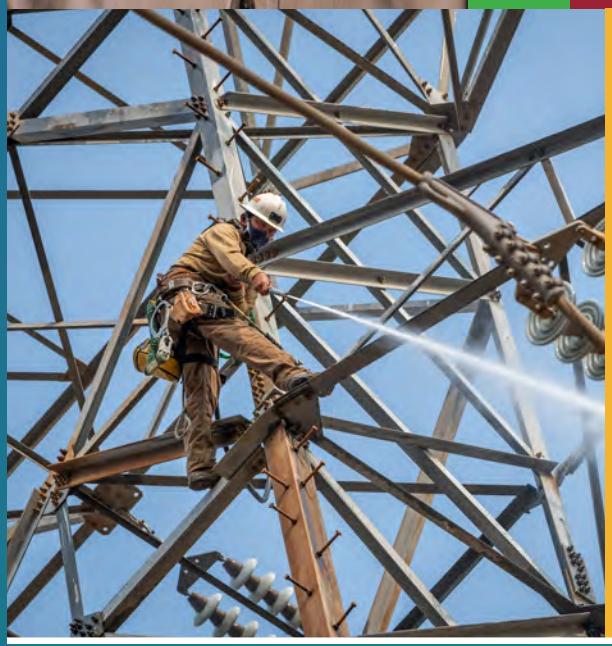
LA DWP Briefing Book 2021-22



INNOVATION



OPPORTUNITY



SERVICE

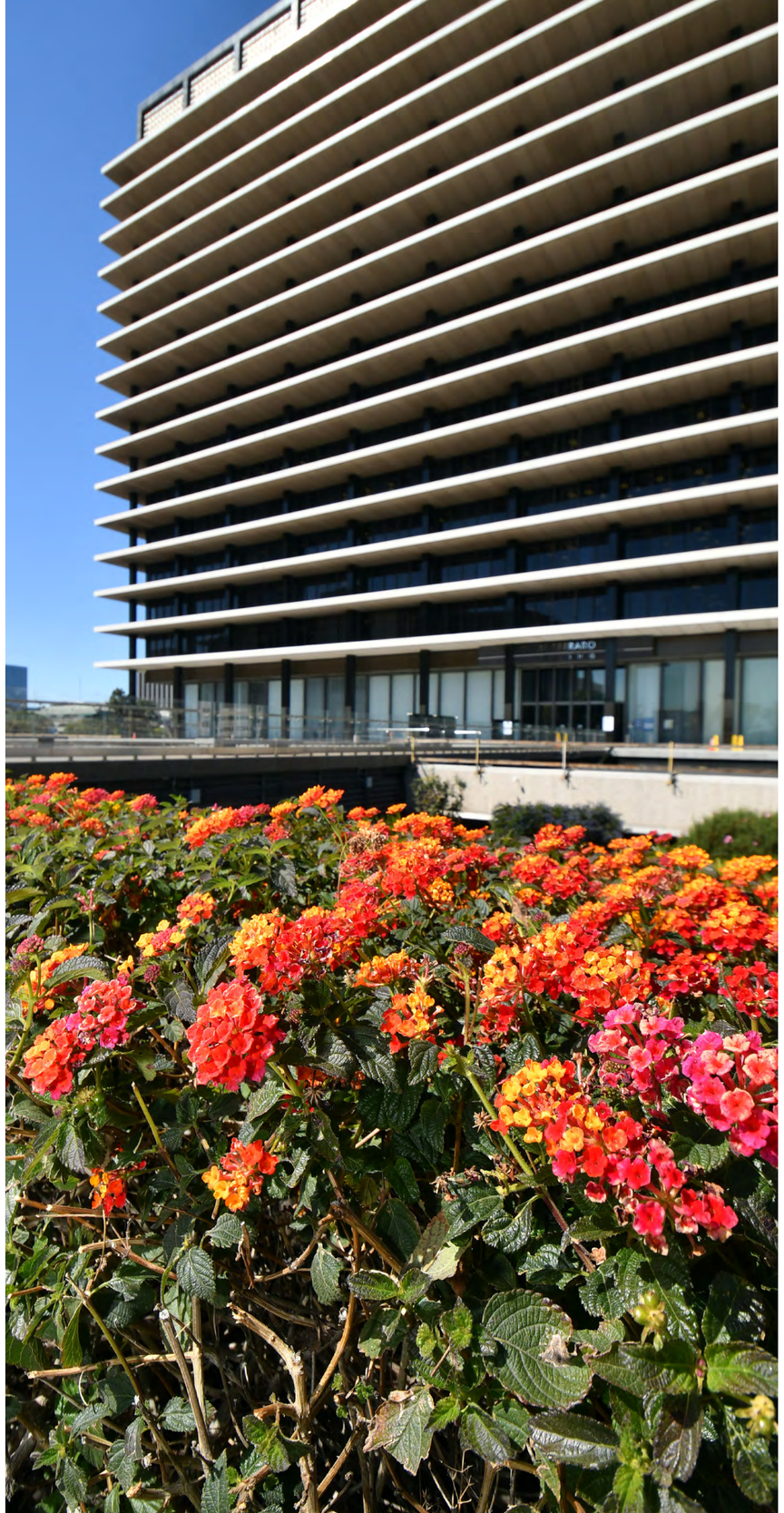


Overview

The Los Angeles Department of Water and Power (LADWP) is the nation's largest municipal utility, with 8,101 megawatts (MW) of electric capacity and serving an average of 454 million gallons of water per day to the more than 4 million residents of Los Angeles, its businesses and visitors. For more than 120 years, LADWP has provided the city with reliable water and power service in a cost effective and environmentally responsible manner. With a workforce of more than 11,000 employees, LADWP is guided by the five-member Board of Water and Power Commissioners, appointed by the Mayor and confirmed by the City Council.

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Board of Water and Power Commissioners

Cynthia McClain-Hill
President

Susana Reyes
Vice President

Jill Banks Barad-Hopkins
Commissioner

Nicole Neeman Brady
Commissioner

Mia Lehrer
Commissioner

Mission Statement

The Los Angeles Department of Water and Power exists to support the growth and vitality of the City of Los Angeles, its residents, businesses and the communities we serve, providing safe, reliable and cost-effective water and power in a customer-focused and environmentally responsible manner.

Our Team

Martin L. Adams
General Manager and Chief Engineer

Joseph A. Brajevich
General Counsel

Anselmo Collins
Senior Assistant General Manager
Water System

Monique Earl
Senior Assistant General Manager
and Chief Diversity, Equity and
Inclusion Officer

Nazir Fazli
Chief Safety Officer

Andrew C. Kendall
Senior Assistant General Manager
Corporate Services

Reiko A. Kerr
Senior Assistant General Manager
Power System Engineering and
Technical Services

Mark Northrup
Chief Information Technology Officer

Joseph M. Ramallo
Senior Assistant General Manager
Corporate Strategy and
Communications

Ann M. Santilli
Chief Financial Officer

Nancy Sutley
Senior Assistant General Manager
External and Regulatory Affairs and
Chief Sustainability Officer

Brian J. Wilbur
Senior Assistant General Manager
Power System Construction,
Maintenance, and Operations

The LADWP Briefing Book is published by the LADWP Corporate Strategy and Communications Division. This edition covers fiscal year 2020-21 and the first three quarters of fiscal year 2021-22.

Building a Stronger L.A.

Through Service, Innovation and Opportunity









At LADWP we are helping to build a stronger Los Angeles by creating good-paying jobs, partnering with businesses to fuel our local economy and empowering all of our customers to save on their utility bills, while combating climate change. As the nation's largest city-owned water and electric utility, revenue from our ratepayers is spent not on profits, but on strengthening our water and power infrastructure, greening our grid and making our city more prosperous and sustainable while ensuring that all of our customers benefit from our transition to a green economy and 100% clean energy.

Creating Good-Paying Jobs

- Recruiting from local trade schools and colleges
- Focusing on workforce diversity
- Empowering women in non-traditional jobs
- Excellent benefits, exciting challenges and competitive pay

Fueling Our Local Economy

- Over $1 billion in contracts each year
- Business assistance loans
- Supply chain diversity
- Upgrading aging infrastructure





Ensuring Equity and Affordability

- Streamlined low-income discount rate program
- Competitive water and power rates
- *Help Is on the Way!* debt relief program
- Flexible play plans
- Expanding energy equity
- Community solar programs
- Energy efficiency in low-income housing

BUILDING A STRONGER L.A.









Enhancing Diversity, Equity and Inclusion in our Workforce and in our Communities

At LADWP, we are committed to ensuring that diversity, equity and inclusion are valued and reflected in every aspect of our operations. In response to Mayor Eric Garcetti's Racial Equity Executive Directive No. 27, we embarked upon a comprehensive review of LADWP's operations, practices, policies and procedures—including extensive engagement of our workforce and other LADWP stakeholders—to document the diversity of our workforce, culture, operations, services and practices. Our first-ever Racial Equity Action Plan (REAP), issued in the summer of 2021, establishes goals and recommendations to foster equity and build a diverse and inclusive organization that our employees, city leaders, businesses, community stakeholders, and residents can look upon with pride.

We took immediate action to implement one of the report's key recommendations—creating an Office of Diversity, Equity and Inclusion (DEI) and hiring LADWP's first Chief Diversity, Equity and Inclusion Officer reporting directly to the General Manager and Chief Engineer. The DEI Office will implement the REAP and oversee the policies, practices and programs designed to improve diversity and opportunities throughout LADWP.

LA100 Equity Strategies

Following the release of the groundbreaking Los Angeles 100% Renewable Energy Study (LA100), LADWP launched LA100 Equity Strategies in the summer of 2021 to ensure the path to 100% carbon-free energy is equitable as well as achievable. LA100 Equity Strategies, a two-year study in partnership with the National Renewable Energy Laboratory (NREL) and UCLA, brings together L.A.-based community justice organizations and stakeholders in a Steering Committee to guide this unprecedented effort.

Learn more: LADWP.com/LA100ES

Building a Strong and Diverse Workforce



LADWP recognizes the importance of a strong and diverse workforce to continue building a stronger Los Angeles. As a jobs creator and employer, LADWP maintains a workforce of more than 11,000 and promotes economic development in the region by providing secure, well-paying civil service jobs. LADWP is also committed to creating paths to secure employment especially for members of underserved communities, promoting STEM education that may lead to future employment at LADWP, while also investing in the leaders of the future.

To accomplish this, we have significantly stepped up recruiting for trade and professional positions with the goal of creating a workforce that reflects the diversity of our city and the communities we serve.

Learn more: LADWP.com/jobs

Our Diverse Workforce

LADWP's diversity reflects that of the city we serve. Our staff come from many different backgrounds. Embracing these various characteristics and influences has helped the Department become a stronger organization. Though our employees were socially distanced during the pandemic, the expansion of virtual platforms like Webex to more team members, including those in the field, opened new opportunities to connect during diversity month celebrations throughout the year. Celebrations of Women's History Month, Asian American and Pacific Islander Heritage Month, Hispanic Heritage Month and Filipino American History Month were highlights in 2021, drawing hundreds of employees through virtual events. In February 2022, we embarked upon a month-long celebration in honor of Black History Month, offering dynamic events that highlighted our Black employees' strong legacy.

A discussion on Asian hate brought the serious issues facing Asian-Americans today to the forefront. A lighthearted cultural exchange between different members of the Latinx community was featured during Hispanic Heritage Month. And in October, a guest speaker provided a moving history lesson about Filipino Americans.

Empowering Strong Women

During the Women's History Month celebration in March 2021, our Women's Empowerment Panel sparked conversations and suggestions that led to the formation of the LADWP and IBEW Local 18 Women's Council. Formed in 2022, the council aims to support, elevate and advance women in the LADWP workforce.

Though LADWP has made strides in achieving gender equity in our workforce, women remain underrepresented in skilled craft and trade positions. LADWP's water and power systems are developing strategies to attract and recruit more women in non-traditional jobs and trades.

We produced a series of recruitment videos for key trade positions across LADWP, including Instrument Mechanic Supervisor, Steam Plant Operator, Electrical Mechanic and Water Treatment Supervisor. Our recruitment team also began a partnership in 2022 with Women in Non-Traditional Employment Roles (WINTER), a non-profit workforce development program that aims to train, educate and prepare women for careers in the construction industry. LADWP holds a hiring presentation for each WINTER cohort, educating women about the civil service process and job opportunities.



Sustainability

Our Carbon Reduction Progress

Reducing greenhouse gas (GHG) emissions to fight climate change continues to be a priority for LADWP as we work to meet our accelerated decarbonization targets.

In 2016, LADWP achieved the target set by California Senate Bill 32 to reduce GHG emissions to 40% below the 1990 level by 2030. LADWP met and exceeded this target 14 years ahead of the deadline. By the end of 2021, L.A.'s power portfolio was 55% carbon free and our GHG emissions level was estimated to be 7.7 million metric tons (MMT)—approximately 57% below our 1990 emissions baseline of 17.9 MMT.

At the close of 2021, we reached a major milestone with the completion of the 331 MW Red Cloud Wind Project. The major wind facility is expected to boost our renewable energy portfolio by 6%, bringing our power supply to over 60% carbon free.

Through the 2022 Strategic Long-Term Resource Plan (SLTRP), LADWP is analyzing scenarios for L.A.'s future power mix that contemplate aggressive buildouts of renewable energy resources, energy storage, demand response, and energy efficiency. These alternative pathways target reducing GHG emissions to between 80% and 90% below our 1990 baseline by 2030, achieving the state's long-range GHG emissions reduction target 20 years early, and ultimately to achieve 100% carbon free by 2035.



SUSTAINABILITY



L.A. Ranks No. 1 Solar City in U.S.

The City of Los Angeles ranked no. 1 for solar energy capacity in the latest edition of the Environment California Research and Policy Center's report *Shining Cities: The Top U.S. Cities for Solar Energy*, which tracked data through December 2021.

The report designates Los Angeles a "Solar Superstar," meaning it boasts 100 or more watts of solar PV capacity installed per capita. Los Angeles is home to 550 MW (AC power) of total solar capacity, combining net energy metering, feed-in tariff, and utility-built solar. That averages 166.7 solar watts per person. Our city has now held the title seven out of the last eight years that the report was issued.

Clean Air Community Grants

A variety of clean air and clean energy programs, ranging from an e-bike library in the Northeast San Fernando Valley to solar arrays and cool roof installations for low-income housing in Wilmington and Watts, were among nine projects that received $4.2 million in grants in 2021 through the first round of LADWP's Community Emissions Reduction Grants Program. The program seeks to reduce emissions in communities that experience disproportionate levels of pollution, including those surrounding Valley Generating Station in Sun Valley and Harbor Generating Station in Wilmington. The program will award $20 million in grants over five years using funds from CARB's Cap-and-Trade program and Low Carbon Fuel Standard (LCFS) program.

Investing in Energy Efficiency

Energy efficiency continues to be a key strategy for transitioning our power supply to 100% clean energy, providing a cost-effective way to reduce GHG emissions. Energy efficiency supports system reliability and resiliency while enabling customers to better manage their power use.

Guiding Principles

LADWP applies the following guiding principles for launching new and redesigned energy efficiency programs:

- Promoting energy efficiency programs for all customer sectors
- Targeting hard-to-reach customers, such as low-income residents and small businesses
- Achieving tangible economic benefits for low-income customers
- Leveraging programs to support jobs for the local workforce



Through our portfolio of energy efficiency rebates, free efficiency upgrades, and other programs, LADWP customers saved nearly 448 GWh cumulatively during FY 2020-21. That amount of energy savings is comparable to offsetting electricity for 80,287 homes and reducing GHG emissions by 140,622 metric tons annually, which equates to removing 33,353 gasoline-fueled cars from the road.

- Working collaboratively with partner agencies on outreach and education to reach a broad and diverse customer base
- Operating transparently and reporting results regularly
- Expanding education, accessibility, and participation to serve a diverse customer base

Energy Efficiency Goals

We achieved our target of 15% cumulative energy savings from 2010 through 2020, representing 3,437 gigawatt-hours (GWh), enough to offset the electricity needs of 615,950 homes, and avoid over 1 million metric tons of GHG emissions. LADWP is focused on reducing power use in Los Angeles by an additional 15% by fiscal year 2030-31, representing a potential cumulative savings of 3,439 GWh by 2035.

Building Electrification

Converting homes and other buildings to electricity is critical for meeting California's ambitious decarbonization goals. LADWP continues to play an active role with partner agencies and organizations to drive building electrification. To support our city's clean energy goals and provide savings for our customers, LADWP is committed to promoting zero-carbon energy new construction projects and making high-efficiency electric heating, ventilation and air conditioning (HVAC) technology more accessible and affordable to all Angelenos.

Water System

LADWP's Water System supports the vitality and sustainability of Los Angeles by providing our customers and the communities we serve with reliable, high quality and competitively priced water services in a safe and environmentally responsible manner. We are the nation's second largest municipal water utility. In fiscal year 2020-21, we supplied approximately 166 billion gallons of water annually, and an average of 454 million gallons per day (GPD), to 735,600 water service connections.

LADWP has a strong history of water resources management. As Los Angeles has grown from a population of 142,000 in 1902 to approximately 4 million residents today, we continue to make efficient water use a way of life, providing reliable, high quality resilient water supplies now and in the future.

Our Water System is committed to implementing innovative water management, and is a leader both nationally and globally by focusing on three key areas: the safety of drinking water, reliability of water infrastructure, and developing sustainable local water supplies.



WATER SYSTEM

2021-22 BRIEFING BOOK

Water System

Los Angeles' Water Sources



Water Facts

Approved Water Budget
(FY 2021-22)

- $ **1.7** billion **total**
- $ **592** million for operations and maintenance
- $ **891** million for capital projects
- $ **250** million for purchased water

Water Use (FY 2020-21)

112 gallons Average Daily Use Per Capita

Residential Customers
(FY 2020-21)

340,000 acre-feet per year or
303 million GPD

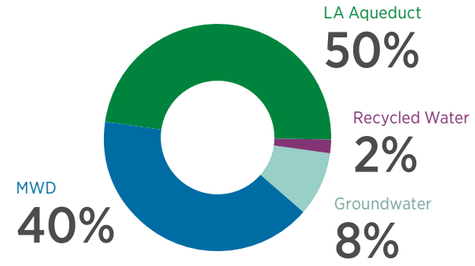
Commercial/Industrial/ Institutional Customers
(FY 2020-21)

135,000 acre-feet per year or
120 million GPD

Annual Water Supplied to Customers (FY 2020-21)

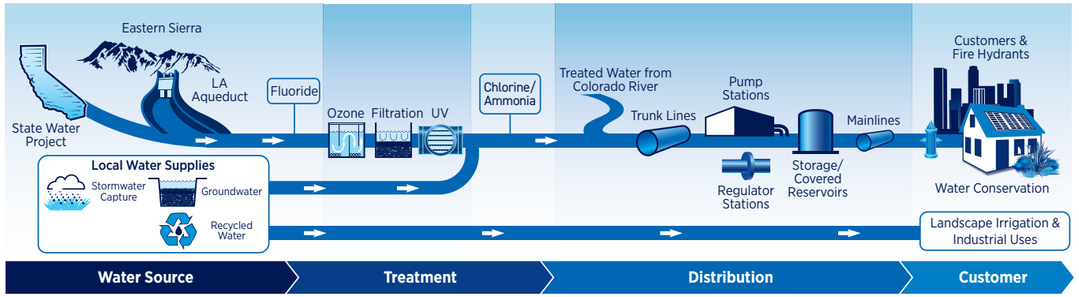
166 billion gallons
735,600 active water service connections

Water Supply Sources
(5-year average, FY 2017-2021)



Water System Infrastructure

115 Tanks and Reservoirs
85 Pump Stations
9 Ammoniation Stations
22 Chlorination Stations
329 Regulator and Relief Stations
111 System Pressure Zones
7,340 Distribution Mains and Trunk Lines (miles)
61,077 Fire Hydrants
323,362 Capacity (In-city and along the L.A. Aqueduct)





Water Reliability and Resiliency

Upgrading Water Infrastructure

LADWP maintains a vast water system with about 7,340 miles of mainlines and trunk lines, which are critical to reliably delivering high quality water to Los Angeles residents and businesses. With a large percentage of our pipe installed at the turn of the last century, we are working to accelerate the replacement and upgrade of aging water mains and riveted-steel trunk lines.

About one-quarter of LADWP's mainlines are over 80 years old, nearing the end of their useful life. LADWP has steadily increased the replacement of aging distribution pipes. The replacement work focuses on pipes that are prioritized as vulnerabilities within the water distribution system after a thorough assessment.

Our long-term goal is to achieve a replacement cycle that aligns with the expected useful life of the pipes, ranging from 100 to 120 years. For fiscal year 2021-22, our target is to replace 195,000 feet of mainline pipe along with upgrading portions of the Los Angeles Aqueduct, tanks and reservoirs, pump stations, pressure regulating stations, system valves, water meters, and other infrastructure improvements.

Water Infrastructure Upgrades—At a Glance

Infrastructure Replacements	FY 2020-21 Achievements	FY 2021-22 Targets
Distribution mainlines (pipes 20 inches or less in diameter)	159,029 feet	195,000 feet
Trunk lines (pipes 20 inches or greater in diameter)	16,313 feet	10,600 feet
Large valves	6	5
Pressure regulator stations	10	10
Pumps/motors	15	12
Small meters	28,950	32,500

Seismically Resilient Pipe Network

LADWP was the first water utility in the nation to install earthquake resistant ductile iron pipe (ERDIP) within our water system beginning in 2013. In April 2014, we initiated a Resiliency Program to further strengthen Los Angeles' water infrastructure in the event of an emergency, such as an earthquake or other natural disaster.

The program continues to build out a seismically resilient pipe network by installing earthquake resilient pipe (ERP) that includes specially designed ductile iron pipe with seismic joints and welded steel pipe. We install ERP at critical locations that are vulnerable to large ground movement within Los Angeles.

The Resiliency Program supports our city's sustainability goals by ensuring a safe, secure, and reliable drinking water supply and distribution system. Since the beginning of the Resiliency Program, we have installed over 29 miles of ERP, with more projects strategically planned in the near future.

River Supply Conduit Unit 7

The River Supply Conduit Improvement Upper Reach Unit 7 Project (RSC7) consists of installing 13,325 linear-feet of 78-inch diameter welded steel pipeline primarily within a tunnel. Located in the Burbank area, the tunnel begins at Johnny Carson Park South, south of the 134 Freeway in Burbank and continues northwest under Whitnall Highway to join with RSC Unit 6 near Biloxi Avenue and West Burbank Boulevard. At the close of 2021, LADWP was nearing completion of the four-year effort to upgrade the RSC7 trunk line. RSC7 is a key project that will help ensure future water supply reliability. The new trunk line replaces the existing RSC7, which was installed in the 1940s.

A connector pipe was completed in early 2020, enabling Burbank to convey drinking water that is a blend of San Fernando Basin groundwater, treated at the Burbank Operable Unit, and water imported from MWD to LADWP's distribution system.

The entire project is expected to be completed by February 2023.

Learn more: LADWP.com/rsc

Foothill Trunk Line Unit 3

Among the current ERP projects is the replacement of Foothill Trunk Line Unit 3, a major water artery that crosses the Sylmar Fault in the North San Fernando Valley. The original 1930s-era pipe, which ranges in diameter from 24 to 36 inches, will be replaced with nearly three miles of 54-inch diameter ERP trunk line.

The increased size will improve water quality and flow capacity as well as water system flexibility and reliability. To minimize impacts to the community, a new 12-inch diameter ERP distribution water mainline will be installed alongside the trunk line. The mainline will separate the water serving the local community from the trunk line. The construction includes 13,000 feet of open trenching and 3,430 feet of tunneling in six work areas to minimize impact to community and allow through traffic. The last open trench work area is scheduled to start by December 2022 and expected to be completed by April 2023. Tunneling work will be scheduled following the completion of the last open trench work area.

Learn more: LADWP.com/foothill

Century Trunk Line Unit 1

The Century Trunk Line Unit 1 Project is replacing approximately 7,600 feet of existing 36-inch welded steel pipe originally installed in 1937 on Century Boulevard in the vicinity of the Los Angeles International Airport. Operating past its useful service life, the old pipe is being replaced with 10,200 feet of 24- and 48-inch diameter ERP to increase resiliency during earthquakes. Construction is slated to be completed by September 2022.

Learn more: LADWP.com/CenturyTrunkLine

LADWP maintains a high level of water service reliability. Due to our targeted efforts to replace pipe in areas with the highest leak density, our rate of pipes leaking has dropped to 14 leaks per 100 miles of pipeline over the past five years—well ahead of the national average of 25 leaks per 100 miles of pipes.



Ensuring a Sustainable Water Supply

LADWP is committed to providing a water supply that is resilient, reliable, sustainable, high quality and cost effective as we confront extremes in weather conditions and address other challenges in managing our city's water supply.

In the past 15 years we have seen significant swings in hydrological conditions, affecting our allotted supply from the State Water Project (SWP), purchased from the Metropolitan Water District of Southern California (MWD). We also leave about half of the water that was historically exported to Los Angeles from the Eastern Sierra in the Owens Valley and Mono Basin to protect and sustain the environment.

To ensure a sustainable water supply, we continue diversifying and expanding our local water resources through increasing the use of recycled water, improving the capacity for stormwater capture, and cleaning up contamination of the San Fernando groundwater basin. We also rely upon our customers to adopt water efficient measures and continue their strong water conservation efforts.

Learn more: LADWP.com/AboutYourWater

Water Conservation

When it comes to saving water, LADWP customers are heroes. Angelenos have long embraced water-saving ethics, and water conservation is at the core of multiple strategies to ensure a sustainable water supply. Water use has dropped by over 30% in the past 15 years as our customers have diligently maintained their water-efficient habits.

LADWP is one of the few water agencies across the state to mandate water use restrictions continually since the early 1990s. We have limited outdoor watering to three days a week under Phase 2 of the City's Water Conservation Plan Ordinance since 2009 along with other prohibited outdoor uses of water.

Facing the third consecutive dry year, limited water supplies imported from the Sierra Nevada Mountains, and lack of access to regional storage, the Los Angeles City Council authorized reducing outdoor watering from three days to two days per week and moving to Phase 3, effective June 1, 2022.

The action followed MWD's approval of a regional water shortage emergency plan, impacting LADWP and five other water agencies that rely upon SWP water from Northern California. As the region's water distribution system is designed, MWD cannot deliver other sources of water to these areas. We already had instigated major operational changes to connect more of the city to these regional supplies.

With the decision to implement Phase 3, LADWP is asking customers to find ways to cut back their water use further to meet a monthly volumetric limit in compliance with MWD's water shortage emergency declaration. In fiscal year 2020-21 our customers' water use was 112 gallons per day despite the lower level of precipitation. Our new goal is to further reduce water use to 105 gallons per person per day.

LADWP encourages conservation and water use efficiency through our tiered rate structure, which incentivizes lower water use. We educate customers about water conservation through various outreach and educational programs, and offer generous incentives for water-saving measures and devices, such as turf replacement and high-efficiency clothes washers. In addition, LADWP's Water Loss Task Force continues to develop and implement strategies to detect and reduce already low water leaks in our distribution system.



Press event announcing two-days-a-week watering

Phase 3: Two-Days-A-Week Watering

Phase 3 of the Water Conservation Plan Ordinance reduces the number of days for outdoor watering from three days to two days per week, and is now in effect for all customers.

The new Phase 3 restrictions incorporate all of the existing Phase 2 prohibited uses, which have been in effect throughout the city since 2009. Outdoor watering with sprinklers is limited to eight minutes per station on permitted watering days. Watering with sprinklers using water-conserving nozzles are permitted for up to 15 minutes twice a day, on the designated watering day. All watering is prohibited between the hours of 9 a.m. and 4 p.m.

Customers with street addresses ending in odd-numbers may water on Mondays and Fridays, and customers with even-numbered street addresses may water on Thursdays and Sundays, before 9 a.m. or after 4 p.m. Hand watering is allowed every day during those hours if the hose is equipped with a self-closing water shut-off device. Drip irrigation is also allowed during those hours on any day for watering food sources, such as a community vegetable garden.

LADWP's Water Conservation Response Unit (WCRU) is patrolling neighborhoods to enforce the ordinance and educate people about the restrictions. The WCRU team also helps customers identify ways to reduce their use. The team members will issue warnings first but fines can be imposed if violations are not addressed. The fines escalate for failing to address the issue and for unreasonable water use.

To help customers reduce their water use, LADWP has boosted many water-saving rebates and programs. (See page 55.)

Learn more: LADWP.com/WateringDays

A Water Conscious City

- 30% reduction in water use over the past 15 years
- 30+ years of mandatory water conservation ordinances
- 51 million+ square feet of turf replaced
- 3.2 million+ high-efficiency toilets, washing machines, showerheads and faucets replaced





Most of the city's golf courses, such as Roosevelt Golf Course in Griffith Park, use recycled water for landscaping.

Recycled Water

Operation NEXT

Operation NEXT is a water supply initiative being developed by LADWP in partnership with LA Sanitation and Environment (LASAN) that aims to improve the overall water supply resiliency and reliability for Los Angeles. The goal of Operation NEXT is to maximize purified recycled water from the Hyperion Water Reclamation Plant in Playa del Rey, creating a new sustainable water supply for L.A. and the region.

Recycled water will offset purchased imported supplies through a process known as indirect potable reuse, which involves using the purified recycled water to replenish the groundwater basin. Concurrently, LADWP is working with regulators to allow integrating purified recycled water directly into the drinking water system. This process, known as direct potable reuse, would further expand the use of purified recycled water from Hyperion and other city water reclamation plants as a supplemental water source.

The Hyperion plant will be retrofitted with advanced treatment processes (membrane bioreactors, reverse osmosis, and ultraviolet advanced oxidation), to produce up to 217 million gallons per day (MGD) of purified recycled water. That represents enough water to sustain 972,000 Los Angeles homes every day. Working with regional partners — the Water Replenishment District of Southern California (WRD) and MWD — LADWP will use the purified recycled water as a sustainable and reliable source of local water supply for the city.

LADWP is developing a robust stakeholder communication and outreach plan as part of our Operation NEXT Master Plan. By working with partner agencies, community groups, elected officials, environmental leaders, Neighborhood Councils and other stakeholders, LADWP is creating a high level of collaboration and cooperation for Operation NEXT.

Learn more: LADWP.com/OperationNEXT





Stormwater Capture

Expanding our capacity for capturing stormwater runoff is a key strategy to ensure our city remains water strong. Capturing and managing stormwater is a reliable and sustainable way to replenish local groundwater aquifers while reducing urban flooding. Stormwater capture also improves the quality of water in downstream waterbodies such as rivers, lakes, and ocean.

With over 70 new projects forecasted over the next 15 years, LADWP and its partners, such as the Los Angeles Department of Public Works and Los Angeles County Flood Control District (LACFCD), will double the city's stormwater capture capacity. Many of these projects will happen at our neighborhood parks, and LADWP will be upgrading park amenities along the way.

Our stormwater capture goal is to reach 48.9 billion gallons (150,000 acre-feet) of annual stormwater capture capacity by 2035. For reference, an acre-foot of water is roughly equivalent to one foot of water covering a football field.

Tujunga Spreading Grounds Enhancement Project

After five years in the making, the Tujunga Spreading Grounds Enhancement Project was completed in November 2021. LADWP and LACFCD partnered to improve the stormwater capture and groundwater replenishment at the 150-acre Tujunga Spreading Grounds. Work involved reconfiguring and deepening 20 existing stormwater capture spreading basins of varying sizes into nine deeper basins. Overall, the project is expected to double the stormwater capture capacity from 2.61 billion gallons (8,000 acre-feet) to approximately 5.21 billion gallons (16,000 acre-feet), providing enough water to supply more than 64,000 homes in Los Angeles annually.

In the last phase of construction, we added community benefits, such as walking paths, an outdoor classroom, educational signage, and a permeable pavement parking lot to improve the environment and help beautify the community with native vegetation and open space.

The project was funded by LADWP, LACFCD, with support from State of California Proposition 84 and Proposition 1 grants. In 2019, it received awards from the Western Council of Construction Consumers and the American Academy of Environmental Engineers and Scientists.

Learn more: LADWP.com/TSG

San Fernando Regional Park Infiltration Project

The San Fernando Regional Park Infiltration Project, located at San Fernando Regional Park in San Fernando, will collect stormwater runoff from a 942-acre drainage area, recharge the San Fernando Groundwater Basin with approximately 1.45 million gallons (446 acre-feet) of stormwater annually, and renovate existing park amenities. In 2018, LADWP partnered with the City of San Fernando on the project design, and plans on extending the partnership through project completion. To date, the City of San Fernando has been awarded funding under both the Safe, Clean Water Program and State of California Proposition 1 Integrated Regional Water Management Program. Construction began in January 2022 and is anticipated to be completed in July 2023.

Pacoima Spreading Grounds Improvement Project

A three-year project to expand the capacity of stormwater capture is underway at the 169-acre Pacoima Spreading Grounds in the northeast San Fernando Valley. Runoff and rainwater percolating through these spreading grounds recharge the San Fernando Groundwater Basin with an average of 1.69 billion (5,200 acre-feet) per year of stormwater annually. However, with the existing configuration, stormwater storage capacity and percolation rates are limited. The Pacoima Spreading Grounds Improvement Project, which began in May 2021, seeks to increase the capacity of the spreading grounds, enhance the percolation rate, and provide community enhancements. This will be accomplished by deepening and consolidating the spreading basins, removing underlying clay layers, making improvements to the intake canal, and constructing steel picket fencing and a bike path adjacent to the Pacoima Diversion Channel between Devonshire Street and Filmore Street. Overall, the project is estimated to bring the total stormwater capture capacity to 3.42 billion gallons (10,500 acre-feet) per year. The project is supported by State of California Proposition 84 funding for construction.

Stormwater Capture at City Parks

A series of stormwater capture projects are underway to expand stormwater capture at nine city parks in the East San Fernando Valley in partnership with the Los Angeles City Departments of Public Works and Recreation and Parks. The Stormwater Capture Parks Program is anticipated to create up to 978 million gallons (3,000 acre-feet) of stormwater capture capacity at the parks.

Participating parks include David M. Gonzales Recreation Center, Fernangeles Park, Strathern Park North, Whitsett Fields Park North, Valley Plaza Park North, Valley Plaza Park South, Alexandria Park, North Hollywood Park and Valley Village Park. The projects will use a variety of measures, including catch basins, bioswales, pre-treatment devices, pumps, storm drains, underground infiltration galleries, and other best management practices.

The program includes extensive public outreach to keep the community informed of plans and progress until completion, expected in 2030. Construction for the projects will be divided into three phases to limit community and environmental impacts. The first construction phase is expected to begin in 2023. In March 2022, LADWP was awarded $45.8 million in Measure W awards for the David M. Gonzales Recreation Center and Valley Plaza Park Stormwater Capture Projects.

Learn more: ladwp.com/parks

San Fernando Valley Green Street Projects

A series of green street projects were completed in 2021 in the San Fernando Valley, and are designed to capture about 163 million gallons (500 acre-feet) of water per year. Implemented in partnership with LASAN, the Green Street Projects will help recharge groundwater, alleviate local flooding, reduce the amount of pollution in runoff after the first rain, and improve water quality downstream. The projects feature enhanced access for walking as well as improved aesthetics along the existing right-of-way. They include the Ben and Victory Green Stormwater Infrastructure, Agnes Avenue Stormwater Capture, Victory-Goodland Street Median Stormwater Capture, Glenoaks and Filmore Stormwater Capture, Lankershim Boulevard Great Street, and Van Nuys Boulevard Great Street projects.

WATER SYSTEM

Groundwater Cleanup

The San Fernando Groundwater Basin (SFB) is a critical local water resource but has been limited due to historical contamination affecting nearly 50% of LADWP's groundwater wells. LADWP continues expanding remediation systems to remove contamination from the SFB. During dry periods, when purchased imported water is less available, the SFB has provided an average of 12% of our water supply, and up to 23% during extended dry periods. Resolving contamination problems and restoring the beneficial use of the SFB are essential to protecting public health and the environment, and to recovering LADWP's historical groundwater supply as a valuable local water resource.

Based on an extensive groundwater remedial investigation and improvement study, LADWP has installed 26 monitoring wells. These new wells, along with a network of 70 existing wells, provide data to evaluate groundwater quality in the northern portion of the SFB, which includes the city's most productive well fields. LADWP's current groundwater remediation efforts are focused on three major remediation projects: The North Hollywood West, North Hollywood Central, and Tujunga Well Fields. Additional groundwater evaluation in the Southern San Fernando Basin Well Fields is also underway.

Groundwater Cleanup Agreements

To restore the SFB as a beneficial and long-term resource for drinking water, and mitigate the cost for our customers, LADWP and the U.S. Environmental Protection Agency (US EPA) have engaged in a coordinated effort to hold more than 20 responsible parties in the area accountable for their historic production of hazardous materials and the resulting SFB groundwater contamination.

North Hollywood West Wellhead Treatment Project

The North Hollywood West Wellhead Treatment Project is an important part of LADWP's Interim Remedial Action for the North Hollywood West Operable Unit. The project involves constructing an Advanced Oxidation Process (AOP) treatment facility for the remediation of 1,4-dioxane (historically used as a solvent in industrial and laboratory applications, among other purposes) encountered in groundwater in the North Hollywood West Well Field. The project is expected to operate year-round and will be capable of treating 3.86 billion gallons of water per year. The project broke ground in January 2018 and is expected to be operational by spring of 2022.

North Hollywood Central and Tujunga Well Fields

Two interim groundwater remediation projects underway are the North Hollywood Central and Tujunga Well Field Response Action Treatment Facilities. The projects will provide the necessary treatment improvements to remove contamination in groundwater at the Rinaldi-Toluca Well Field and the Tujunga Well Field. Studies have identified the presence and/or threat of 1,4-dioxane and volatile organic compounds contamination at both locations.

The treatment equipment includes the use of AOP and liquid phase granular activated carbon vessels for groundwater remediation. Once completed, the treatment facilities will allow for the operation of the full well fields. Construction for both projects began in fall 2020 and is expected to be complete in summer 2023.

Grants and Funding

LADWP proactively seeks local, state, and federal funding to offset potential rate impacts. To date, LADWP has been awarded $66.6 million from Measure W funds to support our Stormwater Capture Parks Program. Measure W, the Safe Clean Water Program, was approved by Los Angeles County's voters in 2018, and provides a dedicated stream of funding for stormwater capture projects.

LADWP has been awarded several grants funded through Proposition 1, the Water Quality, Supply, and Infrastructure Improvement Act, to support our groundwater remediation projects.

Approved in 2014, the measure provides funding for projects that improve water quality, including drinking water protection, and help meet the long-term water needs of California. As of January 2021, LADWP has received $6 million in Proposition 1 planning grants for the North Hollywood Central, Tujunga, and Pollock Well Field remediation projects. LADWP has also been awarded $329.9 million in Proposition 1 grants and loans for water conservation, groundwater remediation, recycled water, and stormwater capture projects.



Owens Valley

From the Sierra Nevada and the Colorado River to the ground beneath our feet in Los Angeles, our city's water comes from a variety of diverse sources. One of those comes to L.A. through the Los Angeles Aqueduct. Built in 1913, the L.A. Aqueduct was the largest water infrastructure project in the world at the time. Now, more than a century later, the L.A. Aqueduct still runs 233 miles north of Los Angeles carrying fresh runoff from the Eastern Sierra to the L.A. Basin.

Today, LADWP maintains stewardship of nearly 315,000 acres of land throughout Inyo and Mono counties.

Learn more: LADWPEasternSierra.com

Aqueduct Operations

LADWP operates several key facilities involved in delivering water and power safely and reliably to Los Angeles, as well as about 6,000 electric customers in the Owens Valley. We employ nearly 350 people in the Eastern Sierra area and are actively recruiting new employees from the region. In addition to our water and power operations, construction, and maintenance forces, we administer leases and other land-use activities ranging from ranching and grazing to campgrounds and golf courses.

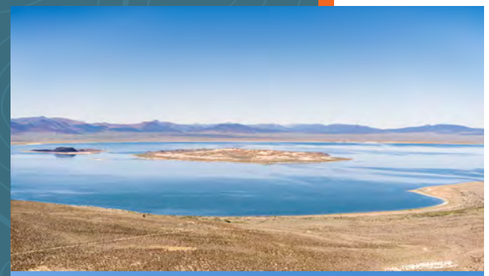
Stewardship

For decades, LADWP has been working hand-in-hand with the State of California, advocates, and local voices to protect the environment. LADWP is committed to maintaining, protecting, and enhancing the natural resources of Owens Valley, Long Valley and Mono Basin.

Today, LADWP leaves about half of the water that historically was exported to the city in the Eastern Sierra to meet environmental commitments and operational needs. LADWP manages over 100 environmental initiatives in Inyo and Mono Counties related to protecting and sustaining the environment.

In the Owens Valley, we have implemented 64 mitigation projects resulting in the restoration, re-greening, and/or revegetation of land owned by the City of Los Angeles and managed by LADWP. These projects have fostered the creation and maintenance of wetland ecosystems, invasive vegetation eradication, and additional environmental benefits to the area. LADWP continues to fulfill more than 100 other environmental tasks related to protecting and sustaining the environment.

Sustaining the Owens Valley and Mono Basin Environments



Owens Lake

We have invested nearly $2.4 billion in dust mitigation at Owens Lake, including the establishment of bird and waterfowl habitats recognized as a Western Hemisphere Shorebird Reserve Network site of international importance.



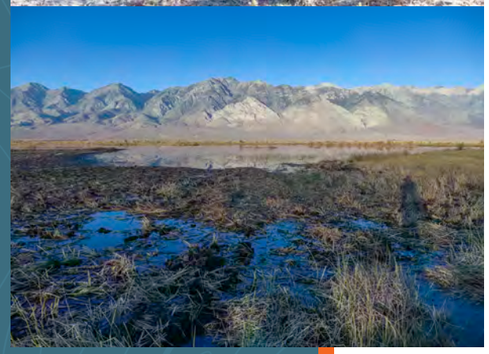
Lower Owens River

We completed the largest river restoration project of its kind in the Western U.S. by rewatering 62 miles of the Lower Owens River and enhancing approximately 2,000 acres of wetland and aquatic habitat for waterfowl. Since the release of water in 2007, the Lower Owens River has evolved into a thriving ecosystem and a recreational area for hiking, kayaking, and other activities.



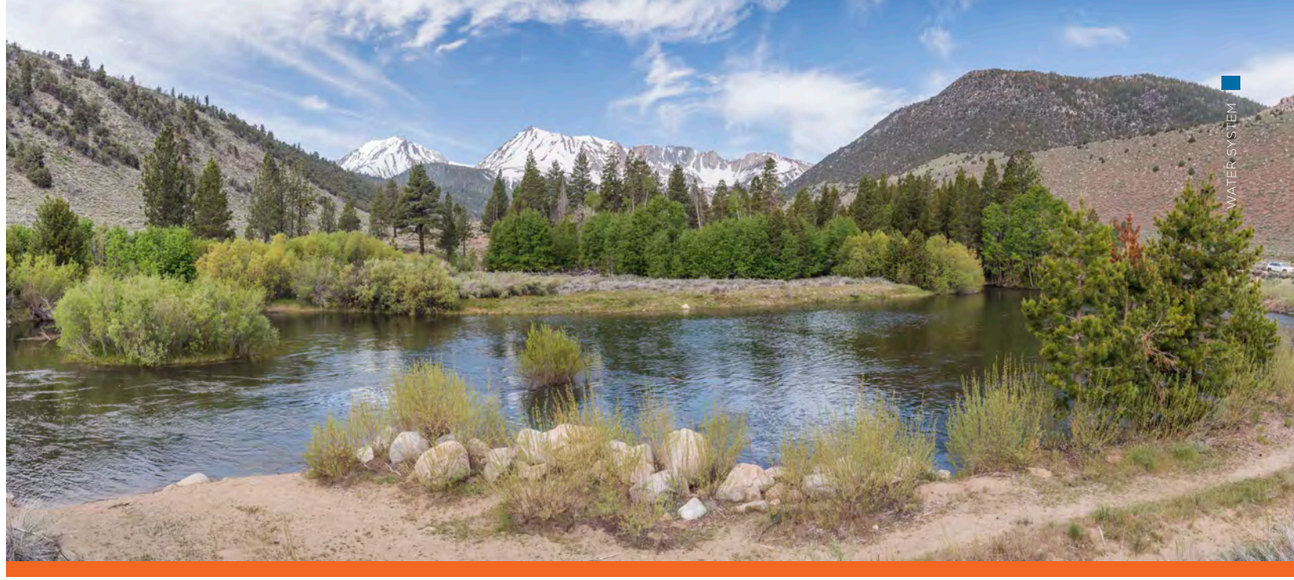
Laws Revegetation

In 2021, we successfully planted approximately 17,000 native plants in Laws, a small town north of Bishop, to provide groundcover and dust control. Through the Laws-Poleta Revegetation Project, LADWP has planted over 209,000 native shrubs covering 253 acres of land.



Blackrock Waterfowl Area

The successful five-year Interim Management and Monitoring Plan for the Blackrock Waterfowl Management Area in partnership with Inyo County has already enhanced habitat for Lower Owens River Project waterbird indicator species including shorebirds, waterfowl, and wading birds, and provided improved habitat for local and migratory bird populations.



Mono Basin

For nearly 40 years, LADWP has been working with local partners in the Eastern Sierra to restore and preserve the natural beauty of the Mono Basin. LADWP has invested in dozens of restoration projects that restored riparian vegetation around Mono Lake and its tributaries, as well as the rehabilitation of streams throughout the watersheds. In addition to water and air quality benefits from these projects, plant and animal biodiversity has increased, fish and wildlife populations have grown, and there are more acres of wetlands in the watershed than in decades past.

LADWP continues to advance one of the largest environmental restoration projects in the Mono Basin. The project includes the construction of a new spillway gate designed to increase control of flows from Grant Lake Reservoir, through Rush Creek, and into Mono Lake. The structure will be used during specific wet year conditions to deliver higher flows, as recommended by the state and outlined in a 2013 settlement agreement.

In April 2021, LADWP announced completion of the Long Valley Adaptive Management Plan for the bi-state sage grouse, which was collaboratively developed with input from other regulatory agencies and sage-grouse experts. The plan is intended to be a living document to guide land management decisions that will ultimately preserve and enhance the bi-state sage-grouse population.

Community Investments

LADWP supports almost 100 organizations annually in Inyo and Mono counties that host events, community programs, educational activities, and workforce development opportunities. In 2021, we launched the first "LADWP in the Eastern Sierra" community newsletter, bringing subscribers information about LADWP operations, projects, and programs in the Eastern Sierra. We continue to update our LADWPEasternSierra.com dedicated website that went live the previous year. Residents, customers, and visitors have more access to news, timely facility and land updates. There is also information for Owens Valley electric customers.

LADWP continues efforts to build our workforce in the Owens Valley. We conducted our fourth virtual job fair for Owens Valley residents to attract qualified employees to apply for jobs in our Northern District offices.

Recreating Responsibly

One aspect that makes the Eastern Sierra such an enjoyable place is its wide-open spaces. It represents some of the most accessible wilderness areas in California. The recreational opportunities on LADWP Eastern Sierra land include fishing, camping, golf, hiking, rock climbing, and sightseeing. When the COVID-19 pandemic became widespread in 2020, LADWP worked closely with local agencies and law enforcement to keep the Eastern Sierra safe and clean. In collaboration with partners such as the Bishop Chamber of Commerce and the Eastern Sierra Interpretive Association, responsible recreation is promoted through outreach campaigns and property signage. LADWP also co-hosted the 2nd annual stewardship clean-up event in October 2021 in the Upper Owens River watershed.

Adopt-A-School

Our Adopt-A-School program extends to the Owens Valley where LADWP Northern District staff has adopted six schools in Inyo County. Through this program, employee volunteers engage in activities ranging from gardening programs to judging science fairs to speaking in classrooms during career days or other events.



FY 2021-22 Achievements

- Completed Los Angeles Reservoir Ultraviolet Treatment Facility.
- Achieved full compliance with the U.S. Environmental Protection Agency's (US EPA) regulations to protect drinking water in reservoirs.
- Carried out a comprehensive testing program throughout LADWP's water system and our water sources, including an annual average of 30,000 samples and 250,000 water quality test parameters.
- Maintained continuous, daily operation of field testing, sampling, and lab analysis throughout the pandemic.
- Completed a study on the useful life of the 96 million L.A. Reservoir shade balls and extended the replacement cycle from 10 to 15 years.
- Developed new water quality technology and utilized online water quality monitors for the L.A. Convention Center during Super Bowl 2022 festivities.



Water Quality

Ensuring Safe, High Quality Water

LADWP is committed to providing our customers and the communities we serve with clean, safe, and cost-effective drinking water that meets all state and federal standards. The water supplied to our customers' taps has been rigorously treated, tested, and monitored by highly-trained, vigilant staff dedicated to providing the highest water quality possible.

In 2021, we culminated a 20-year effort that required work on over 30 major infrastructure projects and more than $1.5 billion in investments to safeguard the city's drinking water and meet strict regulations. These regulations include the Long Term 2 Enhanced Surface Water Treatment Rule (LT2), which protects drinking water in reservoirs from microbiological contamination, and the Stage 2 Disinfectants/ Disinfection By-Products Rule (DBP2).

Learn more: ladwp.com/waterquality

LA Reservoir UV Plant

Commissioning activities for the LA Reservoir Ultraviolet Disinfection Plant (LARUVDP), a state-of-the-art $123.8 million water-treatment facility, were completed on January 31, 2022. The project puts LADWP in full compliance with the US EPA's LT2 regulations—culminating 20 years of redesigning the water system to meet stringent water quality rules. According to regulations, open-air reservoirs must be either covered, removed from service, or incorporate treatment of water before it enters the distribution system.

In combination with the existing Dr. Pankaj Parekh Ultraviolet Disinfection Facility, completed in 2014, and the deployment of nearly 96 million shade balls in 2015 on the surface of the Los Angeles Reservoir, the LARUVDP plant further improves water quality for our customers by providing essential disinfection while minimizing disinfection by-products and reducing the required chlorine dose. The LARUVDP treats 650 million-gallons-per-day with ultraviolet rays from 13 UV reactors and includes a flow control station, five seismic resilient vaults, and a chlorine injection vault.

Reservoir Compliance

Compliance efforts to meet the LT2 and DBP2 regulations included converting to chloramination disinfection; removing from service large, uncovered reservoirs such as Encino, Lower Stone Canyon, Silver Lake and Hollywood, and replacing them with tanks, bypass trunk lines and other infrastructure. We also installed floating covers on other reservoirs including Santa Ynez, Elysian and Upper Stone Canyon to help protect the water from environmental contaminants.

Headworks Reservoir Complex

The Headworks Reservoir Complex is a major project underway to help protect the city's drinking water supply and in turn, provide an aesthetic, landscaped recreation area for the public. The complex replaces the Ivanhoe and Silver Lake open-air reservoirs with the two seismically resilient, buried reservoirs, among the largest underground water storage tanks in the Western U.S. with a combined water storage capacity of 110 million gallons. Headworks East became operational in 2014. Headworks West Phase 2 was most recently completed. Soon to begin construction, Headworks West Phase 3 involves developing a flow control station to regulate water from the new River Supply Conduit Upper Reach pipeline into the reservoirs. Headworks West is expected to enter service in 2023 along with the flow control station.

In addition, we are building a modern water quality lab and a direct potable reuse (DPR) demonstration facility at the Headworks complex. The demonstration project, once completed in 2028, will produce purified recycled water from the Los Angeles-Glendale Water Reclamation Plant to eventually augment the drinking water supply.

Expanding Hydration Stations

LADWP continues to support a major citywide initiative to expand access to safe, high-quality drinking water by installing or refurbishing 200 drinking water hydration stations by the end of 2022. The Hydration Station Initiative Program aims to benefit the environment by reducing single-use plastic bottles while promoting our free, clean and accessible drinking water for the enjoyment and health of all residents and visitors.

In partnership with multiple city agencies, LADWP has facilitated the installation of 112 hydration stations as of March 2022. Over half of them are located in disadvantaged communities, with more planned at key locations in the city.

Power System

LADWP is the nation's largest municipal electric utility. In fiscal year 2020-21, we supplied 20,936 gigawatt-hours (GWh) to more than 1.55 million residential and business customers, as well as more than 5,100 customers in the Owens Valley. We maintain a diverse and vertically integrated power generation, transmission and distribution system that spans five Western states, and delivers electricity to more than 4 million people in Los Angeles.

LOS ANGELES' POWER GENERATION AND TRANSMISSION

If stretched end to end, LADWP's 15,000 miles of power lines and cable are longer than the distance from Los Angeles to Australia and back.



Power Facts

Approved Power Budget
(FY 2021-22)

- **$ 4.9** billion **total**
- **$ 1.6** billion operations and maintenance
- **$ 1.8** billion capital projects
- **$ 1.5** billion fuel and purchased power

Electric Capacity

8,101 MW Net dependable generation capacity from a diverse mix of energy sources

Power Resources
(Calendar Year 2021*)

*Preliminary and unaudited; submitted to the California Energy Commission for calendar year 2021

Power Use (FY 2020-21)

The average electricity consumption per home was about **475** kWh per month. The median usage for residential customers was about **333** kWh per month. Business, industry, and government agencies consumed about **63%** of the electricity in Los Angeles, while residents constituted **87%** of total customers.

Peak Energy Demand

6,502 MW The record instantaneous peak demand is reached on August 31, 2017.

Power Infrastructure

The Power System is responsible for inspecting, maintaining or replacing, and operating the following:

Generation

- **4** in-basin thermal plants
- **1** out-of-basin thermal plant
- **14** small hydroelectric plants
- **1** large hydroelectric pumped storage plant
- **1** wind plant
- **1** out-of-state wind plant
- **2** solar photovoltaic plants

Energy Storage

- **23** MW of City-owned energy storage
- **21.5** MW of utility-scale battery energy storage
- **1,265** MW of pumped hydro storage

Transmission

- **4,040** miles of overhead transmission circuits (AC and DC) spanning five Western states
- **135** miles of underground transmission circuits

Distribution

- **7,266** miles of overhead distribution lines
- **3,801** miles of underground distribution cables
- **300,884** distribution utility poles
- **3,135** pole-mounted capacitor banks
- **130,703** distribution transformers
- **177** distribution substations



Power Reliability & Resiliency

LADWP maintains a vast network of transmission and distribution overhead lines, underground cables, towers, poles, crossarms, transformers, and vaults. We are committed to providing reliable, resilient and safe electricity service for our customers.

Reliability Performance

Our power reliability metrics continue to beat national norms. Our power system performance ranked in the 1st quartile for the system average interruption frequency and duration indices (SAIFI and SAIDI). We ranked in the 2nd quartile for outage restoration time compared to investor-owned utilities (IOUs) nationwide, according to a benchmarking study performed by First Quartile Consulting and Pandora Consulting using data from the U.S. Energy Information Administration (EIA).

On average, our customers experienced less than one outage and 160 minutes of power interruption during fiscal year 2020-21, according to SAIFI and SAIDI, which are reported annually by most U.S. utilities.

Power Grid Upgrades—At a Glance

Infrastructure Replacements	FY 2020-21 Achievements	FY 2021-22 Targets
Poles	3,944	3,500
Crossarms	10,068	11,000
Transformers	1,206	1,050
Underground Cable (miles)	58.2	50
Vaults	26	20

Investing in Infrastructure

LADWP has invested significantly in the replacement and upgrade of aging and undersized electrical equipment through the Power System Reliability Program (PSRP), supported by annual rate adjustments from 2016 through 2020. LADWP invested approximately $4.7 billion from FY 2016-17 through FY 2020-21, with over $1 billion budgeted in FY 2021-22.

Through the PSRP, LADWP proactively inspects power equipment to identify needed repairs. In FY 2020-21, LADWP crews completed repairs on over 5,200 infrastructure-related jobs, and exceeded distribution equipment replacement targets for poles, crossarms, transformers, and underground cables. We are on target to meet all performance metrics for FY 2021-22 regarding cable replacements, pole and crossarm replacements, and maintenance hole lid restraint installations. Continued investment in the PSRP will enable improved reliability and resilience.

Outage Notifications

To better serve our customers,LADWP provides automated power outage alerts to keep customers informed of the status of power outages in their neighborhoods. Customers who enroll can be notified through texts, emails or both when there is a power outage affecting their neighborhood. Since the program went live in July 2019, 47,239 customers have subscribed to receive outage notifications, and the system has proven effective during several significant outage events. LADWP also keeps customers informed of major incidents via social media, including Facebook, Twitter and Nextdoor.

Sign up: LADWP.com/OutageAlert

Western Energy Imbalance Market

On April 1, 2021, LADWP successfully joined the Western Energy Imbalance Market (EIM), culminating four years of planning and preparing to become fully integrated with other participating power agencies. The Western EIM, operated by the California Independent System Operator (CAISO) offers a way for electric grid operators in the West to share energy reserves, which helps ensure reliability, lower costs, reduce greenhouse gas emissions, and optimized renewable energy resources. Through the Western EIM, LADWP voluntarily provides excess energy to other participating utilities as needed to maintain reliability in their service areas while retaining control of our generation and rate-setting.

Following the smooth “go-live” transition, LADWP has focused on fine-tuning our seasonal model and unit performance to improve participation. In addition to generating $42.71 million in the first nine months of operation, as reported by CAISO, the EIM has allowed LADWP to reduce the need for real-time flexible reserves and has resulted in a reduction of our overall carbon footprint. LADWP continues to operate as an overall net importer in the market.





POWER SYSTEM

Wildfire Mitigation Plan

Wildfires have posed a significant threat to public safety. LADWP updates our Wildfire Mitigation Plan every year per state of California legislation. Our plan includes preventative strategies and programs such as system hardening through design and construction, vegetation management, operating protocols, and inspection and maintenance programs.

As required by SB 901 and AB 1054, LADWP submits updated Wildfire Mitigation Plans to the California Wildfire Safety Advisory Board (WSAB) each year. We expect to submit the next update on July 1, 2022.

Learn more: LADWP.com/wildfireplan

Major Projects

Citywide Underground Cable Replacement

To strengthen the reliability and resiliency of the power grid, LADWP has completed a five-year effort to replace and modernize 1940s and 1950s era transmission cables that were at the end of their useful life. The Citywide Underground Cable Replacement project was a comprehensive effort to replace 10 underground transmission circuits totaling 135 miles of cable, strengthening the western portion of the grid. Completed on schedule in April 2021 despite delays due to the COVID-19 pandemic, the project was designed to improve power reliability, increase energy flow capacity and reduce long-term maintenance and replacement costs as we transition to a 100% clean energy future. All of the work took place within existing LADWP maintenance substructures, so there was no construction-related disruption to water or power service. The innovative cable project was engineered to reduce maintenance by installing spans of cable over 1,000 feet long, cutting the number of splicing maintenance vaults by nearly half.

Learn more: LADWP.com/UGCableReplacement

LAX Receiving Station in Mid-Flight

LADWP and Los Angeles World Airports (LAWA) have partnered to address the electrical load growth within LAX as the airport continues to expand. Construction is underway on a new receiving station (RSX), along with new transmission and distribution pathways to support LAX modernization. Most of the underground structures and conduits were completed as of March 2022. The entire receiving station is on track to begin operating in early 2025. RSX is the first high-voltage receiving station to be built in Los Angeles in more than three decades.

Scattergood-Pershing-Olympic Line

While RSX construction is underway, LADWP has begun installing the new 11.5-mile, 230 kV Scattergood-Pershing-Olympic Transmission Line that will replace a 1974 line and feed energy to RSX to support LAX and nearby areas. On track to be in service by May 2024, the project will improve the flexibility and reliability of the transmission system, comply with federally-mandated standards, and increase the transmission capacity to bring more renewable energy into the city, which is essential to achieving our 100% clean energy goal while maintaining reliability of the power grid.

Valley Generating Station

Plans are underway to take down the stacks and demolish the old, non-operating generating units at the Valley Generating Station in Sun Valley. Units 1-4 were decommissioned in the early 2000s and replaced with more efficient units. Once the old units are fully demolished and cleared, the space will provide up to 12 acres for clean energy projects such as solar, battery energy storage, and electric vehicle charging stations. The demolition plans include removing various structures and systems associated with those units.

Learn more: LADWP.com/ValleyGen

VIC-LA Transmission Upgrade

As we strive to reduce greenhouse gas emissions and increase renewable energy, LADWP is upgrading a key East-West transmission line to support new renewable energy expected to come into the L.A. Basin from east of Los Angeles. Most of these environmentally friendly generating resources have been proposed east of the Victorville/Adelanto transmission line and will be conveyed to Los Angeles through the Victorville-to-LA Basin (VIC-LA) Transmission System. VIC-LA stretches 399 miles and includes three 500kV and two 287kV lines. The VIC-LA project expands the path's capacity by about 450 MW, from 3,850 MW to 4,300 MW, and includes 12 projects at various facilities along the route. As of the end of 2021, LADWP had successfully raised 14 new transmission towers and placed nearly 16 circuit miles of upgraded transmission line in service. We also completed the installation of five high-capacity transformers, three 500kV circuit breakers, and 11 disconnect switches. A majority of the project is on track to be in service by December 31, 2022. Three remaining jobs will be completed first quarter of 2023.

Rosamond Switching Station

LADWP is laying the groundwork to build a new switching station that will be vital to our efforts to achieve our renewable energy targets. The Rosamond Switching Station will make it possible for LADWP to bring more renewable energy to Los Angeles via the Barren Ridge Renewable Transmission Corridor. Currently, over 600 MW of utility-scale solar projects are generating clean power in the Mojave Desert with more being proposed or under development. The new 230kV switching station will tie into the existing 230kV Barren Ridge-Haskell Canyon Lines 1, 2, and 3. The station will be equipped for six bays but has potential for up to 10 bays in anticipation of future interconnection requests by renewable energy developers. The project is in the design and land procurement phases, with plans to be in service in November 2025.

2021-22 BRIEFING BOOK



LA100

ACHIEVING 100% RENEWABLE ENERGY IN LOS ANGELES

Our Path to 100% Clean Energy

Completed in March 2021, the groundbreaking Los Angeles 100% Renewable Energy Study (LA100) affirmed that LADWP could meet the city's aggressive goal to be fully powered by 100% renewable and carbon-free energy by 2045, and even by 2035 in the fastest scenario.

Following the conclusion of the 3 ½-year independent study, LADWP has pursued accelerated decarbonization goals established by Mayor Eric Garcetti and the City Council: Supply 100% clean energy for Los Angeles by 2035, and 80% renewable and 97% carbon-free energy by 2030. Meeting these goals requires immediate actions along with near-term and long-term planning. While undertaking the immediate next steps, we have initiated two related planning efforts to determine the optimum path to achieve our clean energy goals and meet reliability requirements in a way that is equitable and keeps our rates competitive.

Determining a Path

2022 Strategic Long-Term Resource Plan

LADWP has begun to incorporate key takeaways from the LA100 study into our next Strategic Long-Term Resource Plan (SLTRP), which began in the summer of 2021. Working with community partners, LADWP is studying scenarios to determine the optimal long-term path to achieve 100% carbon-free energy as early as 2035, and interim targets of 80% to 90% renewables by 2030. After developing and modeling several scenarios, LADWP will recommend the most viable scenario that will meet our core principals of reliability, sustainability, affordability, and equity for our customers. Our results and recommendations will be selected in consultation with the SLTRP Advisory Group, a community advisory group that has been convened to ensure our plans reflect the input of the communities and customers we serve.

Learn more: LADWP.com/SLTRP

LA100 Equity Strategies

Following the release of the LA100 study, LADWP launched LA100 Equity Strategies (LA100ES) to ensure the path to 100% carbon-free energy is equitable as well as achievable. LA100ES, a two-year study in partnership with the National Renewable Energy Laboratory (NREL) and UCLA, brings together L.A.-based community justice organizations and stakeholders in a Steering Committee to guide this unprecedented effort. NREL, which led and authored the LA100 study, and UCLA researchers will analyze ways to improve or expand existing LADWP customer energy programs as well as develop new strategies to foster equity, incorporating what community members themselves believe is needed to achieve a more equitable energy future. During the first year, LA100ES outcomes will help inform the recommended path of the 2022 SLTRP as they become available. Once concluded, LA100ES findings will be incorporated into future iterations of the SLTRP as we transition to a 100% clean energy future.

Learn more: LADWP.com/LA100ES

LA100 Finding: "All communities will share in the benefits of the clean energy transition, but improving equity in participation and outcomes would require intentionally designed policies and programs."

LA100 Study

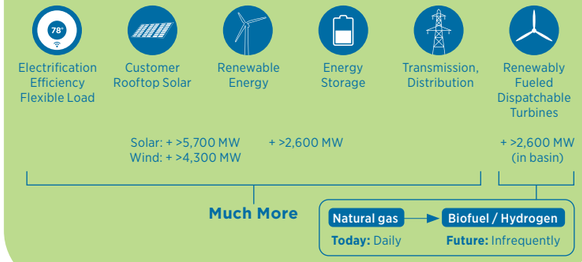
Completed

Unprecedented analysis identified multiple paths to achieve 100% target

Considers reliability, equity, sustainability and affordability

- Confirmed 100% by 2035 achievable
- Community & stakeholder input

Common Investments Across All Scenarios



LA100 Equity Strategies

Fall 2021-23

Community-driven, objective to achieve equity

Robust community engagement

Areas of Focus



2022 SLTRP

Fall 2021-2022 | 2035 & 2045 Targets

Our comprehensive integrated power plan

Recommends path forward to achieve our goals

- Integrates findings of LA100
- Community & stakeholder input
- Prioritizes reliability, resiliency, equity, affordability, sustainability

Considerations



Fast Track to 100% Clean Power

LA100 Next Steps

Based on the findings of LA100, we began implementing actions that will be needed to achieve 100% carbon-free energy by 2035, and meet our interim goal of 80% to 90% renewables by 2030. These are common investments identified through LA100 that are critical to meeting our goals. All scenarios being evaluated through the 2022 SLTRP anticipate a rapid increase in renewable energy, energy storage, local solar, customer energy management (demand response) and energy efficiency programs. LA100 also identified the need to increase power reliability within the L.A. Basin by expanding key transmission pathways and developing renewable energy generation that can provide power on short notice, 24/7 throughout the year. This will provide critical resiliency and reliability during critical events, such as the loss of power or transmission due to fires or earthquakes.

The essential next steps for a successful transition to 100% clean include:

Rapidly expanding renewables by deploying 3,000 MW of new renewable energy projects.

Upgrading and expanding transmission to deliver power to where it is needed within the city, and leverage existing transmission that will be needed to bring more renewable power into the L.A. Basin from outside the city.

Transforming local generation with quick-start turbines powered by renewable fuel.

Accelerating energy storage capacity within and outside of the city.

Ensuring equity as we deploy new solar and other distributed resources in the city, and reducing use of Valley Generating Station.



Rapidly Expanding Renewables

In calendar year 2021, LADWP achieved an estimated 37% renewable energy from wind, solar, geothermal, and eligible hydroelectric power. With the addition of the Red Cloud Wind Project, our renewable energy portfolio is expected to increase to nearly 44% in 2022.

2021 Renewable Energy Highlights

- Red Cloud Wind (331 MW) was placed in-service on December 22, 2021
- Northern Nevada Geothermal Portfolio increased to 127 MW on May 5, 2021
- Reached 550 MW of total installed local solar

Red Cloud Wind Project

The Red Cloud Wind Project, located about 85 miles southeast of Albuquerque, New Mexico, began commercial operation December 22, 2021, generating 331 MW of clean and affordable wind power for Los Angeles. That amount of wind energy is expected to boost our renewable energy portfolio by 6%, moving our city closer toward becoming 100% carbon free by 2035. Red Cloud is the largest, most efficient and lowest cost wind farm in LADWP's renewable energy portfolio to date. The amount of wind power being produced is expected to serve about 222,300 Los Angeles homes and save 464,040 metric tons of carbon emissions annually—the equivalent of removing nearly 100,000 gas-fueled cars from the road per year.

Large-Scale Solar Power

As of the end of 2021, LADWP has 1,120 MW of large-scale solar generation in our renewable portfolio through long-term power sales agreements, producing 2,875 gigawatt-hours (GWH) for Los Angeles. That includes 660 MW in the Mojave Desert along the Barren Ridge Renewable Corridor—Beacon Solar (250 MW) + Battery (20 MW/10MWh); Springbok Solar (350 MW), and RE Cinco Solar (60 MW). We also built and maintain the Pine Tree Solar (8.5 MW) and Adelanto Solar (10 MW) facilities. Outside of California, we receive solar from the Copper Mountain 3 Solar Plant in Nevada (210 MW) and Moapa Southern Paiute Solar in Southern Nevada (250 MW).

Eland Solar + Energy Storage Center

The Eland Solar and Storage Center, expected to be one of the nation's largest combined solar power and battery energy storage system (BESS), will be capable of dispatching power to meet peak demand, even after the sun sets. Located off Highway 14, north of Mojave, California, the Eland Solar and Storage Center will consist of two large-scale solar facilities totaling 400 MW of single-axis solar photovoltaic system, integrated with 300 MW / 1,200 MWh BESS energy. Glendale Water and Power (GWP) is participating with LADWP in Eland 1 and will receive 12.5% of the total solar and BESS energy. Construction is underway to build Eland Phase 1, which is expected to achieve commercial operation in the third quarter of 2023. Eland Phase 2 is in the design phase, and expected to reach commercial operation in the fourth quarter of 2023.

McGinness Hills Phase 3

In May 2021, LADWP began receiving clean renewable geothermal power from the McGinness Hills Phase 3 expansion project in Eastern Nevada. The McGinness Hill expansion increases LADWP's total Northern Nevada geothermal portfolio to 126.65 MW. The plant provides a significant step toward our 100% clean energy future, since geothermal power plants can produce energy continuously, so we can rely on it for around-the-clock renewable power.



Green Hydrogen Pathways

Hydrogen is the simplest and most abundant element in the universe. With economy-wide decarbonization taking shape, there is growing interest in hydrogen as a promising energy carrier since it emits no carbon when used. Traditionally, hydrogen is produced from fossil fuels in processes that produce carbon. LADWP is focused on developing green hydrogen, which uses renewable energy to produce hydrogen through electrolysis, which splits water into hydrogen and oxygen. Green hydrogen is currently expensive and the necessary infrastructure to support its production, transportation, and storage does not yet exist. However, with an accelerated focus on clean energy, a developing landscape with supporting policies and subsidies, and rapid technology innovations, green hydrogen offers the potential for LADWP to achieve 100% carbon-free power that is available even during critical situations.

IPP Renewed

LADWP is already planning our first-ever green hydrogen generation and storage system at the Intermountain Power Project (IPP) in Utah, the last remaining coal power plant in LADWP's energy portfolio. LADWP and our partners in the Intermountain Power Agency (IPA), which owns IPP, are developing a new state-of-the-art, 840 MW combined-cycle generating system that will use green hydrogen as a fuel source.

Dubbed "IPP Renewed," the facility will be capable of operating with a fuel blend of 30% green hydrogen and 70% natural gas starting on Day 1 of operation, expected in mid-2025, and up to 100% by 2045. It will also feature a seasonal energy storage system that could hold up to 100,000 MWh of renewable hydrogen for months at a time. The renewable hydrogen will be stored in caverns, each about the size of the Empire State Building, built within a giant natural salt dome near IPP.

A contract for the generating units was established in 2020, and a two-stage request for proposals (RFP) is underway to secure the green hydrogen fuel supply and storage. In early 2022, we established an initial contract to secure a portion of the required underground salt cavern storage capacity, along with energy conversion services. This contract will provide the technology to convert renewable energy into green hydrogen to fuel the new generating units. Potentially the first major power plant to operate with green hydrogen, IPP Renewed will lead the way to making green hydrogen an economically viable carbon-free power supply.

Green Hydrogen Hub in L.A.

The LA100 study showed that in the future, L.A. can rely upon clean energy technologies like wind, solar, and batteries for most of our everyday power needs. However, LA100 pointed to the need for combustion turbines—driven by renewable fuels—for limited periods during critical situations. While this type of power generation would be used infrequently, it is considered essential for keeping the lights on during the most extreme situations, such as a wildfire or earthquake causing the loss of transmission lines bringing power into the city.

In 2021, we began exploring the potential for developing green hydrogen-ready generation and storage within the city, gathering information from the industry to better understand the opportunities and technologies to support LADWP's green hydrogen goals. Through a Request for Information, LADWP asked the industry about all areas of the green hydrogen value chain, including production, storage, transportation, electricity generation, safety, and environmental impacts.

HyDeal L.A.

In May 2021, the Green Hydrogen Coalition in conjunction with LADWP and other partners launched HyDeal Los Angeles. A collaboration of industry, utilities, manufacturers, investors, HyDeal LA was formed to bring down the cost and create a market for affordable green hydrogen, starting in Los Angeles.

Maximizing L.A. Sunshine

As we work toward 100% clean energy for Los Angeles, a high priority is fostering greater use of solar among L.A. residents and businesses. As of the end of 2021, nearly 52,000 customer-installed solar systems were connected to the grid, providing 550 MW of total installed local solar.

Through the 2022 SLTRP, we are evaluating scenarios to significantly expand local solar equitably and across the city as part of LA100 Equity Strategies. LADWP's suite of local solar programs include new initiatives to benefit underserved and environmental justice customers living in multi-family buildings.

Feed-In Tariff

LADWP has expanded the Feed-in Tariff (FiT) program to 450 MW as well as increased the maximum size allowed for each renewable energy project. The FiT program enables property owners and developers to install 30 kW systems or greater and directly feed generation into the local distribution grid. Under this program LADWP purchases all the energy from FiT projects for up to 20 years through a power purchase agreement.

Feed-In Tariff Plus Pilot Program

LADWP launched the Feed-in Tariff Plus (FiT+) Pilot Program in April 2021, with 10 MWs of capacity available for customers and solar developers. FiT+ encourages the installation of energy storage coupled with local solar projects, making solar energy available to customers even after the sun sets, while increasing LADWP's grid resiliency and reliability. This program is designed for customers seeking to install solar together with energy storage.

Community Solar

Since launching the Community Solar Program (CSP) in 2015, LADWP has been developing innovative business models to better serve our customers and help create the grid of the future, meet renewable energy mandates, increase solar equity, and empower communities in the clean energy transition. The CSP includes the Solar Rooftops and Shared Solar Programs. Both came about in response to findings of LADWP's Equity Metrics Data Initiative (EMDI) that identified a lack of solar in disadvantaged and underserved communities. Community Solar programs offer an opportunity for all Angelenos to access the health and environmental benefits of solar power.

Shared Solar

The Shared Solar Program was designed specifically for residential customers living in multifamily dwellings. Launched in May 2019, Shared Solar allows apartment or condo dwellers to participate in the economic benefits of solar while supporting a cleaner and healthier environment. Shared Solar participants are charged a fixed cost for a portion of their electric bill, guarding against rising utility costs for up to 10 years. Customers can subscribe to 50 kWh or the maximum of 100 kWh of solar power on a monthly basis. The blocks of clean electricity come from new solar power plants constructed in or near the L.A. basin.

Virtual Net Energy Metering: Removing Barriers

Residential customers living in multifamily housing have limited opportunities to enjoy the benefits of solar projects. LADWP's Virtual Net Energy Metering (VNEM) Pilot Program, launched in March 2021, expands solar to communities with the least solar installed. VNEM is designed to help remove barriers to solar benefits and make it easier for renters to manage their electrical bills over time. VNEM is similar in structure to the FiT program, but available to residents of multifamily housing, a sector with great potential for rooftop solar systems. Developers will sell the output of local solar projects directly to LADWP. Proceeds from the energy sales will be financially divided among tenants, project developers, and property owners.

Net Energy Metering

Residents and businesses in Los Angeles continue demonstrating their enthusiasm for going solar. The Net Energy Metering Program (NEM) enables customers to install their own solar system and connect to the city's electric grid. Customers benefit by receiving a credit on their bill for the amount of power that their solar system provides to the grid. Through the program, LADWP provides customers with a solar net energy meter and works with them on connecting the meter to the power grid. Federal tax credits are available through 2024 to help offset the cost of going solar.

Learn more: LADWP.com/Solar



Local Solar – By the Numbers

(Updated as of December 31, 2021)

Total 60,237 customer-installed solar systems connected to the grid

Net Energy Metering/Solar Incentive Program (SIP):

- $338.9 million in solar incentives for 34,601 systems since the program launch in 1999
- $288 million in incentives for 279.7 MW under state legislated program (SB1)*
- Total net-metered solar (includes SIP): 454.81 MW from 60,074 systems, generating approximately 751,000 MWh per year

*Includes incentives processed after the SIP program closed on December 31, 2018.

Feed-in Tariff (FiT) Program:

- 131 solar projects in service in the city, totaling 83.4 MW
- Two additional projects in the Owens Valley totaling 4 MW of capacity and 1 renewable landfill gas project with a capacity of 2.95 MW
- Total installed FiT program capacity: 90.35 MW.
- The energy produced from these projects is enough to supply nearly 26,700 homes

Feed-In Tariff Plus Program

- 5 projects submitted for evaluation totaling 1.78 MW

Solar Rooftops Program:

- 32 installations completed
- 116.4 kW of solar power being delivered
- 16 projects totaling 66.9 kW are expected to be installed in 2022

Shared Solar Program:

- 2,116 customers enrolled
- 177,850 kWh per month supplied

Utility Built Solar (in-basin)

- 47 installations completed totaling 6.9 MW

Learn more: LADWP.com/solar



Charging Up L.A.

LADWP plays a vital role in converting our city's car culture into clean, carbon-free vehicles and transit. As the city's electric service provider, we offer incentives to encourage customers to drive electric while expanding the necessary charging station infrastructure to make EVs a reliable and convenient mode of transportation for Angelenos and visitors. After surpassing the goal of 10,000 commercial chargers in the city in 2020, Los Angeles is on track to meet our next electric transportation milestones, including 45,000 commercial charging stations by 2025 and 120,000 by 2030. LADWP's efforts will provide EV infrastructure for the 2028 Summer Olympic and Paralympic Games, and support the goal of 750,000 EVs in the city by 2030.

Charging Up Disadvantaged Communities

This past year, LADWP continued to focus on improving access to EV charging stations in disadvantaged communities, such as the EV charging plaza now under construction at the Green Meadows Recreation Center. Green Meadows and the Van Nuys Service Center, also under construction, will offer microgrids that offer community solar power as well as public EV charging stations. We also support public charging stations at many of our facilities, including the John Ferraro Building in downtown Los Angeles, the Los Angeles Zoo, various city libraries, and other city facilities.

Increased Rebates

We continue providing rebates to encourage customers to drive electric. In early 2022, LADWP enhanced rebates for low-income customers who apply for the Used EV and Residential EV Charger Rebate Programs.

- The Used EV Rebate Program provides up to $1,500 toward the purchase of a used battery electric or plug-in hybrid vehicle
- Added $1,000 on top of the $1,500 for low-income customers for a total of up to $2,500 for a qualifying used EV
- Added $500 for a residential Level 2 charging station on top of the existing $500 rebate for all residential customers, plus an additional $500 to cover the cost of installation for low-income customers
- A low-income customer can now receive up to $1,500 for the cost of an installed home charger

In 2020 and 2021, years that were heavily impacted by the COVID-19 pandemic, LADWP customers applied for 1,760 used EV rebates. Since 2019, LADWP has allocated $112.8 million in funding to support residential, commercial, and used EV rebates.

Learn more: LADWP.com/EV

Partnerships to Expand EV Charging

Since 2018, LADWP has partnered with other City Departments to develop and support transportation electrification projects for employees, city fleets, or public use through agreements that reserve funds and reduce air emissions. More than $32 million have been allocated to deploy EV charging stations at Port of Los Angeles (POLA), Los Angeles Department of Transportation (LADOT), General Services Division (GSD), and Recreation and Parks (RAP) facilities. Additional MOUs are under development to expand EV charging station deployment in Los Angeles.

Charging Up LADWP Facilities

LADWP is actively installing charging stations to support our fleet and employees, as well as expanding public access to EV charging. As of the end of 2021, LADWP had installed more than 1,005 Level 2 and 32 DC fast charger (DCFC) charging stations at our facilities. Fifteen of our DCFCs are publicly accessible. We are planning to install 450 more charging stations on LADWP properties over the next two years.

Our vision for transportation electrification includes creating EV fast charging hubs at LADWP and other city facilities. The Van Nuys Customer Service Center EV plaza, with a target completion date of July 2022, will offer four DCFCs and joins the Crenshaw Customer Service Plaza, already in operation. Another fast charging hub nearing completion is located at our distributing station in Woodland Hills (DS-136), which will offer three DCFC stations to the community.

Clean Fuel Reward Program

The Clean Fuel Reward Program offers a point-of-sale price reduction toward the purchase or lease of any eligible new battery electric or plug-in hybrid vehicle. Since its launch in 2020, over 27,500 LADWP customers benefited from the program, which can be combined with other local, state and federal incentives. The program is funded by electric utilities, such as LADWP, participating in the California Air Resources Board (CARB's) Low Carbon Fuel Standard (LCFS) Program.

Learn more: www.cleanfuelreward.com

Putting Customers First

Introduction

As we adapted over the past two years to the global events impacting our everyday lives, our focus on supporting our customers has not wavered. To ensure we continue to work as efficiently and responsively as possible, we reviewed nearly 400 unique customer functions that our customer service representatives perform on a daily basis, resulting in over 100,000 daily customer transactions and interactions. We updated our policies, implemented new programs, increased employee training, expanded customer research, and invested in new facilities and technology to ensure that we are ready and able to assist our diverse residential, commercial, industrial and institutional customers.

We're Here to Help

All of our customers are our partners. Our focus is on providing information, assistance and services so that interactions with us are safe, effortless and as efficient as possible, especially during the pandemic. In 2021, we continued to adapt our services to bring crucial support to our financially struggling customers.

We worked to create safe and convenient customer interactions. We performed virtual water leak surveys, allowed customers to pay by appointment to ensure safe social distancing, and retrained customer service representatives to work even more proactively with customers affected by the pandemic.



By the Numbers - for FY 2020-21

1.6 million	42,258	85,449	295,485	6 minutes 32 seconds	14,633
Calls handled	Emails handled	Online signups	In-person visits (including drop box payments)	Average call wait time	Appointments in Service Centers

PUTTING CUSTOMERS FIRST

2021-22 BRIEFING BOOK



Help Is on the Way

In November 2021, LADWP instituted the most comprehensive effort in the city's history to help hundreds of thousands of financially strapped customers who were burdened by mounting unpaid utility bills due to the sustained economic impacts of the pandemic. With significant funding assistance from the State of California, and working with community-based partners, LADWP announced plans to issue up to $280 million to help qualifying customers experiencing financial hardships due to the pandemic shutdown, leaving their utility bills unpaid. The Board of Water and Power Commissioners also extended a moratorium on shutting off services to customers with unpaid bills to March 2022 to allow time for their accounts to be credited through the debt relief program, "Help Is on the Way."

Through the program, LADWP issued $275 million in utility debt relief to about 250,000 residential and commercial customers as of January 2022. With the moratorium on utility shut-offs due to expire at the end of March, we instituted more ways to assist customers, including extended payment plans for up to four years for low-income customers and three years for all other residential customers.

In addition, we worked to distribute another $1 million in state funds to commercial customers who owe money for their power bills. The Mayor's Office, LADWP, and LA Sanitation and Environment continue to advocate for additional utility relief at the state and federal levels.

EZ-SAVE

To assist customers experiencing financial hardships, we streamlined the Low-Income Discount Program (renamed EZ-SAVE), and removed the requirement to provide proof of income in 2021. Since then, participation in EZ-SAVE has steadily increased. In February, enrollment reached 130,162—the highest enrollment number reported since we began actively tracking and reporting in July 2019.

Learn more: LADWP.com/CARES

Scam Awareness

Scams are a growing problem for utilities across the nation, and imposters are known to strike more frequently during crises. LADWP belongs to a national organization, Utilities United Against Scams (UUAS), through which we work together on nationwide campaigns to increase awareness and protect our customers from scams.

When the pandemic occurred, we stepped up messaging on our social media channels to caution customers about potential scams. We reinforced the message that we were not severing service for non-payment and that no one from LADWP would go to customers' homes or businesses demanding payment.

To help convey this message, we renamed our past due notices as "Payment Reminders" to tell customers that we were not disconnecting service for non-payment and to call us if they needed payment options.

Customer Service Centers

LADWP closed our community Customer Service Centers when the city and state invoked "Stay at Home" orders in 2020. Within the year, we reopened our doors for appointments, understanding that many customers prefer or need to conduct business with us in person. In 2022, we plan to move to new locations in Mission Hills and Watts to replace the existing service centers to better serve those communities. Opening in 2022, the new centers will be more spacious and convenient with a variety of amenities, including EV charging stations and an improved queueing system.

Fifth Year as Business Customer Champion

LADWP was recognized as a 2021 Business Customer Champion by Escalent, marking the fifth time in six years that we have been recognized. Customer Champions are determined by utility achievement on Escalent's business ECR (engaged customer relationship) score, a 360-degree customer relationship review across service, brand, outreach and product experiences. LADWP's ECR score of 804 (on a 1,000-point scale) places us among the top in the industry on business customer engagement.



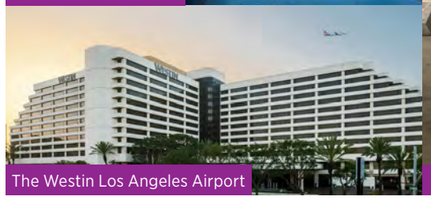
Keeping Customers Safe

The COVID-19 pandemic created unprecedented challenges and significant disruptions to face-to-face customer interactions due to safety concerns. These challenges had the potential to temporarily shut down LADWP's commercial energy efficiency rebate programs that require in-person visits. Staff inspects the work to verify that the energy efficient measures were installed before we can issue a rebate check for the customer.

Although COVID-19 led to the suspension of in-person verifications, LADWP's Efficiency Solutions Field Group quickly evolved and shifted to remote video verifications, launching a pilot program within weeks of the shutdown in 2020 to test the feasibility and fine-tune both the technical and safety processes, protocols and requirements. LADWP's field verifications pilot thrived and remote verifications are now permanently part of our energy efficiency business practices. By year-end 2021, field verifications increased by 31%, completing a total of 571 pre- and post-verifications. LADWP continues to create new efficiencies to better serve our customers.

Customer Savings and Sustainability


Fenix Marine Services

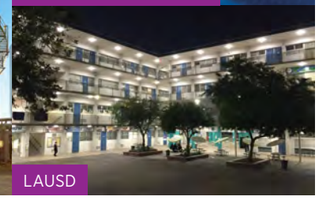

The Westin Los Angeles Airport


Renaissance Collection



Airgas USA, LLC


Electro Rent Corporation


LAUSD

Sustainability Awards

LADWP hosted the 6th Annual Sustainability Awards via a web-enabled virtual ceremony on April 15, 2021. The awards, which were launched in 2016, honor our largest customers and partners that achieved significantly positive environmental impacts through participation in LADWP rebate programs. These water and power efficiency and electric vehicle efforts help participating organizations save on costs, conserve our natural resources and contribute to meeting the environmental goals set for the city of Los Angeles.

Through their outstanding commitment to sustainability, these organizations conserved approximately 74 million gallons of water and reduced CO_2 emissions by 10,285 tons annually.

Awards were presented to 21 customers in five categories: Energy Management, Water Management, Electrification of Transportation (LADWP's Charge Up L.A. Program), Renewable Power and Demand Response. Leadership Awards are based on absolute water and energy savings, and Impact Awards are based on how much water and energy was saved compared to their annual average use.

Energy Efficiency 1st Place Winners

- Leadership: **Fenix Marine Services**, saved 3.46 GWh annually under the Commercial Lighting Incentive Program by installing new LED fixtures with wireless lighting control system.
- Impact: **Electro Rent Corporation**, installed 2,067 linear LED tubes, reducing annual electric use by nearly 36%.

Water Conservation 1st Place Winners

- Leadership: **The Westin Los Angeles Airport**, saved 2.62 million gallons of water annually through the Commercial/Multi-Family Water Rebate Program by installing 766 high efficiency toilets.
- Impact: **The Westin Los Angeles Airport**, reduced their water use by 13% annually.

Transportation Electrification 1st Place Winner

- **Renaissance Collection**, installed 480 Level 2 chargers at 12 locations through the Charge Up LA! Program.

Demand Response 1st Place Winners

- Leadership: **Los Angeles Unified School District**, curtailed 30,315 kW through the Demand Response Program by raising the chilled water temperature of their HVAC units, reducing their interior lighting and plug load, and turning off miscellaneous fans and parking structure lighting.
- Impact: **Airgas USA, LLC** curtailed 82% of their base load for the entire 2020 season by shutting down process compressors at their facilities.

Learn more: LADWP.com/SAP

Focusing on Equity through Clean Energy Programs

While offering a menu of rebates for all segments of customers to reduce their use and help lower their utility costs, a major focus over the past year has been to develop new or modified programs to foster energy equity for low-income customers, tenants, residential building owners, and businesses located in disadvantaged communities.

Learn more: LADWP.com/save

Innovative Clean Energy Program for Low-Income Housing

The Comprehensive Affordable Multifamily Retrofits (CAMR) program is a new energy efficiency effort that will help low-income tenants and affordable housing property owners save money on energy bills, create green jobs for the local workforce, and meet our sustainability objectives. The program will support our transition to a carbon-free power system while also empowering Angelenos who bear a disproportionate burden of the environmental impacts created by the climate emergency.

Launched on May 1, 2022, the $75 million program will provide energy efficiency retrofits, including building electrification measures and on-site solar installations. Participating property owners will receive free energy assessments and assistance with identifying potential retrofits for their buildings, including apartment units and common areas, based on opportunities for energy savings, cost reductions, and GHG emissions reduction. To qualify, property owners need to propose measures that will achieve at least 10% in energy savings.

Learn more: LADWP.com/CAMR

Free Energy Improvement Upgrades

After being paused due to the COVID-19 pandemic, we expected to reopen the Home Energy Improvement Program (HEIP) in July 2022. The program offers 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 program is free to eligible customers.

Refrigerator Exchange Program Resumed

In July 2021, we resumed offering Energy Star® refrigerators in exchange for qualified older model refrigerators, free of charge, for qualified low-income customers. The energy-saving refrigerators can save up to $60 annually on refrigerator operating costs. In the first six months of FY 2021-22, we provided 2,201 refrigerators to customers for a potential savings of 1,764,762 kWh.





Savings for Large Customers

Zero by Design

LADWP launched a new program in January 2022 to help developers and designers create net-zero emissions buildings. LADWP's Zero by Design program offers new construction incentives for both commercial and high-rise multi-family projects that aim to exceed the state Building Energy Efficiency Standards (Title 24) by more than 10% energy savings. The program is modeled after the state's Savings by Design program. LADWP has also produced a new Zero by Design workbook to help participants quickly view their projects' estimated energy savings and incentive amounts.

Enhanced AC Optimization

LADWP's Air Conditioning Optimization Program (ACOPT) is LADWP's first energy efficiency program to offer incentives to customers who electrify their heating and cooling systems. The program creates an opportunity for LADWP to reduce GHG emissions, resulting in improved health for Angelenos.

ACOPT provides free certified technician services to analyze cooling systems and provide basic maintenance and efficiency services for all eligible residential and commercial LADWP customers. It includes complimentary AC diagnostic and maintenance and the installation of smart thermostats for eligible, Wi-Fi enabled residential customers. Participating program contractors are now required to be certified as Nest Pro installers, which increases the warranty available to customers on the installed thermostats.

Learn more: LADWP.com/ACOPT

Lighting Up Our Schools

Following the COVID-19 lock down, LAUSD students and faculty returned to newly renovated, more energy efficient campuses in 2021. With the assistance of California's Clean Energy Job Creation Fund Proposition 39, LADWP provided more than $4.4 million in incentives for LAUSD to install massive energy efficiency upgrades at 76 schools, achieving more than 21 GWH in energy savings through our Custom Performance Program. The energy efficiency upgrades included replacing more than 250,000 inefficient light fixtures with high-efficiency LEDs; retrofitting over 80,000 outdated flood lights, wall and canopy fixtures; installing over 20,000 lighting controls and more than 300 high-efficiency transformers. Select campuses also benefited from new chiller upgrades and installation of variable frequency drives on pumps.

CSU Facilities Achieve Efficiencies

College and university buildings include a mix of classrooms, large lecture halls, sports complexes and other types of facilities with distinct lighting requirements. With the financial support of LADWP's Commercial Lighting Incentive Program, 35 California State University Northridge buildings were authorized to proceed with their individual retrofit plans that meet both function and energy-saving goals.

Residential Rebate and Incentive Programs

LADWP's Consumer Rebate Program (CRP) promotes the use of energy efficient products by offering financial incentives to residential customers. This program is designed to educate LADWP residential customers about the benefits of energy efficiency and help them to purchase and install qualifying products in their home.

Efficient Product Marketplace

LADWP's Efficient Product Marketplace (EPM) Program is a convenient online marketplace that offers a variety of popular energy efficient products from different stores and online retailers with pricing and rebate information. In 2021, the EPM added two informational categories: Solar Marketplace and Safety & Preparedness. The Solar Marketplace provides customers with the ability to create a customized solar system for their home, and compare and choose offers from a list of local third-party vendors. Combining renewable energy strategies and energy efficiency helps customers save energy and money while cutting greenhouse gases. The Safety & Preparedness category list products that help families prepare for the unexpected. It allows customers to track prices, compare products, and check out current offers.

Learn more: LADWP.com/EPM

Energy Management Programs

Like energy efficiency, demand response is considered an important strategy to achieve our clean energy future, focusing on ways to reduce energy demand on the customer side of the meter. Through demand response programs, customers are incentivized to shift their energy use to off-peak periods, when rates are typically lower and there is less demand on the grid. This helps customers reduce their cost and improves the reliability power supply and infrastructure.

Demand Response at Work

LADWP provides incentives to commercial and industrial customers who participate in our Demand Response Program. Participating customers reduce their energy use during the peak summer months, increasing reliability of the power grid and supporting the integration of renewable energy resources. In 2021, 58 participants—consisting of high-rise office buildings, retail-chain stores, schools, manufacturing plants, cold storage facilities and other large commercial and industrial customers—saved 377 MWh of peak energy use during three demand response events. Since the inception of the program in 2015, LADWP incentivized around $4 million to the program's participants for reducing peak load on hot summer days, offsetting 34 MW of power generation. For the 2022 demand response period, LADWP looks to expand the program to 60 MW.

Learn more: LADWP.com/DRProgram

Demand Response at Home

Following a successful launch in 2020, LADWP expanded a new program that helps residential and small business customers better manage their energy use and reduces demand on the power grid during peak periods. The Power Savers program asks customers to "bring your own thermostat" to participate. Customers receive an incentive upon enrollment and for each year of participation. In 2021, over 32,000 residential customers (with around 36,000 thermostats) participated in the program, contributing to a 25 MW reduction in electricity demand. Through nine separate Power Savers events in 2021, customers achieved 351 MWh of energy savings. In 2021, LADWP paid over $5.2 million in incentives to participating customers, and planned to scale up the program to 35 MW by the end of summer 2022.

The Consumer Rebate Program processed 23,005 applications in FY 2020-21, resulting in over $28 million in rebates to customers.

During that same period, 2,026 EV Program applications resulted in over $19 million in rebates.



Helping Customers Save Water

As Los Angeles and the rest of California entered the third consecutive drought year—also the three driest years on record—we expanded and boosted rebates for water-efficient devices, appliances, and other measures for residential and commercial customers.

Boosting Rebates

To help residential customers step up their efforts to conserve water, we increased rebates to $250 for residential premium high-efficiency toilets and $500 for high-efficiency clothes washers in early 2022. These incentives will help drive the market towards making conservation a California way of life, the LA way! Commercial customer rebates for high-efficiency toilets were increased to $300.

Learn more: LADWP.com/save

Home Water Use Report

About 70,000 LADWP customers receive bi-monthly water use reports through our Home Water Use Report pilot program. Selected customers enroll online to receive individualized reports that help identify the water efficiency of their households. Results from our pilot program showed customers achieve savings by receiving individual water use consumption data and tailored messaging about how to save water.

On TAP for Large Customers

For our large commercial customers, LADWP approved an eight-fold increase in rebates of up to $2 million through the Technical Assistance Program (TAP). TAP offers financial incentives for large water conservation projects, such as upgrading cooling towers, that help multifamily, commercial, and industrial building customers conserve water. As a part of TAP, qualified customers can receive free cooling tower assessments.

Learn more: LADWP.com/cwr

Even with the extreme swings in climate conditions, our water customers use about the same amount of water today as they did in the 1970s, despite an increase in population of over one million people.

Turf Replacement Program

One way to achieve significant water savings is to replace water-thirsty lawns with sustainable and drought tolerant landscaping. We offer a Turf Replacement Rebate of $3 per square foot for up to 5,000 and 50,000 square feet for residential and commercial customers, respectively. We now offer turf replacement design services for eligible single-family residential customers to help remove barriers customers may face in transforming their landscapes to California Friendly gardens.

Landscape Training

Virtual Training: LADWP continues to offer Landscape Training Classes online and in-person to help customers manage their outdoor water use by transforming their lawns into California Friendly® and drought-tolerant landscaping. In response to the pandemic, which restricted in-person interactions, the training program transitioned to an online classroom in May 2020. The one-hour virtual trainings are offered several times each month in English and Spanish as well as Mandarin. Classes cover landscape design and the basics of landscape irrigation.

Hands-On Workshops: In addition to the classroom-based training classes, customers can participate in Hands-On Workshops to transform their landscape and save water. After a hiatus during the pandemic, the workshops resumed in September 2021. Customers can get their hands dirty learning the proper way to remove turf, grade for water capture, install drip irrigation, and plant native landscaping that thrives in their yards. LADWP also offers many free resources on our website, such as watering guides, planting templates and YouTube videos.

Learn more: LADWP.com/landscaping

Since the turf removal and replacement program began, LADWP has incentivized the conversion of over 51 million square feet of turf in Los Angeles.





A Winter Solstice celebration at the Chatsworth Nature Preserve was our first in-person event since the COVID-19 lockdown.

Connecting with Communities

As the world opened back up, we welcomed the opportunity to safely re-engage with our communities at events across the city. Virtual platforms continued to play a key role in our outreach efforts, especially with neighborhood councils and other community groups on significant issues, and construction projects affecting their areas. We continued to support LADWP's essential water and power crews as they maintain critical infrastructure in local neighborhoods, and we sought to minimize impact on customers and local traffic as more cars returned to the streets.

While the pandemic continued to pose challenges, we never slowed down on outreach and engagement with stakeholders to support LADWP's important water and power planning efforts, including the 2020 Urban Water Management Plan and the 2022 Power Strategic Long-Term Resource Plan. In the midst of the pandemic, we launched a new stakeholder engagement initiative, LA100 Equity Strategies, which builds off of the Los Angeles 100% Renewable Energy Study (LA100) to identify paths that ensure a just and equitable transition to clean energy for the city.

With so many of our stakeholders using digital communications to stay connected, we maintained a strong presence on Nextdoor, where LADWP can reach over 808,000 members and about 1,300 neighborhoods, representing 26% of L.A. households. We also stayed in contact with our communities through a monthly digital newsletter, *LADWP in the Community,* which reaches about 2,400 subscribers. During fiscal year 2020-21 and the first half of 2021-22, LADWP conducted or participated in 439 community events and meetings. Among them, the Winter Solstice event on December 21, 2021 at the Chatsworth Nature Preserve, marked LADWP's first in-person community event since the pandemic.

Learn more: ladwp.com/community

Partnerships in Education

For more than four decades, LADWP and our employees have partnered with the Los Angeles Unified School District (LAUSD), nonprofit education-related organizations, local schools and teachers on programs and activities to enhance education and students' learning. We also partner with Owens Valley schools to support communities along the Los Angeles Aqueduct where LADWP has a significant presence.

During the COVID-19 pandemic, we transitioned most of our long-time education programs to virtual and digital platforms. During calendar year 2021, as schools re-opened, LADWP engaged in virtual, digital and in-person education programs reaching 111,500 students, 1,861 teachers and 620 schools. Among our many programs, we conducted the first-ever virtual LADWP Science Bowl competition in the spring of 2021 when the regional championship team North Hollywood High School won its second national championship.

We also co-sponsored the intensive Environmental Teacher Institute for 30 teachers over four Saturdays emphasizing water and energy topics. Our sponsored "A Drop in the Bucket" water conservation program from The Wildwoods Foundation was offered both virtually and outdoors on campuses. The popular LADWP-sponsored Water Guardians virtual water conservation program was presented to elementary schools virtually.

For decades, LADWP employees have volunteered to lend their expertise to schools in LADWP's service area, including the Owens Valley, through the Adopt-A-School Program. In 2021, we added career readiness partnerships at three high schools, emphasizing engineering, solar photovoltaics, and other STEAM (science, technology engineering, arts and math) fields as well as cybersecurity pathways.

In the spring 2022 semester, nearly 30 high school teachers tried out a new lesson package, "Charge into the EV World," covering climate change, smart grid, and energy supply sources. LADWP partnered with LAUSD and an education publisher on the new program, which will be offered again in the 2022-23 school year.

Learn more: LADWP.com/education

LA DWP Los Angeles Department of Water & Power

Times in Education

Reaching the most students, our Times in Education Program covers many of LADWP's priority topics. We provide digital access to three teacher guides, and access to the daily newspaper. The program also offers a student art poster contest—a creative way for kids to learn about water conservation and energy efficiency. Pictured is the Grand Prize-winning poster submitted by a 5th-grader at Hancock Park Elementary School.

Los Angeles Times IN EDUCATION





Finance & Corporate Performance

As a public municipal water and power utility, LADWP exists by and for our customers, who are also our owners. We develop all of our strategic plan goals and objectives so that they are achievable, measurable, and cost effective, and are designed to maintain cost competitive rates for our customers. LADWP is committed to meeting our operational needs and financial goals through:

- Maintaining diverse power and water sources
- Meeting or exceeding all regulatory commitments
- Continuing to invest in water and power system reliability
- Maintaining competitive retail rates and financial stability
- Improving customer service

For the FY 2021-22, the budgets approved by the Board of Water and Power Commissioners are consistent with our strategic plan, reflecting continued cost controls and prioritization of resources that address our customer-driven priorities.

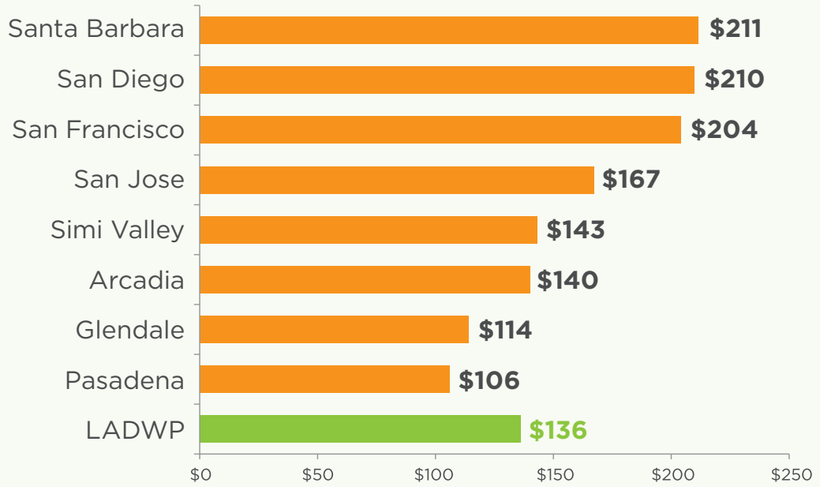
Successful Bond Sales

Maintaining strong credit ratings is a key component of keeping water and power rates competitive. LADWP continues to maintain high bond ratings from Wall Street, and this enables us to access low-interest borrowing and achieve cost-effective capital projects, which saves money for our customers.

Since 2011, LADWP has refunded $7.3 billion of debt and yielded $1.2 billion in present value savings. To maintain our financial health and protect our ratepayers, LADWP also adheres to Board approved financial planning metrics including debt service coverage, operating cash, and capitalization ratios.

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Our Water and Power Rates Are Competitive



Residential combined monthly water and power bills, as of January 2022.
Based on the midpoint of all residential electricity use of 300 kWh per month and residential water use of 10 HCF per month.

Financial Data

This provides an overview of the financial activities of the LADWP for fiscal years 2016-17 through 2020-2021.

For the complete financial statements:
LADWP.com/financialinfo

WATER SERVICES FACTS IN BRIEF

	FY 2021	FY 2020	FY 2019	FY 2018	FY 2017
Use of Water					
Average Los Angeles Population Served	3,923,341	4,010,684	4,040,079	4,054,400	4,021,488
Average daily use per capita (gallons)	112	105	105	112	102
Water Sales for Fiscal Year (Millions of Billing Units of 100 cu. Ft)	209.3	199.9	195.4	205.3	196.0
Water Supply (Millions of Billing Units of 100 cu. Ft.)					
Local supply	24.0	15.0	14.0	9.5	22.3
DWP Aqueduct	55.9	127.2	136.1	134.0	92.6
MWD	138.0	67.0	60.0	79.6	95.7
Recycled Water	4.9	4.2	3.3	4.3	3.5
Gross Supply	222.8	213.4	213.4	227.4	214.1
Diversion from (to) local storage	0.4	-0.3	-0.7	-0.1	-3.4
Net supply to distribution systems	223.2	213.1	212.7	227.3	210.7
Bond Ratings					
Moody's/S&P/Fitch	Aa2/AA+/AA	Aa2/AA+/AA	Aa2/AA+/AA	Aa2/AA+/AA	Aa2/AA+/AA
KBRA*	AA+	Not Applicable	Not Applicable	Not Applicable	Not Applicable

ENERGY SERVICES FACTS IN BRIEF

	FY 2021	FY 2020	FY 2019	FY 2018	FY 2017
Number of Customers					
Residential	1,414,367	1,404,768	1,396,643	1,385,470	1,378,172
Commercial and Industrial	126,418	126,153	125,673	123,680	122,841
All Other	7,030	7,010	6,484	6,391	6,651
Total customers of all classes	1,547,815	1,537,931	1,528,800	1,515,541	1,507,664
Power Use					
Sales to Ultimate Customers - kilowatt (kW) hours	20,837,903,238	21,127,502,753	21,961,382,983	22,383,310,345	22,490,122,681
Sales to Other Utilities - kW Hours	2,086,733,000	1,050,536,000	626,058,000	532,293,000	1,425,847,000
Average annual kW hours per residential customer	5,667	5,335	5,252	5,248	5,285
Net dependable capacity, megawatts	7,954	7,981	7,937	7,850	7,787
Bond Ratings					
Moody's/S&P/Fitch	Aa2/AA-/AA-	Aa2/AA/AA-	Aa2/AA/AA	Aa2/AA/AA	Aa2/AA-/AA-
KBRA*	AA	Not Applicable	Not Applicable	Not Applicable	Not Applicable

WATER AND POWER (CONSOLIDATED) FINANCIAL FACTS IN BRIEF

($ Billions)	FY 2021	FY 2020	FY 2019	FY 2018	FY 2017
Financial Data					
Total Assets	30.9	29.0	28.3	26.9	26.7
Total Net Position	9.8	9.1	8.8	8.4	8.9
Total Annual Operating Revenue	5.8	5.1	5.3	5.0	4.8
Total Annual Budget	6.2	6.3	5.7	6.1	6.3
Retiree Benefits Data Based on Market Value of Assets					
Unfunded/(Overfunded) Pension Liability	(1.7)	1.1	0.8	0.9	1.3
Funded Pension %	111.1%	92.3%	94.0%	93.1%	89.4%
Unfunded/(Overfunded) Retiree Medical Liability	(0.3)	0.2	0.5	0.4	0.4
Funded Retiree Medical %	101.2%	92.5%	82.8%	84.5%	81.4%

*S&P continues to rate bonds issued prior to December 2019. Starting in FY 2021, Kroll Bond Rating Agency rated the Power 2021 B Bonds and the Water 2020 B, 2020 C, and 2021 B Bonds.

WATER SERVICES SELECTED FINANCIAL DATA AND STATISTICS

($ Millions)	FY2021	FY2020	FY 2019	FY 2018	FY 2017
Operating Revenue					
Residential	$634.8	$537.6	$515.2	$509.6	$450.4
Multi Dwelling	460.5	402.0	396.0	352.1	338.6
Commercial and Industrial	301.2	253.2	262.3	254.7	264.7
Other	67.3	82.3	80.0	73.7	64.9
Total Operating Revenue	$1,463.8	$1,275.1	$1,253.5	$1,190.2	$1,118.6
Operating Income	386.9	317.3	309.1	339.0	261.1
As % of operating revenues	26.4%	24.9%	24.7%	28.5%	23.3%
Change in Net Position*	$290.6	$208.6	$167.2	$200.3	$140.5
Balance Sheet					
Net utility plant	$9,481.9	$8,926.0	$8,436.8	$8,033.0	$7,554.0
Capital additions, net	576.8	504.5	455.8	479.0	541.0
Capitalization					
Net Position	3,684.7	3,394.0	3,185.4	$3,018.3	3,136.2
Long-term debt	6,740.2	6,334.1	6,139.4	5,786.4	5,569.2
Interest on debt	208.7	218.4	214.5	205.3	194.5
Key Financial Planning Metrics					
Debt Service Ratio	2.10	1.85	1.71	1.82	1.74
Number of Days Cash on Hand	274	259	253	183	165
Debt to Capitalization %	64%	65%	66%	65%	64%
Operations					
Gallons sold (billions)	156.6	149.5	146.2	153.6	146.5
Customers - average number (thousands)	692	689	687	683	680
Average Revenue per hundred cu. ft. Sold (in dollars)					
Residential	$7.66	$7.15	$7.07	$6.48	$6.21
Multiple Dwelling	7.05	6.37	6.45	5.62	5.54
Commercial and Industrial	6.95	5.89	5.94	5.53	5.89
Water Supply (millions of billing units of 100 cu. ft.)					
Local supply	24.0	15.0	14.0	9.5	22.3
DWP Aqueduct	55.9	127.2	136.1	134.0	92.6
Metropolitan Water District	138.0	67.0	60.0	79.6	95.7
Recycled Water	4.9	4.2	3.3	4.3	3.5
Gross Supply	222.8	213.4	213.4	227.4	214.1
Diversion from (to) local storage	0.4	-0.3	-0.7	-0.1	-3.4
Net supply to distribution systems	223.2	213.1	212.7	227.3	210.7

*The Change in Net Position amount under Fiscal Year 2018 excludes the cumulative effect of change in accounting for post retirement benefits other than pensions under GASB 75.

ENERGY SERVICES SELECTED FINANCIAL DATA AND STATISTICS

($ Millions)	FY2021	FY2020	FY 2019	FY 2018	FY 2017
Operating Revenue					
Residential	$1,614.0	$1,360.6	$1,376.3	$1,265.7	$1,179.5
Commercial and industrial	2,492.1	2,372.5	2,560.1	2,429.3	2,331.6
Sales for resale	186.7	61.5	111.5	91.4	88.1
Other	(24.3)	12.7	22.9	17.8	98.7
Total Operating Revenue	$4,268.5	$3,807.3	$4,070.9	$3,804.2	$3,697.9
Operating Income	744.1	364.0	512.3	725.3	611.7
As % of operating revenues	17.4%	9.6%	12.6%	19.1%	16.5%
Change in Net Position*	$415.6	$90.1	$226.9	$278.2	$176.9
Balance Sheet					
Net utility plant**	$13,457.8	$12,826.9	$12,173.8	$11,377.5	$10,772.6
Capital additions, net	668.5	695.2	715.1	634.7	479.2
Capitalization					
Net Position	6,117.6	5,702.0	5,611.9	5,384.9	5,767.9
Long-term debt	11,360.8	10,761.7	10,370.1	9,772.3	9,519.3
Interest on debt	359.0	370.1	355.4	348.3	326.0
Transfers to City of Los Angeles	218.4	229.9	232.6	241.8	264.4
Key Financial Planning Metrics					
Debt Service Ratio	2.60	2.11	2.40	2.59	2.37
Number of Days Cash on Hand	247.10	211.00	204	176	206
Debt to Capitalization %	65%	65%	65%	63.6%	61.4%
Full Obligation Ratio	1.88	1.74	1.90	1.88	1.63
Operations					
Kilowatt hours sold (billions)	23.0	22.3	22.6	23.0	24.0
Customers - average number (thousands)	1,548	1,538	1,529	1,516	1,508
Average Revenue per kWh Sold (in cents)					
Residential	20.9	18.9	18.8	17.4	16.2
Commercial and Industrial	18.9	16.9	17.5	16.0	15.2
Energy production (billions in kWh)					
Total generation	17.3	17.9	16.9	14.0	14.6
Purchases	9.0	7.3	9.0	12.3	12.2
Total production	26.3	25.2	25.9	26.3	26.8
Net system dependable capability (thousand megawatts)					
Power System-owned facilities	4.7	4.8	4.8	4.8	4.8
Jointly owned and firm purchases	3.2	3.2	3.1	3.1	3.0
Total	7.9	8.0	7.9	7.9	7.8

*The Change in Net Position amount under Fiscal Year 2018 excludes the cumulative effect of change in accounting for post retirement benefits other than pensions under GASB 75.

**A reclassification has been made to the 2018 Net Utility Plant amount to conform to the 2019 financial statement presentation.

We are building a **stronger** Los Angeles through **Service, Innovation** and **Opportunity.**

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