OLIVER WYMAN

Los Angeles Department of Water & Power

FUNCTIONAL TOTAL COST STUDY

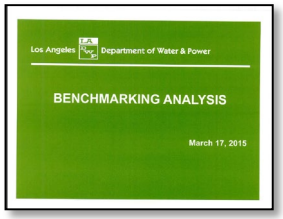
PRESENTATION TO:
NEIGHBORHOOD COUNCILS

SEPTEMBER 5, 2020

MARSH & McLENNAN COMPANIES

Context for Phase 2 – LADWP's benchmarking program

This study, jointly conducted by the OPA and LADWP, is the second of a three phase benchmarking process begun in 2014



Phase 1 - High level financial benchmarking
First of three phases of benchmarking focused on high level operating and capital expenditures - used FY12/13 data

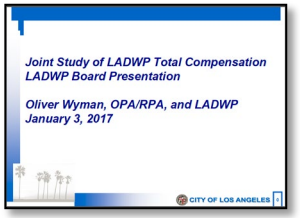
Phase 2 – Joint Functional Total Cost Study
Second phase which is evaluating total labor cost and staffing for key functions as well as non-labor costs (e.g. 3rd party service). Jointly conducted by OPA and LADWP - used FY14/15 data

2014/2015

2016/2017

2017-2020

Future



Joint Compensation Study
Total compensation benchmarking study that compared matched "jobs" at LADWP to those in industry surveys. Jointly conducted by OPA and LADWP

Phase 3 – Business process improvement
Final phase of benchmarking that will target specific business processes identified for improvement

Perspectives on the Benchmarking Program and Phase 2
OPA is jointly conducting this Functional Total Cost Study with LADWP

Perspectives of OPA

- OPA recommended that LADWP begin a benchmarking program as part of its role to provide public independent analysis of LADWP's actions as they relate to water and electricity rates
- Working jointly with LADWP on this report ensured a higher quality control in making accurate and correct industry comparisons, and identifying opportunities for improvement
- A joint program also helps to build support of improvement efforts within LADWP and the City
- Jointly-conducted benchmarking and improvement efforts are fundamentally different from fiscal and performance audits of LADWP that may also occur (e.g., by the City Controller)

Perspectives of LADWP

- As one of the top-20 largest utilities in the US, LADWP constantly looks for ways to enhance its strategies, including supporting infrastructure investment, complying with regulatory mandates, and providing customer service
- LADWP also emphasizes cost control and fiscal discipline to maintain its financial metrics and preserve its low cost of borrowing
- LADWP also seeks to "provide the basics" to align with the City's goals and sustainability objectives that support LA's Green New Deal
- LADWP serves a unique geographic area using employees with deep local experience. Many have worked at the utility for most of their careers

Phase 2 study methodology and results

We employed both top-down and bottom-up approaches to this analysis combined with extensive joint discussion with LADWP's staff and OPA

Data and Analysis Approach

Top down:

Total cost data benchmarking for all LADWP functions based on third party sources; filings to FERC and state regulators; and POU financial reports

Bottom up:

Staffing ratios based on panels of 24 IOUs and 26 POUs at the employee level encompassing over 90K comparative staff; account-level analysis in FERC, state, and municipal level financial reports

Discussion and Review

Consideration of LADWP's uniqueness:
Input and discussion by *all* LADWP divisions from over 90 LADWP staff, including 7 District Superintendents and executive management team; extensive joint discussion between LADWP and OPA

Conclusions and Recommendations

- Provides baseline data and information on LADWP's staffing, labor costs, and total costs by function
- Highlights areas for LADWP to consider for new improvement initiatives or to incorporate into existing initiatives, including a deeper dive into identified areas for further evaluation
- Provides context for discussion and decision-making for future rate actions

Of 17 key recommendations outlined in this report, nearly half support ongoing initiatives underway at the Department

Context for modernization and path forward addressed in this review

It may surprise some critics, but LADWP performs fairly well. Like all utilities, LADWP must continue to evolve in a rapidly changing environment

THE DEPARTMENT HAS ACHIEVED GOOD RESULTS IN A UNIQUE ENVIRONMENT	• These unique aspects (e.g., traffic congestion, growth history, stakeholder pressure) of the service territory will only continue to exert pressure on the Department
THE LADWP IS A LARGE, COMPLEX UTILITY	• Large complex utilities need (1) a strong and aligned utility management team, (2) a sufficient and skilled work force or resources, and (3) a robust IT infrastructure
LADWP HAS MAINTAINED COMPETITIVE POWER AND WATER RATES/CUSTOMER BILLS	• Increases in renewable generation together with its modernization effort will challenge LADWP to continue this performance
LADWP IS EXECUTING ONE OF THE LARGEST INFRASTRUCTURE MODERNIZATION INITIATIVES IN THE UTILITY INDUSTRY	• LADWP must ensure the its capital spending program delivers the appropriate customer and operations impacts
LADWP HAS MEDIAN CONTROLLABLE POWER OPERATIONS AND MAINTENANCE (O&M) EXPENSES; WATER O&M IS 4TH QUARTILE	• LADWP's service environment, goals, and stakeholder needs will continue to place pressure on O&M expense levels and growth
OVER THE LONG-TERM, LADWP HAS REASONABLY CONTROLLED THE GROWTH OF BOTH POWER AND WATER O&M EXPENSES	
LADWP HAS ACHIEVED GOOD RESULTS WHILE USING AN INTERNAL-LABOR DRIVEN UTILITY BUSINESS MODEL	• LADWP will need more staff to meet its goals. Ensuring adequate labor resources at a reasonable cost will drive LADWP's future performance

Uniqueness of LADWP impacts service, operations, and costs
Managing, providing customer service, and operating LADWP is very complex

OPERATING IN LOS ANGELES

- **Growth:** LA has had a spectacular and unique growth path
- **Congestion:** LA is one of the most congested cities in the USA

RUNNING A LARGE POWER AND WATER UTILITY

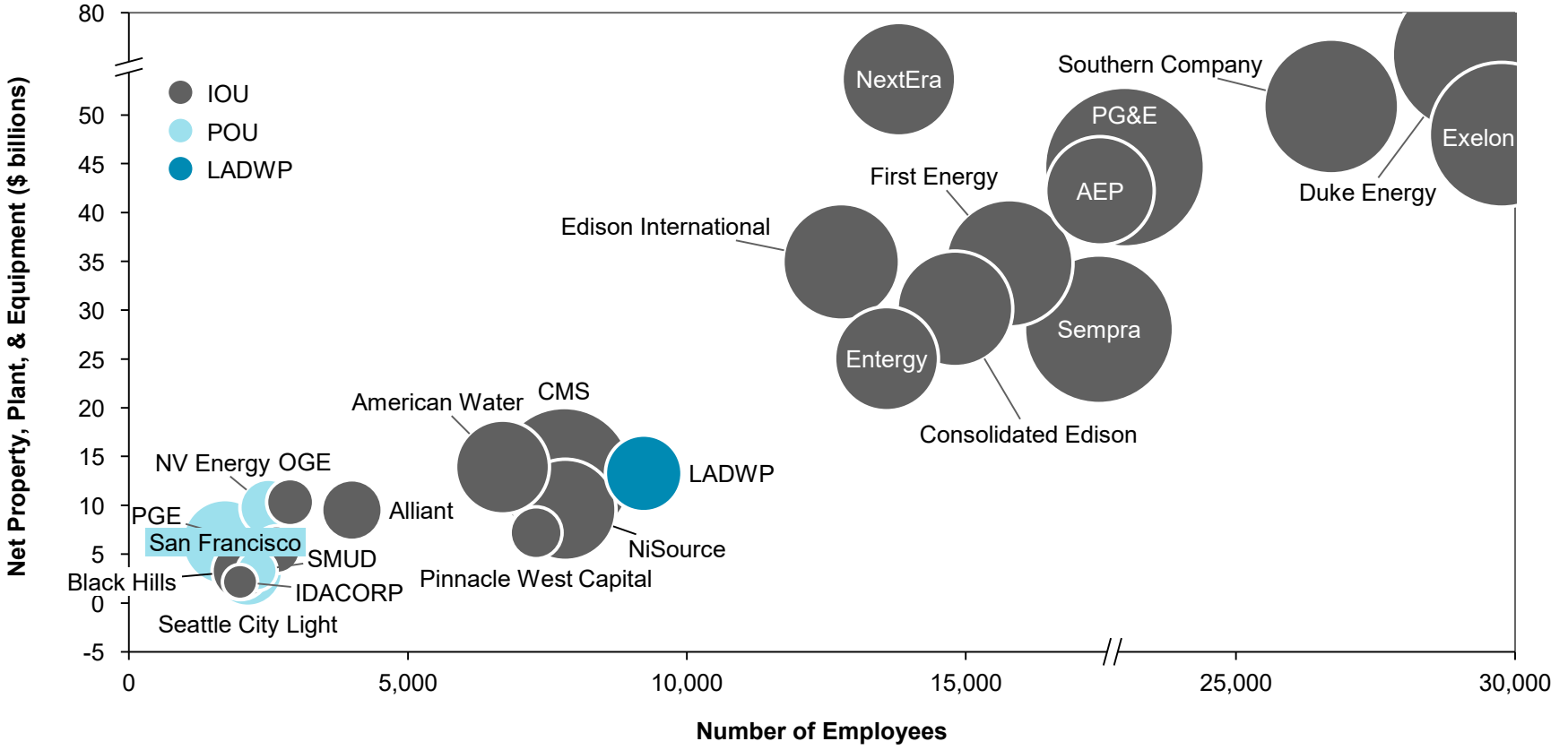
- **Utility size:** LADWP is a big utility. Big utilities are complex to run requiring seasoned senior leadership, a skilled labor force, and significant IT capabilities
- **Union representation:** LADWP has far more union representation than other utilities or government sectors
- **Internal staff**: LADWP uses an internal labor driven business model, outlined in the City Charter provision

MANAGING AND FULFILLING LADWP'S PUBLIC ROLE

- **Diversity**: LA represents a very diverse community. LADWP tailors its customer experience to reflect this diversity
- **Overseeing a municipal utility:** About 85% of larger cities do not have a municipal power utility. Among cities that have municipal power utilities, LADWP is 4 times as large. Defining a public role for and overseeing presents challenges for municipal government
- **Stakeholder demands**: Having such a large presence, LADWP is challenged to prioritize and service demands from its many stakeholders

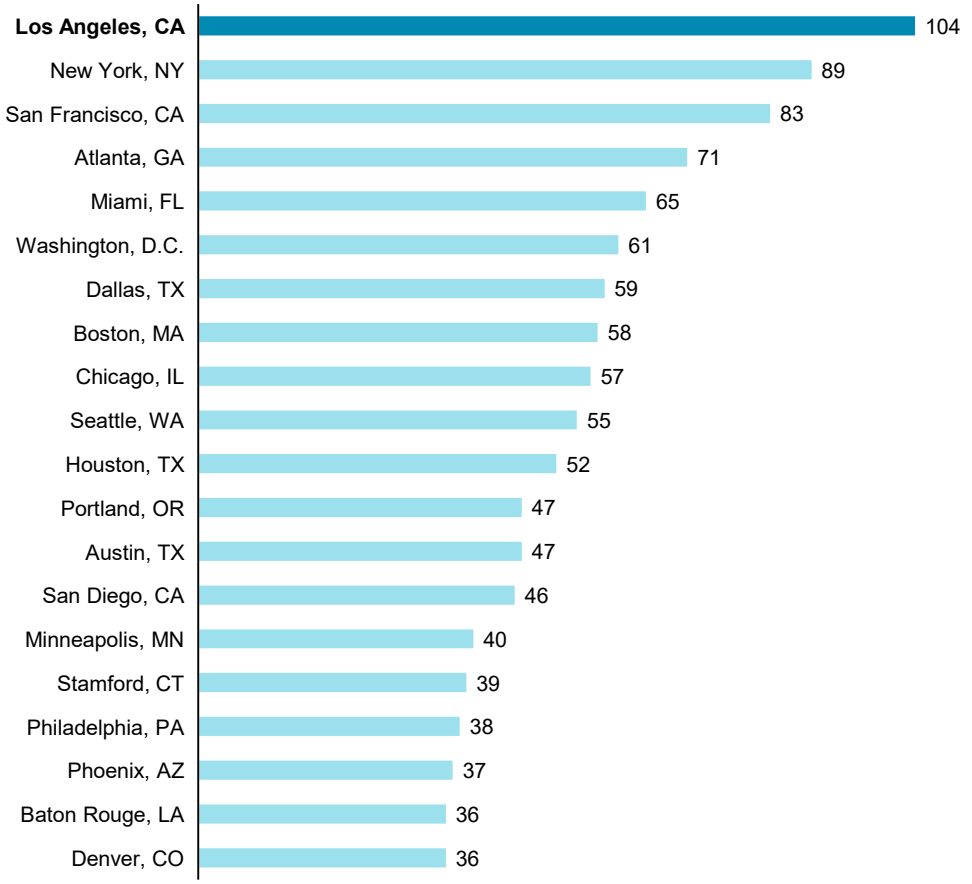
LADWP is a large and complex utility
The Department is larger than many peer IOUs and most if not all POUs

Employees, Property, Plant & Equipment (net of depreciation), and customer count
2015, IOUs and POUs (bubble size represents customer count)

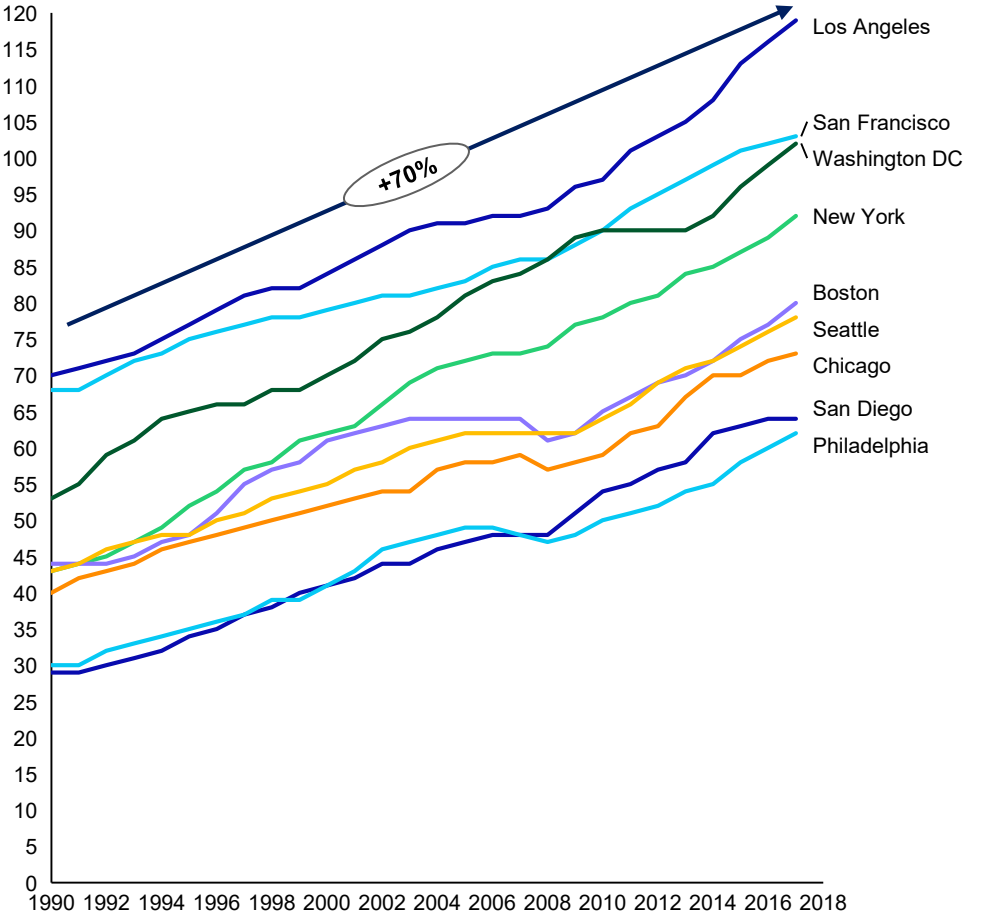


Congestion: LA is the most congested
Impacts LADWP's operations, service and performance

Avg time spent in congestion for top 20 US metro areas
Hours per year, 2016

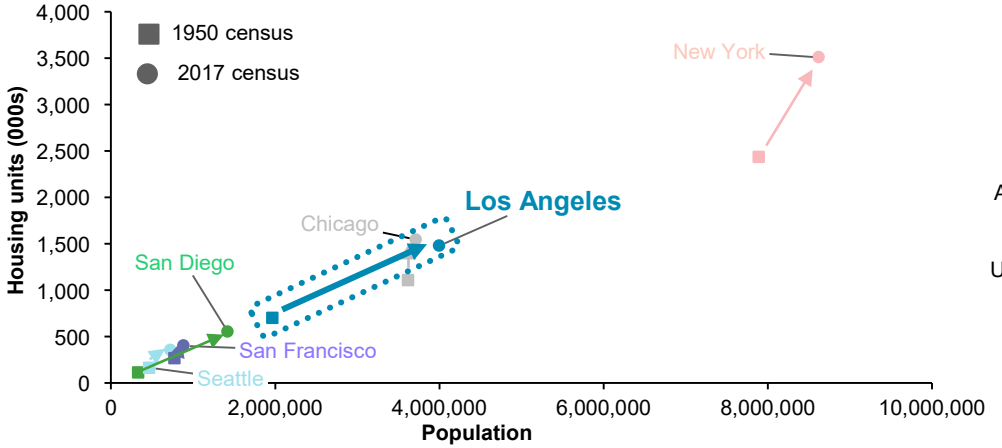


Avg time spent in congestion for largest US metro areas
Hours per year per auto commuter; 1990 - 2017

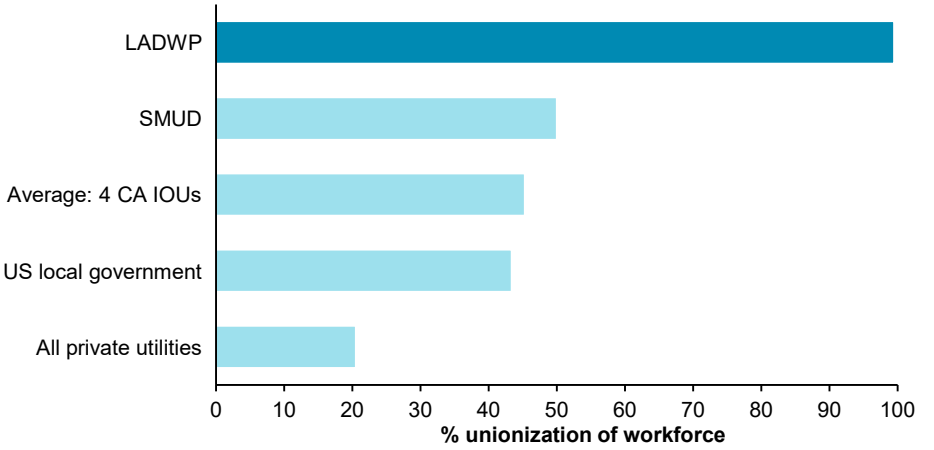


Uniqueness of service in the LA area
Rapid growth, diversity and large represented labor force

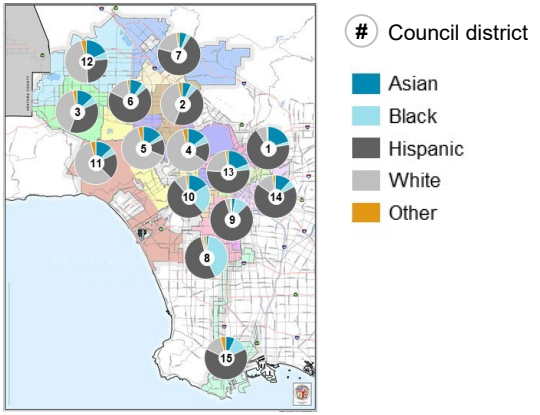
Change in population and housing units in selected major cities
Changes are between 1950-2017



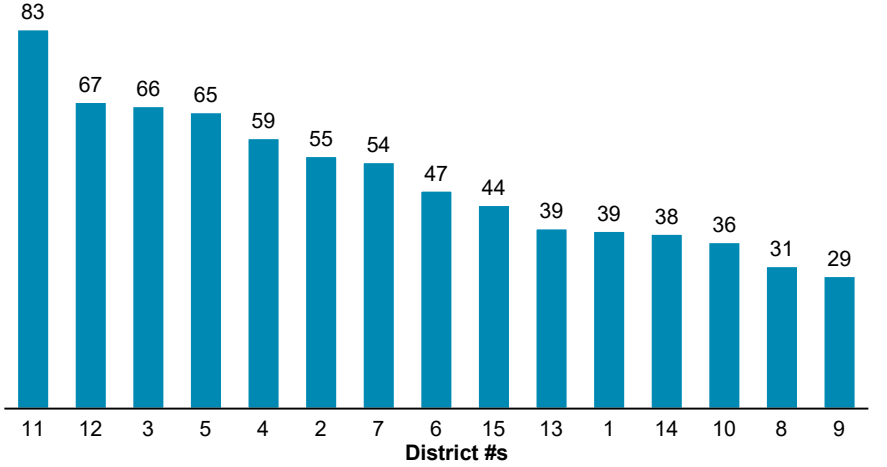
Union representation of utility, by %
2018, key California electric utilities and other sectors



Race percentage of total population by council district
%, 2014

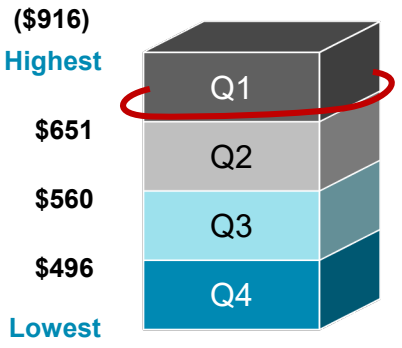


Median Household Income by council district
$ ('000), 2013



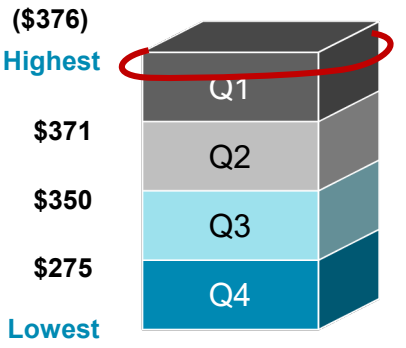
Capital spending
Both Water and Power are investing significantly in infrastructure

2015 Power Capital Spending
Total $ per electric customer, IOU panel



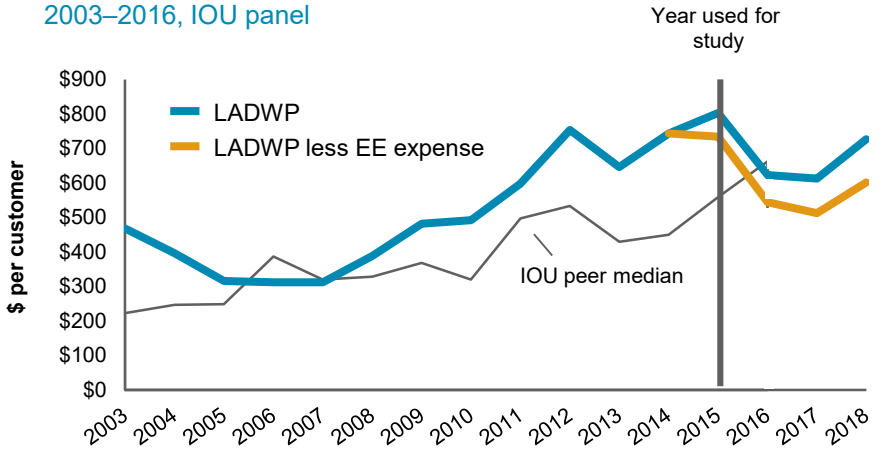
LADWP = $735
(excludes energy efficiency)

2015 Water Capital Spending
Total $ per water customer, IOU panel

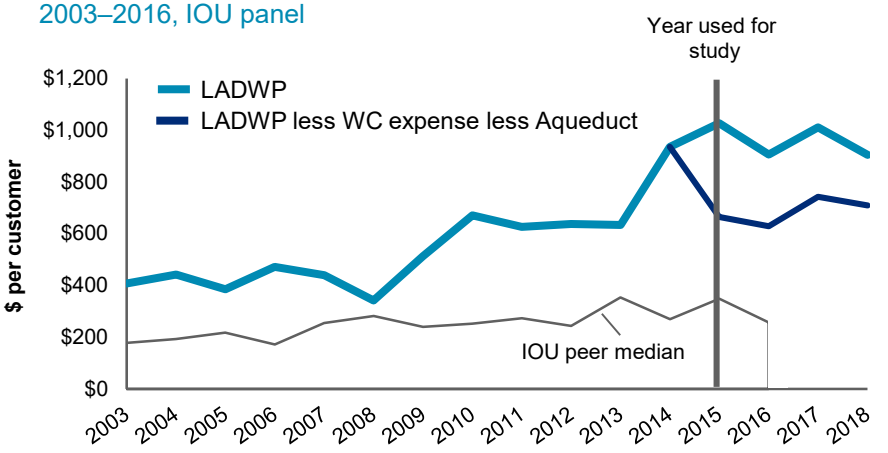


LADWP = $665
(excludes water conservation, aqueduct)

Power Capital spend per customer ($/customer)
2003–2016, IOU panel



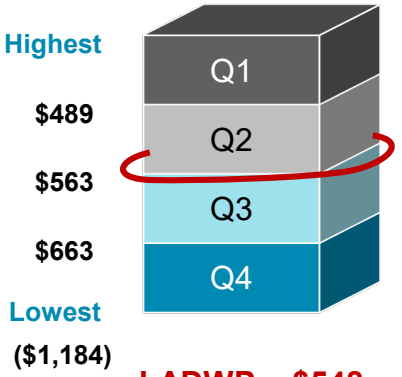
Water Capital spend per customer ($/customer)
2003–2016, IOU panel



Overall controllable O&M expense

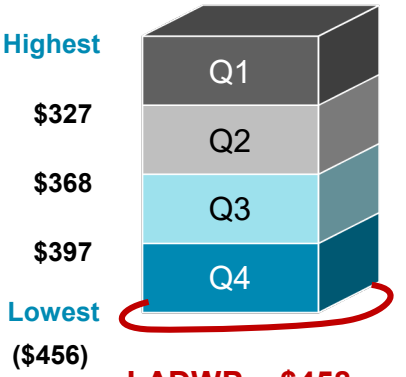
Power has remained at or below median; Water has been at or somewhat higher than median

2015 Power O&M – Excluding P&B
Total $ per electric customer, IOU panel



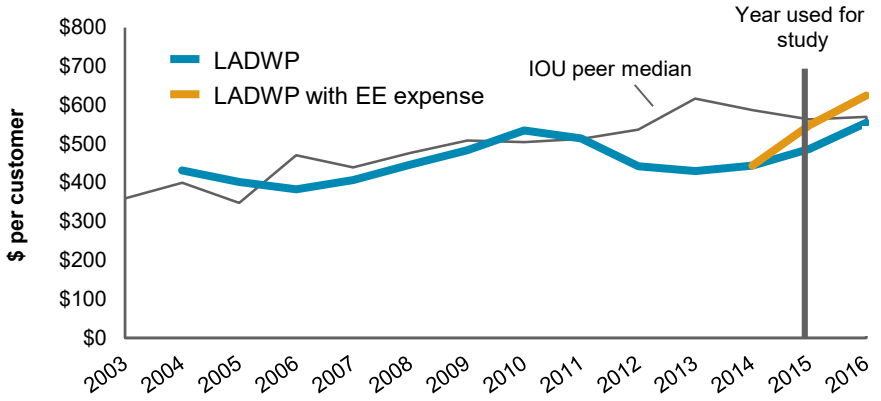
LADWP = $548
(includes energy efficiency)

2015 Water O&M – Excluding P&B
Total $ per water customer, IOU panel

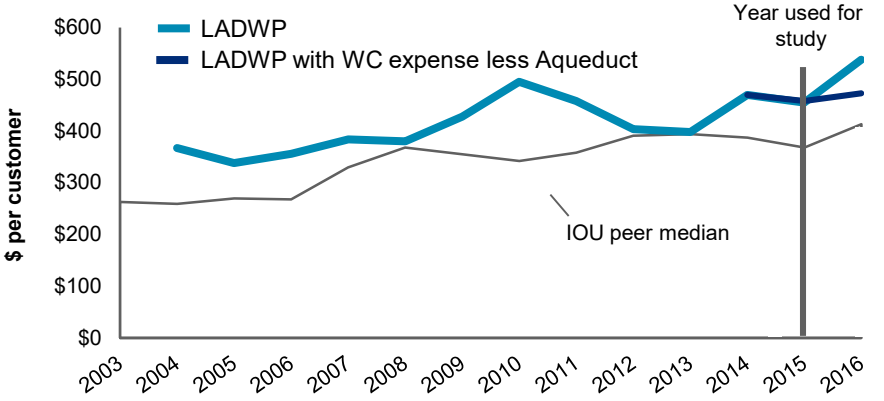


LADWP = $458
(incl. water conservation, excl. aqueduct)

Non-fuel/purchased power O&M expense per customer ($/customer)
2003–2016, IOU panel

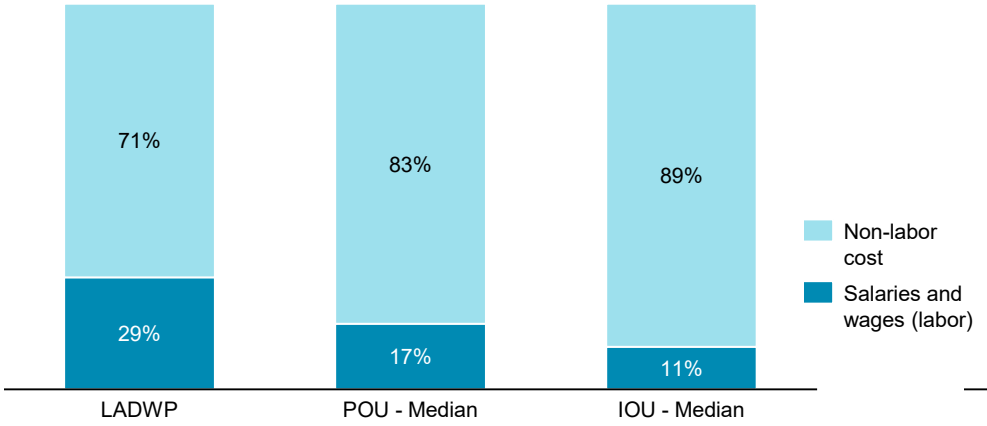


Non-purchased water O&M expense per customer ($/customer)
2003–2016, IOU panel

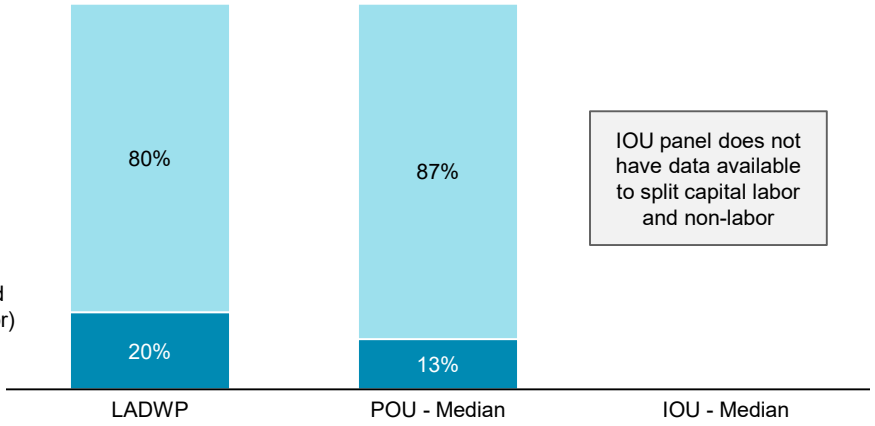


Unique LADWP business model
Internal-labor intensive model: LADWP uses far more internal labor than peers

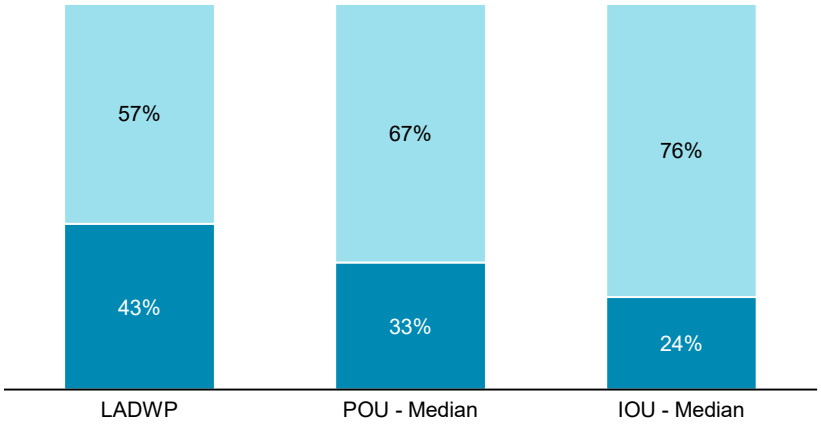
Power Capital expenditures: Internal Labor, Non-labor
FY14/15, % labor/non-labor, all panel companies



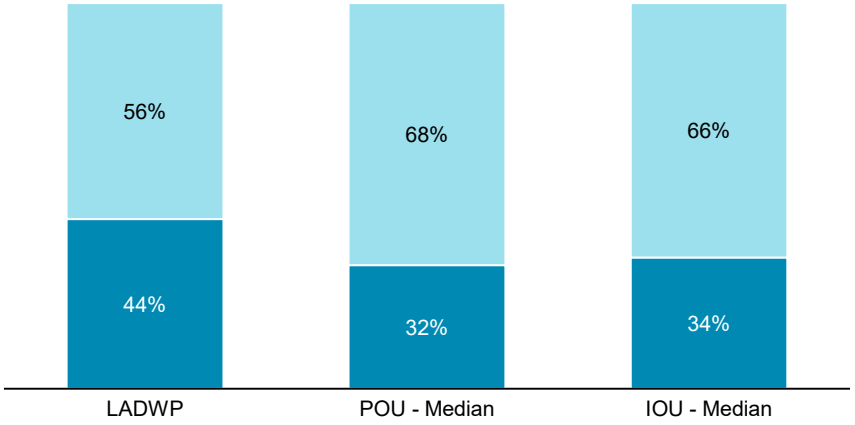
Water Capital expenditures: Internal Labor, Non-labor
FY14/15, % labor/non-labor



Power O&M expenses: Internal Labor, Non-labor
FY14/15, % labor/non-labor, all panel companies



Water O&M expenses: Internal Labor, Non-labor
FY14/15, % labor/non-labor

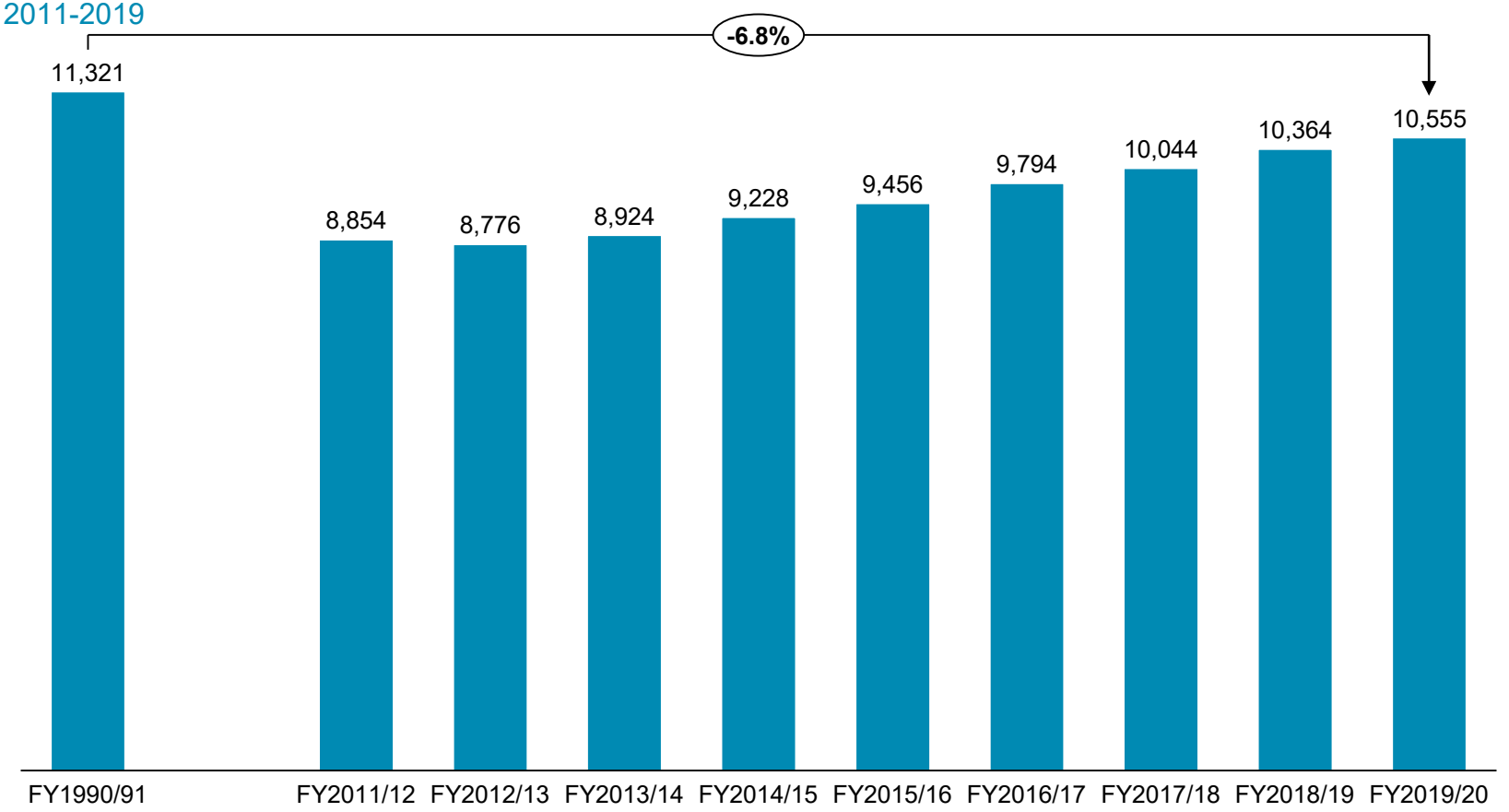


LADWP staffing (based on positions occupied)

Staffing levels have increased but so has the amount of work, including multiple new programs such as power and water infrastructure modernization

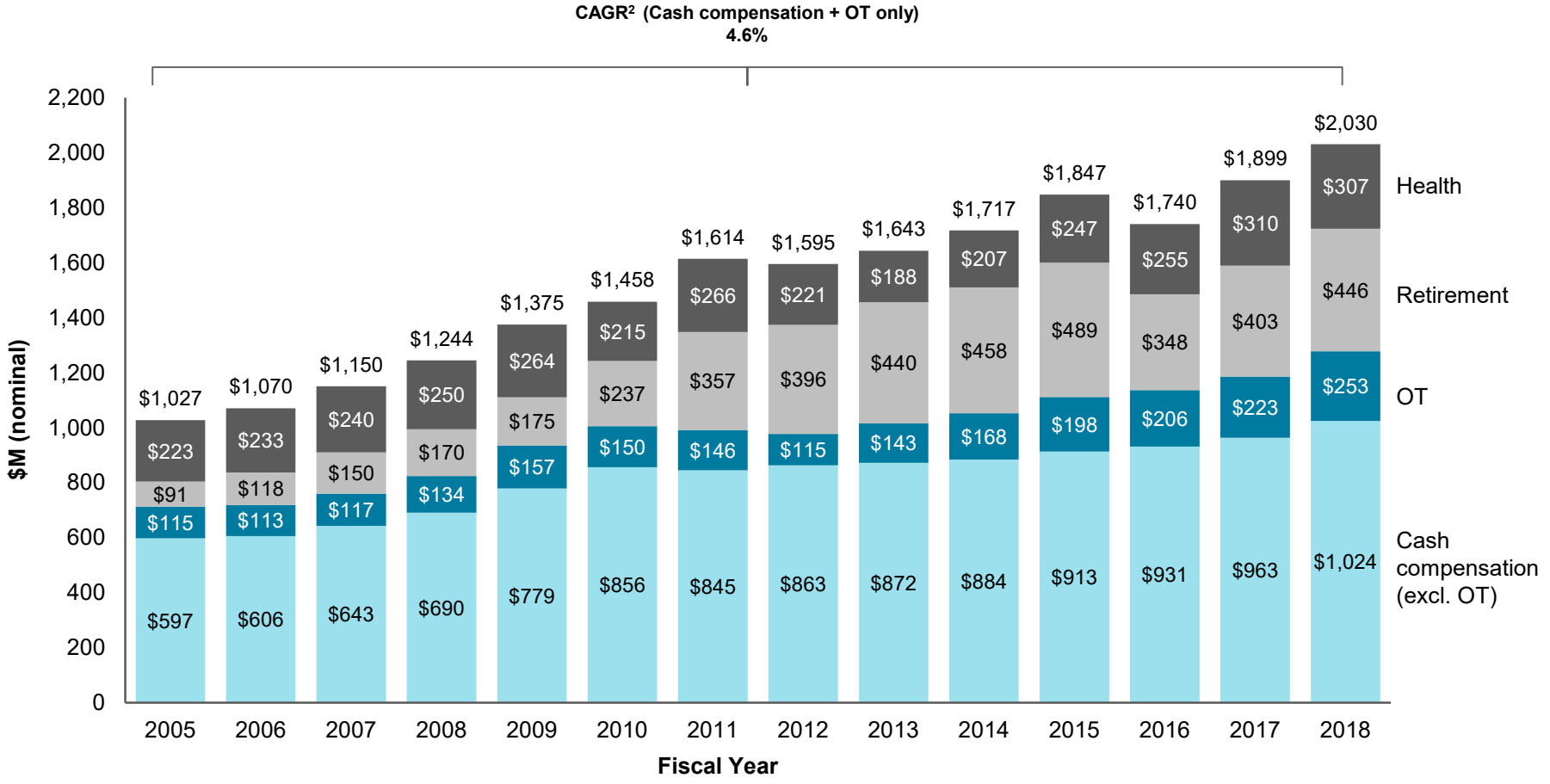
LADWP occupancy trend

1990, 2011-2019



Historical and forecast employee-related costs
LADWP's internal-labor cost is large and has grown

Historical actual total employee-related costs[1]
Power and Water



Best available benchmark comparison

Summary of total cost results
LADWP performs fairly well overall and in a number of functions

Summary results of all functions
Data from FY14/15

Q1	Very low cost	Q2	Lower cost	Q3	Higher cost	Q4	Very high cost

Function	Total Cost benchmarks: IOU Panel	Total Cost benchmarks: Third-Party	Total Cost benchmarks: POU Panel	LADWP Total Cost ($M)	FTE
Total Power System					
Power (total O&M) *IOU excludes P&B, POU includes*	Q2			$818	5,779
Power (total capital)	Q1			$1,097	
Total Water System					
Water (total O&M) *IOU excludes P&B, POU includes*	Q4			$309	2,661
Water (total capital)	Q1			$449	
Power Operations O&M					
Electric Distribution	Q4			$217	1,897
Electric Transmission	Q3			$75	581
Generation	Q2			$197	827
Water Operations O&M					
Water Transmission & Distribution	Q4		Q2	$94	1,434
All other Water Operations	Q3			$71	
Customer Service O&M					
Power	Q3			$221	
Water	Q4			$94	
Combined	Q3		Q4	$315	1,176
Functions *(3rd party benchmarks)*					
Human Resources		Q4		$26	275
Information Technology		Below Median		$97	419
Purchasing & Materials Management		Above Median		$36	349
Fleet Services		Above Median		$29	265
Facilities Management		Above Median		$33	330
Security		Above Median		$24	255
Finance, Accounting & Planning		Below Median		$41	200
Legal		Q2		$19	43
Executive Mgmt – Executives		Q1		$3	14
Functions (*POU benchmark only*)					
Electric Resource Planning & Supply			Q1	$7	44
Environmental			Q4	$24	76
Marketing/EE/Conservation Programs			Q2	$23	121
External Relations & Communications			Q1	$4	29
Rates and Regulatory Affairs			Q1	$5	11
Safety			Q3	$6	42

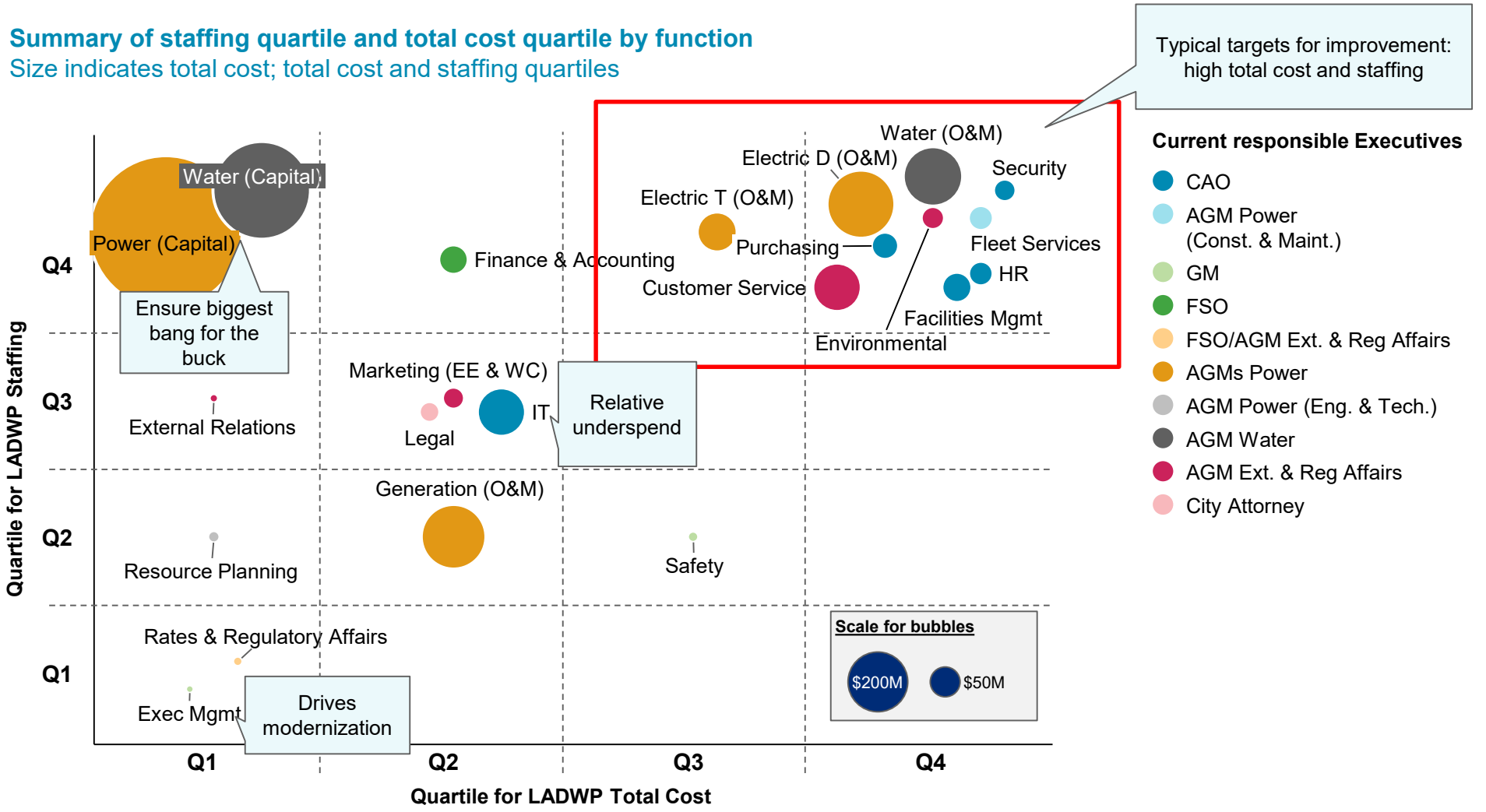
Q1 is highest capital spend but viewed as beneficial since it is investment in the infrastructure

Summary of Performance: Staffing and total cost by executive

4th quartile total cost and staffing suggest areas for improvement; functions with underspending represent potential areas to deliver incremental impact

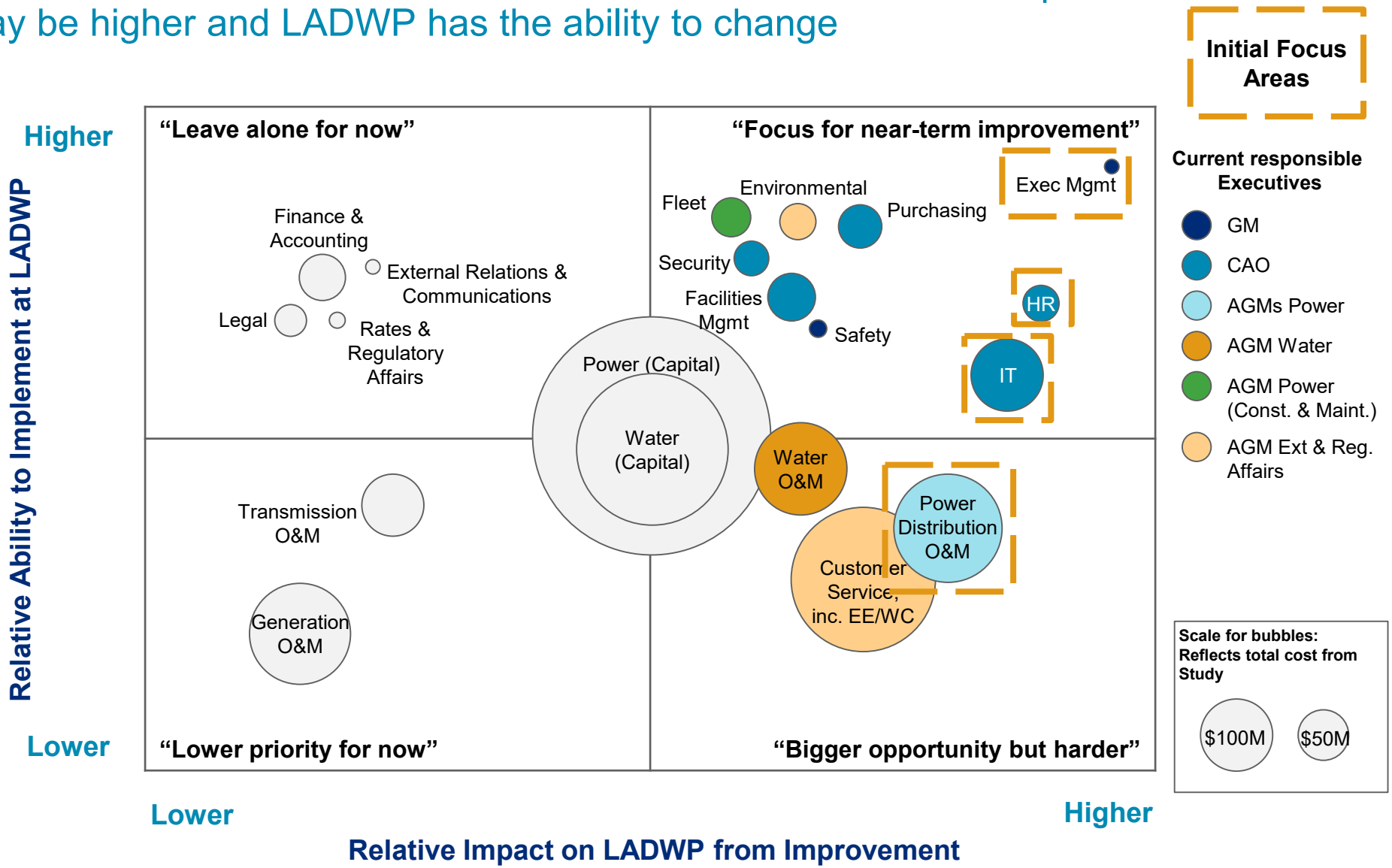
Summary of staffing quartile and total cost quartile by function

Size indicates total cost; total cost and staffing quartiles



Summary of Functional Opportunities

A number of areas could warrant further effort where both the impact on LADWP may be higher and LADWP has the ability to change



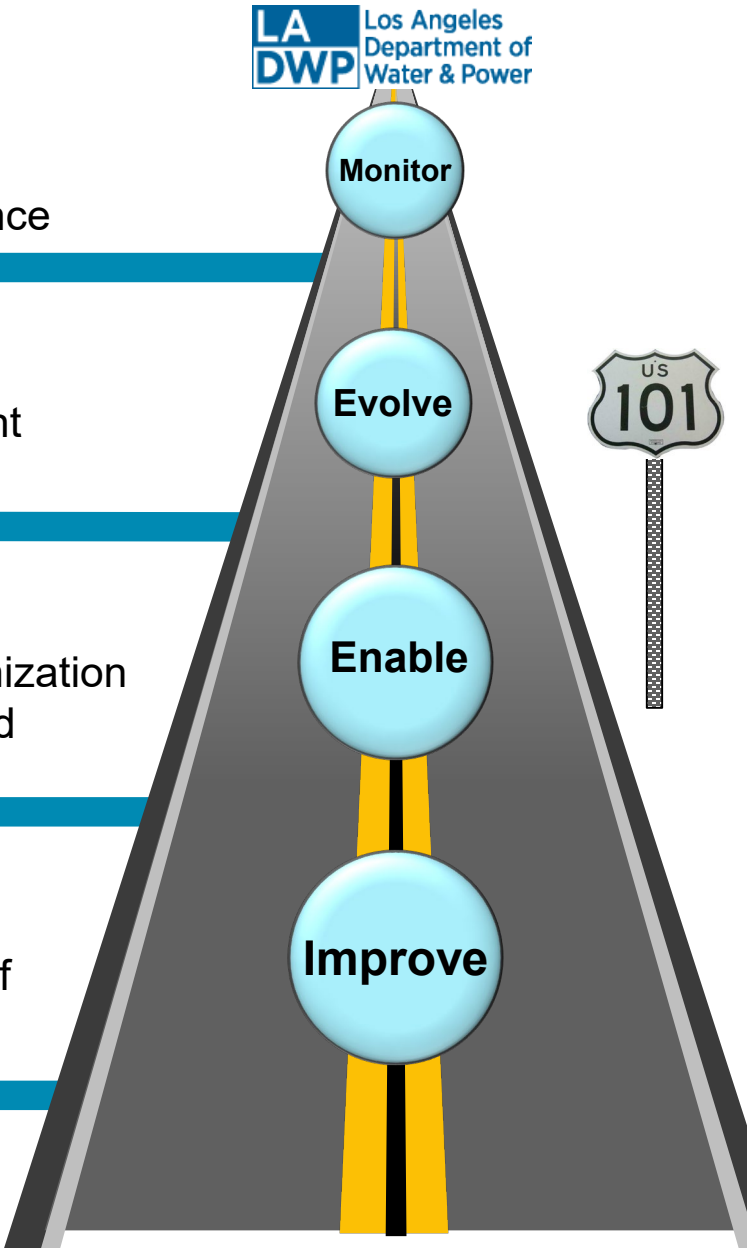
Functional Total Cost Study
17 recommendations across four topic areas

D. Monitor progress
4 recommendations to monitor modernization performance

C. Evolve management
4 recommendations to help evolve LADWP management capabilities

B. Enable modernization
5 recommendations to better enable the path to modernization through Human Resources, Information Technology, and Operations Support

A. Improve core utility
4 recommendations to improve core utility businesses of Power, Water, and Customer Service



Five recommendations for initial focus
Based on consensus of LADWP Executive Team and supported by OPA

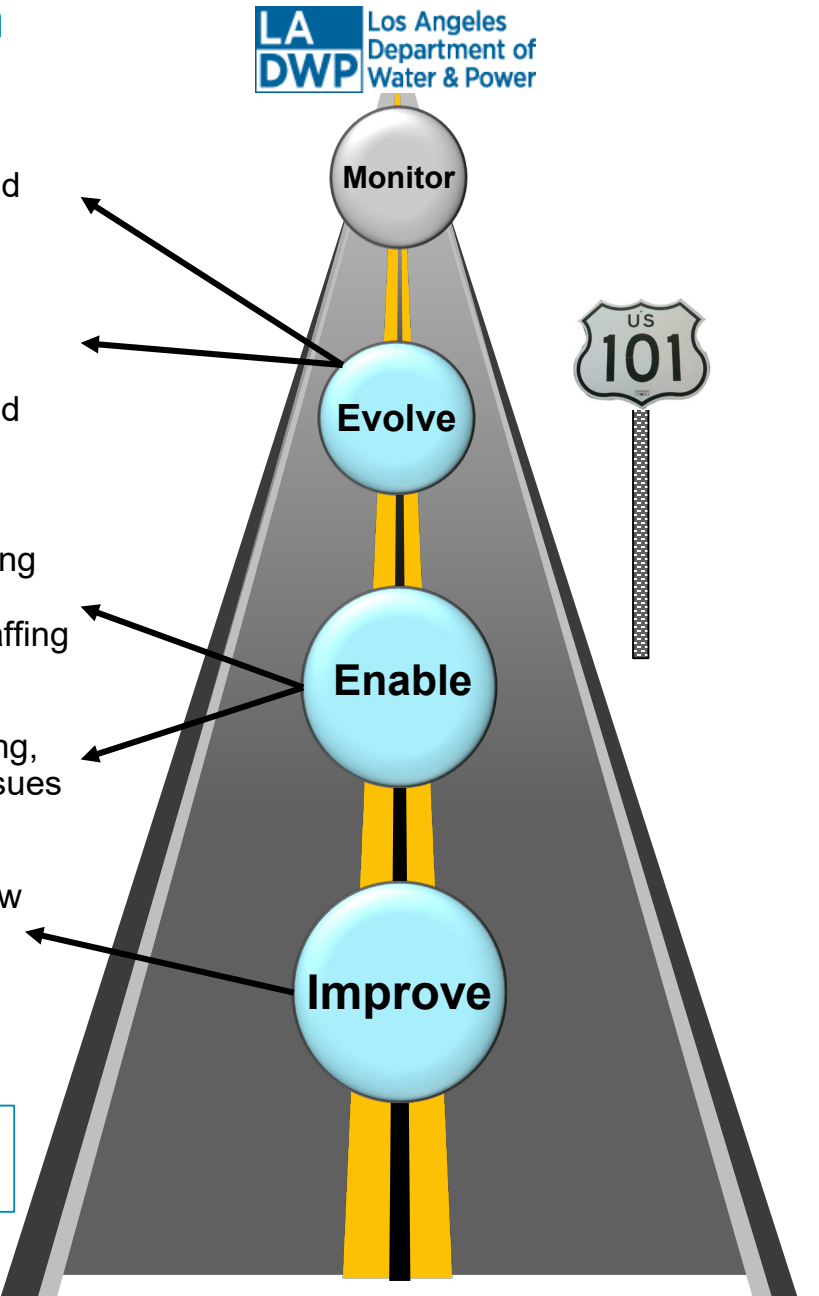
Management Value Proposition*: Develop and implement a new value proposition for executives and all layers of management – address roles and responsibilities, career progression, total compensation (including base compensation, appropriate incentives, and benefits)

Management Alignment and Development: Evolve senior staff more to manage a complex and very large utility business. Encourage increased collaboration among executives to drive the modernization. Focus on shared goals among the senior leaders. Cascade development efforts to first line managers

Support of Current Three-Year ITS Program*: Provide guidance on staffing plans, hiring practices, job descriptions, and total compensation for IT professionals. Use this study's conclusions on underspending and understaffing in IT to support the Three-Year ITS Roadmap

Key HR Processes: Review and redesign key HR processes including hiring, staffing, advancement and training employees; address internal LADWP issues as well as interfaces with City Personnel

Power Distribution: Improve work planning and productivity, especially new business, replacement capital programs, outage response, and compliance and maintenance activities. Focus on people, including understaffed areas, organization, and processes. Determine key drivers of O&M cost in Power Distribution



Use the insight and capability of LADWP's staff to design and put into practice improvement initiatives. Let the LADWP staff create the improvement and change.

* Recommendations supporting ongoing initiatives at LADWP

Phase 2 results: Five areas of initial focus
Significant potential impact exists in each area

	POWER DISTRIBUTION	KEY HR PROCESSES	SUPPORT ITS PLAN	MGMT ALIGNMENT & DEVELOPMENT	MGMT VALUE PROPOSITION
ISSUES	• Overwhelmed with work • Continuing hiring, retention, & skill issues • Field management struggle • 4th quartile O&M expense • Significant increase in net staff most likely needed	• Key to enable internal-labor focused business model • Continuing issues on hiring, retention, skills, and gap filling • Process issues both internal to LADWP and within City • 4th quartile total HR cost • Function spread across 7 LADWP organizations	• LADWP lags technology adoption and use • Below median spending on IT • Below median staffing in key IT areas • Skills gaps in key IT areas	• Historic GM turnover • Somewhat siloed organization • Not enough effort to build and strengthen middle and lower level management	• Below median total rewards for managers • Unclear roles, responsibilities, & expectations of mid- and first line managers • Diminished incentives to become a manager • Growing incentive reward structure among POU peers (~30% have some incentives)
OPPORTUNITY	• Peers achieved up to 50% improvement in new business • Up to 15% improvement in LADWP's outage response to move to median • $40M gap to 3rd quartile O&M[1]	• Improved HR processes and more effective HR organization • Effective staffing of internal-labor focused business model • $5M gap to 3rd quartile total cost[1]	• Create a modern utility IT function • Attracting and retaining new skilled IT staff • 2nd quartile total cost; $60M gap to median[1] • Ensuring sound choices on possible 80% increase in spend	• Taking advantage of opportunity with new GM and Executive Team • Reinvigorating middle and first line management • Possible O&M savings of $500M+ over 10 years	• Offering a competitive total rewards package • Better ability to attract, retain and develop senior, mid-, and first line managers

1) Values are based on FY14/15 actuals and comparisons

Consolidated descriptions of all draft recommendations

Initial Focus Areas

		IMPROVE CORE UTILITY
A	1	**Power Distribution**: Develop improvement initiatives focused on work planning and productivity, especially new business, replacement capital programs, outage response, and compliance and maintenance activities
	2	**Water T&D**: Determine key drivers of O&M cost in Water Transmission & Distribution. Refresh goals and assumptions
	3	**Customer Service**: Address 4th quartile costs, especially with Water service, and customer experience improvement needs
	4	**Capital Spend**: Ensure LADWP is getting "bang-for-the-buck" with capital spending in both Power and Water

		EVOLVE MANAGEMENT
C	1	**Management Alignment and Development** : Evolve senior staff more to manage a complex and very large utility business
	2	**Utility-level Metrics**: Use a smaller set of executive-level Department-wide metrics (6 to 8) to manage LADWP
	3	**(*)Mgmt. Value Proposition**: Develop and implement a new value proposition for executives and all levels of management – address roles and responsibilities, career progression, total compensation
	4	**(*)Labor-related Resources**: Begin to address difficult questions on optimizing spending on internal labor and third-party resources

		ENABLE MODERNIZATION
B	1	**(*)Key HR Processes**: Review and redesign key HR processes including hiring, staffing, advancement and training employees; address internal LADWP issues as well as interface with City Personnel
	2	**Integrated Human Resources Plan**: Hire and staff to meet LADWP's goals. Develop a comprehensive, realistic, and utility-wide Integrated Human Resources Plan (IHRP) to support appropriate levels of increased hiring
	3	**Understaffed Areas**: Perform deep dive examining staffing issues in specific functions across the organization
	4	**Support Current Three-Year ITS Program**: Provide guidance on staffing plan, hiring practices, job descriptions, and total compensation for IT professionals
	5	**Operations Support Functions**: Improve internal customer service and cost effectiveness. Immediate focus on effectiveness of Purchasing. Secondary focus on Fleet, Facilities and Security

		MONITOR PROGRESS
D	1	**Employee Engagement**: Engage all employees of LADWP; listen to them and encourage them to contribute. Develop and launch a formal employee engagement and follow-up program
	2	**Utility-wide Functional Benchmarking**: Enhance the use of both (1) Department-wide and (2) functional-level benchmarking across LADWP
	3	**Periodic Utility-wide Studies**: Conduct periodic comprehensive utility-wide performance and benchmarking reviews
	4	**Regulatory Accounts**: Provide better industry standard financial information in the future

Recommendations supporting ongoing initiatives at LADWP

(*) indicates recommendation that requires close coordination with and participation of the City (e.g. City Council, Mayor, Personnel Dept.)

LADWP's next steps

By the end of Fiscal Year 2020/2021:

1. **Improve power distribution**: Focus on multiple priorities that require the same skilled employees but current approach cannot keep up with competing work demands (e.g., new business, outage management, capital replacement/modernization, compliance/maintenance). Address the plans, people, and execution to modernize:
   - Work with key stakeholders to bring forward actions addressing issues related to working time restrictions, HR, IT, MOU, and funding processes
   - Identify areas where Personnel/CAO/CLA actions or agreement are needed to address progress.
2. **Further develop the human resources processes to support long-term goals**
   - Evaluate short-run LADWP internal initiatives to better support hiring and staffing. Address potential missing utility expertise in specialty skills (e.g., IT)
   - Create partnership with City Personnel to address hiring challenges that are controlled by the civil service process
3. **Use the Functional Total Cost Study to support the ITS Program**: Use this Study to help guide ITS funding, opportunities, and modernization. Consider staffing plans, hiring practices, job descriptions, and total compensation for IT professionals. Use the Study's conclusions on underspending and understaffing in IT to support ITS initiatives
4. **Continue to evolve management at LADWP**: Improve management alignment through development. Start with a program focused on LADWP's senior team. Cascade development efforts to all levels of management at LADWP
5. **Improve the management value proposition at LADWP**: Develop and implement a new value proposition for executives and all levels of management – address roles and responsibilities, career progression, and total compensation

Contextual information

Alignment with the City of Los Angeles

The recommendations focus on paving the way for LADWP to better implement a "back to basics strategy" for the modernization

- This report helps to establish urgency through transparency on LADWP's future needs, especially the need for resources to sustain LADWP's internal labor-driven business model to meet the City's goals
- The focus on rebuilding all levels of management will create a powerful coalition, enabled by the new General Manager and senior team, to guide LADWP's modernization
- Addressing issues in Power Distribution, Water, and Customer Service help to improve the basics of modernizing a utility to support infrastructure investment, comply with regulatory mandates, and improve customer service
- Focusing on performance metrics, O&M expenses, labor costs, and expense growth reinforces LADWP's emphasis on cost control and fiscal discipline
- Focusing on improving basic Human Resources processes, building a modern employee value proposition for all levels of management, listening more to all LADWP staff, and making smart IT decisions contribute to removing key obstacles for enabling the modernization of LADWP

The recommendations will help LADWP better align with the City's goals

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Peer utility panels

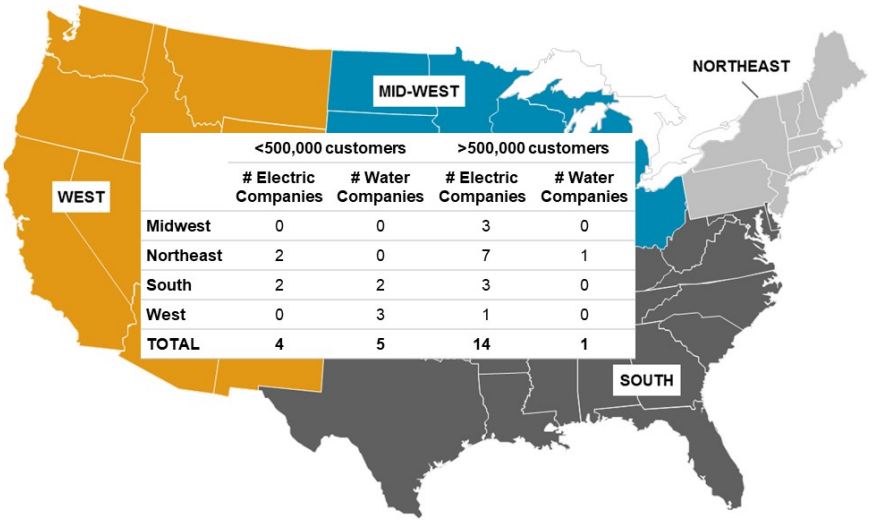
The benchmarking aspect of this study used both publicly available data from POUs and IOUs as well as comparable utilities from Oliver Wyman's proprietary dataset

Publicly-Owned Utility Panel (POU)

Utility name	Power	Water
Imperial Irrigation District (IID)	✓	
City of Anaheim	✓	✓
City of Riverside	✓	✓
City of Glendale	✓	✓
City of Pasadena	✓	✓
City of Burbank	✓	✓
Sacramento Municipal Utility District	✓	
Modesto Irrigation District	✓	
Turlock Irrigation District	✓	
City of Santa Clara (Silicon Valley Power)	✓	✓
City of Roseville	✓	✓
City of Redding	✓	✓
City of Alameda	✓	
City of Palo Alto	✓	✓
East Bay Municipal Utility District		✓
City of San Diego		✓
Irvine Ranch Water District		✓
City of San Francisco		✓
City of Fresno		✓
City of Long Beach		✓
Placer County Water Authority		✓
CPS Energy (San Antonio)	✓	
Austin Energy	✓	
Seattle City Light	✓	
Snohomish Public Utility District No. 1	✓	✓
Austin Water		✓

SCPPA Non-California

Investor-Owned Utility Panel (IOU)



	<500,000 customers		>500,000 customers	
	# Electric Companies	# Water Companies	# Electric Companies	# Water Companies
Midwest	0	0	3	0
Northeast	2	0	7	1
South	2	2	3	0
West	0	3	1	0
TOTAL	4	5	14	1