



# RSCCD SUSTAINABILITY STRATEGIES AND THE CLIMATE ACTION CAMPAIGN

BOARD FACILITIES COMMITTEE MEETING  
JULY 6, 2021





## BACKGROUND SUSTAINABLE PLANNING

- ▶ Board Policy and Administrative Regulation 6012 *Sustainable Practices*.
- ▶ The Sustainability Plan for the District was approved by the Board of Trustees on March 9, 2015. This plan sets out a vision for the District and identifies a number of goals and objectives that are intended to improve existing practices or to establish new practices that align with principles of sustainability.
- ▶ The Sustainable RSCCD Committee oversees the implementation of the Sustainability Plan and sets annual goals. The committee also assists in making recommendations to update Board Policy 6012 Sustainable Practices.
- ▶ **Vision Statement:** The Rancho Santiago Community College District holds sustainability to be a foundational principle in its current and future development. As a responsible steward of natural resources and the environment, the District will endeavor to minimize its impact on the environment by implementing best practices for conserving resources, reducing waste, implementing energy reduction and alternative energy generation strategies, constructing efficient buildings, and by developing partnerships that will further these activities.



# GOALS OF THE SUSTAINABILITY PLAN

The Sustainable RSCCD Committee (SRC) has identified the following sustainability goals and priorities. The goals and priorities for the Sustainability Plan reflect campus needs, interests, and available resources.

## ▶ Goal 1 - Campus & Community Engagement

- ▶ Encourage participation in and awareness of sustainability issues through effective education and engagement. Integrate sustainability into all facets of student life, including student government, clubs, and organizations.

## ▶ Goal 2 - Curriculum Development

- ▶ Facilitate the inclusion of environmental sustainability and social responsibility into existing curriculum and develop new curricula and career-oriented certificate and training courses with an emphasis on sustainability.

## ▶ Goal 3 - Energy

- ▶ Utilize 2012-2013 benchmark study to establish annual energy use and demand reduction goals (target 5% reduction). Plan appropriate energy efficiency, demand reduction, or clean self-generation measures by mid-2015 to meet reduction goals.

## ▶ Goal 4 - Facilities Design & Operation

- ▶ Design and construct all major capital projects and renovations to meet LEED Silver “equivalent” standard and operate facilities to meet solid waste, energy, and water use reduction goals. Employ sustainable landscaping practices.



# GOALS OF THE SUSTAINABILITY PLAN

## ▶ Goal 5 - Solid Waste Management

- ▶ Continue to implement the landfill diversion program, expand it to include all sectors of recycling and waste reduction to landfills, and strive to meet the statewide landfill recycling goal of 75% by 2020.

## ▶ Goal 6 - Sustainable Procurement

- ▶ Implement efforts to source campus food, materials, supplies, information technology, equipment, and resources from organizations committed to social responsibility and environmental sustainability.

## ▶ Goal 7 - Transportation

- ▶ Reduce the reliance of students, faculty, and staff on single occupancy vehicle commutes by 5% within the next five years, and encourage the use of low and zero emissions vehicles.

## ▶ Goal 8 - Water Management

- ▶ Perform water use benchmarking studies at both campuses and the District Office to better understand usage as compared to similar facilities and community college peers. Based on the results, establish annual water use reduction goals and plan appropriate measures to achieve goals.

The goals described above will apply to both Santa Ana College and Santiago Canyon College, the education centers, and the District Office. The goals are listed in numerical order, and are not necessarily listed by priority.



## SUMMARY OF ACHIEVEMENTS 2016-2018

The committee has published two biennial reports covering fiscal years 2016-2018 and 2018-2020. The reports can be found on the District's website at [Sustainable RSCCD Committee \(SRC\)](#).

- ▶ Compiled Utility Data Use for the last 8 years and established the baseline year as 2012-2013.
- ▶ Districtwide utility use has gone down by 5% for electricity, gas, and water in comparison to 2012-2013.
- ▶ A new central chiller plant and replacement of underground utilities were completed at Santa Ana College, along with new sustainable landscaping.
- ▶ Santa Ana College's new Science Center building is under construction and is LEED Silver equivalent, and is 28% more energy efficient than required by code.
- ▶ Santiago Canyon College has been utilizing the new Energy Management System (EMS) and making operational adjustments for both HVAC and exterior lighting with the new controls provided.
- ▶ A standard set of guidelines for building operators was set for building temperature set points (for heating and cooling) and continues to be implemented across all buildings.



## SUMMARY OF ACHIEVEMENTS 2018-2020

- ▶ The District has continued to meet the original goal stated in the Sustainability Plan 2015 to reduce energy consumption by 5 % from baseline year (2012-13).
- ▶ Districtwide there has been an average reduction by 13% in electricity and 21% in gas over the last 5 years when compared to the baseline year.
- ▶ California was in a severe drought from 2012 to 2015 and a statewide mandate for water conservation was implemented in 2015. Governor Brown's 2015 Executive Order was issued. Division of State Architect issues new water reduction landscaping guidelines.
- ▶ The District has met the 5% reduction water use goal.
- ▶ Districtwide there has been a water use reduction by 28% over the last 5 years in comparison to the baseline year.
- ▶ Successfully completed all Five Years of energy efficient projects utilizing Proposition 39 state funding and passed all state audits.
- ▶ Incorporated several sustainable features in the new construction projects at both colleges.
- ▶ Accomplished the procurement of several new sustainable products and equipment.
- ▶ Contracted with a new waste hauler to track and provide data on landfill diversion for recyclable materials.



# ELECTRICITY CONSUMPTION AND REDUCTION PLANNING

The District has taken proactive measures over several years to reduce energy consumption by:

- ▶ Reducing demand on resources resulting in savings to the district (e.g. LED lighting changes, EMS upgrades, occupancy sensor lighting switches, etc.)
- ▶ Utilizing design principles that ensure energy efficient buildings and renovations (e.g. District has developed design guidelines for architects and continues to keep these guidelines updated)
- ▶ Participating in State or other agency funded programs (e.g. Proposition 39 - for energy reduction measures, Savings by Design, Gas and So Cal Edison incentive/rebate programs)



# PROPOSITION 39 PROJECTS

Year 1 (13-14)	SAC - Interior and Exterior LED Lights SCC - Science Center RCx (Retro-commissioning)
Year 2 (14-15)	SCC - Interior and Exterior LED Lights District Office - Interior LED Lights
Year 3 (15-16)	DMC and OCRSTA - Interior and Exterior LED Lights SAC - Building I and Z Interior and Exterior LED Lights SCC - Building D EMS (Energy Management Systems), Chiller and Pumps Equipment Upgrade
Year 4 (16-17)	SAC, DMC, OCRSTA - EMS Upgrades
Year 5 (17-18)	SAC, SCC, DMC, OCRSTA, DO - Additional LED Lighting Conversions SAC - Lighting Occupancy Sensor Retrofits SCC - U Portables HVAC Upgrades

- ▶ **Totaling a savings of more than 2,668,000 Kwh each year**
- ▶ **State and utility company incentive funding totaling over \$5.3 million**





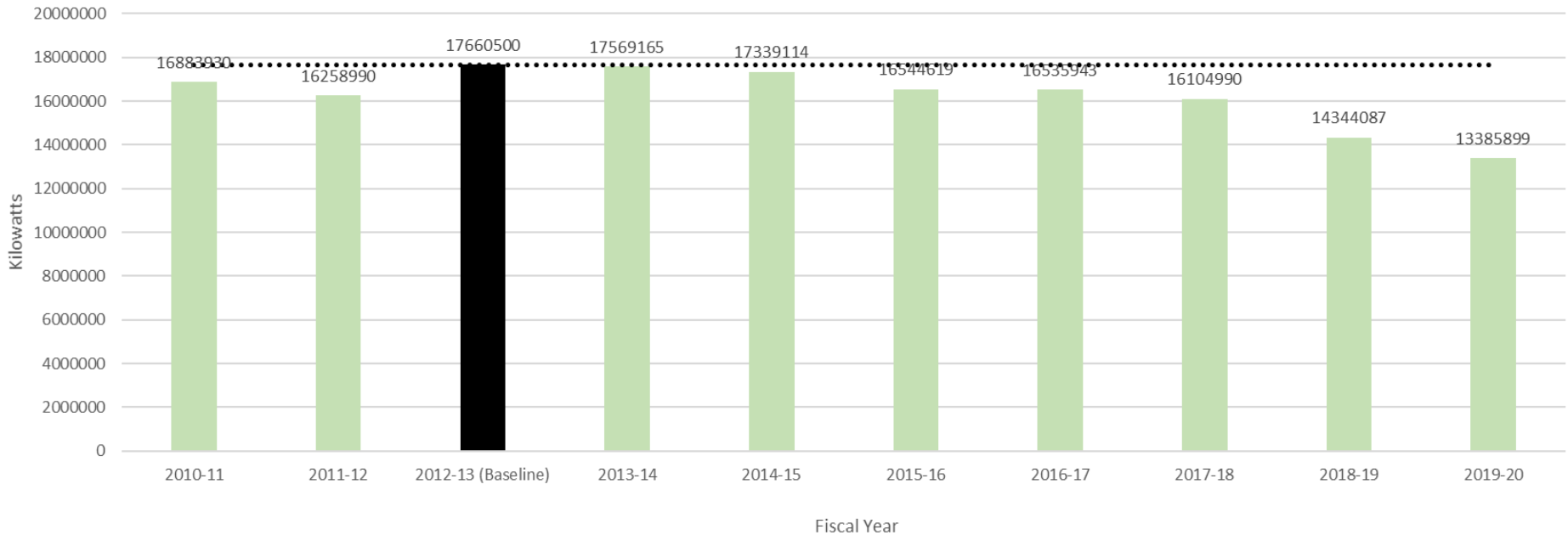
# ELECTRICITY USE PERCENT CHANGE BY FISCAL YEAR COMPARED TO BASELINE

Sites	Electricity Use by Kilowatts 2012-13 (Baseline)	2015-16	2016-17	2017-18	2018-19	2019-20	Five Year Average %
District Operations Center	1,222,424	-30.68%	-29.18%	-27.69%	-29.90%	-32.46%	-29.98%
Santa Ana College	8,669,762	-5.80%	-4.91%	-2.41%	-15.41%	-19.17%	-9.54%
Centennial Education Center	680,089	-8.17%	-11.00%	-8.41%	-8.94%	-24.42%	-12.19%
Digital Media Center	492,034	7.61%	7.60%	-12.91%	-18.63%	-20.17%	-7.30%
Orange County Sheriff's Regional Training Academy	823,648	6.42%	-4.58%	-11.89%	-14.60%	-15.55%	-8.04%
Santiago Canyon College	4,991,821	1.62%	3.24%	-4.89%	-16.16%	-23.12%	-7.86%
Orange Education Center	780,722	-45.28%	-54.97%	-69.84%	-68.61%	-85.62%	-64.86%
<b>Districtwide</b>	<b>17,660,500</b>	<b>-6.32%</b>	<b>-6.37%</b>	<b>-8.81%</b>	<b>-18.78%</b>	<b>-24.20%</b>	<b>-12.90%</b>



# ELECTRICITY CONSUMPTION BY FISCAL YEAR COMPARED TO BASELINE

Districtwide Electricity Consumption History by Fiscal Year





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## STRATEGIES FOR FURTHER REDUCTION OF ENERGY CONSUMPTION

- ▶ Continue exploring effective strategies and lessons learned from other colleges.
- ▶ Partnering or lobbying for State Agency programs and funding when available.
- ▶ Exploring programs such as the Community College League of California Direct Access Energy Program.
- ▶ Monitoring other agency opportunities such as Community Choice Aggregators (or Community Choice Energy).



## HOW DOES THE DISTRICT GET ITS SUPPLY OF POWER?

- ▶ The District has 12 service accounts with Investor Owned Utility (IOU) Southern California Edison on seven sites. All are Time-of-Use (TOU) accounts.
- ▶ Time-Of-Use rates are part of a statewide initiative designed to keep the electric grid reliable—even when energy resources are in high demand.
- ▶ All rates include **distribution charges, energy charges** that vary based on the time of day, the day of the week, and the season. Some rates also include **demand charges** that are based on the maximum amount of electricity your business uses at once and during certain times of the day – Critical Peak Pricing (CPP).
- ▶ Depending on the account and time of day, consumption charges vary from 13¢ per kwh to 29¢ per kwh.
- ▶ The District utilizes equipment and energy management systems and strategies to minimize peak charges.



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## WHAT OPTIONS ARE THERE FOR SUPPLY OF POWER?

- ▶ Investor Owned Utility (IOU) Southern California Edison
- ▶ Community Choice Aggregator (CCA)
- ▶ California Community College League Electricity Consortium
- ▶ Other Energy Service Providers (ESPs)



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## WHAT ARE CCA'S AND HOW DO THEY WORK?

District staff received presentation materials for review and consideration from a member of the Board Facilities Committee. It provided information about a potential opportunity for purchasing power via a Community Choice Aggregator (CCA). In our area that is the Orange County Power Authority.

# What's Possible? Sustainability in Santa Ana





# WHAT ARE CCA'S AND HOW DO THEY WORK?

- ▶ **Community choice aggregation (CCA)**, also known as municipal aggregation, are programs that allow local governments to procure power on behalf of their residents, businesses, and municipal accounts from an alternative supplier while still receiving transmission and distribution service from their existing utility provider. CCAs are an attractive option for communities that want more local control over their electricity sources, more green power than is offered by the default utility, and/or lower electricity prices. By aggregating demand, communities gain leverage to negotiate better rates with competitive suppliers and choose greener power sources.
- ▶ CCAs purchase power and provide electric generation service within their respective jurisdictions.



## Power Generators

The CCA purchases electricity on behalf of the entire community from traditional or green power sources.



## Utility

The existing utility continues to deliver the electricity using the same power lines and billing mechanisms.



## End Users

Customers benefit by receiving lower cost power, often with higher green power contents and minimal effort.



## WHAT ARE CCA'S AND HOW DO THEY WORK?

- ▶ The Orange County Power Authority would be the area CCA and would enter into a Joint Powers Agreement with the City of Santa Ana, or other agency in the county wishing to participate.
- ▶ Power procured by the Orange County Power Authority is delivered to its customers via Southern California Edison transmission and distribution infrastructure.
- ▶ Member cities currently include Buena Park, Fullerton, Huntington Beach and Irvine.
- ▶ Irvine, which spearheaded the creation of the authority and Fullerton have been joined by Huntington Beach and Buena Park in the endeavor, but Costa Mesa and Lake Forest have dropped out, and Santa Ana officials have chosen to wait and consider their options. (The Orange County Register February 20, 2021)
- ▶ Community College Districts are currently not required or subject to participate in a CCA





# IOU v. CCA

## THE CLIMATE ACTION CAMPAIGN

- ▶ CCAs may be able to provide energy at lower cost (which is determined by the CCA).
- ▶ CCAs may be able to provide larger percentage of renewable energy at a premium cost.
- ▶ The District currently purchases power from Southern California Edison, an IOU.
- ▶ Investor Owned Utilities (IOU's) are required to provide a percentage of renewable energy mandated by the Public Utilities Commission. The California Energy Commission target is in excess of 33% renewable energy by 2020. A greater percent of renewable energy is available for individual accounts to purchase at a premium.
- ▶ The IOU still provides transmission and distribution services to the CCA and charges fees for those services.
- ▶ IOU will charge an 'exiting fee' on top of transmission costs that may be distributed over years, in order to recover the cost of services without imposing that cost on remaining customers.
- ▶ Customers in a CCA area may have to opt-out if participation is not desired.



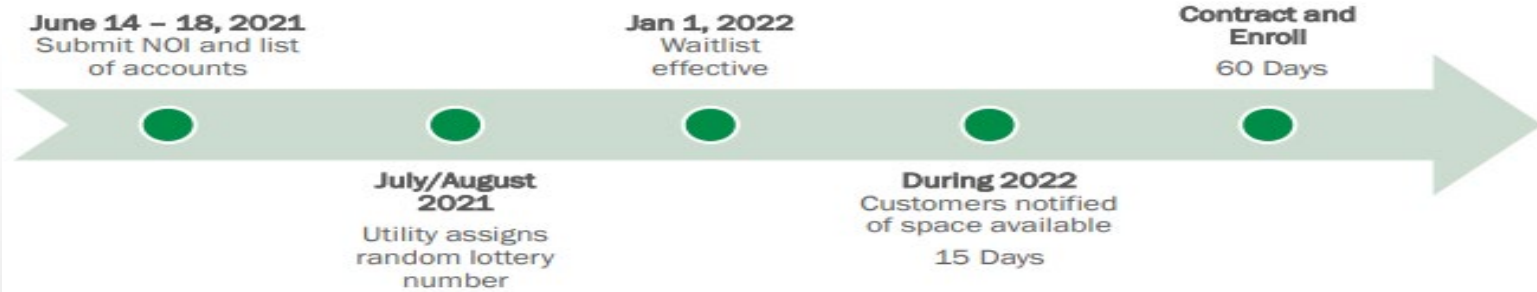
## OTHER OPTIONS: DIRECT ACCESS PROGRAM

- ▶ Investor Owned Utilities may have energy capacity that exceeds actual consumption which creates excess “space”.
- ▶ As more customers reduce energy consumption, the IOU’s may have remaining unallocated “space” available for Direct Access purchase.
- ▶ The California Community College League has an Electricity Consortium that has members who can leverage the amount of power purchased by Direct Access.
- ▶ Districts participating in the Community College League’s Electricity Consortium have benefited financially from programs including Direct Access energy procurement.
- ▶ Direct Access customers in the consortium enjoy fixed pricing for up to two years in the future. The ability to “lock in” electricity rates is an advantage in budgeting and managing costs. In addition, the program works hand-in-hand with districts as they explore solar and other renewable products and services.
- ▶ Individual districts can also opt to purchase higher percentages of renewable energy at a premium.



## OTHER OPTIONS: DIRECT ACCESS PROGRAM

- ▶ The program is currently allocated per IOU with application offered by annual lottery.
- ▶ Annual reapplication for the lottery is required as space becomes available.
- ▶ Prior to District approval and shift to Direct Access provider, an energy consumption and forecast feasibility study is conducted, including potential savings of energy costs, balanced with exiting fees charged by the IOU. This allows the District to understand if Direct Access purchasing will be beneficial.
- ▶ The District submitted an application to the Lottery program (June 16, 2021) which includes a non-binding Letter of Intent and permission to review historical usage data to begin a feasibility study if the District's Lottery number is selected.





## SUMMARY THOUGHTS

- ▶ IOU rates are likely to increase
- ▶ CCA Program is not readily available, not yet proven savings, still in its infancy phase
- ▶ Direct Access program is via a lottery, two-year fixed rate potential and not guaranteed in any given year
- ▶ Exiting fees are a major concern to transition from one provider to another
- ▶ Renewable “clean” energy is already required and available. If you want a higher percentage of energy in your portfolio to be “clean” it comes at a premium cost.



## NEXT STEPS & RECOMMENDATIONS

- ▶ Continue to monitor Orange County Power Authority progress in providing community choice access for SCE customers in our area, and the City of Santa Ana's participation as well as other educational institutions.
- ▶ Await notification of lottery and available 'space' in the Community College League's Electricity Consortium's Direct Access to SCE power generation program. If selected, the District may consider joining the program to lock-in rates for a two year period.
- ▶ Continue to implement operational practices at all sites to manage and reduce energy use across the District.
- ▶ Continue to evaluate participating in State or other agency funded energy reduction measures, programs and incentives.



# QUESTIONS