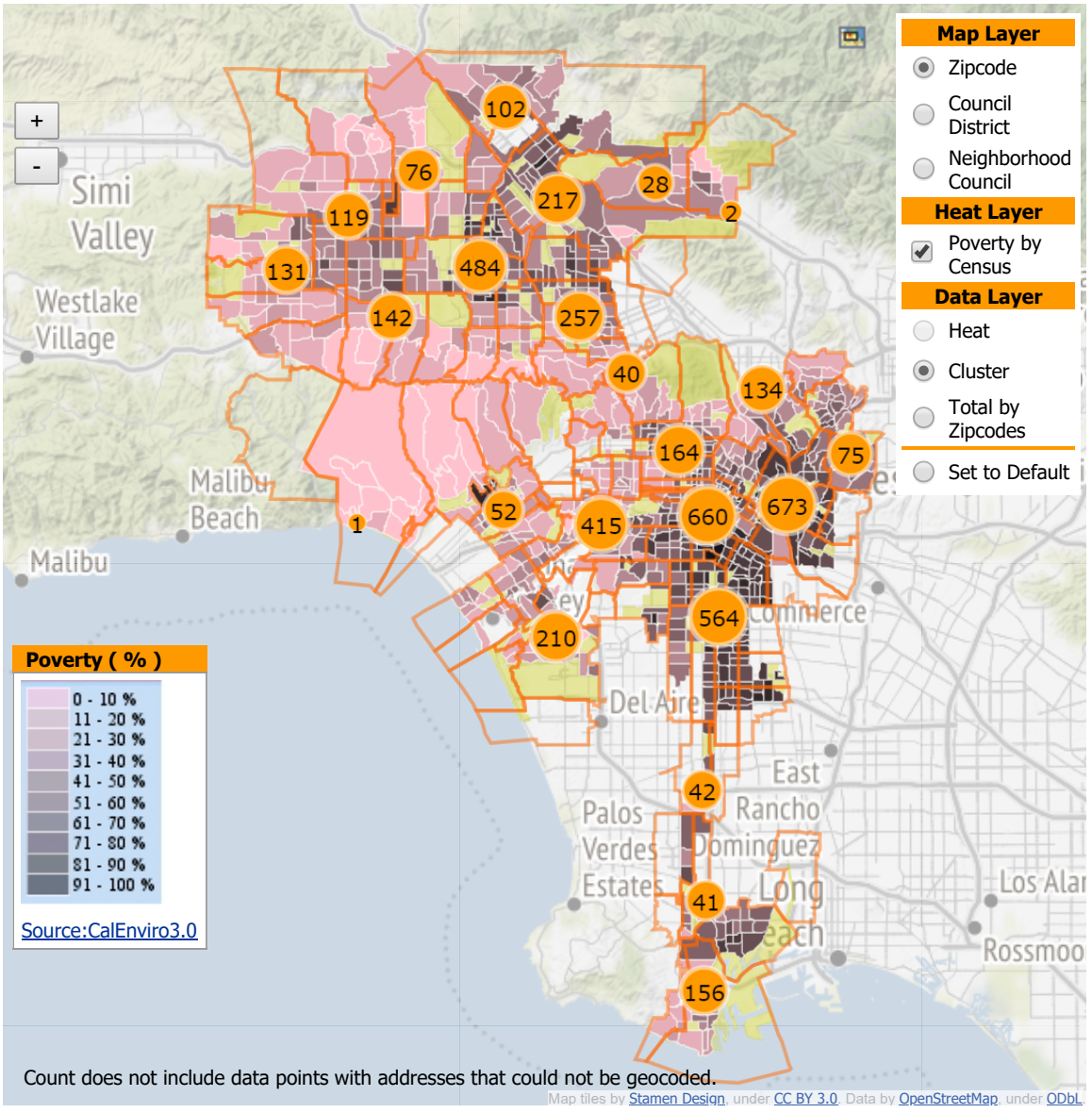
LADWP EMDI - Customer Incentive Programs/Services

RESPONSIBLE MANAGER:Victoria Black

REPORTING PERIOD: Nov 2018 - Apr 2019

Commercial Direct Install

LADWP's Commercial Direct Install Program is available to qualifying businesses whose average monthly electrical demand is 200 kilowatts (kW) or less. After an energy and water use assessment is made, energy and water saving equipment is installed at the business at no cost to the business owner.
The numbers shown on the map are the number of commercial customers participating in the program by geographic area.



LADWP EQUITY METRIC – *Commercial Direct Install (Joint)*

RESPONSIBLE MANAGER: Victoria Black **REPORTING PERIOD: FY18/19 (110118 – 043019)**
EQUITY CORE CATEGORY: Customer Incentive Programs EQ KPI ID 14

1. NARRATIVE / BACKGROUND

This program is a direct install program that offers business customers in the LADWP territory free lighting and water retrofit products and services to improve the energy and water efficiency. LADWP partners with Southern California Gas Company (SCG) to offer a tri-resource efficiency program aiming to reduce the use of electricity, water and natural gas.

2. CRITERIA

- Target market is commercial customers
- LADWP electric account holder in good account status
- Monthly usage 250kW or lower

3. ACHIEVEMENTS

FY 18/19 (11-01-18 to 04-30-19)

- Savings 49,067,314 kWh
- Savings 8,549 kW
- Savings 7,890 HCF
- 4,440 businesses completed

4. ISSUES

- Expectations of business customers (wanting what the program does not offer)
- Projects exceeding the cost versus expected savings baseline

5. OUTREACH STRATEGY / PLAN

- Outbound Canvassing - Existing Community Based Organizations (CBO) and other community organizations market the program and its availability to LADWP business customers
- Flyers – Program flyers are distributed via outbound canvassing, community events support, and any other appropriate outreach channel likely to build program awareness
- Website – Program information in English and Spanish is available on the LADWP website
- New lighting product technology is frequently introduced and evaluated for review and approval for inclusion to the existing approved measures

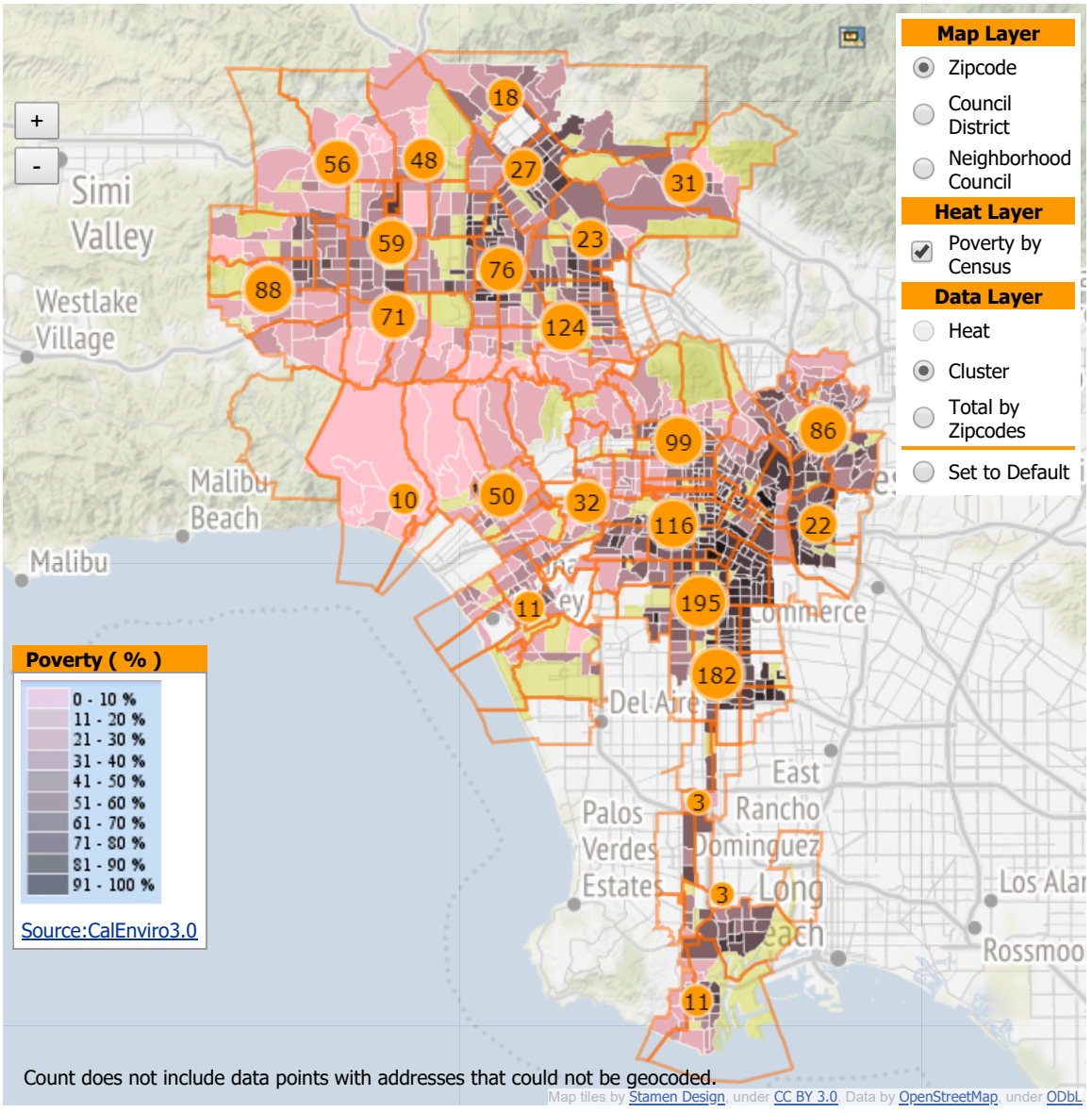
LADWP EMDI - Customer Incentive Programs/Services

RESPONSIBLE MANAGER:Victoria Black

REPORTING PERIOD: Nov 2018 - Apr 2019

Home Energy Improvement

The Home Energy Improvement Program (HEIP) offers LADWP residential customers the opportunity to improve the energy and water performance in their homes, which can improve their comfort level and potentially reduce their energy and water cost.
The numbers shown on the map are the number of residential customers participating in the program by geographic area.



LADWP EQUITY METRIC – *Home Energy Improvement (Joint)*

RESPONSIBLE MANAGER: Victoria Black **REPORTING PERIOD: FY18/19 (110118 – 043019)**
EQUITY CORE CATEGORY: Customer Incentive Programs EQ KPI ID 8

1. NARRATIVE / BACKGROUND

This program is a comprehensive direct install whole-house retrofit program that offers residential customers a full suite of free products and services to improve the energy and water efficiency in the home by upgrading/retrofitting the home's envelope and core systems. While not limited to low-income customers, HEIP's priority is to serve LADWP's neediest customers.

2. CRITERIA

- Target market is residential customers
- LADWP electric account holders

3. ACHIEVEMENTS

FY 18/19 (11-01-18 to 04-30-19):

- Savings 2,447,477 kWh
- Savings 18,082 HCF
- 1,467 homes completed

4. ISSUES

- Trust – (A portion of customers do not believe the program is free)
- Landlord refusal to allow participation
- Low participation in multi-residential buildings
- Condition of the home (Asbestos, Mold, etc.)
- Presence of hazardous material
- Lack of Saturday field appointments
- Staff shortage with the HEIP Field Team causes delay in scheduling assessments and completing installations

5. OUTREACH STRATEGY / PLAN

- Direct Mail – Mail batches are created according to council district and zip code and delivered to our vendor for mailing
- Flyers – Program flyers are distributed via direct mail, utilized for community events support, distributed to council districts for reach constituent centers, and any other appropriate outreach channel likely to build program awareness
- Website – Program information in English and Spanish, including the HEIP application is available on the LADWP website
- Hotline – A toll-free program hotline and email address is available for customers to have access with HEIP personnel
- Program Outreach & Community Partnership Program – Some of the grantees that participate in the POCP program provide services to hard-to-reach customers that help them participate in the HEIP program
- Redesign of HEIP Application to target the Property Owner of Multi-residential buildings and a separate HEIP Application for properties that are single family homes up to four units

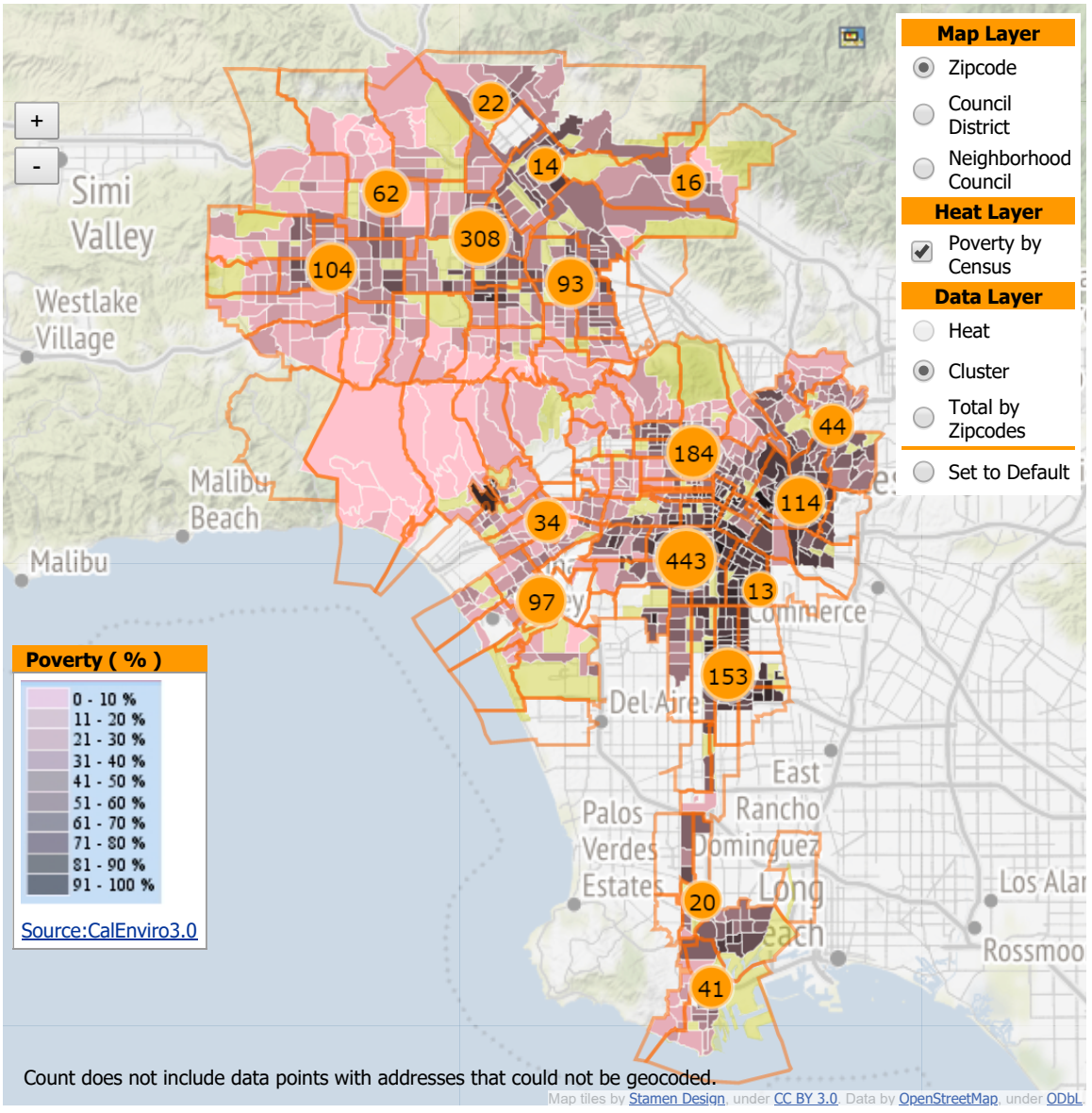
LADWP EMDI - Customer Incentive Programs/Services

RESPONSIBLE MANAGER:Victoria Black

REPORTING PERIOD: Nov 2018 - Apr 2019

Refrigerator Exchange Program

The LADWP's Refrigerator Exchange Program provides new energy-saving, ENERGY STAR® rated refrigerators in exchange for qualified older model refrigerators, free of charge.
The numbers shown on the map are the number of refrigerators provided by geographic area.



LADWP EQUITY METRIC – *Refrigerator Exchange Program (Joint)*

RESPONSIBLE MANAGER: Victoria Black **REPORTING PERIOD: FY 18-19 (through 04/30/19)**
EQUITY CORE CATEGORY: Customer Incentive Programs/Services

1. NARRATIVE / BACKGROUND

Refrigerator Exchange Program (REP) is a free refrigerator replacement program designed to target customers that qualify on either LADWP's Low-Income or its Senior Citizen/Disability Lifeline Rates. The program was expanded to include the following entities, multi-family and mobile home communities, civic, community, faith-based organizations as well as educational institutions. This program leverages a 3rd Party Contractor, ARCA (Appliance Recycling Centers of America), to administer the delivery of the program and provides energy efficient refrigerators for these customer segments to replace older, inefficient, but operational models.

2. CRITERIA

a) Targeted Sectors:

- Residential
- Multi-family
- Nonprofit

b) Program Qualifications:

- Must be a LADWP customer in good standing
- Be a LADWP residential customer on the Low Income or Lifeline Discount rate or
- Be a qualifying multi-family unit in which the property owner owns the refrigerator unit or a mobile home community
    - Multi-Family Property must be owned or rented in accordance with policies for Affordable Housing in use by the Los Angeles Housing Department, or
    - A minimum of 50% of residents must be income qualified or
- Be a qualified:
    - Civic Organization
    - Community Organization
    - Faith-Based Organization
    - Educational Organization

c) Unit Criteria:

- In order to qualify the unit must meet the following criteria:
    - Located in the LADWP service territory
    - Owned by qualified recipient
    - Be at least 10 years old
    - A minimum of 14 cubic feet
    - In working condition
    - Used as the primary unit
    - Be plugged into a properly grounded outlet

d) Market Penetration:

- As of April 30, 2019, there were approximately 151,043 customers who are receiving services on a qualifying rate schedule (low income or lifeline) who may have qualifying units.

3. ACHIEVEMENTS

- The program reached the milestone of being in existence for 11 years
- Since program inception, May 1, 2007, to, April 30, 2019, a total of 128,650 refrigerators were exchanged for a savings of 103,521,668 kWh.
- Initiated a direct mailing campaign which will span over 12-months. Postcards will be mailed to potential participants (on qualified rate, who may have qualifying units, who have not participated in the program) in batches of 37,000 per quarter.
- Participated in discussion with representative from LA Housing and Community Investment Department regarding collaborating with other stakeholder groups (LA Better Buildings Challenge, Social Association of Non-Profit Housing, as well as LADWP Non-Profit Grantees). The discussion focused on how the Refrigerator Exchange Program can be leveraged to provide refrigerators for multi-family dwellings.

4. ISSUES

- Lack of individual customer awareness of program
- Lack of multi-family property awareness of the program
- Trust, customer's skepticism of free offering
- Increased difficulty in achieving energy savings targets as the program matures, as the majority of the older refrigerators have been exchanged. The average age of refrigerators being exchanged continues to decrease, which lowers the savings realized from program participation (refrigerators manufactured 1993 and earlier consume significantly more energy than those manufactured after 1993)
- Program Inconveniences:
    - Customer must coordinate and be present for two separate site visits, pre-inspection and delivery
    - Refrigerator provided doesn't come with additional features i.e. ice maker, in door water dispenser, etc.
    - No color options

5. OUTREACH STRATEGY / PLAN

- Continued Marketing Campaigns via,
    - Reengagement of previous program applicants that ultimately cancelled their participation prior to receiving a new unit.
    - Direct Mailing
    - Customer Service Events
    - Bill On-serts
    - E-mail Blast
    - CBOs
    - Neighborhood Council Newsletters
    - Community Events
    - Social Media Networks (Facebook, Twitter, etc.)
    - Additional Marketing, as appropriate
- Use of program to educate customers on energy efficiency and of the added expense an environmental impacts of both inefficient and possessing additional refrigerators and/or freezers

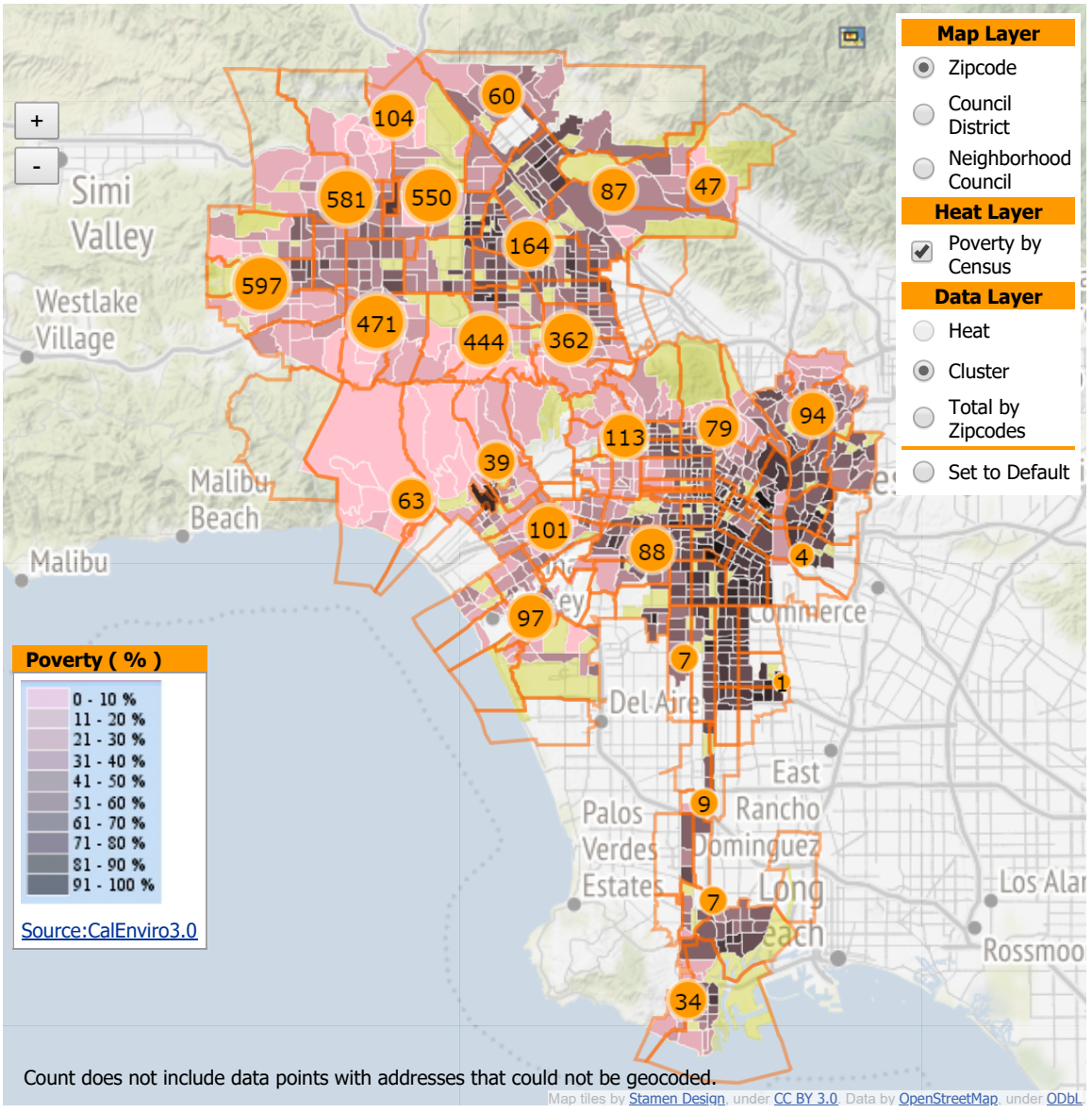
LADWP EMDI - Customer Incentive Programs/Services

RESPONSIBLE MANAGER:Victoria Black

REPORTING PERIOD: Nov 2018 - Apr 2019

Consumer Rebate Program

LADWP offers the Consumer Rebate Program (CRP) to our residential customers to promote the use of energy-efficient products. This program is designed to both educate and encourage LADWP residential customers to purchase and install qualifying products in their home.
The numbers shown on the map are the number of rebates provided by geographic area.



LADWP EQUITY METRIC – *Consumer Rebate Program (Joint)*

RESPONSIBLE MANAGER: Victoria Black **REPORTING PERIOD: Nov 2018 – April 2019**
EQUITY CORE CATEGORY: Customer Incentive Program

1. NARRATIVE / BACKGROUND

The Consumer Rebate Program (CRP) encourages LADWP residential customers to purchase and install qualifying energy efficient products in their home. The CRP offers rebates on comprehensive energy efficiency measures, including whole house solutions, performance standards and opportunities for integration. The CRP rebates reduces the cost for customers who need to purchase either a single measure or multiple measures by encouraging the adoption of energy-efficient choices when purchasing and installing household equipment. This is carried out by offering customers educational materials about energy efficiency options, rebates and other incentive offerings.

2. CRITERIA

- Target market is all residential customers
- Customers who purchase and install qualifying equipment are eligible to participate

3. ACHIEVEMENTS

- The program is meeting the energy savings goals
- The program is within budget
- All complete, approved application rebates consistently paid out within 30 days from date of approval for the past 6 months
- Addition to administrative support staff has improved CRP application processing
- Paid 5,878 rebates with energy savings of 5.3 GWH
- Implemented customer notification process Q1 2019

4. ISSUES

- Lack of automated customer notification system for the purpose of expediting response to customer inquiries for applications submitted by mail
- High number of incomplete applications from customers
- Lack of customer knowledge of product eligibility
- Lack of education for contractors regarding application packet submissions criteria

5. OUTREACH STRATEGY / PLAN

- Current outreach strategy to increase customer awareness of the program consists of utilizing LADWP website, email blast, customer contact, service center, Consumer Rebate Program staff, trade events, and LADWP sponsored events.
- Future outreach strategy may include partnering with big box stores to promote rebate-eligible products
- Utilize LADWP customer facing facilities to advertise and promote the Consumer Rebate Program

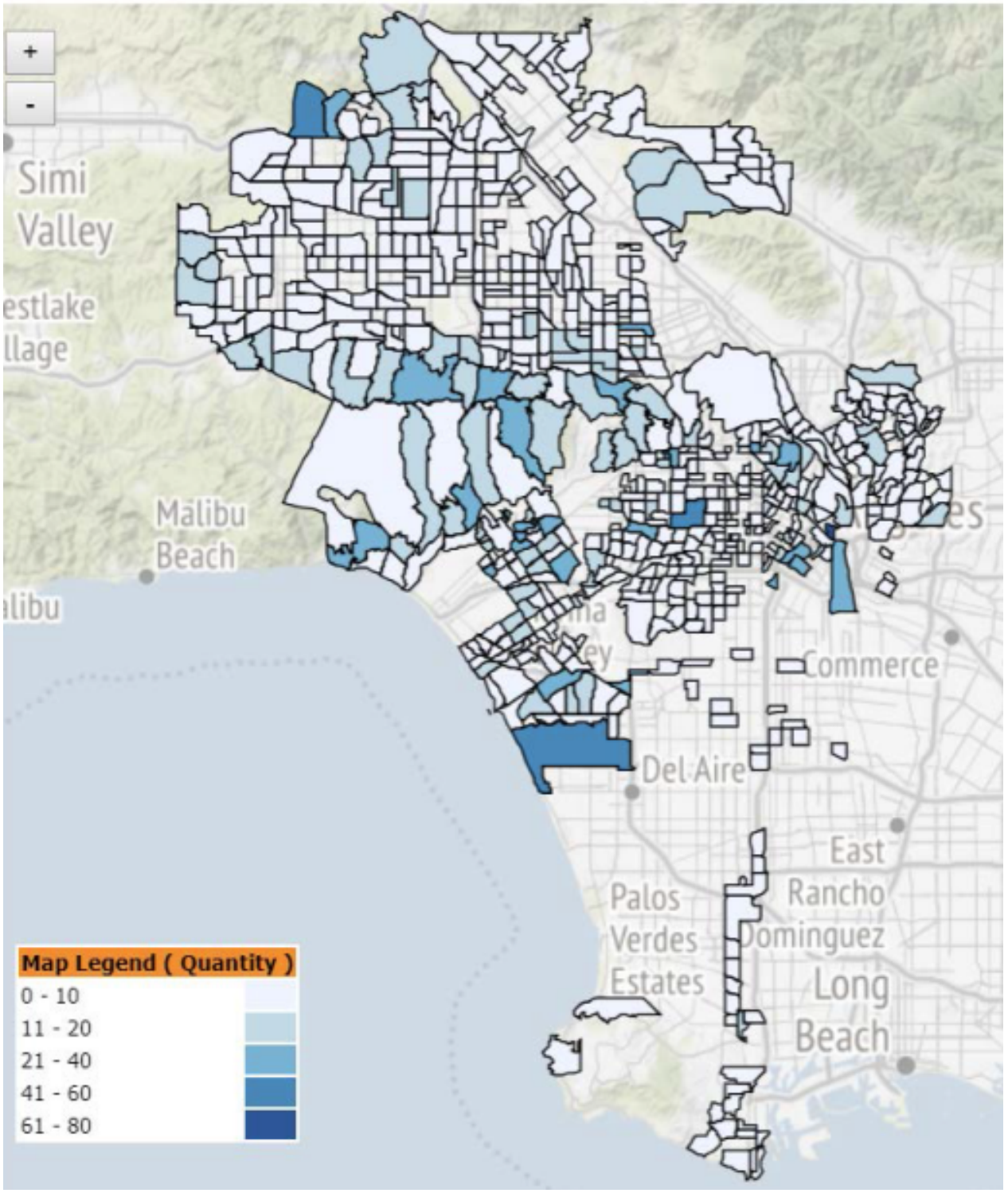
LADWP EMDI - Customer Incentive Programs/Services

RESPONSIBLE MANAGER:Scott Briasco

REPORTING PERIOD: Apr 2019

Electric Vehicle Infrastructure

LADWP introduced the Electric Vehicle Charger Rebate Program, "Charge Up L.A.!" to encourage the installation of convenient electric vehicle (EV) charging stations at residential and commercial locations in order to support the purchase and the use of EVs. Under the CEC grant project, 185 publically accessible chargers were installed at different city agency facilities (LADOT, LAPD, LAPL, and LAWA). In addition, LADWP has 100 public charging stations at various facilities including 41 pole-mounted charging stations, to ensure that EV drivers have equitable access to EV charging across LADWP territory, with more installations planned or in the works. There is also currently an effort to install 200 curbside chargers for the City's disadvantaged community EV Car Sharing program, BlueLA, of which 115 chargers in 23 locations have been installed.



LADWP EQUITY METRIC – *Electric Vehicle Infrastructure (Power)*

RESPONSIBLE MANAGER: Scott Briasco
Power Planning, Development, and Engineering Division
EQUITY CORE CATEGORY: Customer Incentive Programs/Services

REPORTING PERIOD: April 2019

1. NARRATIVE / BACKGROUND

Source data: Jobs M5014, M5015, M5020, M5021, and P6059
(KPI No. 05.03.03.04)

- In support of LA's Sustainable City pLAn 2019 and LADWP's Clean GRID LA plan, the Electric Transportation Program seeks to promote the adoption of electric vehicles (EV) in the City of Los Angeles and to ensure EV charging infrastructure is distributed equitably throughout the City of Los Angeles in collaboration with other City Departments and State Agencies.
- This program will facilitate EV adoption and usage to support LADWP's Integrated Resource Plan (IRP). According to LADWP's IRP, accelerating transportation electrification is the most impactful component of reducing overall Green House Gas (GHG) emissions.
- Infrastructure Goal: 10,000 commercial chargers in the City of Los Angeles by 2022 through the Los Angeles Department of Water and Power's (LADWP) *Charge-Up LA!* Rebate Program. This includes public, workplace, and multi-unit dwelling (MUD) chargers. Of those chargers, 4,000 will be on City property.
- Off-peak charging is encouraged through Time of Use (TOU) rates. LADWP is developing a residential smart EV charging pilot to incentivize customers not on the TOU rate to charge at off-peak times.
- Promote EV adoption through incentives, customer education, outreach, and "ride and drive" events.
- Provide positive customer experience to encourage purchasing an EV through a seamless and positive process.
- Maintain the utility grid integrity.

2. CRITERIA

- Install, or support the installation of, EV charging stations including public, workplace, and fleet chargers at City and LADWP locations using a combination of rebates and funds from the sale of Low Carbon Fuel Standard (LCFS) credits.
- Residential: LADWP's residential EV charger rebate program provides residential customers up to $500 per installed charger and an extra $250 for a dedicated TOU meter.
- Commercial: LADWP's commercial EV charger rebate program provides commercial customers up to $5,000 per installed charger for up to 40 chargers per property. The rebate amount was increased as of July 1, 2018. This applies to public, workplace, and MUD.
- Rebate Terms and Conditions determine eligibility: 1) Level 2 charger (with J1772 connector if commercial); 2) Nationally Recognized Testing Laboratory (NRTL) approved charger
- Used EV: LADWP's Used EV rebate pilot program provides residents in LADWP service territory up to $450 towards the purchase of a qualifying used electric vehicle or plug-in hybrid electric vehicle.
- Medium and Heavy Duty EV Fleet: LADWP's Charger Rebate program will provide a rebate to medium and heavy duty customers. The rebate amount is to be determined based on vehicle type and charging infrastructure used.
- Collaborate with all LA City agencies, creating partnerships which enable the installation of more EV chargers through a combination of grants, rebates, and LCFS funds.
- Administer agreements between third party EV Supply Equipment (EVSE) service providers and LADWP properties.

- Site selection for the installation of new EV chargers are made based on an evaluation of electrical capacity, available parking, and operational considerations. Sites located in CalEnviroScreen designated disadvantaged communities are given greater priority where possible.

3. ACHIEVEMENTS

Commercial Charger Installations:

FYTD as of:	Target	Actual	Variance		Re-Estimate
			Unit	%	
18-Jul	59	21	(38)	**-64%**	
18-Aug	118	120	2	**2%**	
18-Sep	177	120	(57)	**-32%**	
18-Oct	236	227	(9)	**-4%**	
18-Nov	295	449	154	**52%**	
18-Dec	354	501	147	**42%**	
19-Jan	413	650	237	**57%**	
19-Feb	472	744	272	**58%**	
19-Mar	531	847	316	**59%**	
19-Apr	591	1019	428	**72%**	
19-May	651				
19-Jun	711				

Rebates Issued:

FYTD as of:	Used EV	Residential	Commercial	Total
18-Jul		62	114	176
18-Aug	10	177	289	476
18-Sep	24	261	289	574
18-Oct	31	296	383	710
18-Nov	61	361	595	1017
18-Dec	75	464	647	1186
19-Jan	91	525	781	1397
19-Feb	109	594	844	1547
19-Mar	131	716	941	1788
19-Apr	131	716	1098	1945
19-May				
19-Jun				

Attachment A indicates the quantity of rebates issued and total charging stations rebated per zip code since August 2013.

4. ISSUES

- The EV program was approved for seventeen (17) positions in FY 18/19. Fourteen (14) positions have been filled and three (3) are in the process of being filled. One (1) position is pending Neat Engineering Associate in Training placement. Two (2) positions are pending approval of the position description for electric vehicle charger maintenance.
- There was a delay in finalizing the terms and conditions for the commercial EV charger rebate and as a result, the rebate application was not made available until mid August 2018.
- Lengthy rebate process has delayed payments to customers. Many applications are received incomplete. However, it is improving now with further education and outreach. Currently in development, as part of additions being made to the commercial rebate program, are new fact sheets, FAQs, a completed application example and new website content. This is planned to be completed by the end of June 2019. Upgrades to website flow for customer ease of use are also in development in the 3rd Quarter of 2019.
- New Americans with Disabilities Act (ADA) requirements.
- Some LA City Departments do not budget for EV maintenance resulting in neglected faulty chargers. This creates a negative EV experience.
- Some customers cannot afford to front the initial cost of charger installations.
- Vandalism.
- Meter installation has been delayed on many projects which also creates a delay in approving rebate applications.

5. OUTREACH STRATEGY / PLAN

- Outreach efforts will include print collateral in customer centers, website content, social media posts, and ads in customer bills.
- EV program information will be presented to homeowner associations and at neighborhood council meetings.
- LADWP will participate in a minimum of 4 major EV Events including the National Drive Electric Week, LA Auto Show, and various other ride and drive events.

- LADWP will participate in at least 10 community events to promote electric transportation. Some events already attended by LADWP include the Watts National Drive Electric Week, Larchmont Family Fair, Prove It! campaign at Calvary Baptist Church and Centro De Vida Victoriosa, the Sherman Oaks Green and Beautification Committee meeting, BlueLA car sharing launch, the Earth Day event at Grand Park, Sherman Oaks Street Fair, Taste of Soul in Crenshaw, and various CicLAvia events.
- Membership in CalETC, CalStart, and Veloz to develop and implement critical incentives for our customers such as state EV rebates, and HOV lane access.
- Support legislation and policy through CalETC, CalStart, and Veloz to promote EV adoption.
- Customers can access LADWP's EV Rebate Program through LADWP.com/EV. Website improvements to be developed for an improved user experience.
- Improve outreach/public education portion of the Program through targeted marketing and a regional website working with other utilities and Original Equipment Manufacturers (OEMs). Outreach is done partially with the regional effort, and partially with DWP Communications, Marketing & Community Affairs.
- Work with agencies to market Air Quality Management District's (AQMD) modified Rule 2202 to support EV charging.
- Participate in the LA City EV Task Force to promote charging infrastructure installations on other City properties.

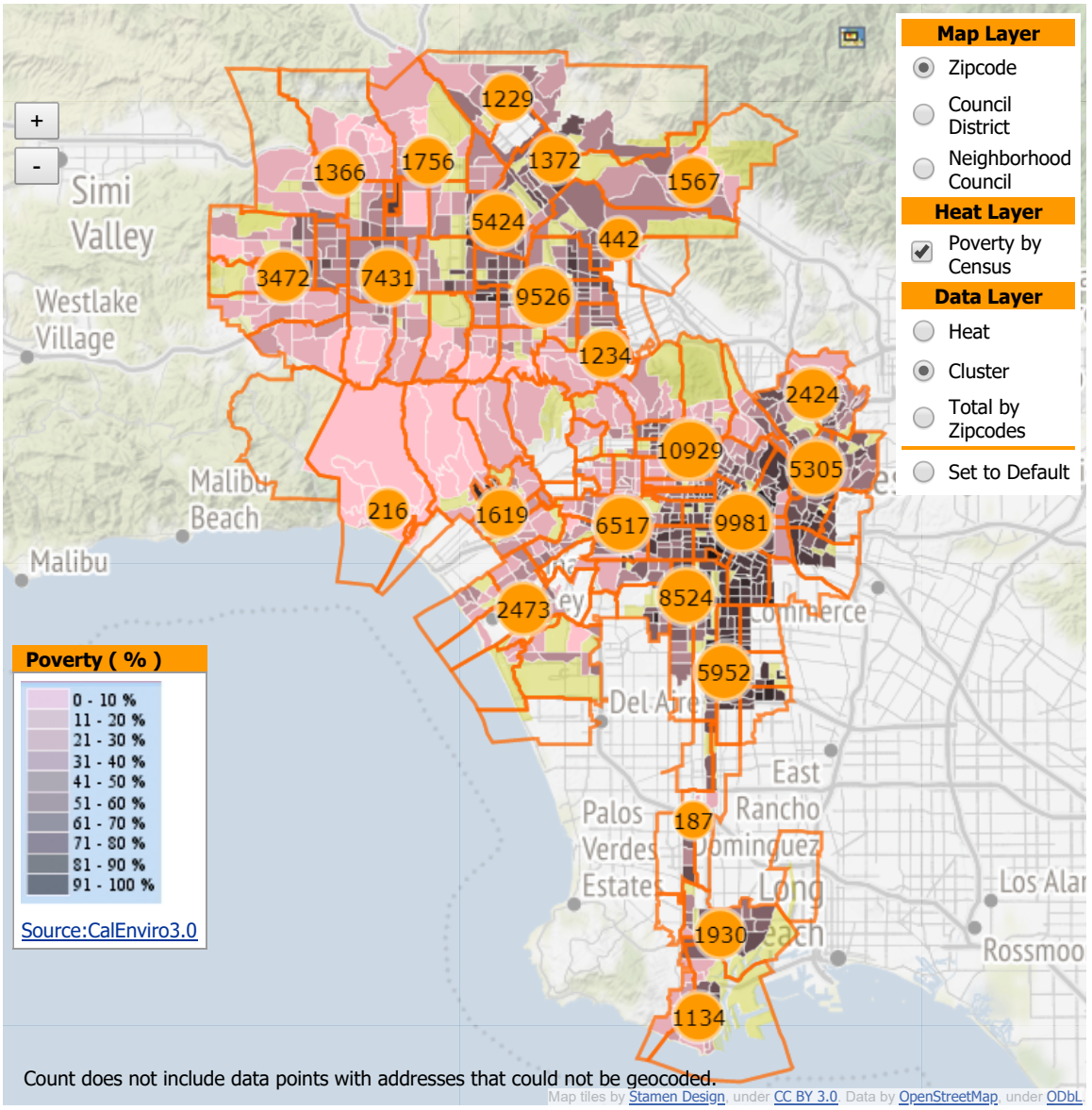
LADWP EMDI - Customer Incentive Programs/Services

RESPONSIBLE MANAGER:Nasim Ghaffari

REPORTING PERIOD: Run date as : 01 May 2019

Lifeline Discount Program

Lifeline Program: Customers who are 62 years of age or older or permanently disabled may qualify, based solely on their income, to have a discount applied to their electric and/or water bills.



LADWP EQUITY METRIC – *Lifeline Discount Metric*

RESPONSIBLE MANAGER: Nasim Ghaffari **REPORTING PERIOD: FY 2018-2019**
EQUITY CORE CATEGORY:

1. NARRATIVE / BACKGROUND

LADWP has partnered with the City of Los Angeles Office of Finance to offer customers who are 62 years of age or older or permanently disabled a discount on their electric and/or water bills. The program customers receive subsidies of $17.71 per month ($35.42 bi-monthly) for electricity and of $10.00 per month ($20.00 bi-monthly) water. Renters paying for electric service only, are eligible to receive the low income water subsidy credit. These programs are designed to make water and electricity more affordable for qualifying families.

2. CRITERIA

1) Residential customer within the City of Los Angeles
2) Either
    a. Senior Citizen - 62 years of age or older, or
    b. Disabled Citizen
3) Combined adjusted gross household income of less than $36,050 for the prior calendar year

**Applications are submitted directly to the City of Los Angeles Office of Finance.*

3. ACHIEVEMENTS

- As of April 2019, there are approximately 104,614 participants enrolled in the program
- The Office of Finance periodically reviews and increases the adjusted gross household income amount based on cost of living.

4. ISSUES

- Online application submission process can be challenging

5. OUTREACH STRATEGY / PLAN

Lifeline Applications can be obtained by the following:

- Mailed via contact with Customer Contact Center
- Online at LADWP.com and FINANCE.LACITY.org (available in both English and Spanish)
- Local community outreach events and at any of the 15 Customer Contact Centers
- Call Contact Center employees assist customers with program questions.

Future Plan:

- Increase outreach through governmental agencies
- Increase use of newer technology for faster application submission and approval.

LADWP EMDI - Customer Incentive Programs/Services

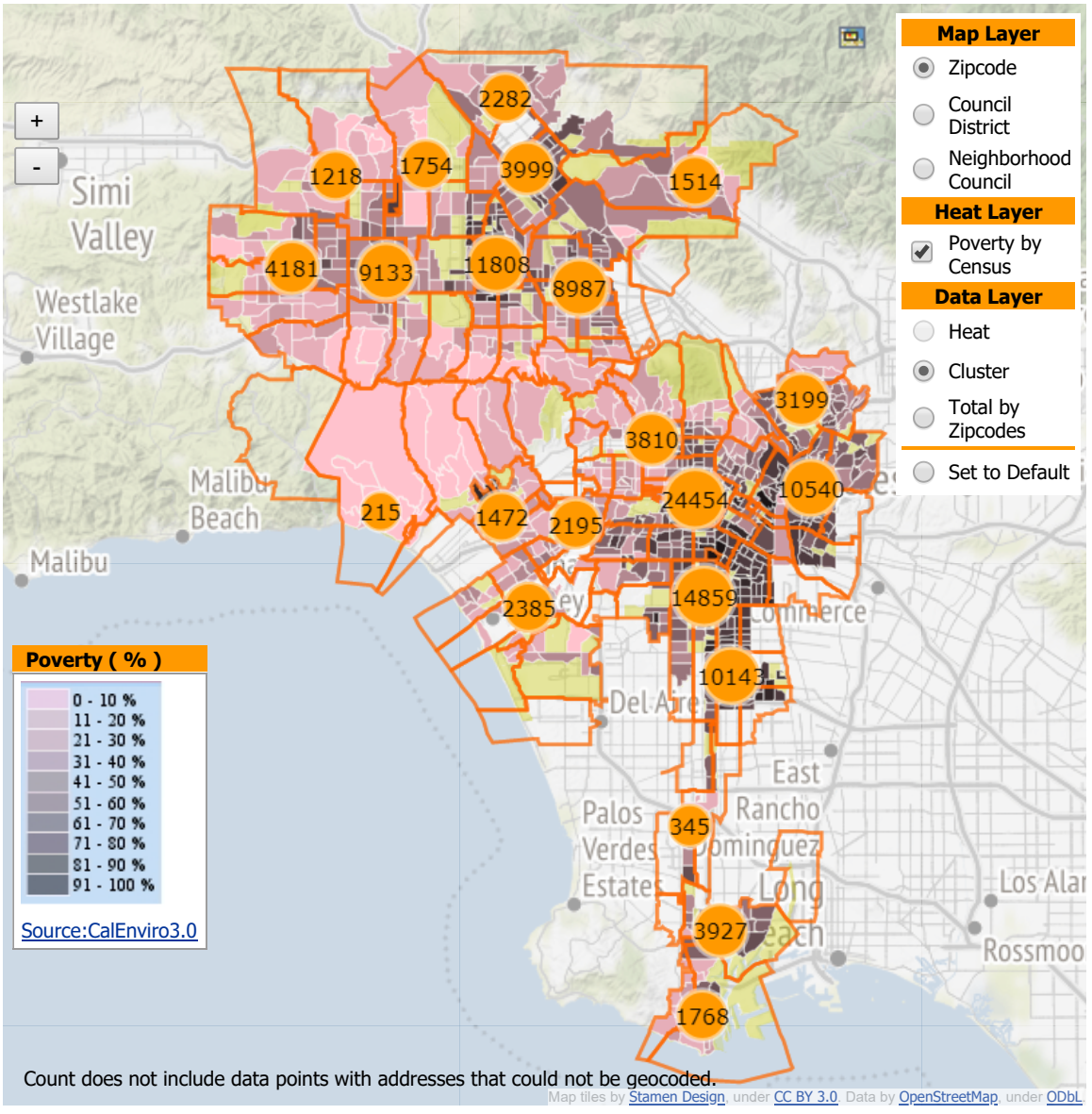
RESPONSIBLE MANAGER:Nasim Ghaffari

REPORTING PERIOD: Run date as : 01 May 2019

Low Income Discount Program

Low Income Program: Customers may qualify to have a discount applied to their electric and/or water bills based on their income and household size. Household Income Requirements Effective July 1, 2017

Members in Household	Maximum Annual Gross Income*
1	$32,480
2	$32,480
3	$40,840
4	$49,200
5	$57,560
6	$65,920
7	$74,280
8	$82,640
Each additional member:	Add $8,320 to income



Count does not include data points with addresses that could not be geocoded.

LADWP EQUITY METRIC – *Low Income Discount Metric*

RESPONSIBLE MANAGER: Nasim Ghaffari **REPORTING PERIOD: FY 2018-2019**
EQUITY CORE CATEGORY:

1. NARRATIVE / BACKGROUND

Since 1991, LADWP has offered a residential discount Low Income Discount rate, for customers with qualifying income levels. Program customers receive subsidies of $8.17 per month ($16.34 bi-monthly) for electricity and $5.00 per month ($10.00 bi-monthly) for water, increased by a $1.00 per month for additional occupants above three up to $10.00 a month. Renters paying for electric service only, are eligible to receive the low income water subsidy credit. The total annual Low Income subsidy is about $158. This is designed to make water and electricity more affordable for qualifying families.

2. CRITERIA

Income Guidelines*	
Household Size	**Income Eligibility Upper Limit**
1-2	$32,920
3	$41,560
4	$50,200
5	$58,840
6	$67,480
7	$76,120
8	$84,760
Each Additional Person	$8,640
* Effective July 1, 2018 to June 30, 2019	

3. ACHIEVEMENTS

- As of April 2019, there are approximately 124,414 participants enrolled in the program.
- Since 2008, the LADWP has increased the Low Income subsidy from 15% to 20%.

4. ISSUES

- Online applications have a longer processing duration
- Application submission tracking needs to be updated

5. OUTREACH STRATEGY / PLAN

Low Income Applications can be obtained by the following:

- Mailed via contact with Customer Contact Center
- Online at LADWP.com
- Local community outreach events and at any of the 15 Customer Contact Centers

Future Plan:

- Increase outreach through governmental agencies
- Increase use of newer technology for faster application submission and approval.

LADWP EMDI - Procurement

RESPONSIBLE MANAGER:Karyn Son REPORTING PERIOD: Nov 2018 - Apr 2019

LADWP's SBE/DVBE Program

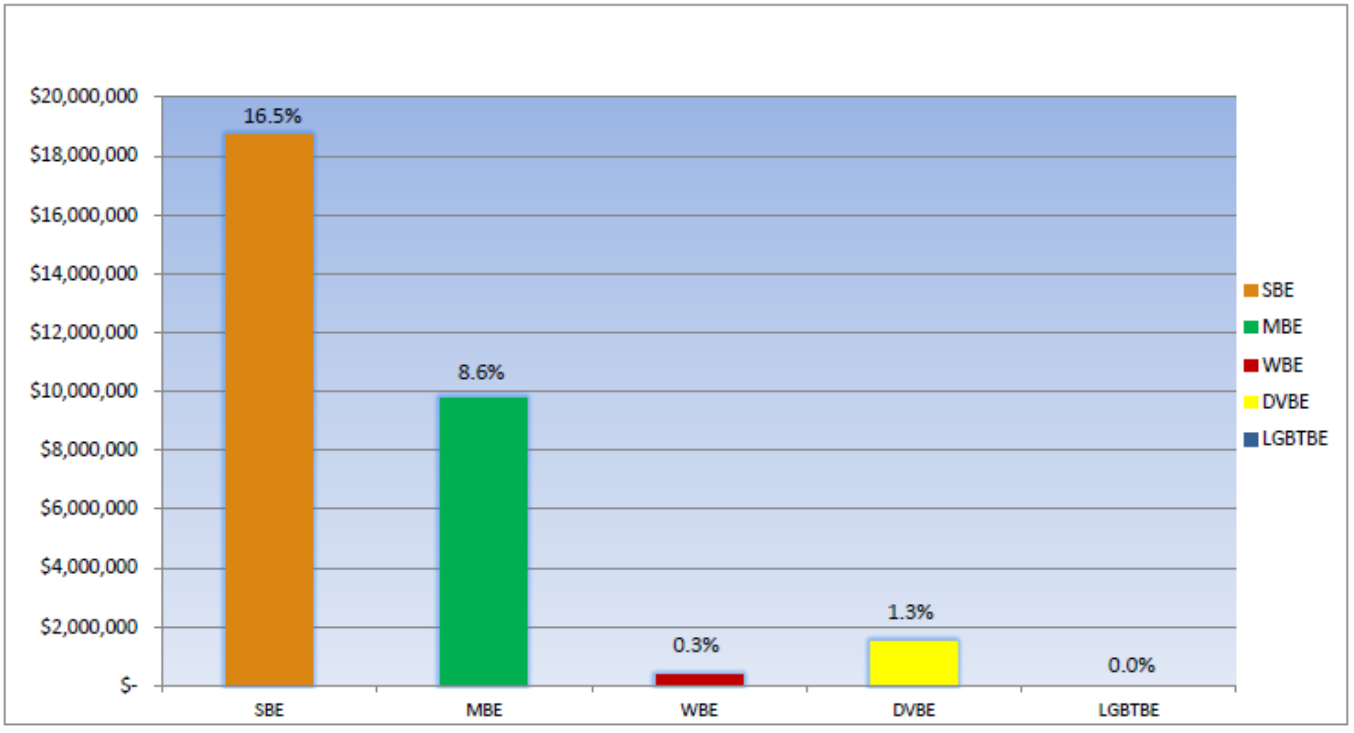
Commitment percentages based on Board-awarded contracts that had SBE/DVBE participation requirements.

Firms with multiple certifications are counted in each category in which they were certified.

Current data reflects a significant change from previous reports due to a correction made in source data.

NOVEMBER 2018 - APRIL 2019 Contract* Participation Commitments

MONTH/YR	Total Contract Amount Awarded*	PERCENTAGE OF COMMITMENTS BY CERTIFICATION STATUS**				
		SBE	MBE	WBE	DVBE	LGBTBE
Nov 2018	$ 450,000	45.0%	0.0%	10.0%	0.0%	
Dec 2018	$ 2,121,160	10.0%	0.0%	0.0%	40.0%	
Jan 2019	$ 18,800,000	24.3%	0.0%	0.0%	3.4%	
Feb 2019	$ -					
Mar 2019	$ 90,705,043	15.0%	10.7%	0.3%	0.0%	
Apr 2019	$ 1,110,000	5.0%	0.0%	0.0%	0.0%	
	$ 113,186,203	**16.5%**	**8.6%**	**0.3%**	**1.3%**	**0.0%**



*Contracts that had mandatory SBE/DVBE participation requirements.
Firms certified as both WBE and MBE are only counted once as either WBE or MBE; Firms certified as SBE and WBE or MBE are counted as SBE ***and* *WBE or MBE.*

LADWP EQUITY METRIC – *Contract Participation (Joint)*

RESPONSIBLE MANAGER: Karyn Son **REPORTING PERIOD: November 2018 –April 2019**
EQUITY CORE CATEGORY: Procurement

1. NARRATIVE / BACKGROUND

The SBE/DVBE Participation Program was adopted to ensure that all businesses have an equal opportunity to do business with the Los Angeles Department of Water and Power. This program is in conformance with the Mayor's Executive Directive No. 14, entitled the Business Inclusion Program.

This metric measures the achievement of SBE/DVBE Participation Program goals, which were set with an overall Department goal of 25% SBE participation and 3% DVBE participation.

This metric also measures the participation commitments of MBE/WBE/LGBTE firms in LADWP Board-awarded contracts.

2. CRITERIA

Mandatory SBE/DVBE participation requirements are set in all construction and service contracts valued over $150,000.

- Only certified SBEs and DVBEs count toward the fulfilment of the minimum mandatory requirement.
- Failure to meet the minimum mandatory SBE/DVBE participation requirement in bids or proposals results in a finding of non-responsiveness.
- Failure to achieve the requirement can result in penalties or termination of the contract.

3. ACHIEVEMENTS

- Contract participation commitment percentages November 1, 2018 through April 2019:
    - SBE 16.5%
    - DVBE 1.3%
    - MBE 8.6 %
    - WBE 0.3**%**
- Completed the *2018 Small Business Academy* at USC which was focused on the professional services sector. Thirty two small businesses successfully completed the 9-week sessions.
- Hosted the *Water System Major Construction Projects Networking Event*, highlighting upcoming Water System design-build contracting opportunities. The event schedule included presentations on the projects and an introduction to the Simplar procurement method followed by networking opportunities. Approximately 200 were in attendance at the event.
- Participation in 15 outreach events

4. ISSUES

Reporting is currently done manually as the procurement system does not currently capture the certification status of vendors nor does it capture subcontractor certification status and payment information.

5. OUTREACH STRATEGY / PLAN

2019 Objective for the Office of Small Business and Supplier Relations - To increase the participation of small, veteran, minority, women, LGBT, and local businesses in LADWP contracts by:

- Initiating a targeted outreach focused on LGBTBEs, including the inclusion of recognition of LGBTBE certification for procurements.
- Conducting a customer journey mapping analysis on the Express Procurement process to identify the obstacles local and diverse businesses face, in order to develop strategies to increase their participation.
- Initiating the LA Small Business Academy for class of 2019 focusing on the construction sector.
- Attending 24 outreach events per year.

New Hires/Promotions Demographic Composition

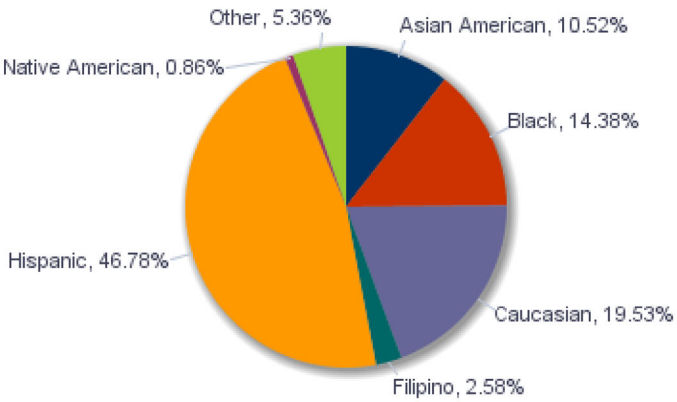
Hiring and Promotions by Ethnic Group

	New Hires		Promotion	
Ethnic Group	F	M	F	M
Asian American	20	29	33	82
Black	25	42	44	55
Caucasian	9	82	32	185
Filipino	6	6	21	30
Hispanic	35	183	59	194
Native American	1	3		3
Other	11	14	6	15
Grand Total	**107**	**359**	**195**	**564**

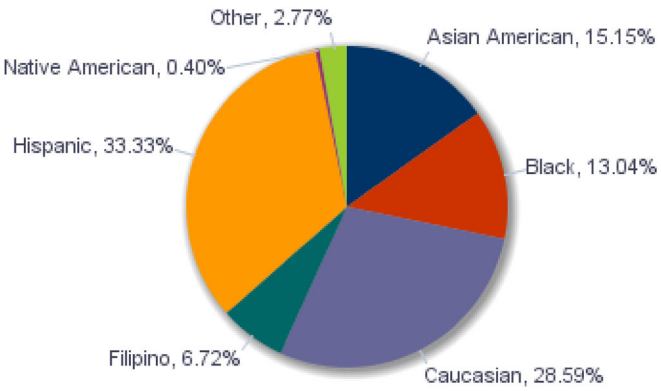
Hiring and Promotions by Gender

Gender	New Hires	Promotion
F	107	195
M	359	564
Grand Total	**466**	**759**

Hiring and Promotions by Ethnic Group

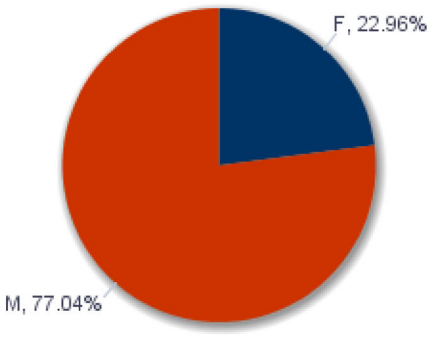


New Hires Employee Counts

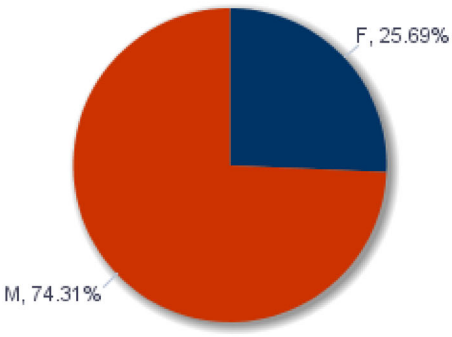


Promotion Employee Counts

Hiring and Promotions by Gender



New Hires Employee Counts



Promotion Employee Counts

LADWP EQUITY METRIC – *New Hire/Promotion Demographic Composition (Joint)*

RESPONSIBLE MANAGER: Shannon C. Pascual
EQUITY CORE CATEGORY: Employment
REPORTING PERIOD: November 2018 – April 2019

1. **NARRATIVE / BACKGROUND**
   This provides a demographic breakdown of our new hires and promotions to better understand the representation of various demographic groups within our workforce.

2. **CRITERIA**
   - Ethnicity
   - Gender

3. **ACHIEVEMENTS**
   - Interviewed engineering students and professionals at the national and regional conferences of the Society of Women Engineers (SWE), the Society of Hispanic Professional Engineers (SHPE), and the National Society of Black Engineers (NSBE), and at the Black Engineer of the Year Award annual conference.
   - LADWP will conduct interviews at the Grace Hopper Celebration (GHC) annual conference in October. GHC is the world's largest gathering of women technologists.
   - Los Angeles Trade Technical College (LATTC) completed the development of an on-line electricity course, which will meet requirements for various targeted Power System skilled craft classifications. This class will be available to high school and community college students.

4. **ISSUES**
   - Lack of gender and ethnic diversity in the engineering and skilled craft classifications.

5. **OUTREACH STRATEGY / PLAN**
   Special recruitment activities include on-site interviewing for engineering classifications at national and regional conferences for the following organizations:
   - SWE
   - NSBE
   - SHPE
   - BEYA annual conference
   - GHC annual conference

   College recruitment will continue to include traditionally African-American colleges and universities, and local diversity-specific events, such as SWE, SHPE, and NSBE Meet the Industry events.

   HR Staff will continue to partner with various organizations, including:
   - LAUSD and other school districts to establish recruitment and outreach activities at various local high schools for LADWP skilled craft classifications;
   - The Los Angeles Community College District (LACCD) and other local community colleges to establish recruitment and outreach activities for interested students to learn about targeted skilled craft classes;
   - Women in Non-Traditional Employment Roles (WINTER) and Tradeswomen, Inc. to work toward an event for women in the trades;
   - Women in Non-Traditional Employment Roles (WINTER) to enhance our recruitment strategies for recruiting female candidates into Water and Power skilled craft classifications;
   - LADWP Marketing Division to increase advertising opportunities and outreach on social media (Facebook, Instagram, Spotify).