

LADWP & The Water - Energy Nexus

NEUAC 2018

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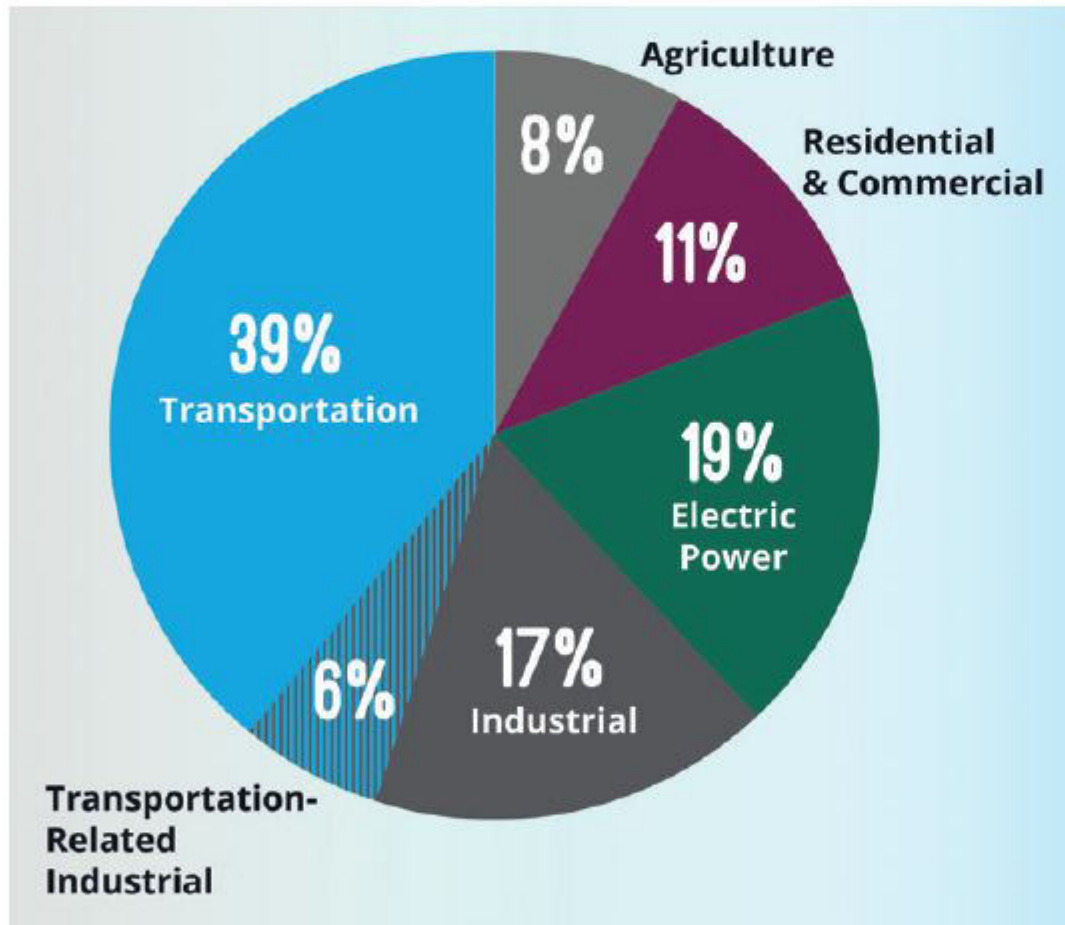
Putting Customers First 

Agenda



- Background – Why Energy Efficiency for LADWP?
- Our Sustained Effort to Achieve EE for 2020 and Beyond
- The Water-Energy Nexus
- Non-Resource Benefits and Equity
- A Nation-Leading POU-IOU Partnership
- LA Kretz Innovation Campus – Driving the Next Generation of ET

Background – Why Energy Efficiency for LADWP?



: California GHG Emissions by Sector in 2015 (Source: CARB)

Energy Efficiency: A Sustained Effort to Achieve 15% by 2020... And Beyond

Annual EE Investment and Goals: 2010 – 2020

Fiscal Year	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Budget (millions)	\$49.5	\$37.3	\$50.0	\$78.0	\$79.0	\$73.0	\$133.0	\$178.0	\$180.0	\$163.0
GWh Savings	265	228	319	337	343	412	480	412	396	359
Portfolio Savings Cum'l	1.1%	2.1%	3.4%	5%	6.5%	8.2%	10.4%	12%	13.7%	15.1%

Actuals

Current
Year
Plan

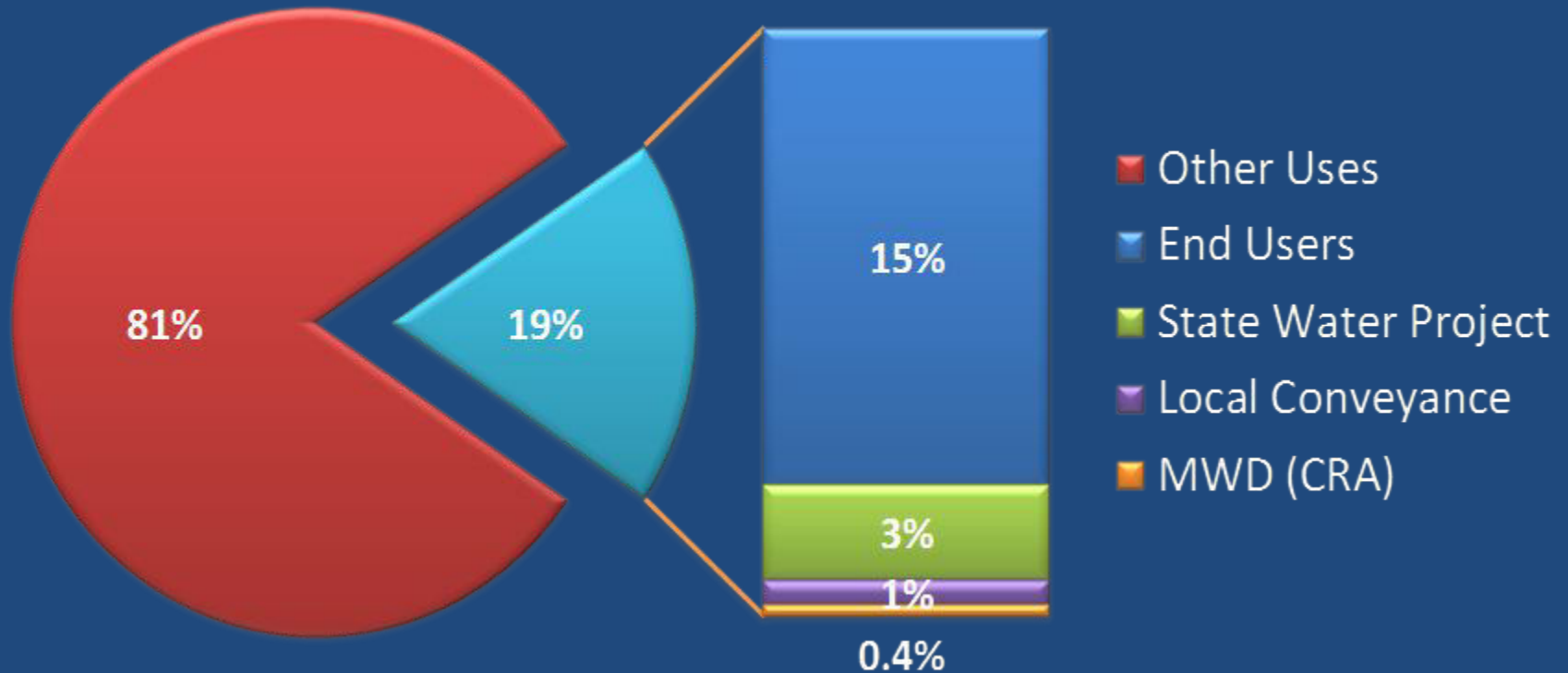
Future
Planned



Water – Energy Nexus: Water-Related Energy Use In California

**Total California Electricity
Use = 250,494 GWH**

**Water-Related
Use**

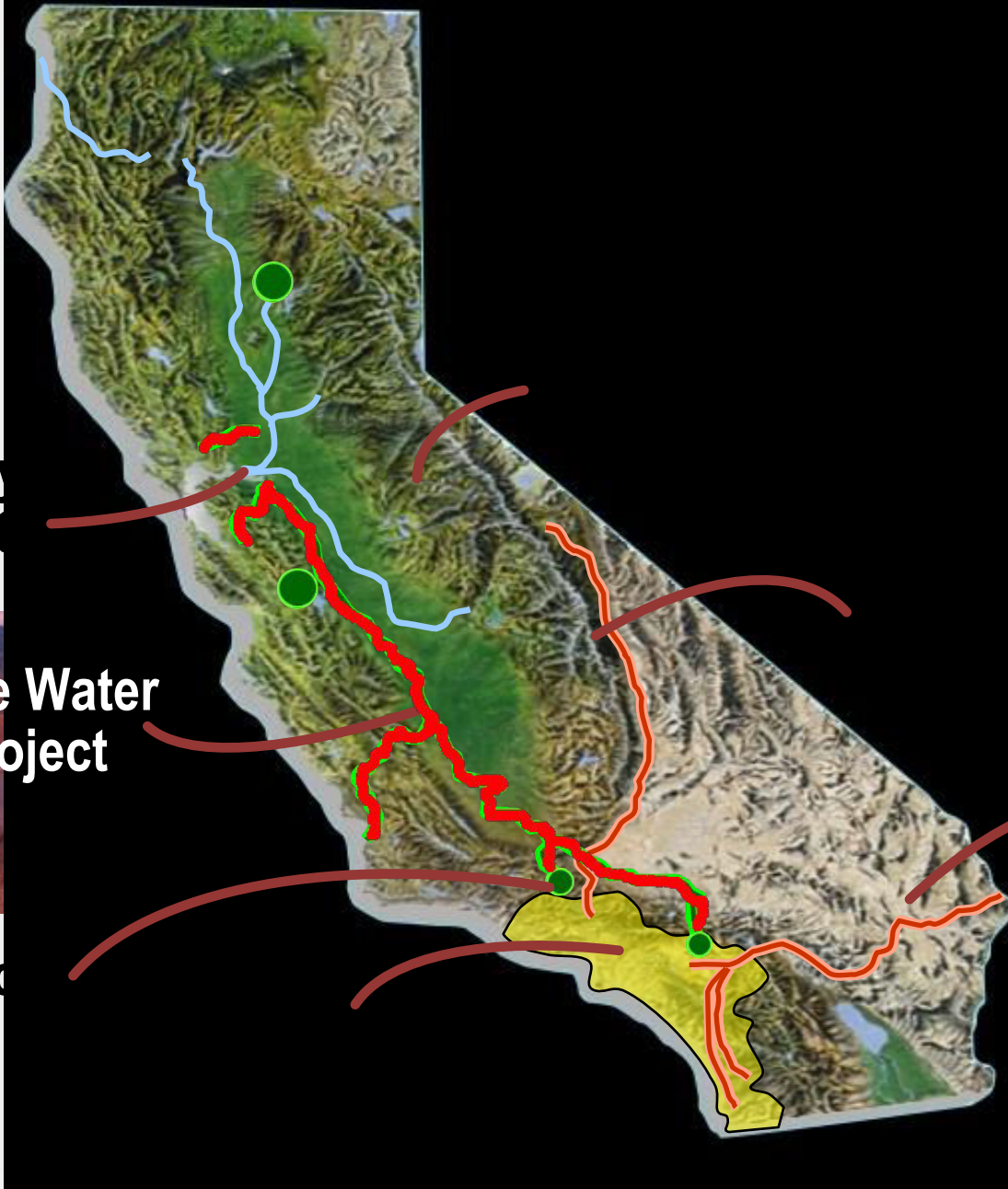


of Supply



duct

Colorado River
Aqueduct



Bay
Delta

State Water
Project

Castaic
Power

Conservation &
Recycling

Why Water Conservation and Efficiency?

- Drivers:
 - Most water used in Southern California is not locally obtained
 - Imported sources
 - Sierra snowmelt (SWP)
 - Colorado River (CWA)
 - ALL imported sources are under pressure: climate, population, water quality criteria
- Options:
 - Stormwater capture
 - Recycling
 - Conservation and Efficiency



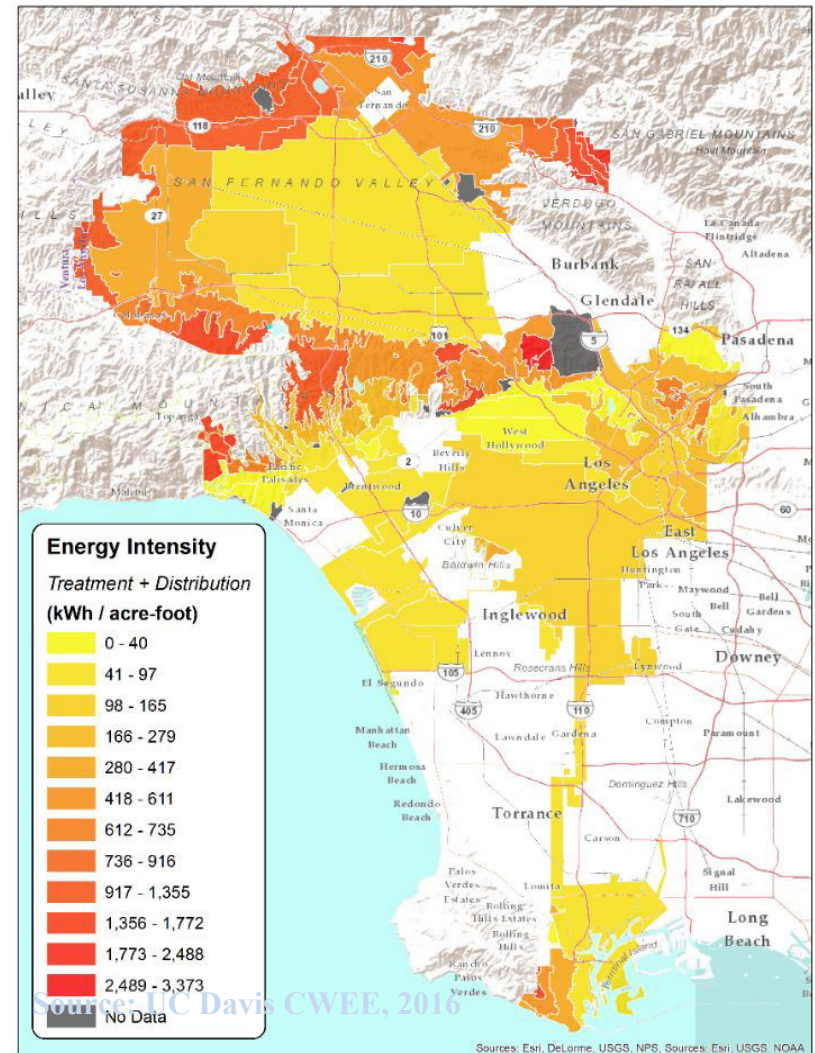
Energy Intensity Within Service Area

A High-Resolution Assessment of Water Utility Energy Intensity, UC Davis CWEE (for LADWP), 2016

Average energy intensity values for the LADWP Service Area and per pressure zone from year 2008 to 2013.

- Includes Treatment and Distribution, Wastewater Collection and Treatment (Outdoor and Indoor) within the Service Area
- Does not include energy intensity attributed to Extraction and Conveyance outside the Service Area
- Does not include groundwater sources

LADWP Service Area Energy Intensity

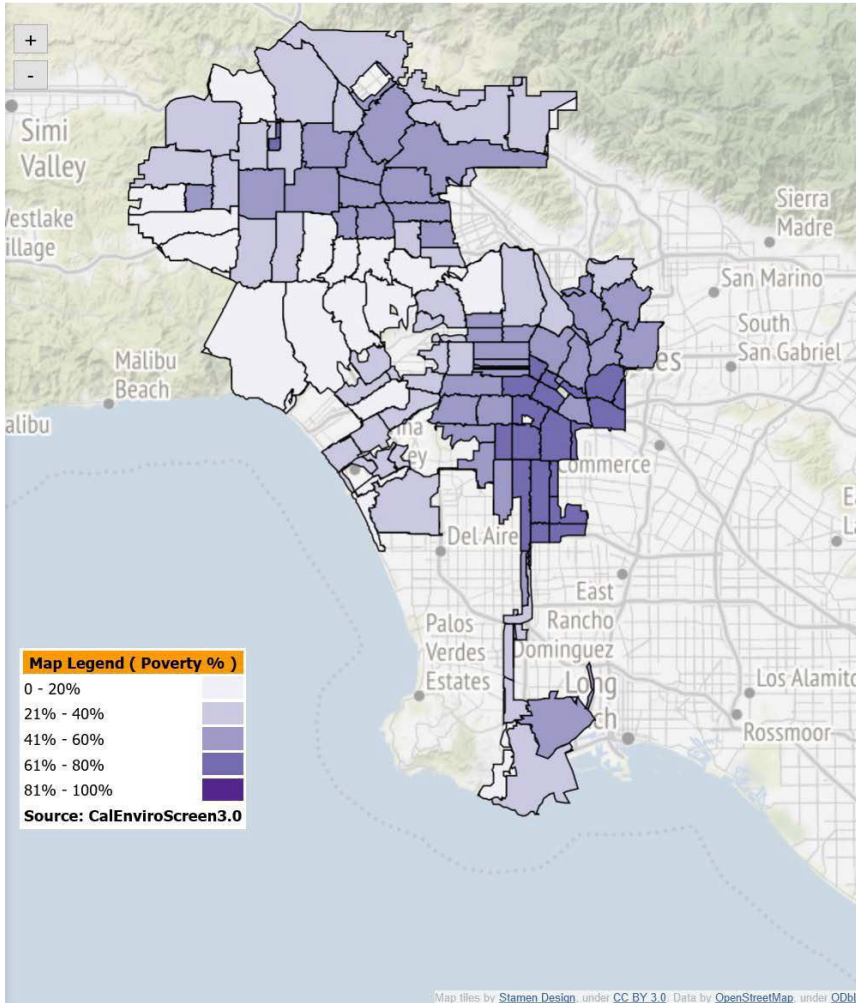


Non-Energy Benefits & Equity

- We serve Our Customers, *not* Wall Street
- Board-adopted Guiding Principles for Efficiency programs, which pledge to serve all customers
- Leverage investments in efficiency to achieve equitable access, skilled jobs, transparency, community capacity building
- UCLA-LADWP 2014 Study on Job Creation from LADWP Energy Efficiency Investments:
 - Expect to create 16 jobs per \$1M invested
 - Compares favorably to jobs created in residential construction, smart grid deployment, solar generation
 - Estimate creation of 11,000 jobs by 2020
- Water study yielded similar results

Equity Metrics

Geographic Distribution of Los Angeles Poverty Levels (CalEnviro3.0)

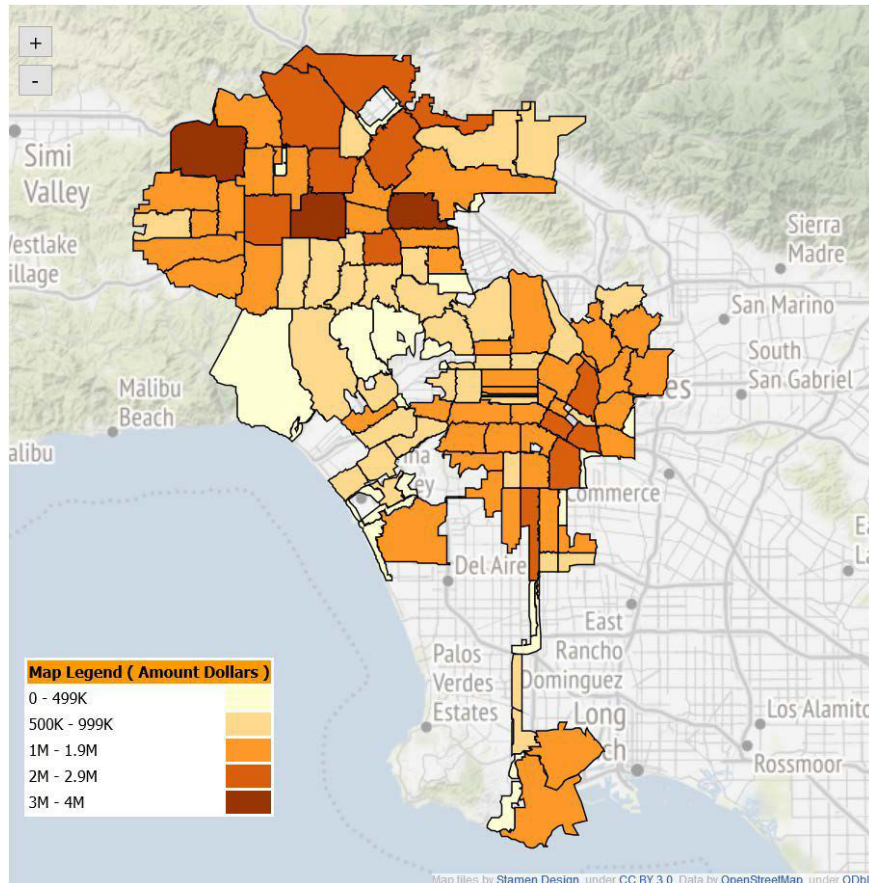


*Source: CalEnviroScreen 3.0 - From the 2011-2015 American Community Survey - the dataset contains percent of population living below two times the federal poverty level.

Equity Core Category	Metric
Water & Power Infrastructure Investment	<ol style="list-style-type: none"> 1. Water Quality Complaints 2. Water System Probability of Failure & Planned Replacements 3. SAIDI & SAIFI 4. Power System Reliability Program – Pole, Cable, and Transformer Replacements
Customer Incentive Programs/Services	<ol style="list-style-type: none"> 5. Rain Barrel/Cistern/Water Tank Rebates 6. Turf Removal Rebates 7. Tree Canopy Program 8. Commercial Direct Install Program 9. Home Energy Improvement Program 10. Refrigerator Exchange Program 11. Consumer Rebate Program 12. Electric Vehicle Infrastructure 13. Low Income & Lifeline Programs
Procurement	14. LADWP SBE/DVBE Program
Employment	15. New Hire/Promotion Demographics

Equity Metrics

Geographic Distribution of Low Income Discount Rates Program, Energy Efficiency and Water Conservation Program Expenditures for Calendar Year 2017



Low Income Discount Rates Program (307,501 Participants)

Low Income Discount	Life Support Discount
Lifeline Discount	Physician Certified Allowance Discount (PCAD)

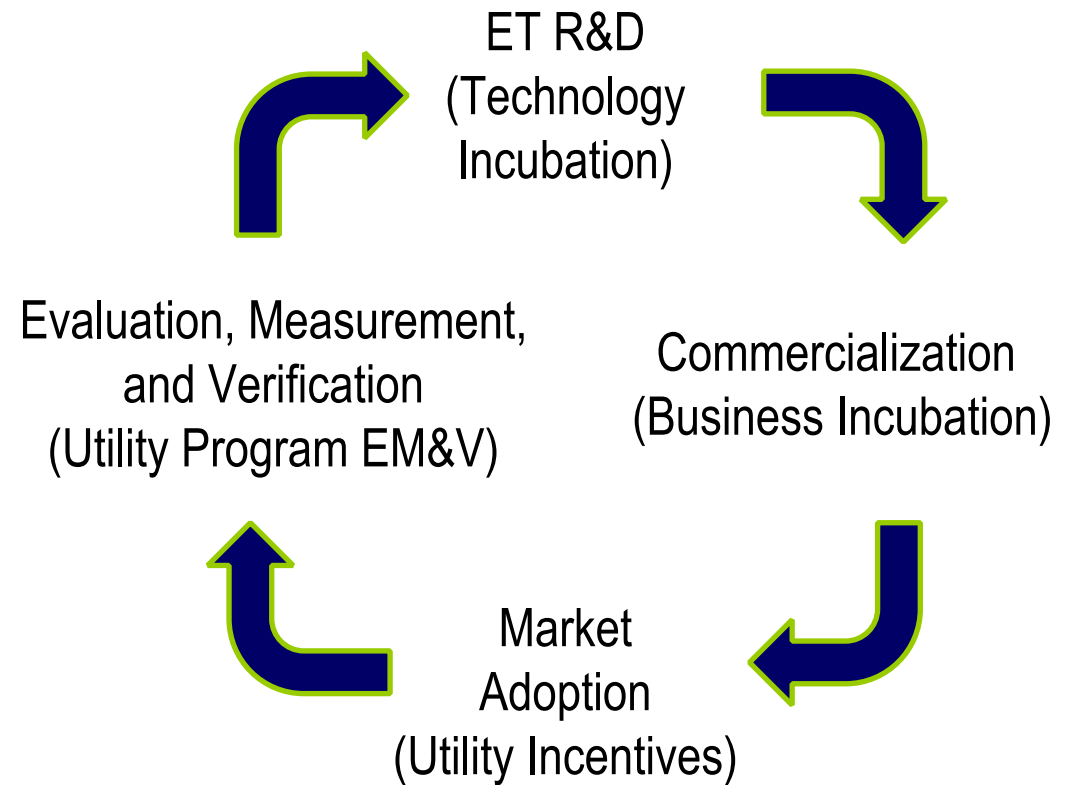
Energy Efficiency (52,796 Participants) and Water Conservation Programs (28,209 Participants)

Commercial Lighting Incentive Program (CLIP)	Efficient Product Marketplace
Food Services Program (FSP)	Refrigerator Exchange Program
Custom Performance Program (CPP)	RETIRE
Energy Efficiency Technical Assistance Program (EETAP)	Energy Savings Assistance Program
Retro-Commissioning Program (RCX)	Consumer Rebate Program
Upstream HVAC	MWD Device Rebates
Savings by Design	Technical Assistance Program
Home energy improvement program (HEIP)	Device Distribution Program
AC Optimization program	Direct Install Program

LADWP & SoCalGas Partnership

- LADWP has partnered with SoCalGas since 2012 through a Master Inter-Utility Agreement
- Agreement allows co-funding of efficiency programs that benefit our shared residents & businesses in LA
- Leverages resources to drive energy & water savings benefits more quickly and at lower overall cost
- Currently partnering on 17 programs, including incentives for low-income multi-family residents and single-family homeowners
- Most extensive joint electric, water & gas utility partnership in US

LADWP and LKIC – A Virtuous Cycle for ET Development and Deployment



Questions?