Mission, Key Objectives, and Goals

Anaheim Public Utilities’ (APU) mission is to add value to the community through a customer-focused approach to providing reliable, high-quality water and power at competitive rates. To fulfill this mission, APU strives to meet six key objectives: sustain a high level of customer satisfaction, deliver daily operations excellence, preserve competitiveness and financial health, effectively manage enterprise risk, invest in a positive and productive work environment, and maintain alignment with the City of Anaheim’s (City) goals.

To assess APU’s performance in meeting these six high level objectives, meaningful performance goals have been established, and progress in meeting these goals are tracked and reported. APU staff carefully evaluates each performance metric to determine how the utility is performing and whether certain processes or practices require closer monitoring or adjustment. To foster a culture of continuous improvement, APU will adjust, modify, or replace goals as needed to ensure that the Utilities Success Indicators report is current, relevant, and moves APU forward into the future.

This report is an update on APU’s progress in meeting its key performance goals. This report covers the reporting period July 1, 2018 – December 31, 2018.

Notable Events in the Reporting Period

Bottled Water Art Contest

In July, two student artists were recognized at City Council for winning APU’s annual Bottled Water Art Contest last spring. This contest aims to educate students on the importance of water conservation as a way of life and is open to all Anaheim 1st through 12th grade students. The winning students were selected from Lincoln and Acaciawood Elementary Schools and will have their artwork displayed on Anaheim’s bottled water that is distributed at various community events for the year.

Wildfire Mitigation Plan

In August, City Council approved the 2018 APU Wildfire Mitigation Plan that established methods and procedures to construct, maintain, and operate electrical lines and equipment in a manner that will minimize the potential risk of a wildfire caused by electrical infrastructure. After receiving Council approval on the plan, APU partnered with Anaheim Fire & Rescue in October to host its first neighborhood gathering on Eucalyptus, a designated high Fire Threat Zone area. Staff talked to neighborhood residents about the recently approved plan and how the plan is designed to help protect their homes during elevated weather conditions.
Pathway to 100% Clean Power

On September 10, 2018, Governor Brown signed Senate Bill (SB) 100, accelerating California’s clean energy goals to 60% renewable energy by 2030 and 100% zero-carbon energy by 2045. APU is working closely with stakeholders to mitigate potential cost impacts to customers as a result of the state's legislative mandate. APU currently obtains 29% of its power supplies from renewable resources and is in compliance with state mandates. Also, during the reporting period, the California Energy Commission (CEC) notified APU of its validation and review of APU’s Integrated Resource Plan (IRP). APU created the IRP in compliance with Public Utilities Code (PUC) 9621 which requires mid-sized and large publicly-owned utilities to adopt an IRP identifying a roadmap towards cleaner, sustainable resources. APU’s IRP includes greenhouse emission reduction targets and a long-term procurement strategy to transition away from fossil fuels towards sustainable resources such as wind, solar, and biomass. APU’s IRP received official CEC approval on February 20, 2019.

Public Power Week

In October, APU invited students and members of the community to celebrate Public Power Week, an annual event that helps publicly owned utilities across the country engage with members of their community. Approximately 100 second grade students from Horace Mann Elementary and 60 fourth to sixth grade students from Maxwell Elementary participated in interactive educational activities on power safety and conservation. Attendees also received information on free shade trees and money-saving efficiency rebates, while students were treated to free bucket truck rides.

Metallic Balloon Safety PSA

Over the summer, APU collaborated with Anaheim Union High School District’s Student Film Academy for a public service announcement contest promoting metallic balloon safety. Students submitted entries highlighting the importance of metallic balloon safety and potential community impacts when such balloons are not properly disposed. From thirty video entries, four were selected as winners and posted on APU’s website and YouTube channel. This month-long contest allowed students to apply their creativity, helping APU educate the community on one of the leading causes of power outages.

To see the winning entries, go to www.anaheim.net/4752/Mylar-Balloon.
AIME Student Mentorship

As part of the Anaheim Innovative Mentoring Experience (AIME), APU staff members mentored twenty students from Katella High School from September through December of last year. APU’s mentorship program, now in its fourth year, allows a small group of three to four students to be matched with a staff mentor who guides them on how to build an effective resume, interview for a job, and prepare for college and the workforce. Participating students are also exposed to different careers in the utility industry, and tour multiple utility facilities. The program concluded with student group presentations delivered in front of their peers, a City Council Member, City and school district leaders, and APU staff.

Key Capital Project Milestones

Below are key capital milestones that were completed during the reporting period. A full list of electric and water projects are provided in the quarterly capital improvement updates.

- In July, a dedication event recognized the completion of the La Palma Complex rehabilitation project, involving major improvements to the 4-million gallon reservoir and demolition and reconstruction of the pump station. The new pump stations provides pumping capacity to meet customer demand of up to 6,250 gallons per minute to the surrounding residents and businesses of central and west Anaheim.

- Approximately 18,000 ft. of water pipeline were installed and placed into service on Katella Avenue, North Street, Calle Principia and Avenida La Vida, Riverdale Avenue, Alderdale Avenue, and Maychelle Drive.

- Underground construction began on Euclid Street from Ord Way to Broadway, which will place 1.5 circuit miles of overhead wires underground. Electrical underground installation and removal of overhead wires are scheduled for completion by winter 2019; roadway resurfacing and removal of poles by telecommunication carriers will take place thereafter.

- In December, APU completed the installation of solar lunch and car shade structures through its Solar for Schools program, where a total of 9 structures were installed. Energy produced through
these solar structures will be distributed to participating income-qualified customers through the Green Power Discount program, which provides a $10 monthly billing discount for up to 2,100 participants in 6-month increments. To learn more about this income-qualified discount, including how to apply, visit the following link: www.anaheim.net/5083/Income-Qualified-Green-Power-Discount.
Summary of Results for Reporting Period

This section provides a brief summary of APU’s performance in meeting or exceeding its goals during the reporting period. Following this section is the Appendix, which provides definitions, descriptions, and a more comprehensive analysis of APU’s performance during the reporting period.

<table>
<thead>
<tr>
<th>A. Sustain a High Level of Customer Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Employee Effectiveness</strong></td>
</tr>
<tr>
<td>Goal: Meet at least 85% of Anaheim Anytime survey respondents’ evaluation of employee effectiveness (with a rating of “good” or “superior”) in the categories of employee courtesy, time to respond, and employee effectiveness</td>
</tr>
<tr>
<td>Result: All three measures were above the 85% target</td>
</tr>
<tr>
<td>![Green Traffic Light] (GOAL MET)</td>
</tr>
<tr>
<td><strong>Customer Satisfaction</strong></td>
</tr>
<tr>
<td>Goal: Meet or exceed at least 90% of Anaheim Anytime Survey respondents’ expectations</td>
</tr>
<tr>
<td>Result: Over 90% of survey respondents’ expectations were met or exceeded</td>
</tr>
<tr>
<td>![Green Traffic Light] (GOAL MET)</td>
</tr>
<tr>
<td><strong>Timely Customer Service</strong></td>
</tr>
<tr>
<td>Goal: Respond to customer calls in the Utility Call Center in 3 minutes or less</td>
</tr>
<tr>
<td>Result: Customer calls were answered within 2.3 minutes on average</td>
</tr>
<tr>
<td>![Green Traffic Light] (GOAL MET)</td>
</tr>
<tr>
<td><strong>Timely Street Light Repairs</strong></td>
</tr>
<tr>
<td>Goal: Ensure street light repairs are made within 4 business days on average</td>
</tr>
<tr>
<td>Result: Street light repairs were completed within 2.1 business days on average</td>
</tr>
<tr>
<td>![Green Traffic Light] (GOAL MET)</td>
</tr>
</tbody>
</table>
### Utilities Success Indicators: 2H 2018

#### Electric Reliability
**Goal:** Maintain electric system reliability indicators in the top 25% of the municipal utility category nationally
**Result:** APU was in the top 25% of public power agencies nationwide for outage duration, frequency of outages, and restoration time

#### Renewable Portfolio
**Goal:** Procure adequate renewable resources to comply with state mandates on renewable portfolio standard, meet interim targets, and remain well-positioned for future compliance periods
**Result:** APU is in compliance with all applicable state mandates and is on-track to meet the RPS target of 33% by 2020 and the accelerated RPS target of 60% by 2030

#### Generator Availability
**Goal:** Maintain electric generation availability rate at 95% or better
**Result:** Canyon Power Plant recorded a 98.7% availability rate while Kraemer posted a 59.4% availability rate

#### High Quality Drinking Water
**Goal:** Meet or exceed all state and federal drinking water quality standards.
**Result:** Drinking water quality met or exceeded all state and federal standards

#### Water System Reliability
**Goal:** Minimize main breaks per 100 miles of pipe to under 8 annually, which is nearly 30% below the national average
**Result:** APU recorded 4.4 main breaks per 100 miles of pipe

#### Water System Maintenance
**Goal:** Meet the three-year maintenance goal of exercising all 23,000 system valves (or 639 per month) and inspecting all 7,800 hydrants (or 217 per month)
**Result:** APU met its valve goal by averaging 656 valves monthly but missed the hydrant goal by averaging only 215 hydrants monthly (2 hydrants short of the goal)
## C. Preserve Competitiveness & Financial Health

### Competitive Electric Rates

**Goal:** Maintain annualized Electric rates below rates paid by other Orange County cities

**Result:** Annualized electric rates are at least 17% below rates paid by other Orange County cities

### Competitive Water Rates

**Goal:** Maintain annualized Water rates under the average of local agencies in the county

**Result:** Annualized water rates are 30% below the average of local agencies in the county

### High Bond Ratings

**Goal:** Remain in the A rated or higher categories for bonds

**Result:** All bonds are currently rated A or above; this goal remains at Watch as APU develops strategies and tools for the Water Utility to regain its AAA rating from S&P

### Sufficient Liquidity

**Goal:** Maintain 90 Days + $50 million of cash on hand for Electric, and 120 days cash on hand for Water

**Result:** Both Electric and Water remained above their respective targets for days cash

### Strong Positive Cash Flow

**Goal:** Maintain debt service coverage ratio (DSCR) for Electric at 1.6 or higher, and for Water at 2.0 or higher

**Result:** As of December 31, 2018, both the Electric and Water Utility’s DSCR is projected at 2.0
D. Effectively Manage Enterprise Risk

**Legislative & Regulatory Risk Management**
*Goal*: Proactively identify and manage enterprise-wide risks so that all key risks are properly addressed or mitigated, and no material violations occur that would adversely affect APU’s operations or its assets
*Result*: No material violations occurred and key risks were properly monitored

**Power Supply Management**
*Goal*: Keep counterparty default under 1/2% of short-term power supply costs
*Result*: Counterparty default was kept at 0%

E. Invest in a Positive & Productive Work Environment

**Strong Safety Culture**
*Goal*: Maintain an industrial safety and health injury rate that does not exceed 1.0
*Result*: The disabling injury rate was 0.61

**Employee Efficiency**
*Goal*: Meet or exceed industry benchmark for employee efficiency
*Result*: APU exceeded its employee efficiency benchmark with over 40% more electric customers per non-power generation employee and nearly 30% more water customers per water utility employee

F. Maintain Alignment with the City’s Goals

**City Council, Public Utilities Board & City Manager Vision**
*Goal*: Support City Council policies and initiatives, seek the Public Utilities Board’s recommendations and direction, and implement programs and projects at the City Manager’s direction
*Result*: APU continued to support and expand many City Council and City Manager policies and initiatives throughout the reporting period
APPENDIX

Metric Goals, Definitions, Results
A. SUSTAIN A HIGH LEVEL OF CUSTOMER SATISFACTION

1. Meet at least 85% of Anaheim Anytime survey respondents’ evaluation of employee effectiveness (with a rating of “good” or “superior”) in the categories of employee courtesy, time to respond, and employee effectiveness

   **Detail:** APU strives to achieve high satisfaction ratings through its many customer interactions, which occur through the call center, at the service counter, in the field, and on phone calls or emails. Through Anaheim Anytime, an interactive customer service tool, APU customers can rate the service they received in categories like service effectiveness, quality of service, and timeliness of response. Each of these categories can be rated on a scale of poor, below average, average, good, or superior. This metric will focus on the percentage of responses rated “good” or better during the reporting period.

   **Result:** Goal Met. For the reporting period, APU received a total of 259 Anaheim Anytime surveys and the percentage of responses that rated service effectiveness, quality of service, and time to respond with a “good” or better rating was over 85%.

   ![Service Effectiveness](92%)
   “Crews were here in less than an hour, and power was restored shortly thereafter. Great job, guys. Thanks all around.” – J. Lee

   ![Time to Respond](92%)
   “Very quick response. Follow-up visits were needed and were made on a timely basis. Problem was completely resolved! Thank you!” – T. Spirlong

   ![Employee Courtesy](93%)
   “Anaheim employee did an excellent job. Was very courteous when spoken to. Thank you for a job well completed.” – P. Edwards

2. Meet or exceed at least 90% of Anaheim Anytime survey respondents’ expectations

   **Detail:** Overall customer satisfaction is a barometer of whether APU is meeting the needs of its residential and business customers. Through Anaheim Anytime, APU customers have the opportunity to ask questions, put in a service request, communicate about an issue that needs service or immediate attention, and rate whether their service expectations were met. This metric will focus on the percentage of respondents that rated their expectations as being “met” or “exceeded” during the reporting period.

   **Result:** Goal Met. 93% of the total 259 respondents completing an Anaheim Anytime survey during the reporting period indicated that their expectations had been met or exceeded. For
the entire 2018 calendar year, over 450 respondents completed a survey and 94% of them indicated that their expectations had been met or exceeded.

3. Respond to customer calls in the Utility Call Center in 3 minutes or less

Detail: Customer Service Representatives (CSRs) in the Utility Call Center are trained APU staff members who strive for the highest quality of professionalism, effectiveness, and courtesy when answering phone calls from customers. They are trained to provide answers and solutions to a number of issues relating to the customer’s utility account or any number of city-wide issues.

Customer wait times are calculated in this report by totaling the duration of minutes where customers experienced a wait before speaking to a representative and dividing this total by the number of calls answered.¹ This indicator is calculated each month using a twelve-month rolling average to remove the effects of seasonality, and only utility-related calls during normal business hours are included in this calculation. Call volume is calculated by dividing the total number of calls answered in a period by the total number of full work days in the same period; a twelve-month rolling average is also applied.² Customers who call the Utility Call Center can speak to a live representative within one minute of listening to an Interactive Voice Response (IVR) system message³, which prompts them to select from an array of self-service options.

¹ Prior reports calculated this metric by averaging the total monthly wait times within a six-month period and dividing it by the average monthly total of calls answered each month within the same period. For better accuracy, this metric is now calculated by taking the total call wait duration in a six-month period and dividing it by the total calls answered within that same period; this calculation also filters out customers who drop their call before speaking with a representative.

² Similar to call wait times, the daily call volume calculation filters out calls that were dropped. Full work days in the calculation are for business weekdays only with at least 10.5 work hours.

³ The Interactive Voice Response (IVR) provides immediate self-service options for customers and may also alert customers to issues like fraudulent callers pretending to be utility employees. For more information on scammers targeting utility customers, including tips on how to avoid such scams, please see www.anaheim.net/4755/Scam-Alert.
Wait times begin immediately after a customer listens to the IVR message and ends when a service representative answers their call.

Besides handling utility calls, CSRs also answer phone calls for the City’s 311 service, a non-emergency service allowing callers to report graffiti, submit code enforcement and community preservation requests, make general city-related inquiries, or follow-up on requests made through Anaheim Anytime.

**Result:** Utility-related call wait times averaged 2.3 minutes with an average volume of 869 calls daily for the reporting period.

311 call wait times averaged 0.9 minutes with an average volume of 57 calls daily during the reporting period. Wait times for 311 calls are typically much lower than Utility-related calls because of the lower call volume and because specific call center representatives are assigned to answer these calls with urgency.

4. **Ensure street light repairs are made within 4 business days on average**

**Detail:** Repairing street lights promptly is a high priority for residents and businesses and is therefore tracked as its own metric. APU’s goal is to repair street lights within 4 business days on average. For many street light repairs, a light bulb and photo sensor are replaced – which is a straightforward and quick repair. However, if wiring or infrastructure repair or replacement is needed, more time may be required for proper repair.
**Result:** Goal Met. Over 900 street lights were repaired during the reporting period within 2.1 business days on average. For the entire 2018 calendar year, over 1,600 street lights were repaired within 2.1 business days on average.

Yearly street light repairs are expected to decrease over time as Utilities replaces more high-pressure sodium (HPS) street lights with light emitting diodes (LEDs), a technology known to have better efficiency and longevity than HPS. Currently, LEDs are installed on approximately 20% of the street lights requiring repair. In some parts of Anaheim, there are distinctive styles of street lights that reflect a neighborhood’s overall look and history, comprising approximately 3,700 or 18% of Anaheim’s total street lights, and utilizing HPS technology. APU is currently testing LED solutions for two different streetlight design styles (known as colony and traditionaire style) for these areas of Anaheim. APU expects to complete the testing in the coming months so that installed LED street lights complement these neighborhoods appropriately.

<table>
<thead>
<tr>
<th>Year</th>
<th>Average Business Days</th>
<th># Repairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>2.6</td>
<td>2,321</td>
</tr>
<tr>
<td>2015</td>
<td>2.7</td>
<td>1,996</td>
</tr>
<tr>
<td>2016</td>
<td>2.0</td>
<td>1,837</td>
</tr>
<tr>
<td>2017</td>
<td>2.2</td>
<td>1,884</td>
</tr>
<tr>
<td>2018</td>
<td>2.1</td>
<td>1,608</td>
</tr>
</tbody>
</table>

**B. DELIVER DAILY OPERATIONS EXCELLENCE**

1. **Maintain electric system reliability indicators in the top 25% of the municipal owned utility category nationally**

**Detail:** APU monitors its service reliability by tracking the following key reliability indicators against the top quartile of municipal utilities across the nation, as well as neighboring utilities.4

- **Duration of Outages:** The system average interruption duration index (SAIDI) is an indicator of system performance and reflects the integrity of the local electric grid. It measures the number of minutes over the year that the average customer is without power by dividing the total customer minutes out by the number of electric service customers.

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4 Benchmark data is provided by PA Consulting Group Inc. as part of their annual, national benchmarking study, consisting of over one hundred and fifty participating electric utilities. PA Consulting Group Inc., "System Reliability, Restoration, and Response Report (SR3), Reliability Data for Calendar Year 2017".

APU looks at neighboring utilities whenever publicly available data is available. Only sustained outages, defined here as those outages lasting 5 minutes or more, are included for comparison. Total system indices, which include distribution and transmission indices, are also used. Major event days from benchmark agencies are excluded for a more accurate comparison. Results from other agencies are from calendar year 2017, with the exception of LADWP which have provided FY 2018 results on their website.
• **Restoration Time:** The customer average interruption duration index (CAIDI) is an indicator of response time for every occurring outage, indicating how quickly power was restored to customers. It measures the average amount of time a customer is without power per interruption by dividing the total customer minutes out by the number of customer interruptions.

• **Frequency of Outages:** The system average interruption frequency index (SAIFI) is an indicator of system resilience, reflecting how often a typical customer is affected by an outage. It measures the number of times an average customer experiences an interruption by dividing the number of customer interruptions by the number of service customers.

**Result:** **Goal Met.** APU was in the top national quartile of the municipal owned utilities category for all three reliability indicators, with the average customer experiencing 1 outage every two years (0.49 SAIFI), lasting approximately 27.4 minutes on average (SAIDI), and seeing power restored within 56.5 minutes on average (CAIDI). The charts below demonstrate how APU fares against neighboring utilities for all three reliability indices.

As a recognized Reliable Public Power Provider (RP3) by the American Public Power Association, APU continues to invest in upgrading or replacing electric infrastructure for improved reliability. An example includes APU’s direct buried cable replacement program that
replaces aged and degraded cable that developers placed directly into the dirt (without a conduit or tube to protect the cable) in the 1970s and 1980s. Many of these cables have deteriorated over time – due to soil minerals, moisture, and age – and are responsible for a sizable portion of the underground outages occurring today. This program is an aggressive and long-term approach to strengthening the electric system and minimizing the likelihood of underground cable failure.

2. **Procure adequate renewable resources to comply with state mandates on renewable portfolio standard, meet interim targets, and remain well-positioned for future compliance periods**

**Detail:** APU has long remained committed to reducing greenhouse gas emissions through increasing its renewable resources while lowering more carbon-intensive resources like coal in its power resources portfolio. And the trend towards greater renewable resources as a percentage of a power resource portfolio is accelerating, reflected in state legislation requiring 33% renewable portfolio standard (RPS) by 2020, 60% RPS by 2030, and 100% carbon-free energy by 2045. California’s governor signed the last two provisions into law (known as SB 100) on September 10, 2018.

While renewable resources like solar, wind, geothermal, and biogas have traditionally been costlier to procure than non-renewable resources, APU has been incrementally phasing in new renewables to mitigate the potential of large rate spikes to its customers, while diversifying its power portfolio, reducing GHGs, and meeting state mandates and regulations. APU continues to plan and strategize on managing its overall energy resource into the next decade and will continue updating its progress and results to policymakers and the general public.

**Result:** **Goal Met.** APU’s renewable portfolio standard (RPS) is currently at 29%, and APU is on track to meet its RPS goals in compliance with state mandates.

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*Power outages can occur for a variety of reasons but underground cable failure continues to be a leading cause, contributing to nearly a third of all unplanned outages. Such outages are far more challenging to repair than overhead outages, usually requiring 8-10 hours to repair. For underground outages, an electric troubleshooter must find where the fault (electric failure) is located, dig up the fault, and either splice the electric wire or completely replace it if it is beyond repair. In contrast, an overhead outage typically averages closer to 2 hours for repair.*

*See Senate Bill (SB) X1-2 for 33% RPS by 2020 and Senate Bill (SB) 100 for 60% RPS by 2030 and 100% carbon-free energy by 2045. SB 100 allows the 100% clean-energy provision to be met through eligible renewable resources along with “existing large hydro and any other zero-carbon polluting resources” – which was intended to “leave the door open” to potential new technologies in the future. See focus.senate.ca.gov/sb100/faqs for more information.*
3. Maintain generation availability rate at 95% or better

**Detail:** Generation availability is a barometer of reliability, indicating the percentage of time the power plant is available to operate and generate power. This metric is calculated by dividing the total number of hours the plant is available to operate by the total number of hours in the reporting period. Results of generation availability will be provided for both the Canyon Power Plant (Canyon) and Kraemer Power Plant (Kraemer).

**Result:** Watch. During the reporting period, Canyon Power Plant recorded an availability rate of 98.7% while the Kraemer Power Plant only reached a 59.4% availability rate.

Kraemer Power Plant’s low availability was due to issues with a fuel nozzle and mid-frame that caused the turbine to overheat. Three months were required to fix the issue during the reporting period, which brought the availability of this plant to zero during those months. In October, the plant was fully operational again and availability returned to normal levels.

As presented to the Public Utilities Board late last year, APU is maximizing its investment in the Kraemer Power Plant because the plant plays an instrumental role in supporting the integration of intermittent renewable resources like wind and solar. However, APU plans to ramp down the plant’s operation over the next ten years, reflecting a gradual shift towards cleaner energy resources – in-line with the state’s legislative mandates.

4. Continue to meet or exceed all state and federal standards for drinking water quality

**Detail:** APU conducts more than 44,000 analyses each year to ensure its customers receive high quality tap water that is clean, safe, and great-tasting. As a public water agency, Anaheim is required by the U.S. Environmental Protection Agency (U.S. EPA) and the State Water Resources Control Board (formerly regulated by the Department of Public Health) to comply with all regulations that limit the amount of certain contaminants in water. For more information about Anaheim’s drinking water quality and how it is tested, please see Anaheim’s most recent Water Quality Report: [www.anaheim.net/2092/Water-Quality-Report](http://www.anaheim.net/2092/Water-Quality-Report).

**Result:** Goal Met. 100% of drinking water standards were met this reporting period. Anaheim’s drinking water continues to meet or surpass all federal and state standards as established by the U.S. EPA and State Water Resources Control Board.
5. **Minimize main breaks per 100 miles of pipe to under 8 annually, which is nearly 30% below the national average**

**Detail:** A key reliability indicator that measures the strength and reliability of water system infrastructure is the number of main breaks per 100 miles of distribution piping. According to the Water Research Foundation and Partnership for Safe Water, “main breaks are a primary indicator of the condition of distribution system infrastructure because they are a critical element in maintaining distribution system integrity and have a large and very visible impact on several other key operational parameters.”

Anaheim’s performance goal is calculated by dividing the annual number of main breaks by the total miles of pipe (per 100 miles) in the distribution system. To encourage greater pipeline replacement throughout Anaheim while minimizing the number of main breaks, a newly revised goal of under 8 main breaks per hundred miles of pipe was established – a level that is nearly 30% below the national average.

Main breaks can occur for any number of reasons including corrosive soil, age of pipe, climate, pipe installation methods, tree root intrusions, or even incidents where a pipe is inadvertently struck by a contractor. Consequently, the number of main breaks per month can vary significantly, which is why this metric is typically reported as an annualized figure. For consistency with other agencies and benchmarks, a 12-month moving total of this metric will be utilized.

**Result:** **Goal Met.** 4.4 main breaks per 100 miles of distribution pipeline was recorded during the reporting period. APU continues to focus its on-going capital improvement program to systematically replace older pipes that are prone to failure, reducing the likelihood of main breaks among the 753 miles of water pipeline maintained. Over the last five years, APU has invested over $25 million in water main replacements.

The first graph shows Anaheim’s recorded main breaks trending downward over a three year period. The second graph compares APU’s performance against neighboring agencies and the national average – please note that a host of factors can influence how each agency performs, such as the age and material of their pipe, the presence of corrosive soil, and climate (among other factors).

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8 See Folkman’s comprehensive study, which represents the survey results from 188 participating utilities for the year 2010, making it “one of the largest surveys conducted on water main failures” that provides more “statistically representative national or regional data than other benchmarking studies.” *Water Main Break Rates in the USA and Canada: A Comprehensive Study,* April 2012, Steven Folkman.
6. Meet the three-year maintenance goal of inspecting all 7,800 hydrants (or 217 per month) and exercising all 23,000 system valves (or 639 per month)

Detail: Preventative maintenance on hydrants and valves is important to managing the operability of the water distribution system, as well as minimizing customer outages when main breaks occur. Activities in this area are tracked monthly to ensure performance is on target to meet program goals. On average, 217 hydrants should be serviced monthly to meet the goal of inspecting all hydrants every three years (7,800 total hydrants divided by 36 months), while 639 valves should be exercised monthly in order to meet the goal of exercising all valves every three years (23,000 total valves divided by 36 months).

Monthly performance on such maintenance activities may fluctuate as staff may be reassigned to support higher priority activities such as supporting time-sensitive construction, water line repairs, or planned outages. Moreover, maintenance performed in high-traffic intersections or other locations requiring additional staff for safety may also impact monthly performance.
Result: Watch. During the reporting period, APU met its valve goal by exercising an average of 656 valves monthly, but inspected only 215 hydrants on average, falling short of the goal by just two hydrants. However, APU recently completed the first of a three-year preventative maintenance cycle and plans to schedule maintenance on all remaining hydrants and valves.

C. PRESERVE COMPETITIVENESS & FINANCIAL HEALTH

1. Maintain annualized system Electric rates below rates paid by other Orange County cities

Detail: An electric rate comparison is based on a typical single-family home that consumes 500 kilowatt hours (kWh) of energy per month. APU is the only municipally-owned utility in Orange County, while the rest of the county is served by Southern California Edison and San Diego Gas & Electric.

Result: Goal met. Annualized residential electric rates remain lower than rates paid by other Orange County cities. This savings increases as usage increases because investor owned utilities typically have larger variances between rate tiers.

For typical residential usage of 500 kilowatt hours of energy per month, Anaheim customers pay $85.10 per month, while North Orange County cities served by Southern California Edison pay approximately 20% more, and South Orange County cities served by San Diego Gas & Electric pay approximately 81% more.

### Monthly Residential Bill Comparison

<table>
<thead>
<tr>
<th>City</th>
<th>Monthly Bill ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>South OC (SDGE)</td>
<td>$154.33</td>
</tr>
<tr>
<td>North OC (Edison)</td>
<td>$102.38</td>
</tr>
<tr>
<td>Anaheim</td>
<td>$85.10</td>
</tr>
</tbody>
</table>

Source: Calculated Using CPUC Utility Tariff Information
For reference, a comparison of system average rates is shown below. This rate captures the average kilowatt hour cost across all customer segments, and reflects several factors including power supply costs, customer type, number of customers, volume of sales, and efficiency of customer load. As the chart\(^9\) below indicates, some cities also have an additional utility user’s tax – which Anaheim does not.

### Average Customer Cost Per kWh (in $/kWh)*

<table>
<thead>
<tr>
<th>Utility</th>
<th>Average Customer Cost Per kWh ($/kWh)**</th>
<th>Utility User's Tax</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDG&amp;E*</td>
<td>0.2222</td>
<td></td>
</tr>
<tr>
<td>Glendale</td>
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*Utility User’s Tax varies by cities served by investor owned utilities

### 2. Maintain annualized Water rates under the average of our local Orange County competitors

**Detail:** Water rates are compared based on residential usage of 16 hundred cubic feet (HCF) per month, which is equal to nearly 12,000 gallons of water per month. This represents the total amount of water consumed by a typical residential household in Anaheim.

Many water districts are supported through revenue sources like property taxes or bonds paid through property taxes, which can artificially lower their water rates significantly. This is because the true cost of providing water, which can be expensive especially in times of...
drought, is subsidized through water district property taxes. In contrast, Anaheim’s water rates are not supported by any property taxes and only reflect the true cost of providing water. Despite these differences, Anaheim remains one of the most competitive water agencies in Orange County.

**Result:** Goal met. Annualized water rates remained under the average of local Orange County competitors during the reporting period. For a typical household, Anaheim’s water bill was $54.06, approximately 30% below the Orange County average. Adjusting for property taxes, which water districts rely on to offset their costs, the chart below shows Anaheim remains competitive amongst its peers.

As a not-for-profit agency, APU’s rates reflect the true cost of providing water or power to its customers – there is no profit margin. Nevertheless, water rates need to keep pace with increasing water supply costs and capital replacement needs. Anaheim’s wholesale water suppliers are investing in drought resiliency and reliable delivery infrastructure, and those investments are resulting in higher wholesale supply costs. Additionally, Anaheim’s water system includes critical pipelines and other components installed in the 1950s and 60s – many of these assets need replacement to keep Anaheim’s water system reliable, and deferring such upgrades may result in costly future maintenance and repairs. To mitigate the impact of a rate adjustment on customers, APU continues to identify practical ways customers can reduce their utility bill, from rebates for high-efficiency devices to income-qualified programs like APU’s Weatherization Program that assists income-qualified renters and homeowners in making their homes more water-energy efficient and comfortable.

* Water districts receive property tax revenue which help them offset water costs and subsidizes water rates. In contrast, APU’s water rates reflect the true cost of providing water to its customers without profit.
3. **Remain in the A rated or higher categories for bonds**

**Detail:** Moody’s, Standard & Poor’s (S&P), and Fitch provide credit ratings “about the ability and willingness of an issuer, such as a corporation, state or city government, to meet its financial obligations in full and on time. Credit ratings can also speak to the credit quality of an individual debt issue, such as a corporate or municipal bond, and the relative likelihood that the issue may default.”

**Result:** Watch. Although both the Water and Electric Utility maintained its high credit rating with a long-term outlook rated in the A category or higher, this metric remains on Watch to develop strategies and tools for the Water Utility to regain its AAA rating from S&P, which was lowered on Sept. 2016 during a statewide drought that resulted in a significant reduction in water revenue.

<table>
<thead>
<tr>
<th>Rating Agency</th>
<th>Water</th>
<th>Electric</th>
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<td><strong>Standard &amp; Poor’s</strong></td>
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<tr>
<td><strong>Fitch Ratings</strong></td>
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4. **Maintain days cash on hand of 90 Days + $50 million for the Electric Utility and 120 days for the Water Utility**

**Detail:** Days cash on hand is a liquidity ratio that indicates the number of days an organization can meet its operating expenses using the cash it currently has available. The higher the number, the more days an organization can sustain its operations without any additional cash inflows. The ratio is calculated in this report by dividing the unrestricted cash balance by the total projected cash expenses for the entire fiscal year and multiplying this quotient by 365 days. For the Electric Utility, the $50 million balance – to meet specified financial performance goals and debt service coverage requirements – is converted into days using this formula and added on to the 90 days target. Currently, the target for the Electric Utility is approximately 143 days.

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11 S&P lowered its long-term rating on the Water Utility from ‘AAA’ to ‘AA+’ in Sep. 2016 after revising its rating criteria consisting of an enterprise and financial risk framework. S&P noted that the Water Utility’s practices were “supportive of high credit quality” and that its credit rating could be raised if “financial metrics improve such that the financial risk profile is commensurate with peers at a higher rating level.” To view the S&P ratings report, click here: [www.anaheim.net/DocumentCenter/View/10032](http://www.anaheim.net/DocumentCenter/View/10032).
Result: Goal Met. As of December 31, 2018, the Electric Utility had 216 days of cash on hand, while the Water Utility had 273 days of cash on hand.\textsuperscript{12} The charts below demonstrate that utilities can maintain a high credit rating without possessing excessive amounts of cash on hand.\textsuperscript{13}

Because existing bond funds are currently used to fund a majority of the Water Utility’s capital projects, Water’s days cash on hand is expected to remain at current levels for at least another fiscal year. Afterward, an increasing percentage of Water Utility capital projects are expected to be cash-funded, which will lower Water’s days cash on hand. APU is focused on cash-funding more routine, capital improvement projects as a way to minimize bond issuances, lower future debt service costs, and to provide greater financial flexibility. A capital reserve fund has been proposed to support this plan, and is expected to keep days cash on hand at more stable levels each year as bond issuances – which typically cover capital project costs over multiple years – will be minimized.

\textsuperscript{12} The Electric and Water Utility’s days cash are unaudited estimates as of December 31, 2018.

\textsuperscript{13} For consistency and standardization, each agency’s credit rating was taken from Fitch Ratings, except for Burbank (Moody’s rating) as their electric revenue bonds are not rated by Fitch. Days cash was calculated based on financial figures listed in each respective agency’s Comprehensive Annual Finance Report (CAFR) for the fiscal year ending June 30, 2018.

Fitch and S&P’s highest rating is AAA, followed by AA, and A. The modifiers “+” or “-” indicates the relative status of that rating within the rating category. For more detail, see Fitch Ratings or S&P Ratings.
5. **Maintain a debt service coverage ratio of 1.6 or higher for the Electric Utility, and 2.0 or higher for the Water Utility**

**Detail:** Debt service coverage ratio (DSCR) is a financial metric that assesses an organization’s ability to pay its debt. The metric in this report is calculated by dividing a fiscal year’s total available net revenue to meet debt obligations by total direct debt service in that same period.\(^\text{14}\) The goal for this metric was established in accordance with Governmental Accounting Standards Board (GASB) rules. Please note that financial figures in this report are unaudited, and may change after the year-end audit when all adjustments have been made and are finalized.

**Result:** **Goal Met.** As of December 31, 2018, the Electric and Water Utility’s DSCR is projected at 2.0.

**D. MANAGE ENTERPRISE RISK EFFECTIVELY**

1. **Proactively identify and manage enterprise-wide risks so that all key risks are properly addressed or mitigated, and no material violations occur that would adversely affect APU’s operations or its assets**

**Detail:** APU manages its enterprise wide risks on an ongoing basis and prepares an internal compliance plan to monitor and report on its compliance with applicable laws and regulations.

**Result:** **Goal Met.** No material violations or compliance issues arose during the reporting period. The Canyon Power Plant (CPP) had several minor exceedances of its nitrogen oxides (NOx) emissions limit due to equipment failure and an operator error – which may result in a notice of violation. Since the incident, APU has developed formal procedures covering such maintenance operations, and staff was trained on these procedures to prevent reoccurrences.

2. **Keep counterparty default under 1/2 % of short-term power supply costs**

**Detail:** Counterparty default risk, or the risk that the other party in a transaction will be unable to fulfill its obligations, is minimized through analyzing and monitoring the credit risk of counterparties and employing a probability default risk model against APU’s short term, power supply costs.

**Result:** **Goal Met.** The counterparty default rate was kept at 0%. APU continues to be mindful of who it conducts transactions with through its risk management program, which screens potential parties carefully to identify potential counterparty default risk.

**E. INVEST IN A POSITIVE AND PRODUCTIVE WORK ENVIRONMENT**

1. **Maintain an industrial safety and health injury rate that does not exceed 1.0**

**Detail:** Many organizations measure the effectiveness of their safety program and culture through an industrial safety metric known as the Disabling Injury Rate (DIR), or the number

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\(^{14}\) Total available cash to meet debt obligations is before any general fund transfers.
of injury cases involving days away from work for every 100 employees. According to some safety experts, this rate “does a better job of representing the actual rate of workplace injury,” because it actually shows the incidence of serious injuries.

This safety metric conforms to the standard base rate calculation used by the Occupational Safety and Health Administration (OSHA): a base of 100 employees, working 40 hours a week, and 50 weeks per year is applied (for a total of 200,000 labor hours). To calculate the DIR, multiply the number of injury incidents resulting in days away from work by 200,000, and divide this product by the number of total employee hours worked.16

**Result:** Goal Met. The DIR for the reporting period was 0.61. During the reporting period, safety meetings continued to emphasize awareness, the importance of reporting and reviewing near miss incidents, and accident prevention. Utilities remains committed to maintaining and promoting a strong safety culture.

2. **Meet or exceed industry benchmark for employee efficiency**

**Detail:** A widely-used measure of employee efficiency in the electric utility industry is the number of retail customers per non-power generation employee. This is a ratio that divides the average number of retail customers by the number of full-time and part-time employees that are not involved in the generation of power. To calculate this ratio, the average number of electric meters in the reporting period is used as a proxy for the number of electric retail customers. Additionally, to maintain accuracy when comparing this metric against industry benchmarks, APU prorates employees that are shared with the Water Utility.17 For the purposes of benchmarking against other electric utilities nationally, APU uses the American Electric Power Association (APPA) median benchmark.

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16 For more information, see the Bureau of Labor Statistics’ website on “How To Compute a Firm’s Incidence Rate for Safety Management”: [http://www.bls.gov/iif/osheval.htm](http://www.bls.gov/iif/osheval.htm)

17 See “APPA Financial and Operating Ratios of Public Power Utilities, 2018,” American Public Power Association. Anaheim’s Electric Utility had 446 retail customer per non-power generation employee compared to the APPA median benchmark of 315 retail customers per non-power generation employee.
Public Power Association’s (APPA) “Selected Financial and Operating Ratios of Public Power Utilities.”

For the Water Utility, APU uses the same methodology as above, dividing the number of water customers by the number of full-time and part-time water employees. The number of water meters is used as a proxy for the number of water customers. Employees that are shared with the Electric Utility, such as customer service or billing staff, are prorated as part of this calculation. APU uses the American Water Works Association (AWWA) benchmark to compare itself against other water utilities nationally.

**Result:** Goal Met. The Electric Utility had 40% more retail customers per non-power generation employee than the median benchmark reported by the American Public Power Association for public power utilities with 100,000+ customers. The Water Utility had nearly 30% more water customers for every water employee than the median benchmark reported by the American Water Works Association.

The charts below demonstrate how both Electric and Water Utility’s meters-per-employee indicator compare favorably against other peers.

### Meters per Employee

<table>
<thead>
<tr>
<th>City</th>
<th>Meters per Employee</th>
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**F. MAINTAIN ALIGNMENT WITH CITY GOALS**

1. **Support City Council policies and initiatives, as well as the City Manager’s direction**

   **Detail:** Examples of how APU supports policies of the City Council are provided in this section. Although definitive targets are not always available for these broad, city-wide

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18 Ibid.

19 AWWA published their 2016 benchmarking in 2017. See “2017 AWWA Utility Benchmarking Performance Management for Water and Wastewater.” Anaheim’s Water Utility had 623 water customers for every water employee compared to the AWWA median benchmark of 484 water customers per employee.

20 Each agencies’ employee count was compiled from FY 2018 budget information found on their website. Because peer agencies do not specify how many generation employees they have, Anaheim includes all of its Electric Utility employees in this comparison chart for a fair apples-to-apples comparison.
initiatives, APU will provide specific examples of programs and efforts that support these city goals.

**Result: Goal Met.** During the most recent reporting period, APU supported City Council and City Manager policies and initiatives through a number of community engagement events while also promoting its income-qualified assistance and regulatory relief efforts.

**Donation of Surplus Vehicles to Puerto Rico**

In October, City Council authorized the donation of surplus vehicles to the City of Guaynabo, Puerto Rico for use in its recovery from Hurricane Maria that struck in September 2017. The hurricane caused significant damage, resulting in loss of power, water, telecommunications, and transportation systems to essentially all of the island’s 3.3 million residents. In coordination with Anaheim Fire and Rescue and Public Works, a total of six surplus vehicles were donated—including two APU bucket trucks—which are expected to be used in helping rebuild Puerto Rico’s roads, water, and electric system.

**Smart City Roadmap Initiative**

In November, City Council approved the Smart City Roadmap Initiative, which authorizes City departments to collaborate in developing and implementing projects and programs that will move Anaheim towards being a Smart City. APU has a number of current initiatives that support the Smart City Roadmap, such as fiber optics, the LED street light replacement program, and EV charging stations. APU will continue to develop initiatives and programs that focus on keeping the community connected, safe, intelligent and sustainable.

**Homeless Initiatives**

- **Temporary Homeless Shelter at Salvation Army:**
  In November, City Council authorized an agreement with the Salvation Army to develop a 224-bed homeless shelter on their parcel near Cerritos Avenue and Lewis Street. APU participated as the project manager for the undertaking, coordination with the Salvation Army and other departments to install a campus-style shelter using portable trailers. Construction commenced in December and the

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21 For more information, see the Federal Emergency Management Agency website on “One Year After Hurricane Maria”: [www.fema.gov/hurricane-maria](http://www.fema.gov/hurricane-maria)
shelter was dedicated on January 31, 2019. As of February 27, 2019, the shelter housed 141 individuals.

- **Hydrant Painting with Better Way Anaheim:** In December 2017, the City established a partnership with Better Way Anaheim to provide work to homeless individuals at the direction of City Council. In support of this initiative, APU coordinated fire hydrant painting projects across the city as one of the qualifying assignments for homeless individuals. The first hydrant painting project took place in August and included eight participants who painted 14 hydrants around the Twila Reid Park neighborhood. Since then, dozens of other hydrants have been painted in other neighborhoods and parks throughout Anaheim in exchange for food, gift cards, and the opportunity to gain work experience.

**Customer Service Initiatives**

To improve customer service, APU has been systematically modifying rules with the goal of simplifying, reducing costs, and providing flexibility for customers to receive electric and water services. City Council has approved modifications for 42 of the 51 rules in APU’s Rates, Rules, and Regulations since 2012. Below is an overview on some of the customer service initiatives and how it has helped Anaheim customers.

**WAIVED ACCOUNT ESTABLISHMENT FEE**

APU waives a $10 service establishment fee for income qualified or declared emergency customers. On average, the fee is waived for approximately 300 customer accounts each year.  
*Effective since Jan. 2013*

**COURTESY CALL PROGRAM**

APU provides a personalized phone call to alert customers when their bill is past due to prevent unwanted disconnection of service. On average, approximately 8,100 courtesy calls are made annually.  
*Effective since Feb. 2016*
**REDUCED CUSTOMER SERVICE FEES**

Reconnection fees were reduced from $30 or $40 to a flat $20 fee, while the same day service establishment fee was reduced from $40 to $35

*Effective since May 2017*

$216,100+

Customer savings from reduced fees

**INCOME QUALIFIED DISCOUNTS**

Income qualified seniors, veterans, and long-term disabled customers can receive a 10% discount on the electric portion of their utility bill. Of the total active customers receiving this discount, 69% are seniors, 28% are long-term disabled customers, and 3% are veterans.

*Effective since Sep. 2015*

6,880+

Active customers

**EXTENSIONS AND PAYMENT PLANS**

Customers requiring assistance with payment of service may request an extension or payment plan. On average, approximately 39,400 extensions and 410 payment plans are granted annually.

*Effective since Feb. 2016*

111,690+

Extensions

1,160+

Payment plans