



Battery Energy Storage System



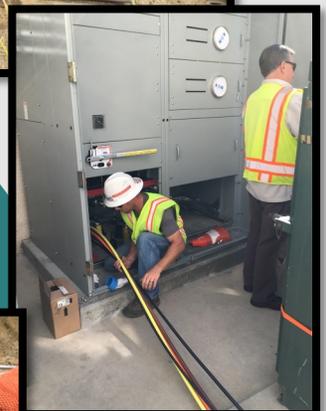
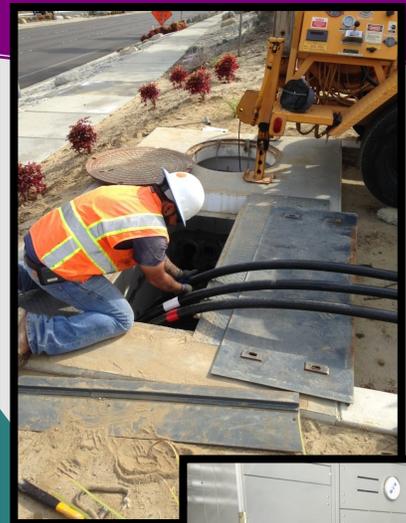
RANCHO CUCAMONGA Municipal Utility

2016 ANNUAL REPORT

Energy... Reliability... Commitment



Astoria 2 Solar Project



Message from the Utility

Preparation: the action or process of making something ready for use or service or of getting ready for some occasion, test, or duty.

RCMU's 2016 was a year of *preparation* so that we can position our utility for future success. In 2016, the City Council approved the execution of two long term renewable resource contracts for photovoltaic solar power at the Astoria 2 project in Kern County and for hydroelectric power at the Boulder Canyon Project at Hoover Dam to not only meet the State's renewable requirements, but to also boost Rancho Cucamonga's commitment to sustainability for the future.

One of the key advantages of a public utility is its investments in the community it serves. RCMU continues to leverage the benefits of our operations, distribution grid and outstanding customer service to maximize our efforts to continually operate efficiently by reducing costs and optimizing infrastructure performance. This was why in the Summer of 2016, the City and Southern California Edison (SCE) came to an agreement for the purchase and sale of more than 15,000 SCE owned streetlights throughout the City. The purchase of these lights by the City would not only reduce costs and expenditures, but improve streetlight maintenance, reliability and improved customer service by having local control of the lighting asset. In addition to *preparing* for future options such as LED lighting and "smart" applications, the future of streetlights citywide are bright with opportunity.

Finally, as RCMU takes on new customers in the future, we continue to embrace new technologies and opportunities. Whether it is smart metering technologies, battery energy storage systems, adding electric vehicle charging stations and fiber broadband services, these are all current and potential projects that RCMU is currently evaluating that will help us understand the benefits of modernization efforts in the utility industry, as well as *preparing* RCMU for future success. In 2017, RCMU looks forward to continuing to serve our customers with reliable electricity and excellent customer service, while maintaining low rates and clean and renewable resources.

ASTORIA 2 SOLAR PV PROJECT

The Astoria 2 Solar PV Project, a 75 MW solar facility built by Recurrent Energy in Kern County in which RCMU is purchasing a 6 MW share has finally been completed. The project began commercial operations in December 2016 and will provide RCMU with almost 20% of its Renewable Portfolio Standard (RPS) through this clean solar resource. RCMU's share of the Astoria 2 solar plant is expected to generate approximately 18,000 megawatt-hours of electricity each year, enough to power more than 1,500 homes and avoid the emission of 5,000 metric tons of carbon dioxide, the equivalent to removing more than 1,000 cars from the road.



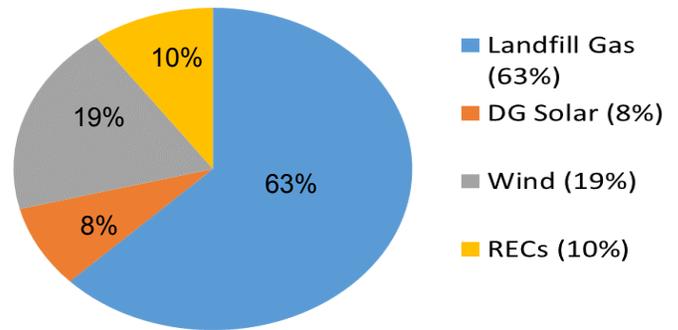
Renewable Energy

RENEWABLE PORTFOLIO STANDARD UPDATE

RCMU is proud to have been certified by the California Energy Commission (CEC) to be eligible for California's Renewables Portfolio Standard (RPS) for using Solar Photovoltaic (PV) renewable energy at City Hall, the Animal Center and the Epicenter. With this certification, RCMU will be able to report the total solar generation amount that the system produces each month to use towards RCMU's RPS requirements.



The end of 2016 marks the end of the 2nd Compliance period for California's Renewable Standard Portfolio (RPS). RCMU is pleased to announce that it has exceeded the State's compliance requirements for renewable energy and is on track to meet the 33% RPS by 2020 requirement.



RCMU RENEWABLE ENERGY PORTFOLIO SUMMARY (MWh per year) 2nd Compliance Period

Renewable Resources	CY 2014	CY 2015	CY 2016	Status	Contract
LANDFILL GAS					
Milliken	2,066	0	0	Offline	RCMU
Mid Valley	9,918	12,184	12,070	Online	RCMU
WIND					
Iberdrola (short term)	0	10,400	0	Complete	RCMU
SOLAR					
Astoria 2	0	0	4,314	Online	Joint
Distributed City Solar	0	0	182	Online	RCMU
RENEWABLE CREDITS					
Short Term Credits	5,398			Online	RCMU
TOTAL RENEWABLES	17,382	22,584	16,566	56,532	
Retail Sales	75,764	74,663	76,186		
% RENEWABLE	23%	30%	22%	25%	
% CA RPS Obligation	20%	20%	25%	22%	

RCMU *expands our services*

HAVEN AVE & SPRUCE AVE LINE EXTENSIONS

In 2016, RCMU continued to expand services throughout Rancho Cucamonga. Over 7000 feet of high voltage electric feeder cable along Haven Avenue, Sixth Street and Utica Ave was installed. The new cable was used to provide electric service for the planned commercial developments along that route. In addition, a new line extension off of Spruce Ave, south of Foothill Blvd was also installed to accommodate a new shopping center in that corner.



CITY TO PURCHASE STREETLIGHTS FROM SCE

In June 2016, the City Council approved a Purchase and Sale Agreement with Southern California Edison (SCE) to purchase more than 15,000 SCE owned streetlights citywide. The acquisition of these lights will save the City's Street Light Maintenance Districts over \$1 million a year due to a lower SCE rate because the City will now be responsible for the maintenance of the lights. The City believes that local control of the streetlight maintenance will improve customer service for residents and businesses and better response time for streetlight repairs. RCMU plans to issue a Request for Proposal (RFP) in early 2017 to contract out operations and maintenance to a full service streetlight contractor.

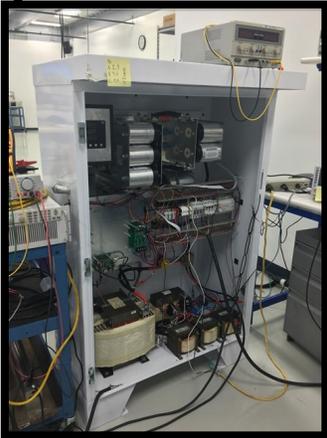
LED STREETLIGHT PILOT PROJECT

In November 2016, RCMU began a 12 month pilot project retrofitting existing High Pressure Sodium (HPS) lights with new Light Emitting Diode (LED) lights. LED's have several benefits including significant energy and cost savings for the City, increased visibility at night, and an extended lifespan which greatly reduces maintenance costs. During this pilot, a total of 14 new LED fixtures from seven different LED streetlight manufacturers have been installed on Day Creek Blvd (South of Foothill Blvd) and Jack Benny Drive. RCMU is encouraging the public to take the opportunity to see the different types of LED streetlight technologies and provide comments and feedback prior to the City of Rancho Cucamonga taking ownership of the more than 15,000 streetlights from SCE in 2017.



Project Highlights *for 2016*

CITY HALL MICROGRID



What is a micro grid? A typical micro grid will consist of smart controls, a battery energy storage system, and a small-scale solar photovoltaic generation system sized to meet the particular characteristics and load requirements of the building. RCMU is pleased to be the first municipal utility in the Inland Empire to deploy this technology as a demonstration project at City Hall. The 100 kW battery storage system is designed to prove the benefits of micro grids and help the utility gain experience with micro grid planning, installation, and operations. In partnership with APPA and UC Riverside, RCMU hopes that this demonstration project will create the blueprint for additional, larger-scale micro grid deployment to be proposed in a later proceeding.

FIBER FEASIBILITY STUDY

In 2016, RCMU hired Magellan Advisors, a broadband and telecommunications planning firm to assist in the development of the City's feasibility study to guide design, construction, expansion and operation of a City-owned fiber optic backbone infrastructure as a long term investment for the City. In conjunction with the master plan, the City will also begin work on a Fiber Optic / Broadband service business plan that would focus on a Fiber-to-the-Premise (FTTP) approach. The City's goal for its fiber optic network will ultimately be a competitive, high-speed broadband service which would provide invaluable benefits to our community ensuring that we are able to compete and thrive in today's digital economy and as an economic development tool to encourage business retention and attraction to Rancho Cucamonga. The business model, roadmap and next steps will be presented in early 2017.

IMPROVING CUSTOMER SERVICE



As a small electric utility company of roughly 900 customers, RCMU strives to provide the best customer service possible. This is why in 2016, RCMU completed an upgrade to our billing software that will improve and provide a faster application of technology when assisting customers. This upgrade provides reduced database size, new security features, customizable daily operation enhancements that will improve productivity and efficiency when serving our customers.

2016 at a glance

BY THE NUMBERS

\$38,830

Solar rebates issued in 2016
for a total of **29.15 kW**

74,000 kWh

Approximate amount of energy saved based on
the number of energy efficiency rebates issued
by RCMU in 2016

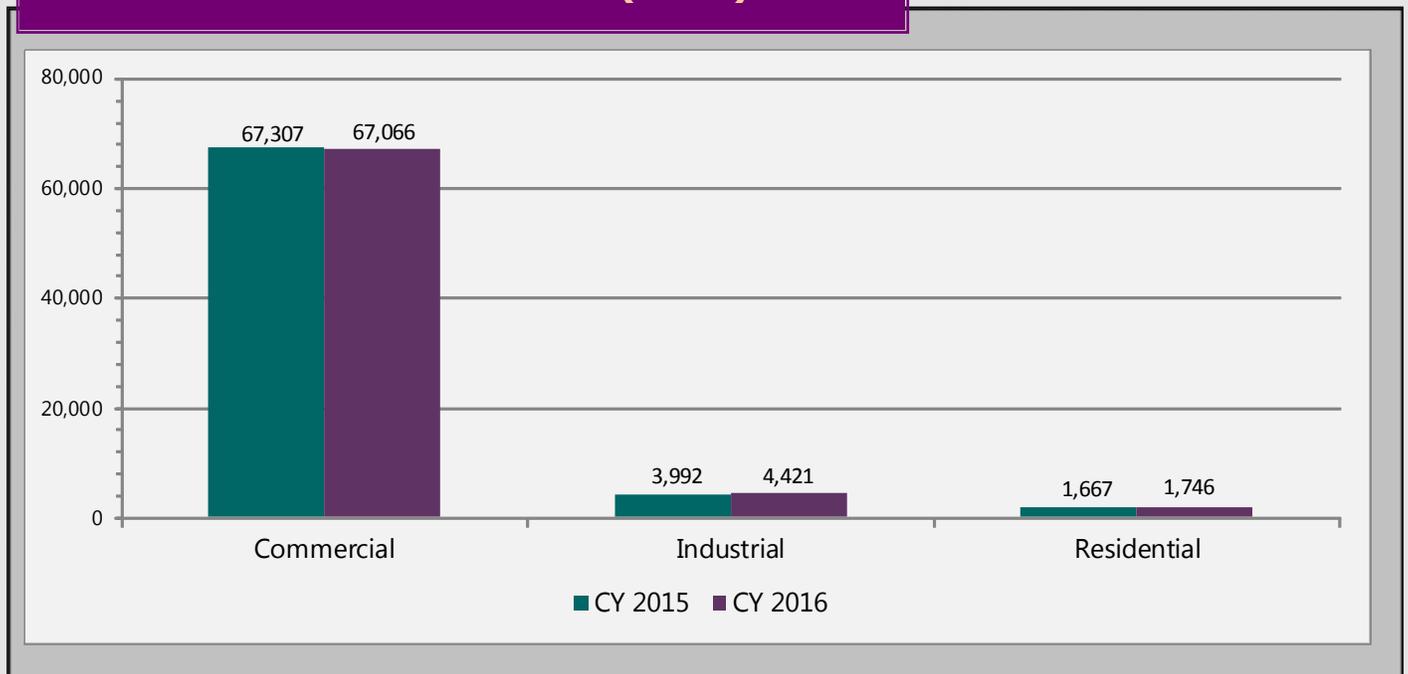
35

Number of
Regulatory Reports
filed in **2016**

3

Energy audits
performed in **2016**

CONSUMPTION BY CLASS (MWh)



FINANCIAL OVERVIEW FOR FISCAL YEAR 2015/16

Revenues (\$)

Operations	\$11,047,570
Wholesale	\$263,290
Total Operating Revenue	\$11,310,860

Expenditures (\$)

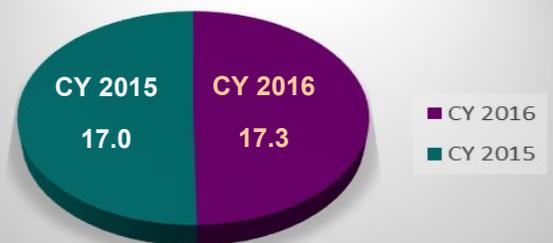
Personnel	\$358,990
Operations & Maintenance	\$4,110,356
Contract Services	\$496,197
Purchased Power	\$2,194,436
Other Operating Expenses	\$2,057,151
Transfer Out GF	\$1,255,350
Misc. / Bad Debt	\$29,555
Contribution to Capital Reserve Fund	\$900,000
Contribution to Utility Fund Balance	(\$91,175)
Total Operating Expenses	\$11,310,860

Based on FY 2015-16 CAFR

NUMBER OF CUSTOMERS BY CLASS

Class	CY 2015	CY 2016
Commercial	585	591
Industrial	3	1
Residential	306	306
Total	894	896

ANNUAL SYSTEM PEAK (MW)



LOOKING FORWARD TO 2017

RCMU is constantly looking for various ways to provide reliable and affordable service to our customers. Several projects that RCMU will be working on for 2017 are:

- New smart metering upgrades
- CPUC approval of the City's purchase of SCE Streetlights and the takeover of maintenance and operations
- Completing various capital line extension projects in order to expand our service area
- Completion of Phase 2 of the City's fiber optic network feasibility study
- Begin long term contract for 3 megawatts of hydroelectric power from the Boulder Canyon Project (Hoover Dam)
- Finalize contract for additional long term renewable energy contracts

CITY DIRECTORY

CITY COUNCIL

L. Dennis Michael, Mayor

Lynne B. Kennedy, Mayor Pro Tem

William J. Alexander, Councilmember

Sam Spagnolo, Councilmember

Diane Williams, Councilmember

John R. Gillison, City Manager

ENGINEERING SERVICES DEPARTMENT

Director of Engineering Services/ City Engineer

Jason Welday

RANCHO CUCAMONGA MUNICIPAL UTILITY

Utilities Division Manager

Fred Lyn