Yucaipa Valley Water District

12770 Second Street, Yucaipa, California 92399 Phone: (909) 797-5117

Notice and Agenda of a Meeting of the Board of Directors

Tuesday, September 29, 2020 at 4:00 p.m.

Due to the spread of COVID-19 and in accordance with the Governor's Executive Order N-29-20 (a copy of which is attached to this agenda), the Yucaipa Valley Water District will be conducting this meeting by teleconference only. Public comments on matters listed on the agenda or on any matter within the District's jurisdiction will be received during Public Comments, Agenda Item No. III.

This meeting is available by calling (888) 475-4499 using passcode 676-950-731#

View live presentation material at https://zoom.us/j/676950731

There will be no public physical location for attending this meeting in person. The District's Board meeting room will be closed to the public until further notice.

If you are unable to participate by telephone, you may submit comments and/or questions in writing for the Board's consideration by sending them to inquiry@yvwd.us. Submit your written inquiry prior to the start of the meeting. All public comments received prior to the start of the meeting will be provided to the Board and may be read into the record or compiled as part of the record.

I. CALL TO ORDER

II. ROLL CALL

III. PUBLIC COMMENTS - At this time, members of the public may briefly address the Board of Directors on matters within its jurisdiction or on any matter listed on this agenda.

Any person who requires accommodation to participate in this meeting should contact the District office at (909) 797-5117, at least 48 hours prior to the meeting to request a disability-related modification or accommodation.

Materials that are provided to the Board of Directors after the meeting packet is compiled and distributed will be made available for public review during normal business hours at the District office located at 12770 Second Street, Yucaipa. Meeting materials are also available on the District's website at www.yvwd.dst.ca.us

IV. CONSENT CALENDAR - All consent calendar matters are routine and will be acted upon in one motion. There will be no discussion of these items unless board members, administrative staff, or members of the public request specific items to be discussed and/or removed prior to the vote for approval.

A. Minutes of Meetings

1. Board Meeting - September 22, 2020

V. STAFF REPORT

VI. DISCUSSION ITEMS

A. Consideration of Initiating Annexation Proceedings for Various Properties to the Yucaipa Valley Water District for Drinking Water, Recycled Water, and Sewer Service [Director Memorandum No. 20-142 - Page 15 of 102]

RECOMMENDED ACTION: That the Board adopts Resolution No. 2020-43, Resolution No. 2020-44, Resolution No. 2020-45, and Resolution No. 2020-46.

B. Consideration of Resolution No. 2020-47 Revising and Updating the Policies and Practices Associated with Accessory Dwelling Units and Multiple Unit Developments [Director Memorandum No. 20-143 - Page 31 of 102]

RECOMMENDED ACTION: That the Board adopt Resolution No. 2020-47.

C. Consideration of Integrated Energy Resiliency Project Proposals and Authorization to Develop a Power Purchase Agreement [Director Memorandum No. 20-144 - Page 35 of 102]

RECOMMENDED ACTION: District staff recommends the Board authorize the General Manager and Legal Counsel to review and execute a Power Purchase Agreement with Ameresco for the Integrated Energy Resiliency Project.

D. Consideration of a Memorandum of Understanding Regarding Overlying Water Rights Transfer and a Commitment to Provide Water Service to the Oak Valley Project [Director Memorandum No. 20-145 - Page 93 of 102]

RECOMMENDED ACTION: That the Board authorize the President to execute the Memorandum of Understanding and authorize the General Manager to sign the commitment to provide water service for the Oak Valley Project.

VII. BOARD REPORTS & DIRECTOR COMMENTS

VIII. ANNOUNCEMENTS

A. October 6, 2020 at 4:00 p.m. - Board Meeting - Teleconference Only
B. October 13, 2020 at 4:00 p.m. - Board Meeting - Teleconference Only
C. October 20, 2020 at 4:00 p.m. - Board Meeting - Teleconference Only
D. October 27, 2020 at 4:00 p.m. - Board Meeting - Teleconference Only
E. November 3, 2020 at 4:00 p.m. - Board Meeting - Teleconference Only
F. November 10, 2020 at 4:00 p.m. - Board Meeting - Teleconference Only
G. November 17, 2020 at 4:00 p.m. - Board Meeting - Teleconference Only
H. November 24, 2020 at 4:00 p.m. - Board Meeting - Teleconference Only
I. December 1, 2020 at 4:00 p.m. - Board Meeting - Teleconference Only

IX. ADJOURNMENT

EXECUTIVE ORDER N-29-20

WHEREAS on March 4, 2020, I proclaimed a State of Emergency to exist in California as a result of the threat of COVID-19; and

WHEREAS despite sustained efforts, the virus continues to spread and is impacting nearly all sectors of California; and

WHEREAS the threat of COVID-19 has resulted in serious and ongoing economic harms, in particular to some of the most vulnerable Californians; and

WHEREAS time bound eligibility redeterminations are required for Medi-Cal, CalFresh, CalWORKs, Cash Assistance Program for Immigrants, California Food Assistance Program, and In Home Supportive Services beneficiaries to continue their benefits, in accordance with processes established by the Department of Social Services, the Department of Health Care Services, and the Federal Government; and

WHEREAS social distancing recommendations or Orders as well as a statewide imperative for critical employees to focus on health needs may prevent Medi-Cal, CalFresh, CalWORKs, Cash Assistance Program for Immigrants, California Food Assistance Program, and In Home Supportive Services beneficiaries from obtaining in-person eligibility redeterminations; and

WHEREAS under the provisions of Government Code section 8571, I find that strict compliance with various statutes and regulations specified in this order would prevent, hinder, or delay appropriate actions to prevent and mitigate the effects of the COVID-19 pandemic.

NOW, THEREFORE, I, GAVIN NEWSOM, Governor of the State of California, in accordance with the authority vested in me by the State Constitution and statutes of the State of California, and in particular, Government Code sections 8567 and 8571, do hereby issue the following order to become effective immediately:

IT IS HEREBY ORDERED THAT:

1. As to individuals currently eligible for benefits under Medi-Cal, CalFresh, CalWORKs, the Cash Assistance Program for Immigrants, the California Food Assistance Program, or In Home Supportive Services benefits, and to the extent necessary to allow such individuals to maintain eligibility for such benefits, any state law, including but not limited to California Code of Regulations, Title 22, section 50189(a) and Welfare and Institutions Code sections 18940 and 11265, that would require redetermination of such benefits is suspended for a period of 90 days from the date of this Order. This Order shall be construed to be consistent with applicable federal laws, including but not limited to Code of Federal Regulations, Title 42, section 435.912, subdivision (e), as interpreted by the Centers for Medicare and Medicaid Services (in guidance issued on January 30, 2018) to permit the extension of

otherwise-applicable Medicaid time limits in emergency situations.

2. Through June 17, 2020, any month or partial month in which California Work Opportunity and Responsibility to Kids (CalWORKs) aid or services are received pursuant to Welfare and Institutions Code Section 11200 et seq. shall not be counted for purposes of the 48-month time limit set forth in Welfare an Institutions Code Section 11454. Any waiver of this time limit shall not be applied if it will exceed the federal time limits set forth in Code of Federal Regulations, Title 45, section 264.1.

3. Paragraph 11 of Executive Order N-25-20 (March 12, 2020) is withdrawn and superseded by the following text:

   Notwithstanding any other provision of state or local law (including, but not limited to, the Bagley-Keene Act or the Brown Act), and subject to the notice and accessibility requirements set forth below, a local legislative body or state body is authorized to hold public meetings via teleconferencing and to make public meetings accessible telephonically or otherwise electronically to all members of the public seeking to observe and to address the local legislative body or state body. All requirements in both the Bagley-Keene Act and the Brown Act expressly or impliedly requiring the physical presence of members, the clerk or other personnel of the body, or of the public as a condition of participation in or quorum for a public meeting are hereby waived.

   In particular, any otherwise-applicable requirements that

   (i) state and local bodies notice each teleconference location from which a member will be participating in a public meeting;

   (ii) each teleconference location be accessible to the public;

   (iii) members of the public may address the body at each teleconference conference location;

   (iv) state and local bodies post agendas at all teleconference locations;

   (v) at least one member of the state body be physically present at the location specified in the notice of the meeting; and

   (vi) during teleconference meetings, a least a quorum of the members of the local body participate from locations within the boundaries of the territory over which the local body exercises jurisdiction

   are hereby suspended.

   A local legislative body or state body that holds a meeting via teleconferencing and allows members of the public to observe and address the meeting telephonically or otherwise electronically, consistent with the notice and accessibility requirements set forth below, shall have satisfied any requirement that the body allow

members of the public to attend the meeting and offer public comment. Such a body need not make available any physical location from which members of the public may observe the meeting and offer public comment.

Accessibility Requirements: If a local legislative body or state body holds a meeting via teleconferencing and allows members of the public to observe and address the meeting telephonically or otherwise electronically, the body shall also:

(i) Implement a procedure for receiving and swiftly resolving requests for reasonable modification or accommodation from individuals with disabilities, consistent with the Americans with Disabilities Act and resolving any doubt whatsoever in favor of accessibility; and

(ii) Advertise that procedure each time notice is given of the means by which members of the public may observe the meeting and offer public comment, pursuant to subparagraph (ii) of the Notice Requirements below.

Notice Requirements: Except to the extent this Order expressly provides otherwise, each local legislative body and state body shall:

(i) Give advance notice of the time of, and post the agenda for, each public meeting according to the timeframes otherwise prescribed by the Bagley-Keene Act or the Brown Act, and using the means otherwise prescribed by the Bagley-Keene Act or the Brown Act, as applicable; and

(ii) In each instance in which notice of the time of the meeting is otherwise given or the agenda for the meeting is otherwise posted, also give notice of the means by which members of the public may observe the meeting and offer public comment. As to any instance in which there is a change in such means of public observation and comment, or any instance prior to the issuance of this Order in which the time of the meeting has been noticed or the agenda for the meeting has been posted without also including notice of such means, a body may satisfy this requirement by advertising such means using "the most rapid means of communication available at the time" within the meaning of Government Code, section 54954, subdivision (e); this shall include, but need not be limited to, posting such means on the body's Internet website.

All of the foregoing provisions concerning the conduct of public meetings shall apply only during the period in which state or local public health officials have imposed or recommended social distancing measures.

All state and local bodies are urged to use sound discretion and to make reasonable efforts to adhere as closely as reasonably possible to the provisions of the Bagley-Keene Act and the Brown Act, and other applicable local laws regulating the conduct of public meetings, in order to maximize transparency and provide the public access to their meetings.

IT IS FURTHER ORDERED that as soon as hereafter possible, this Order be filed in the Office of the Secretary of State and that widespread publicity and notice be given of this Order.

This Order is not intended to, and does not, create any rights or benefits, substantive or procedural, enforceable at law or in equity, against the State of California, its agencies, departments, entities, officers, employees, or any other person.

IN WITNESS WHEREOF I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this 17th day of March 2020.

GAVIN NEWSOM
Governor of California

Consent Calendar

Yucaipa Valley Water District

MINUTES OF A BOARD MEETING - TELECONFERENCE

September 22, 2020 at 4:00 pm

Directors Present:
- Chris Mann, President
- Lonni Granlund, Vice President
- Jay Bogh, Director
- Joyce McIntire, Director
- Dennis Miller, Director

Staff Present:
- Wade Allsup, Information Systems Specialist
- Jennifer Ares, Water Resource Manager
- Madeline Blua, Water Resource Specialist
- Allison Edmisten, Chief Financial Officer
- Chelsie Fogus, Administrative Assistant I
- Ashley Gibson, Regulatory Compliance Manager
- Kathryn Hallberg, Implementation Manager
- Dustin Hochreiter, Senior Engineering Technician
- Mike Kostelecky, Operations Manager
- Tim Mackamul, Operations Manager
- Matthew Porras, Implementation Manager
- Charles Thomas, Operations Manager
- John Wrobel, Public Works Manager
- Joseph Zoba, General Manager

Directors Absent:
- None

Consulting Staff Present:
- David Wysocki, Legal Counsel

Registered Guests and Others Present:
- David Fenn, San Gorgonio Pass Water Agency
- Amelia Cottrell, Engie Services
- Ashu Jain, Engie Services
- Logan Largent, Ortega Strategies Group

Due to the spread of COVID-19 and in accordance with the Governor's Executive Order N-29-20 (a copy of which was attached to the meeting agenda), the Yucaipa Valley Water District conducted this meeting by teleconference.

The meeting was available to the public by calling (888) 475-4499 using passcode 676-950-731 and live presentation material was available at https://zoom.us/j/676950731.

CALL TO ORDER	The regular meeting of the Board of Directors of the Yucaipa Valley Water District was called to order by Chris Mann at 4:00 p.m.
ROLL CALL	The roll was called with Director Jay Bogh, Director Lonni Granlund, Director Chris Mann, Director Joyce McIntire, and Director Dennis Miller present.
PUBLIC COMMENTS	None

CONSENT CALENDAR

Director Dennis Miller moved to approve the consent calendar and Director Joyce McIntire seconded the motion.

A. Minutes of Meetings
    1. Board Meeting - September 8, 2020
B. Payment of Bills
    1. Approve/Ratify Invoices for Board Awarded Contracts
    2. Ratify General Expenses for August 2020

The motion was approved by the following vote:
Director Jay Bogh - Yes
Director Lonni Granlund - Yes
Director Chris Mann - Yes
Director Joyce McIntire - Yes
Director Dennis Miller - Yes

STAFF REPORT

General Manager Joseph Zoba provided information on the following item(s):

- On Monday, September 21, 2020, the Public Works Department staff received a thank you letter from the Calimesa Fire Department for their assistance fighting a brush fire in San Timoteo Canyon.
- The District is prepared for the implementation of the new mandatory reporting regulations by the State Water Resources Control Board.

DISCUSSION ITEMS:

DM 20-135

PRESENTATION OF THE UNAUDITED FINANCIAL REPORT FOR THE PERIOD ENDING ON AUGUST 31, 2020

Chief Financial Officer Allison Edmisten presented the Unaudited Financial Report for the period ending on August 31, 2020.

Director Lonni Granlund moved that the Board receive and file the unaudited financial report.

Director Dennis Miller seconded the motion.

The motion was approved by the following vote:

Director Jay Bogh - Yes
Director Lonni Granlund - Yes
Director Chris Mann - Yes
Director Joyce McIntire - Yes
Director Dennis Miller - Yes

DM 20-136

REVIEW OF AN UPDATED CONFLICT OF INTEREST CODE FOR THE YUCAIPA VALLEY WATER DISTRICT

Chief Financial Officer Allison Edmisten provided an overview of the amended Conflict of Interest code that was recently approved by the Fair Political Practices Commission. The Conflict of Interest Code is currently available for public review and comment.

DM 20-137

OVERVIEW OF THE ASSET CONDITION ASSESSMENT OF DRINKING WATER STORAGE FACILITY R-17.1

Implementation Manager Matthew Porras provided a condition assessment of the R-17.1 drinking water storage reservoirs that were used extensively during the El Dorado Fire. The current condition of the reservoirs will require the two storage tanks be replaced within the next twelve months.

Information regarding the proposed project scope, design, and cost estimate will be presented at a future board meeting.

DM 20-138

OVERVIEW OF THE HAZARD MITIGATION GRANT PROGRAM BY THE CALIFORNIA OFFICE OF EMERGENCY SERVICES

Implementation Manager Matthew Porras discussed the Cal OES Hazard Mitigation Grant Program that might be able to assist with the reconstruction of reservoirs, boosters, and pipelines in the North Bench area.

Director Joyce McIntire moved that the Board authorize the General Manager to submit a Notice of Interest for the 2020 Hazard Mitigation Grant Program.

Director Lonni Granlund seconded the motion.

The motion was approved by the following vote:

Director Jay Bogh - Yes
Director Lonni Granlund - Yes
Director Chris Mann - Yes
Director Joyce McIntire - Yes
Director Dennis Miller - Yes

DM 20-139

STATUS REPORT FOR THE INTEGRATED ENERGY RESILIENCY PROJECT AND DEVELOPMENT OF A POWER PURCHASE AGREEMENT

Implementation Manager Kathryn Hallberg presented a status update of the Integrated Energy Resiliency Project. This Project is designed to provide District facilities with cost effective and reliable energy while minimizing the impacts of Public Safety Power Shutoffs during windy conditions. Additional information about this Project will be provided at the September 29, 2020 board meeting.

DM 20-140

CONSIDERATION OF THE PURCHASE OF A CATERPILLAR SKID STEER AND TEXAS PRIDE TRAILER FOR THE PUBLIC WORKS DEPARTMENT

Public Works Manager John Wrobel presented the need to purchase a skid steer, six attachments, and trailer for the Public Works Department.

Director Jay Bogh moved that the Board authorize staff to purchase a 2020 CAT, 262D3 Skid Steer Loader with attachments for $117,611.76, and a Texas Pride bumper pull dump trailer for $12,772.59, for a sum not to exceed $130,384.35 and adopt Resolution No. 2020-41.

Director Dennis Miller seconded the motion.

The motion was approved by the following vote:

Director Jay Bogh - Yes
Director Lonni Granlund - Yes
Director Chris Mann - Yes
Director Joyce McIntire - Yes
Director Dennis Miller - Yes

DM 20-141 CONSIDERATION OF RESOLUTION NO. 2020-42 AUTHORIZING THE PURCHASE OF PROPERTY AT 12806 SECOND STREET, YUCAIPA	General Manager Joseph Zoba presented information about purchasing the 0.25 acres of property located at 12806 Second Street, Yucaipa. Director Jay Bogh moved that the Board adopt Resolution No. 2020-42 and authorize the General Manager to execute the necessary agreements and escrow documents to complete the property transaction for a sum not to exceed $215,000. Director Lonni Granlund seconded the motion. The motion was approved by the following vote: Director Jay Bogh - Yes Director Lonni Granlund - Yes Director Chris Mann - Yes Director Joyce McIntire - Yes Director Dennis Miller - Yes
BOARD REPORTS AND DIRECTOR COMMENTS	Director Joyce McIntire reported on the San Gorgonio Pass Water Agency board meeting held on September 21, 2020.
ANNOUNCEMENTS	Director Chris Mann called attention to the announcements listed on the agenda.
ADJOURNMENT	The meeting was adjourned at 4:50 p.m.

Respectfully submitted,

Joseph B. Zoba, Secretary (Seal)

Staff Report

Yucaipa Valley Water District

Discussion Items

Yucaipa Valley Water District

Yucaipa Valley Water District

Director Memorandum 20-142

Date: September 29, 2020

Prepared By: Kathryn Hallberg, Implementation Manager

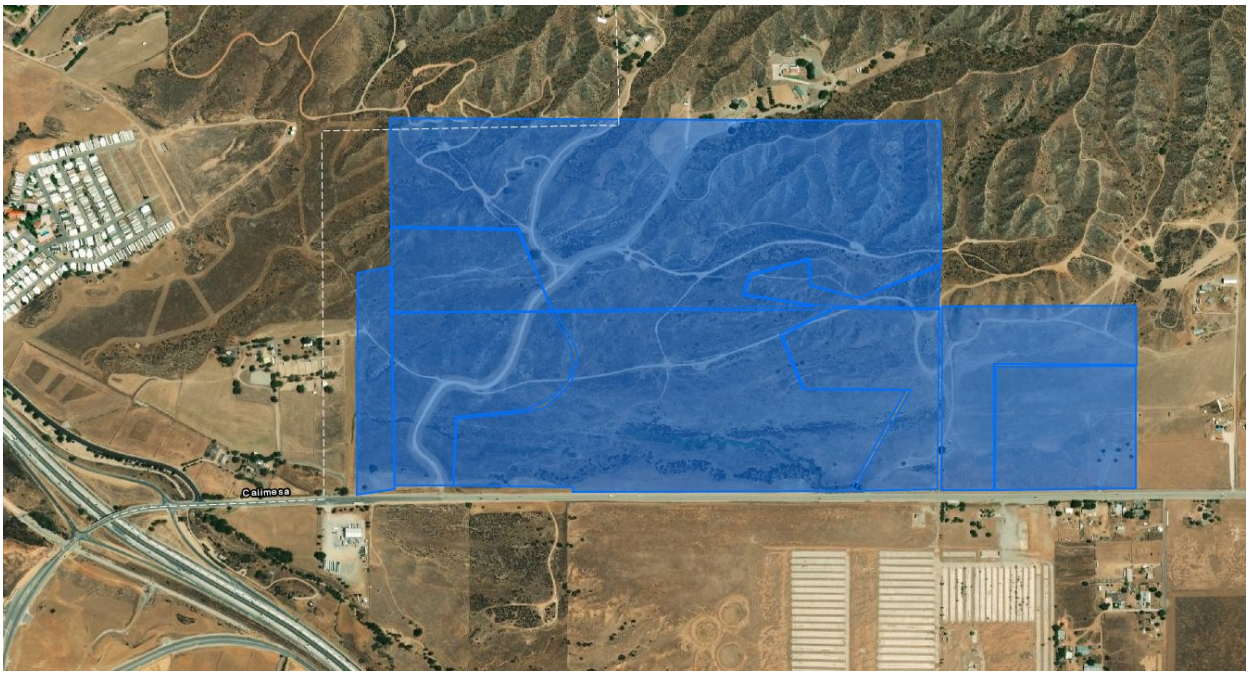
Subject: Consideration of Initiating Annexation Proceedings for Various Properties to the Yucaipa Valley Water District for Drinking Water, Recycled Water, and Sewer Service

Recommendation: That the Board adopts Resolution No. 2020-43, Resolution No. 2020-44, Resolution No. 2020-45, and Resolution No. 2020-46.

The Landowners of Resolution No. 2020-43, Resolution No. 2020-44 and Resolution No. 2020-45 have requested to be annexed to the Yucaipa Valley Water District. The District is requesting the property in Resolution No. 2020-46; which is a residential property already served by the District be annexed into the District. All the properties are located within the District Sphere of Influence.

The Shopoff Parcels – Resolution 2020-43 (Page 5 of 16)

The TSG Cherry Valley, LP (Shopoff Development) properties are 245 acres and are located on Cherry Valley Boulevard in the City of Calimesa. The corresponding Accessor Parcel Numbers are 413270012, 407220004, 407220016, 413270013, 407220007, 407220014, 407220009, 407220017, and 407220008. The owner of the properties has requested the parcels be annexed to Yucaipa Valley Water District.

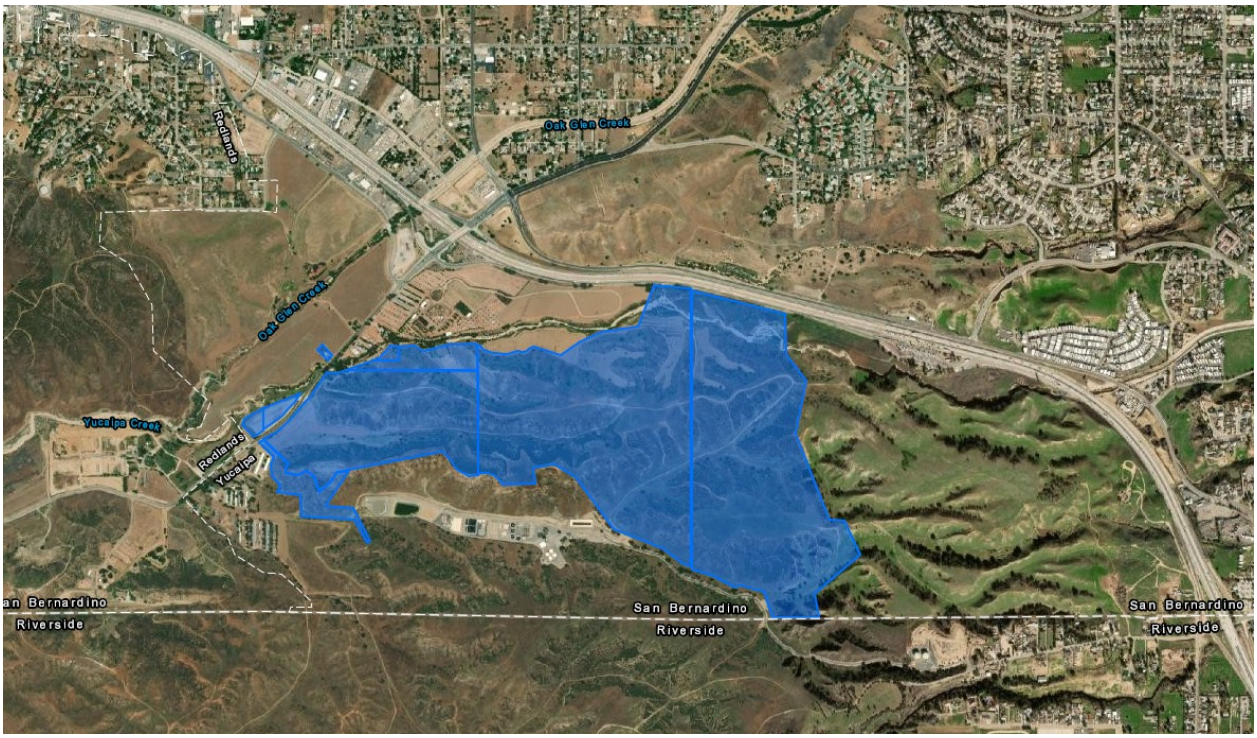


The Oak Valley Partners Parcels – Resolution 2020-44 (Page 8 of 16)

The Oak Valley Partners properties are a total of 6.5 acres and are located on Roberts Road in the City of Calimesa. The corresponding Accessor Parcel Numbers are 413280007, 413280024 and 413280026. The owner of the properties has requested the parcels be annexed to Yucaipa Valley Water District.

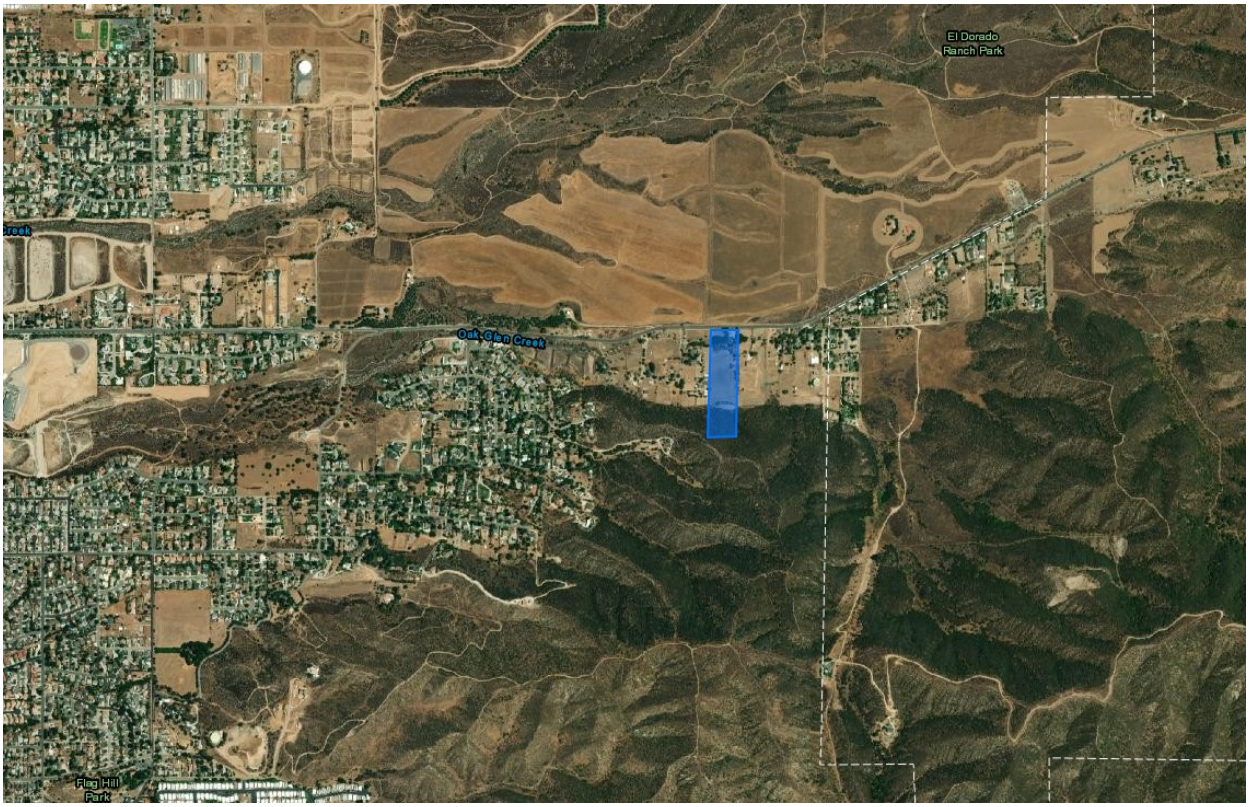
The Palmer Group Parcels – Resolution 2020-45 (Page 11 of 16)

The Palmer Group properties are a total 464.4 acres and are located on Live Oak Canyon Road in the City of Yucaipa. The corresponding Accessor Parcel Numbers are 030120126, 030119121, 030121110, 030122110, 030121112, 030120142, 030120140, and 030120141. The owner of the properties has requested the parcels be annexed to Yucaipa Valley Water District.



Other Parcel – Resolution 2020-46 (Page 14 of 16)

The residential property is 10 acres and is located on Oak Glen Road in the City of Yucaipa. This property is currently served by Yucaipa Valley Water District. The corresponding Accessor Parcel Number is 032124109. The District is requesting this property be annexed to the Yucaipa Valley Water District.



District staff recommends the Board of Directors initiate annexation proceedings with the Local Agency Formation Commission of San Bernardino County for the inclusion of these parcels annexed into the District.

Financial Impact

The expense of the annexation of the Shopoff, Oak Valley Partners, and Palmer Group parcels will be the responsibility of the property owners. The residential property annexation cost will be the responsibility of the District and the costs will be shared amongst the Water (45%), Sewer (45%) and Recycled Water (10%) Funds [G/L Account #xx-506-54109].

RESOLUTION NO. 2020-43

A RESOLUTION OF THE YUCAIPA VALLEY WATER DISTRICT REQUESTING THE LOCAL AGENCY FORMATION COMMISSION TAKE PROCEEDINGS FOR THE ANNEXATION OF TERRITORY

(ASSESSOR'S PARCEL NUMBERS 413270012, 407220004, 407220016, 413270013, 407220007, 407220014, 407220009, 407220017, and 407220008)

BE IT RESOLVED, by the Board of Directors of the Yucaipa Valley Water that:

WHEREAS, the Board of Directors of the Yucaipa Valley Water District desires to initiate proceedings pursuant to the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000, commencing with Section 56000 of the California Government Code, for the annexation of property to the Yucaipa Valley Water District; and,

WHEREAS, the territory proposed for annexation is uninhabited is set forth in Exhibit "A" attached hereto, and by this reference incorporated herein; and,

WHEREAS, the proposed annexation is consistent with the sphere of influence assigned by the Local Agency Formation Commission for the Yucaipa Valley Water District; and,

WHEREAS, it is desired that the proposed annexation be subject to the following terms and conditions:

1. Drinking water, sewer and recycled water service shall be provided to the subject property pursuant to the rules and regulations of the Yucaipa Valley Water District.

2. All standards conditions shall be the responsibility of the property owner as required by the Local Agency Formation Commission.

3. The owner(s) of the property shall be responsible for all costs incurred by the Yucaipa Valley Water District and the Local Agency Formation Commission pertaining to this annexation.

WHEREAS, the reason for the proposed annexation is to provide drinking water, recycled water, and sewer service to the anticipated development of the subject property.

NOW, THEREFORE, BE IT RESOLVED, that this resolution of Application is hereby approved and adopted by the Board of Directors of the Yucaipa Valley Water District, and the Local Agency Formation Commission for San Bernardino County is hereby requested to take proceedings for the annexation as described in Exhibit "A", in the manner provided by the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000.

BE IT FURTHER RESOLVED, that the Secretary of the Yucaipa Valley Water District is hereby authorized and directed to transmit to the Executive Officer of the Local Agency Formation Commission a certified copy of this Resolution.

PASSED, APPROVED and ADOPTED this 29th day of September 2020.

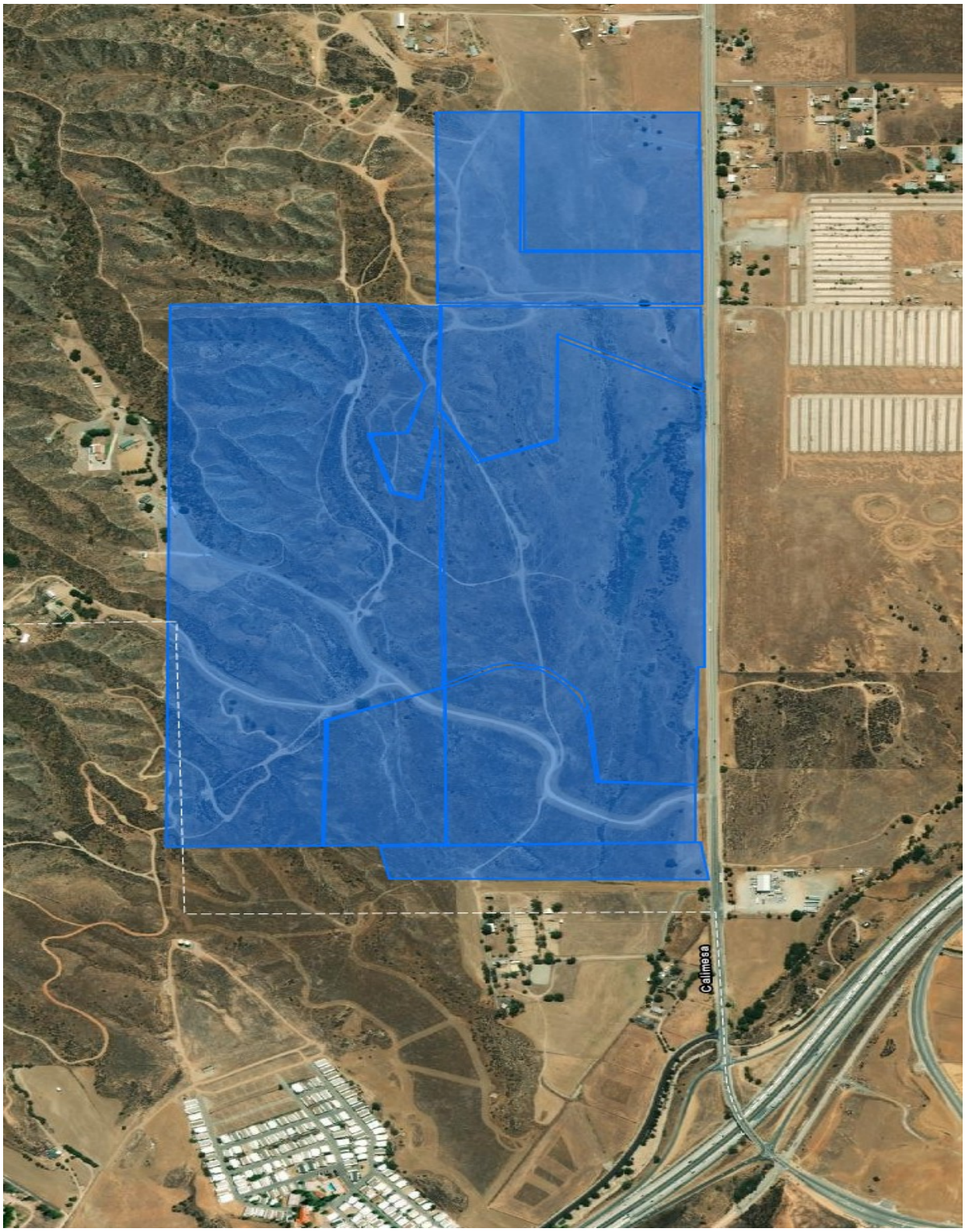
YUCAIPA VALLEY WATER DISTRICT

Chris Mann, President Board of Directors

ATTEST:

Joseph B. Zoba, General Manager

Exhibit "A"



RESOLUTION NO. 2020-44

A RESOLUTION OF THE YUCAIPA VALLEY WATER DISTRICT REQUESTING THE LOCAL AGENCY FORMATION COMMISSION TAKE PROCEEDINGS FOR THE ANNEXATION OF TERRITORY

(ASSESSOR'S PARCEL NUMBERS 413280007, 413280024 and 413280026)

BE IT RESOLVED, by the Board of Directors of the Yucaipa Valley Water that:

WHEREAS, the Board of Directors of the Yucaipa Valley Water District desires to initiate proceedings pursuant to the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000, commencing with Section 56000 of the California Government Code, for the annexation of property to the Yucaipa Valley Water District; and,

WHEREAS, the territory proposed for annexation is uninhabited is set forth in Exhibit "A" attached hereto, and by this reference incorporated herein; and,

WHEREAS, the proposed annexation is consistent with the sphere of influence assigned by the Local Agency Formation Commission for the Yucaipa Valley Water District; and,

WHEREAS, it is desired that the proposed annexation be subject to the following terms and conditions:

1. Drinking water, sewer and recycled water service shall be provided to the subject property pursuant to the rules and regulations of the Yucaipa Valley Water District.

2. All standards conditions shall be the responsibility of the property owner as required by the Local Agency Formation Commission.

3. The owner(s) of the property shall be responsible for all costs incurred by the Yucaipa Valley Water District and the Local Agency Formation Commission pertaining to this annexation.

WHEREAS, the reason for the proposed annexation is to provide drinking water, recycled water, and sewer service to the anticipated development of the subject property.

NOW, THEREFORE, BE IT RESOLVED, that this resolution of Application is hereby approved and adopted by the Board of Directors of the Yucaipa Valley Water District, and the Local Agency Formation Commission for San Bernardino County is hereby requested to take proceedings for the annexation as described in Exhibit "A", in the manner provided by the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000.

BE IT FURTHER RESOLVED, that the Secretary of the Yucaipa Valley Water District is hereby authorized and directed to transmit to the Executive Officer of the Local Agency Formation Commission a certified copy of this Resolution.

PASSED, APPROVED and ADOPTED this 29th day of September 2020.

YUCAIPA VALLEY WATER DISTRICT

Chris Mann, President Board of Directors

ATTEST:

Joseph B. Zoba, General Manager

Exhibit "A"

RESOLUTION NO. 2020-45

A RESOLUTION OF THE YUCAIPA VALLEY WATER DISTRICT REQUESTING THE LOCAL AGENCY FORMATION COMMISSION TAKE PROCEEDINGS FOR THE ANNEXATION OF TERRITORY

(ASSESSOR'S PARCEL NUMBERS 030120126, 030119121, 030121110, 030122110, 030121112, 030120142, 030120140, and 030120141)

BE IT RESOLVED, by the Board of Directors of the Yucaipa Valley Water that:

WHEREAS, the Board of Directors of the Yucaipa Valley Water District desires to initiate proceedings pursuant to the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000, commencing with Section 56000 of the California Government Code, for the annexation of property to the Yucaipa Valley Water District; and,

WHEREAS, the territory proposed for annexation is uninhabited is set forth in Exhibit "A" attached hereto, and by this reference incorporated herein; and,

WHEREAS, the proposed annexation is consistent with the sphere of influence assigned by the Local Agency Formation Commission for the Yucaipa Valley Water District; and,

WHEREAS, it is desired that the proposed annexation be subject to the following terms and conditions:

1. Drinking water, sewer and recycled water service shall be provided to the subject property pursuant to the rules and regulations of the Yucaipa Valley Water District.

2. All standards conditions shall be the responsibility of the property owner as required by the Local Agency Formation Commission.

3. The owner(s) of the property shall be responsible for all costs incurred by the Yucaipa Valley Water District and the Local Agency Formation Commission pertaining to this annexation.

WHEREAS, the reason for the proposed annexation is to provide drinking water, recycled water, and sewer service to the anticipated development of the subject property.

NOW, THEREFORE, BE IT RESOLVED, that this resolution of Application is hereby approved and adopted by the Board of Directors of the Yucaipa Valley Water District, and the Local Agency Formation Commission for San Bernardino County is hereby requested to take proceedings for the annexation as described in Exhibit "A", in the manner provided by the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000.

BE IT FURTHER RESOLVED, that the Secretary of the Yucaipa Valley Water District is hereby authorized and directed to transmit to the Executive Officer of the Local Agency Formation Commission a certified copy of this Resolution.

PASSED, APPROVED and ADOPTED this 29th day of September 2020.

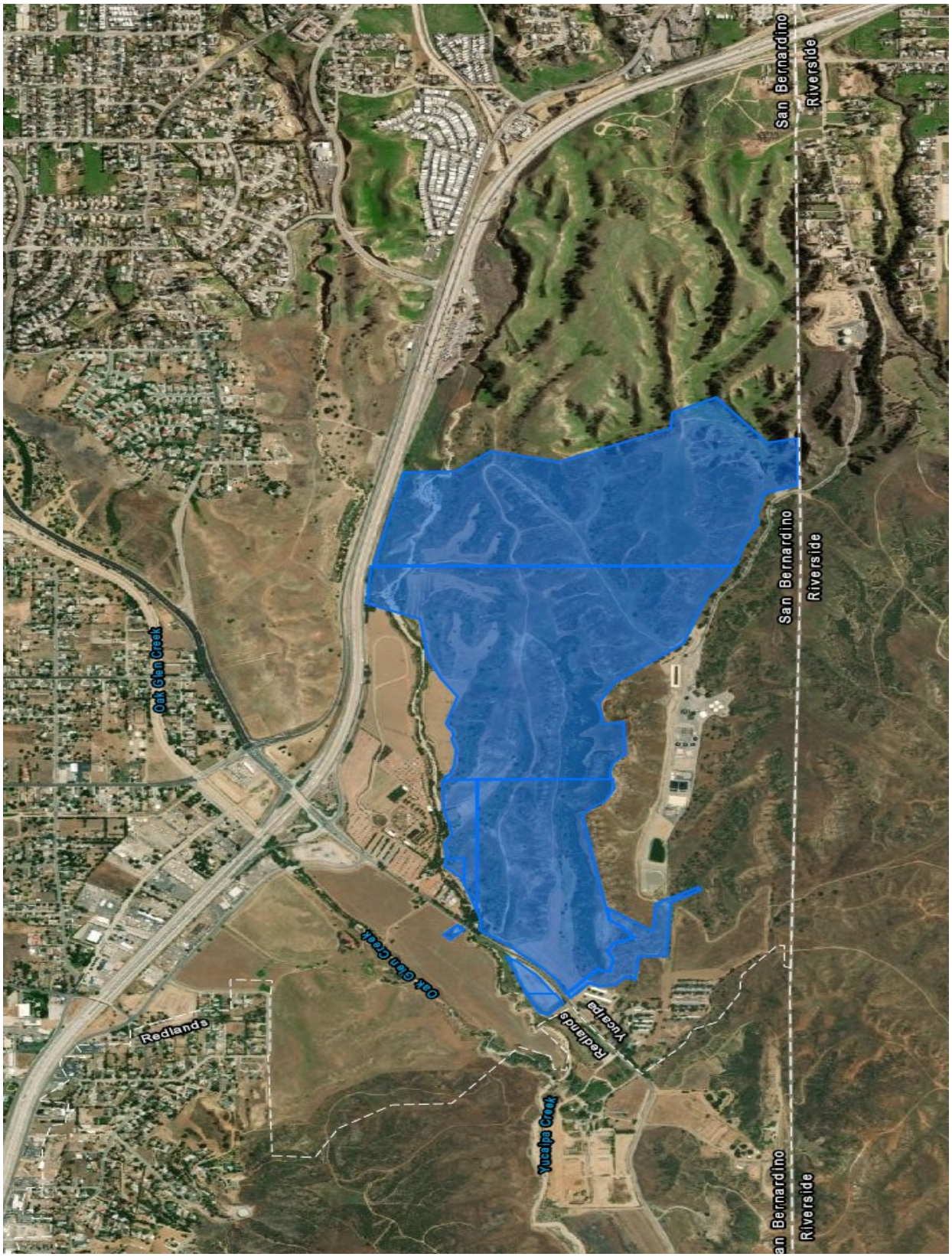
YUCAIPA VALLEY WATER DISTRICT

Chris Mann, President Board of Directors

ATTEST:

Joseph B. Zoba, General Manager

Exhibit "A"


San Bernardino
Riverside
San Bernardino
Riverside
Oak Glen Creek
Oak Glen Creek
Redlands
Redlands
Yucaipa
Yucaipa Creek
San Bernardino
Riverside

RESOLUTION NO. 2020-46

A RESOLUTION OF THE YUCAIPA VALLEY WATER DISTRICT REQUESTING THE LOCAL AGENCY FORMATION COMMISSION TAKE PROCEEDINGS FOR THE ANNEXATION OF TERRITORY

(ASSESSOR'S PARCEL NUMBER 032124109)

BE IT RESOLVED, by the Board of Directors of the Yucaipa Valley Water that:

WHEREAS, the Board of Directors of the Yucaipa Valley Water District desires to initiate proceedings pursuant to the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000, commencing with Section 56000 of the California Government Code, for the annexation of property to the Yucaipa Valley Water District; and,

WHEREAS, the territory proposed for annexation is uninhabited is set forth in Exhibit "A" attached hereto, and by this reference incorporated herein; and,

WHEREAS, the proposed annexation is consistent with the sphere of influence assigned by the Local Agency Formation Commission for the Yucaipa Valley Water District; and,

WHEREAS, it is desired that the proposed annexation be subject to the following terms and conditions:

1. Drinking water, sewer and recycled water service shall be provided to the subject property pursuant to the rules and regulations of the Yucaipa Valley Water District.

2. All standards conditions shall be the responsibility of the property owner as required by the Local Agency Formation Commission.

3. The owner(s) of the property shall not be responsible for all costs incurred by the Yucaipa Valley Water District and the Local Agency Formation Commission pertaining to this annexation, the cost will be paid by the Yucaipa Valley Water District.

WHEREAS, the reason for the proposed annexation is to provide drinking water, recycled water, and sewer service to the anticipated development of the subject property.

NOW, THEREFORE, BE IT RESOLVED, that this resolution of Application is hereby approved and adopted by the Board of Directors of the Yucaipa Valley Water District, and the Local Agency Formation Commission for San Bernardino County is hereby requested to take proceedings for the annexation as described in Exhibit "A", in the manner provided by the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000.

BE IT FURTHER RESOLVED, that the Secretary of the Yucaipa Valley Water District is hereby authorized and directed to transmit to the Executive Officer of the Local Agency Formation Commission a certified copy of this Resolution.

PASSED, APPROVED and ADOPTED this 29th day of September 2020.

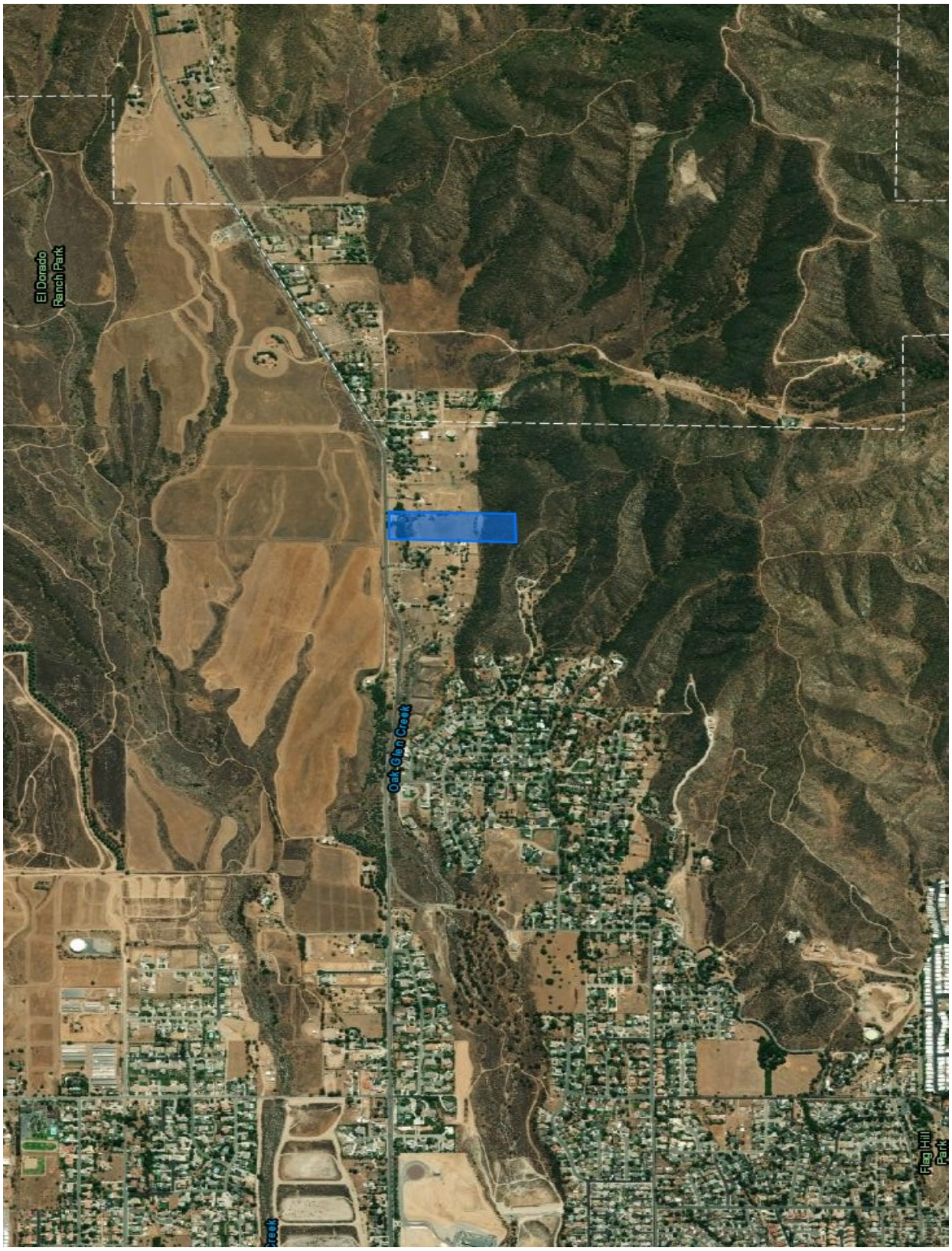
YUCAIPA VALLEY WATER DISTRICT

Chris Mann, President Board of Directors

ATTEST:

Joseph B. Zoba, General Manager

Exhibit "A"



Yucaipa Valley Water District

Director Memorandum 20-143

Date: September 29, 2020

Prepared By: Joseph Zoba, General Manager

Subject: Consideration of Resolution No. 2020-47 Revising and Updating the Policies and Practices Associated with Accessory Dwelling Units and Multiple Unit Developments

Recommendation: That the Board adopt Resolution No. 2020-47.

On July 17, 2018, the Board of Directors approved Resolution No. 2018-23 Setting Forth Policies and Practices Related to Accessory Dwelling Units and Multiple Unit Developments [Director Memorandum No. 18-103]. Since this time, the District staff has been able to apply the policy to several projects and has determined that modifications to the original policy are required.

The proposed changes to the existing resolution involve the removal of the word "condominiums" since the calculation of facility capacity charges for condominiums and townhomes are based on the number of units and not fixture counts.

> Section 3. For apartments, ~~condominiums,~~ commercial, industrial, or institutional uses, the Yucaipa Valley Water District shall charge the applicable Facility Capacity Charges based on water and sewer fixture units and/or drainage units as calculated from the Uniform Plumbing Code. The fixed monthly drinking water, recycled water, and sewer charges shall be based on the fixture units and/or drainage units calculated. The current variable, or consumptive rates for drinking water, recycled water, and/or sewer charges in effect will be billed to the property each month.

RESOLUTION NO. 2020-47

A RESOLUTION OF THE YUCAIPA VALLEY WATER DISTRICT REVISING AND UPDATING THE POLICIES AND PRACTICES ASSOCIATED WITH ACCESSORY DWELLING UNITS AND MULTIPLE UNIT DEVELOPMENTS

WHEREAS, the City of Calimesa and the City of Yucaipa currently regulate the establishment of Accessory Dwelling Units (ADUs); and

WHEREAS, the State of California amended state laws regarding ADUs, effective January 1, 2017, enacting legislation approved by Senate Bill 1069, Assembly Bill 2299, and Assembly Bill 2406; and

WHEREAS, the State of California now regulates ADUs pursuant to Government Code §§ 65852.2 and 65852.22, respectively; and

WHEREAS, the Yucaipa Valley Water District has adopted various resolutions to support the process, code, and regulations set forth for Accessory Dwelling Units and other multi-unit developments; and

WHEREAS, due to continual refinements associated with the implementation of previously adopted policies, this Resolution supersedes the Resolution No. 2018-28.

NOW THEREFORE, the Board of Directors of the Yucaipa Valley Water District does hereby resolve, determine and order as follows:

Section 1. For a parcel that adds an Accessory Dwelling Unit, the Yucaipa Valley Water District shall not charge a Facility Capacity Charge at the time of construction, but will charge an administrative processing fee and monthly drinking water, recycled water, and sewer charges as approved by the Board of Directors and set forth below:

A. A non-refundable administrative processing fee of $150 shall be due payable at the time application materials are submitted to the District.

B. A single residential unit with an Accessory Dwelling Unit (up to 1,200 square feet) on the same parcel shall be charged additional monthly fixed fees for drinking water and sewer charges. The additional drinking water fixed fees shall be based on the number of EDUs or meter size, whichever is greater. Fixed fees for recycled water service will not be impacted. Water consumption charges are anticipated to increase based on the additional demand.

C. The current variable, or consumptive rates for drinking water, recycled water, and/or sewer charges will be billed to the property owner each month.

D. All monthly drinking water, recycled water, and sewer charges may be assigned by the owner to a tenant but shall remain the ultimate responsibility of the property owner as a single monthly utility bill.

E. Utility billing for the fixed monthly drinking water and sewer charges associated with the Accessory Dwelling Unit shall commence to the property six months, or earlier if a certificate of occupancy is issued prior to the six-month period for the Accessory Dwelling Unit.

F. Monthly fees associated with an Accessory Dwelling Unit shall be charged to the property regardless of occupancy status of the Accessory Dwelling Unit.

G. Additions and modifications to the primary residence(s) and/or the Accessory Dwelling Unit may result in the collection of Facility Capacity Charges as provided in Section 2 below.

Section 2. For a parcel with two or more residential units, the Yucaipa Valley Water District shall charge the applicable Facility Capacity Charges at the time of construction, and the following monthly drinking water, recycled water, and sewer charges:

A. A non-refundable administrative processing fee of $150 shall be due payable at the time application materials are submitted to the District.

B. Multiple residential units shall be charged additional fixed fees for monthly drinking water and sewer charges. Fixed fees for recycled water service will not be impacted.

C. The current variable, or consumptive rates for drinking water, recycled water, and/or sewer charges in effect will be billed to the property each month.

D. The billing methodology identified above shall apply to any parcel with more than one water meter for service on the sample parcel, plus costs associated with the installation and maintenance of cross-connection prevention devices.

E. All monthly drinking water, recycled water, and sewer charges may be assigned by the owner to a tenant but shall remain the ultimate responsibility of the property owner as a single monthly utility bill.

Section 3. For apartments, commercial, industrial, or institutional uses, the Yucaipa Valley Water District shall charge the applicable Facility Capacity Charges based on water and sewer fixture units and/or drainage units as calculated from the Uniform Plumbing Code. The fixed monthly drinking water, recycled water, and sewer charges shall be based on the fixture units and/or drainage units calculated. The current variable, or consumptive rates for drinking water, recycled water, and/or sewer charges in effect will be billed to the property each month.

A. A non-refundable administrative processing fee of $150 shall be due payable at the time application materials are submitted to the District.

B. The fixed monthly drinking water, recycled water, and sewer charges shall be based on the calculated fixture units, drainage units, or Maximum Applied Water

Allowance. The current variable, or consumptive rates for drinking water, recycled water, and/or sewer charges in effect will be billed to the property each month.

C. All monthly drinking water, recycled water, and sewer charges may be assigned by the owner to a tenant but shall remain the ultimate responsibility of the property owner as a single monthly utility bill.

This Resolution is effective on adoption.

PASSED AND ADOPTED this 29th day of September 2020.

YUCAIPA VALLEY WATER DISTRICT

Chris Mann, President Board of Directors

ATTEST:

Joseph B. Zoba, General Manager

Yucaipa Valley Water District

Director Memorandum 20-144

Date: September 29, 2020

Prepared By: Kathryn Hallberg, Implementation Manager

Subject: Consideration of Integrated Energy Resiliency Project Proposals and Authorization to Develop a Power Purchase Agreement

Recommendation: District staff recommends the Board authorize the General Manager and Legal Counsel to review and execute a Power Purchase Agreement with Ameresco for the Integrated Energy Resiliency Project.

Yucaipa Valley Water District is developing a fully integrated, cost effective, and reliable energy plan to ensure that water and sewer facilities for the community have access to high quality and affordable water at all times. To ensure the operation, reliability, and cost effectiveness of both the Wochholz Regional Water Recycling Facility (WRWRF) and the Yucaipa Valley Regional Water Filtration Facility (YVRWFF), the District requested proposals for an Integrated Energy Resiliency Project from multiple highly experienced microgrid development organizations.

These proposals include solar, battery storage, and fuel generation components which will be constructed at each facility. The combination of solar, battery storage and fuel generation create a microgrid system within each plant which will produce electricity the District will purchase at a predetermined rate. These projects will be owned, operated, and maintain by the selected organization.

The District received proposals from three world class, well-established, and reputable organizations: Ameresco, Engie and Scale Microgrid Solutions. The proposals are attached for review. All the proposals take the Self Generation Incentive Program funds of $5.8 million awarded to the District from Southern California Edison into account when designing their recommended project. Engie proposed a larger SGIP funding amount for their project and incorporated the estimated award into their proposal. An overview of the electricity generated, and the estimated monetary savings the District will have are detailed in the table below. While all three proposals were thorough and well designed, one proposal offered the best overall project for the District.

	Ameresco	Engie	Scale Microgrid
Electricity Generated (kWh)	12,734,165	12,611,337	18,000,000
Estimated Savings: Year 1	$1,018,388	$699,980	$623,220

The proposal from Ameresco includes solar and natural gas components for electricity production, coupled with battery storage which will store excess electricity to be used when electricity production has decreased from the other sources.

While there are immediate savings projected by this Project, the District has committed to construct the following elements:

- Grading of both sites;
- Design and construction of access road(s);
- Extension and connection to Southern California Gas company natural gas mainline; and
- Interconnection with the SCE power grid.

AMERESCO

Prepared for

Yucaipa Valley Water District

Request for Proposal

Microgrid Project

September 21, 2020

Table of Contents

Section 1: Letter of Transmittal

Dear Yucaipa Valley Water District:

Ameresco is pleased to present this proposal in response to your request for a microgrid solution that can provide resiliency and clean energy for the Yucaipa Valley Water District.

Ameresco, Inc. is an independent provider of comprehensive energy solutions, including infrastructure development and upgrades, energy efficiency, energy security and resilience, asset sustainability, renewable energy solutions, and energy storage. Ameresco has a proven track record of developing complex energy development, storage and microgrid solutions for municipal, commercial and government facilities around the United States and internationally. Ameresco is a long-time partner of many of the municipalities in California and has PPAs with many of the local government utilities in CA.

Hitachi ABB's Grid Edge Solutions (Hitachi-ABB) team combines deep knowledge of hybrid Microgrid Systems, integration of renewable assets and fossil generation, and energy storage devices with extensive engineering knowledge and a large installed base of systems.

Our attached proposal includes a microgrid comprised of energy storage, solar, and temporary reciprocating engines that utilize clean fuel. Our proposal at this time is indicative based on the information provided, and is therefore, non-binding.

We would value the opportunity to review this proposal with you directly to ensure that we are successfully meeting the needs for Yucaipa Valley Water District, and to refine the assumptions with more details about the two sites.

Our team firmly believes in establishing itself with clients as a long-term, trusted energy and sustainability partner. To that end, our approach is characterized by commitment, communication, and efficiency. Our goal is to use unbiased and creative solutions (both technically and fiscally), which includes the best balance of cost, function, and efficiency to drive certainty of execution.

Should you have any questions or require additional information, please do not hesitate to contact me, Jacqueline DeRosa, Vice President Energy Storage Systems at 916-990-8634.

Sincerely,

Jacqueline DeRosa
Vice President Energy Storage Systems

Section 2: Project Details

SUMMARY

The Ameresco-Hitachi/ABB team proposes two microgrid projects utilizing battery energy storage. To develop this proposal, the team explored multiple facets:

- Analyzed load data and rate schedules
- Reviewed site details
- Studied electrical configuration of meters
- Reviewed SGIP applications
- Estimated CO2 reductions
- Optimized islanded operation

We have developed an optimal solution that aims to address the following attributes:

- PSPS and outage events: 72-hr+ resiliency
- Less reliance on diesel
- Flexible remote operations capability
- Maximized SGIP incentives
- Keeping Yucaipa Valley Water District's costs down
- Optimize savings

Our proposal assumes that we will own, install, deliver, repair, and maintain the microgrid project. We we acknowledge that we will be responsible for end of life considerations.

PROJECT SIZE:

PROJECT 1: OAK GLEN:

1.6 MWDC, PV Generation

2.98 GWh, 1MW/4MWh BESS

and mobile gas reciprocating engine.

PROJECT 2: COUNTY LINE

5.2 MWDC PV Generation

9.75 GWh, 1 MW/4MWH BESS

and mobile gas reciprocating engine.

DESCRIPTION OF TECHNICAL SOLUTION

e-mesh™ PowerStore™ Overview

The e-mesh™ PowerStore™ is an energy storage system designed to provide the power system with voltage and frequency stabilization to maintain system stability and provide active regulation during disturbances. This regulation enables the operation of renewable generation, such as a wind farm and solar farm, or large cyclical loads, such as a port crane, without destabilizing the system.

The e-mesh™ PowerStore™ utilizes industry leading power electronic inverters and controls, which enable the device to react extremely quickly. This function can dampen the power fluctuations caused by the volatility of renewable energy resources. The battery unit will be provided separately by a selected battery OEM and will be integrated with Hitachi ABB's inverters and controls to create the e-mesh™ PowerStore™ Battery.

The e-mesh™ PowerStore™ system consists of the following:

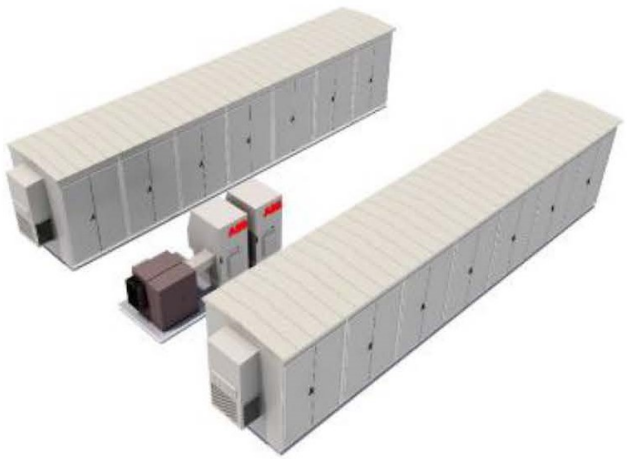
PowerStore™ PCS

The PowerStore™ utilizes a UL 1741 listed power conversion system (PCS), which is based on building blocks of 1,000kW. This building block can be combined on an AC bus to create an aggregated PCS system of up to 4MW.

The PCS is housed in a NEMA 3R cabinet with a hybrid liquid/air cooled inverter system to maintain operating capability in ambient conditions ranging from -20C to 50C.

Local Operator Interface

A local operator interface is used to monitor the battery and PCS components and to provide access to historical data. Historical data of the PowerStore™ will be provided for response and performance analysis, and for asset management.



A number of variables are recorded that include, but is not limited to:

- PowerStore™ active and reactive power
- PowerStore™ State of charge
- Mains 3-phase voltage
- Mains 3-phase current
- Container and system temperatures
- Alarms, status and operation mode
- Mains Frequency
- BMS interface

Through the operator HMI, the PowerStore™ can be remotely started and stopped and alarms remotely monitored and reset.

Battery Strings

The PowerStore™ will consist of Lithium Ion battery strings. The battery strings will be directly connected to the PowerStore™ PCS and will provide the energy storage media of the overall PowerStore™ System. The battery strings will be installed in a purpose-built container.

The PowerStore™ supports the grid by providing a number of support functions including:

Frequency Support – reduces the disturbance in grid frequency by injecting active power based on the grid's frequency deviation from nominal. If the grid frequency is below nominal, then active power is injected into the grid; if the frequency is above nominal, then the PowerStore™ absorbs active power from the grid. The magnitude of the transferred power is a function of the size of the deviation (droop control). A zone or dead-band has been included to allow for a variety of primary grid frequency controllers; the dead-band size and position are adjustable.

Voltage Support – is a method of reducing grid voltage disturbance and is performed in a manner similar to that of a STATCOM. The PowerStore™ voltage support function implements a form of reactive droop control. Capacitive VARS (volt-ampere reactive) are injected into the grid if the voltage is lower than desired, while inductive VARS are injected if the grid voltage is higher.

Grid Reactive Power Support – The reactive power set point is used to adjust the power factor of the power system. By generating or absorbing reactive power, the required power factor for the power station can be achieved, provided it is within the bounds of the operating limits.

Generator Overload Support – In case of generator overloading, the PowerStore™ provides power support to reduce the load of the generators and allow for synchronization of any fast start diesel generators. The overloading of the generators might otherwise cause protection relays to trip the generator. The PowerStore™ intervenes and injects active power into the system before this protection mechanism activates, keeping the unit online and system intact. This functionality only works together with the Hitachi ABB M+ G. This function is enabled when a Hitachi ABB M+ control system is deployed with the generation assets.

Generator Over/Under Ideal Loading Support – The PowerStore™ is able to support the generators running at their minimum loading. In case of fluctuating wind output, the diesel generators might otherwise get pushed below their minimum loading. Reverse power protection algorithms are developed to meet site specific requirements. This function is enabled when a Hitachi ABB M+ control system is deployed with the generation assets. (Refer to "e-mesh™ Controller" section below)

Peak Lopping/Load Leveling – The PowerStore™ can be used to cut off the short-term peak demand of any cyclical loads connected to the electrical network. The peak can easily be mitigated by power delivered from the PowerStore™ instead of providing the spinning reserve and the step load capability with fossil- based generation. By smoothing short-term peaks with the PowerStore™, the start-up of the next generator can be delayed by several hundreds of kW and therefore this increase the amount of power utilized from the wind/solar farm.

Generation/Load Smoothing – In case of spikes in solar output, the PowerStore™ can absorb the first fluctuation of the grid, before it smoothly transfers the load to the generators. In case of feeder trips where a portion of the system load is lost, the PowerStore™ can act as a sink to absorb the overproduction while the remaining power generation is steadily reduced.

PowerStore™ Battery Technical Specifications:

PowerStore™ PCS	
AC Voltage Range	480 VRMS +10/-12%
AC Export Capacity at 25C	1000kVA
AC Import Capacity at 25C	1000kVA
DC Voltage Range	710 -1250 Vdc
Inverter Type	3-Level VSC
Minimum Grid SCCR	2
Nominal frequency range	50 - 60 Hz
Harmonic Distortion	UL1741/IEEE 1547, <2%TDDi per IEEE 519
Power Factor/Reactive Power	0 leading… 0 lagging (full 4-quadrant operation)
Max Aux power consumption	950W
Efficiency: Max| CEC| Euro	98.6% (Est) | >98% (est.) | >98 (est.)
Ambient temperature (operation)	-20C to 50C
Protection Degree	NEMA 3R/IP54
Relative humidity	5%-100% condensing
Max elevation	2,000m (6,500 ft.)
Dimensions (Est)	[89.6" x 39.5" x 47.2"] to [89.6" x 194" x 47.2"]
Weight (Est)	1,043Kg (2,300lb)
Cooling	Hybrid Liquid/Air
Safety (pending)	UL1741 | C22.2 No. 107.1-16
Utility Interconnect (pending)	16UL 1741:2010 R2.18 (SA) | IEEE 1547.1-2005 | CA Rule 21 No. 16-06-052 | Hawaii Rule 14 No. 2014-0192
AC Protection	fuses
DC protection	Fuses (optional)
Fire Suppression	FM-200 or equivalent

ABB is a registered trademark of ABB Asea Brown Boveri Ltd. Manufactured by/for a Hitachi Power Grids company.
Notes: Inverter lineup power rating, measured at LV interconnection. Based on beginning of life rating.

Estimated Battery Life Degradation:

Below is the estimated degradation curve of the battery. This is an estimation and may change based on actual operation of plant which will likely differ from the standard assumptions we have used. The battery performance guarantee, if applicable, will be based on the actual operation and the degradation curve will be updated accordingly.

Estimated Battery Life Degradation – Battery OEM Modules											
	Init	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
SOH(%)	100.0%	97.1%	94.2%	91.3%	88.8%	86.3%	83.8%	81.7%	79.9%	78.3%	76.6%

The above values are based on the following assumptions which ABB believes to be typical of battery usage:

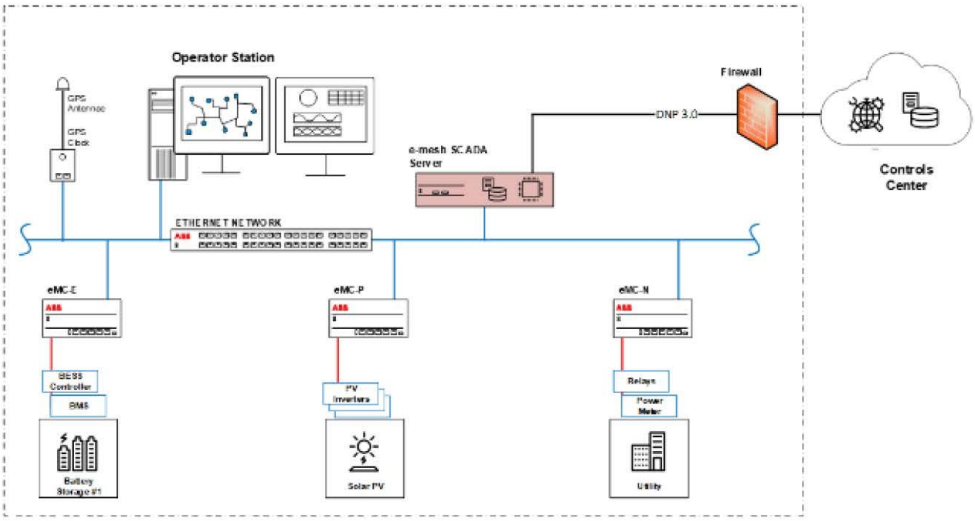
- Average Charge Rate: 0.5C
- Average Discharge Rate: 0.5C
- Average Resting State of Charge: 50%
- Cycles Per Year: 300

e-mesh™ Controller

Hitachi ABB's e-mesh™ control system is the product of nearly 20 years of development, installation and continuous R&D. The main function of the e-mesh™ system is dynamic system energy optimization. In essence, it operates with two governing priorities, in order of priority,

1. Maintain overall system stability
2. Maximize the utilization of renewables to reduce generator fuel consumption

The architecture of the system is a distributed control system, which communicates on a peer to peer network. By using a decentralized approach to system control and communication, the e-mesh™ platform creates a system that is inherently redundant and highly scalable. This means that the risk of a system- wide failure is significantly reduced relative to a centrally controlled system.



Each control element uses a common controller hardware platform, RTU 540, which is then loaded with pre-developed software to control the device it is assigned to, such as a wind turbine, solar photovoltaic array, distribution feeder, grid connection switch, energy storage, diesel generator, etc. During commissioning, the individual controllers are configured with the device ratings and other parameters of the equipment they control. Once the Microgrid system is brought online, the RTU 540 controllers communicate with each other on a peer-to-peer basis via IEC 60870-5-104 to automatically coordinate all system generation sources and loads so that optimized performance is continually maintained.

The goal of the system is to build a top layer power flow management system that integrates all of the very different interfaces of suppliers into one fully integrated power system, providing the monitoring and power dispatch to each device.

The other advantage of the system architecture is scalability. Because the system is completely modular, future system expansions or amendments to the microgrid resources can be easily accommodated. All that is required is the addition of the control to the new asset. The system then automatically accommodates the new asset and operates to optimize dispatch based on the new assets attributes.

The hardware building block of Hitachi ABB's e-mesh™ control system is the RTU 540. This RTU is a highly proven and reliable product with advanced cybersecurity features and extensive protocol flexibility. Additionally, the RTU based system is device agnostic and can communicate via hardwired I/O and various communication protocols including IEC-61850, DNP3, Modbus, etc.

The HMI functionality is provided by Hitachi ABB's MicroSCADA software platform. This software gives the user full interactive access to the control system and includes the single line diagram, all real time and historical data, alarms, parameter setting and other core control functionalities. Like the RTU hardware, the MicroSCADA product is also designed with cybersecurity in mind and features role-based access control among other cybersecurity design considerations. The HMI screens have been based on Hitachi ABB's standard Microgrid library and can be further modified to meet the unique needs of Yucaipa.

Description of Reciprocating Engine – Peterson Caterpillar

Ameresco is proposing the following configurations for the two (2) sites:

- Oak Glen – 2 x Caterpillar CG137-12 TA 400kW Natural Gas Generators @ 480V
- W County Line – 1 x Caterpillar XQ1475G 1475kW Natural Gas Generator @ 480V

Both sites currently assuming pricing for one (1) month of single shift usage (3 day @ 0-24 hours, weekly @ 0-40 hours, monthly @ 0-180 hours) rental equipment delivered to and installed on site. The costs of connecting the rental units each year is included in the pricing.

CAT XQ1475G

CAT CG137-12 TA

Site Details

The team has performed an analysis to optimize the size of the system for C02 reduction, and cost savings, and recommends the following:

	County Line Rd.	Oak Glen Rd.
BESS Size:	1MW/4MWh BESS	1MW/4MWh BESS
Solar Size:	5,241.6 kW-DC	1,606.8 kW-DC
Total annual generation:	9,750,985 kWh	2,983,180 kWh

A general description of the site layouts are as follows:

County Line System Layout

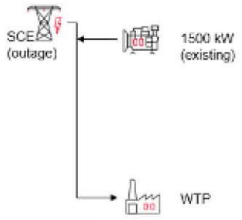
Oak Glen System Layout

The combination of the solar, storage, and recip technologies result in significant C02 savings for Yucaipa Valley Water District. The following graphics depict the magnitude of the savings.

880 County Line WTP Off-Grid Operation (3 day outage)

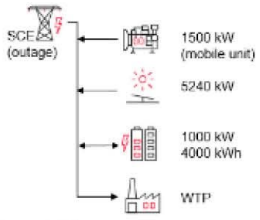
HITACHI ABB

Base case



- Average hours/genset: 72
  - ✓ 0% reduction over 3 days
- Fuel use expected: 5000 gal
  - ✓ 0% reduction over 3 days
  - ✓ 0% CO_2 reduction
- *All back-up from diesel*

5.24 MW_{DC} PV + 1 MW / 4 MWh BESS

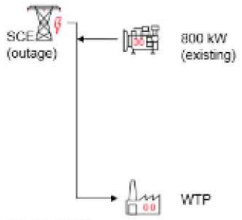


- Average hours/genset: 24
  - ✓ 66% reduction over 3 days
- Fuel use expected: 2600 $gal_{equivlaent}$
  - ✓ 47% reduction over 3 days
  - ✓ 61% CO_2 reduction
- *By shedding non-critical loads, 100% renewable operation is possible*
  - *~80% reduction in load from normal operation needed*

Oak Glen WTP Off-Grid Operation (3 day outage)

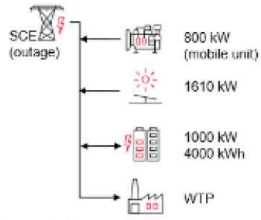
HITACHI ABB

Base case



- Average hours/genset: 72
  - ✓ 0% reduction over 3 days
- Fuel use expected: 1800 gal
  - ✓ 0% reduction over 3 days
  - ✓ 0% CO_2 reduction
- *All back-up from diesel*

1.61 MW_{DC} PV + 1 MW / 4 MWh BESS



- Average hours/genset: 20
  - ✓ 72% reduction over 3 days
- Fuel use expected: 470 $gal_{equivlaent}$
  - ✓ 74% reduction over 3 days
  - ✓ 81% CO_2 reduction
- *By shedding non-critical loads, 100% renewable operation is possible*
  - *~65% reduction in load from normal operation needed*

Section 3: Proposed pricing

	County Line Rd.	Oak Glen Rd.
PPA Rate:*	Indicative PPA rate: $0.105/kWh 0% escalation	Indicative PPA rate: $0.100/kWh 0% escalation
Total annual generation:	9,750,985 kWh	2,983,180 kWh
Energy kWh Offset:	128.26%	128.43%
Annual avoided energy cost:	$744,294	$274,049

***The above pricing is preliminary and indicative.**

Assumptions were made based on information received to date. For example, we assume a property and sales tax exemption and a $1.00 lease payment. More details are required for a firm price.

The price assumes fuel for a mobile reciprocating engine as a pass through to the client.

Assumes full utilization of reserved SGIP grant value for both sites.

Appendix: Qualifications and Experience

Ameresco, Inc. (NYSE: AMRC) is a leading independent provider of comprehensive energy services, including energy efficiency, infrastructure upgrades, energy security and resilience, asset sustainability and renewable energy solutions for businesses, municipalities and organizations throughout North America and Europe. Ameresco's sustainability services include capital and operational upgrades to a facility's energy infrastructure and the development, construction, ownership and operation of renewable energy plants. As a comprehensive solutions company, our core business is the development, design, engineering and installation of projects that reduce the energy and operations and maintenance (O&M) costs of our customers' facilities.

Certified and Licensed Professionals

Ameresco does not outsource any critical project aspects; all development engineering and construction management is performed by Ameresco engineers and staff, a significant percentage of which are licensed Professional Engineers (PEs), Certified Energy Managers (CEM) and LEED Accredited Professionals. Ameresco has many PEs on staff that have expertise in working with Solar PV parking canopies, battery energy storage, and EV chargers. In addition, Ameresco is committed to using local contractors and support to ensure that the project helps maintain local jobs and boosts the local economy. Specifically, for this project Ameresco has selected Fischbach & Moore, an experienced local electrical subcontractor to do the electrical work.

Exceptionally Knowledgeable and Dedicated Personnel

Ameresco's leadership and managers are working leaders and managers. Our senior technical staff works directly on customer projects. We do not outsource our critical project management. All engineering, design, and construction management whether performed in house or with an external resource, is understood, managed and executed by Ameresco engineering and construction staff.

Ameresco Manages All Aspects of The Project

Ameresco will be fully responsible for all aspects of the development and implementation of Yucaipa's solar and battery storage project, including the following:

- **Ameresco will develop, design, construct and operate the project**, providing a single point of responsibility for customer satisfaction, and to develop a successful project. This includes the negotiation of the PPA and all related contracts.
- **Ameresco manages and supervises all work by subcontractors**. All subcontractors are required by Ameresco to fully comply with the insurance, bonding, and other requirements of this RFP. Whenever Ameresco employs a subcontractor to perform a service required by the contract or to supply materials and equipment for use on the contract, we require the subcontractor to perform at the same standards that we are required to deliver.
- **Ameresco is fully responsible for the quality and workmanship of its subcontractors**. Each Ameresco subcontract contains the same flow-down clauses and includes the requirements that are in our contract with the YUCAIPA. Ameresco inspects all goods delivered and services performed to assure compliance with our engineering designs.

Ameresco's strength is implementing complex projects quickly and efficiently while delivering the expected energy and overall desired results.

CAPABILITIES AND FINANCIAL STRENGTH

The information that we have included in this response clearly demonstrates Ameresco's ability to work with Yucaipa. Our skill, integrity, and financial strength to perform faithfully and complete solar PV and battery storage projects for the Yucaipa are evidenced by:

- **National Energy Services Leader; 252+ MW of Solar PV in Operation**. Ameresco has engineered and constructed more than $6 billion of energy services projects in North America. We have 252 MW of solar PV projects in operation with an additional 116 MW of projects in construction. Ameresco has installed solar PV systems on landfills, ground mounts, parking lots and rooftops for several public entities in Massachusetts. In addition, Ameresco has developed, operated or been awarded 49+ MWh of energy storage projects.

- **Profitable, financially strong public company provides assurance of our performance**: Ameresco (NYSE: AMRC) had a construction backlog exceeding $2 billion. Our 2019 revenues were $867 million and had total assets of approximately $1.37 billion, cash in excess of $30 million and an $115 million credit facility. Due to our financial strength, we can secure long-term project financing and maintain 20-year operations responsibility for our solar PV projects under long-term Lease or Power Purchase Agreements.

- **Financing, regulatory knowledge, and skills deliver 100% project success**: Ameresco has completed 100% of contracted solar PV projects due to our financial strength, in-depth understanding of state regulations, and experienced, professional staff. Ameresco finances all construction of solar PV and battery storage projects with our own capital or revolving credit lines, so projects stay on schedule with no delays. Furthermore, our solar PV team has an advanced understanding of regulations and is involved with ongoing regulatory and policy making at the local, utility, state, and federal levels. We have never missed a regulatory deadline affecting state and utility incentives, enabling our customers to receive their intended economic benefit from the projects.

Financial Overview

Ameresco recognizes that it is paramount for its customers to have a technically qualified and financially strong partner. Ameresco has a solid track record of performance in the capital markets. We maintain a $1 billion surety credit facility through two corporate providers, both with an AM Best Rating of "A Excellent".

As a publicly traded company, Ameresco's most current prospectus, including Balance Sheet and Cash Flow statement is provided within our audited, publicly available annual 10-K and quarterly 10-Q financial statement information filed with the U.S. Securities and Exchange Commission (SEC), and can be found electronically utilizing the links below.

10-K - "The Investor's Annual Report"
Ameresco's most recent 10 – K for the period ending December 31, 2019 may be located using the U.S. https://www.sec.gov/Archives/edgar/data/1488139/000148813920000014/amrc1231201910-k.htm
10-Q – "Most recent as of June 30, 2020"
https://www.sec.gov/ix?doc=/Archives/edgar/data/1488139/000148813920000028/amrc-20200331.htm
Additional financial information may also be found in the "Investor Relations" section of the company's website at www.ameresco.com.

$1 Billion Surety Credit Facility

As a strong indicator or our performance track record, we maintain a $1 billion surety credit facility through two corporate providers, both with an AM Best Rating of "A Excellent".

Proposed Funding Sources

Ameresco funds all development and construction. Ameresco funds development of the project using existing cash, cash flows from operating activities, or our $180M senior credit facility. Upon notice to proceed construction, Ameresco will continue to fund the construction of the asset using its balance sheet or will bring on a dedicated non-recourse construction lender. Ameresco currently has access to multiple construction facilities through numerous banks.

Ameresco will source term financing and typically retains equity during operations. Ameresco will source term financing at commercial operations, likely from the same lender that funded construction. We typically retain 100% of the project's equity in the project during its operating phase. If we brought in an equity partner, we would continue to operate and maintain the asset.

TRACK RECORD OF SUCCESS AND SAFETY

Our track record clearly indicates our commitment to quality and to exceeding the expectations of our customers. All work performed within the parameters of an Ameresco project will comply with all applicable Federal, State, prevailing wage, and municipal laws and regulations legally enacted as of the date the work commences. Ameresco's staff includes a very high percentage of Professional Engineers, Certified Energy Managers, Certified Lighting Professionals, and skilled tradesmen on staff include master electricians, electrical journeymen, and gas pipe fitters.

To this end, Ameresco, Inc. commits itself to achieving the following goals:

- Zero Accidents
- Achieving and Maintaining Total Compliance
- Utilizing Integrated Safety Management within All Activities
- Maintaining a Safe and Healthy Work Environment
- Being a Good Steward of Our Environment
- Achieving "World-Class" Safety Performance and Recognition

Ameresco is committed to meeting or exceeding 100% compliance to all established Safety & Health regulations. We currently have implemented policies, procedures, training, and self-assessments to ensure compliance to the following:

- OSHA 29 CFR 1910 - General Industry Standards
- OSHA 29 CFR 1926 - Construction Standards
- US Army Corps of Engineers - EM 385-1-1 US Military Safety Standards
- US Dept. of Energy - 10 CFR 851 – Worker Safety & Health Standards

The Ameresco Corporate Safety & Health Program incorporates an Integrated Safety Management System (ISMS) approach to ensure compliance and quality of our program related to our states program goals and objectives.

Ameresco possesses the skills required to complete this project including licensed professional engineers, North American Board of Certified Energy Practitioners (NABCEP), certified solar PV installers, certified and licensed master electricians, and certified energy managers.

Ameresco has over 1,000 full time employees. We also have an in-house financing team, which works directly with our project teams to provide a range of financing options that speed development, construction, and operation of our projects.

AMERESCO BATTERY ENERGY STORAGE SYSTEM PROJECT EXPERIENCE

Ameresco has developed, constructed, and operates energy storage projects in California, throughout North America and internationally.

This storage capacity is either contained within standalone projects or is combined with other power generation facilities such as microgrids, PV, combined heat and power plants, or other energy efficiency projects (energy savings performance contracts). Ameresco has several projects in operation, development and construction that will provide these types of services in both behind-the-meter and on the utility side of the meter configurations.

Ameresco installed a 500kW/580kWh SAFT Lithium Ion BESS at the Portsmouth Naval Shipyard in 2015

One example is a 5 MW/16 MWh energy storage system installed in East Gwillimbury, Ontario. This system offers energy arbitrage services to the Ontario Independent Electricity System Operator (IESO) and was completed in July 2019. Another example is a 750 kW/1,500 kWh Tesla lithium-ion battery system that was commissioned at the Edward J. Schwartz United States Courthouse in San Diego, CA in 2017. The storage system works with a 305 kW-DC Solar PV array to reduce peak demand purchases from the utility, saving thousands of dollars per month in utility bill charges. Ameresco has also included storage in microgrid projects for the federal Department of Defense. The United States Marine Corps Recruit Depot Parris Island selected Ameresco in 2015 to deploy combined heat and power (CHP) and solar photovoltaic (PV) generation assets and to integrate them with a 4 MW/8 MWh battery energy storage system (BESS) and a microgrid control system (MCS) capable of fast load shedding.

Ameresco is actively involved in leadership roles within several energy storage and microgrid associations throughout the US, Microgrid Knowledge, NY-BEST, Advanced Energy Group (AEG), the national Energy Storage Association (ESA) and the California Energy Storage Alliance (CESA).

In April 2019, Ameresco pledged to emphasize commitment to the well-being and safety of consumers as part of the Energy Storage Industry Corporate Responsibility Initiative. Ameresco joined the Energy Storage Association and other signatory companies to launch a task force to develop best practices for potential operational hazard prevention, end-of-life recycling, and responsible supply-chain practices. Ameresco makes safety a priority in all our projects and this ESS project will be designed using best practices and in accordance with all required codes and standards.

Please see the table on the following page for a summary of Ameresco's energy storage experience.

Portfolio Listing

Table 4: Ameresco's Battery Energy Storage Project List

				Battery		
Project Name	Location	Status	Use Case(s)	Rated Power Capacity (kW)	Rated Energy Capacity (kWh)	Other Technologies
MCRD Parris Island ESPC	Parris Island, SC	Operating	Increased PV Self-Consumption Demand Charge Management Microgrid Islanding Support	4,000	8,000	Solar, CHP
GSA Schwartz Courthouse ESPC	San Diego, CA	Operating	Demand Charge Management	750	1,450	Solar
Ontario IESO	Newmarket, Ontario, CN	Operating	Energy Arbitrage Ancillary Services	5,000	16,000	
JPII Secondary School Micro-grid	London, ON, CN	Construction	Facilitate Carbon Free retrofit, Increased PV Consumption, Market participation, Demand Charge Management	1,100	2,200	Geothermal heating & cooling Solar
NMWDA – Ballenger-McKinney WWTP	Frederick, MD	Construction	Demand Charge Management TOU Energy Management Blackstart	800	1,350	Solar
Plymouth High School	Plymouth, MA	Construction	Demand Charge Management	250	500	Solar
JBSA Lackland Air Force Base	San Antonio, TX	Design	Demand Charge Management Microgrid Islanding Support	4,000	8,000	Solar Gas-fired generators
Norfolk Naval Shipyard	Portsmouth, VA	Development	Microgrid Islanding Support	3,000	5,000	CHP, Diesel generation, microgrid control system
Town of Lexington	Lexington, MA	Development	Demand Charge Management	1,120	2,240	Solar
Portsmouth Naval Shipyard	Kittery, ME	Phase 1: Decommissioned Phase 2: In Construction	Phase 1: Demonstration Phase 2: Microgrid Support; Ancillary Services	Phase 1: 500 Phase 2: 1,000	Phase 1: 580 Phase 2: 2,000	CHP
Baltimore Gas & Electric	Chesapeake, MD	Awarded	Grid Reliability, Energy Arbitrage, Regulation	1,000	2,000	-
McKinleyville Community Services District (MCSD)	McKinleyville, CA	Design phase *size may change	Bill Savings, Resiliency	500*	1340*	Solar
TOTAL PORTFOLIO				22,520 kW	49,320 kWh	

OPERATING PROJECTS

Marine Corps Recruit Depot (MCRD) - Parris Island, SC

Objective

The United States Marine Corps Recruit Depot Parris Island selected Ameresco in 2015 to deploy combined heat and power (CHP) and solar photovoltaic (PV) generation assets and to integrate them with a battery energy storage system (BESS) and a microgrid control system (MCS) capable of fast load shedding. Together, with additional energy efficiency and water conservation improvements, this comprehensive project furthers the Marine Corps Installation Command mission to ensure a reliable, secure energy supply and reduce lifecycle operating costs of Marine Corps facilities while managing future commodity price volatility.

Measures

- 4,000 kW / 8,000 kWh Li-ion BESS
- 5.1 MW Ground Mount Solar PV
- 1.6 MW Carport Solar PV
- 3.5 MW Combined Heat and Power
- 3.5 MW Emergency Diesel Generators
- Sitewide Energy Conservation Measures
- Intelligent, fast load shed capable microgrid control system

Technology Description

This state-of-the-art infrastructure provides Parris Island the capability to maintain reliable operations in the event of loss of utility services. Ameresco replaced the existing end-of-life steam plant with a new, fully automated, natural-gas fueled CHP plant capable of producing 3.5 MW of electricity and all of the steam required for the entire installation. This measure consisted of the decommissioning of an aging, inefficient central steam plant and installing a 3.5 MW gas turbine, a Heat Recovery Steam Generator, 3.5 MW total in backup diesel generators, and two 30,000 lb/hr dual fuel backup boilers.

Ameresco deployed integrated renewable energy solutions, including solar PV, domestic hot water system upgrades, a battery energy storage system (BESS), and a microgrid control system (MCS) capable of fast load shedding. The solar PV measure consist of a 1.6 MW PV carport system and a 5.1 MW ground mount system.

The 4.0 MW/8.1 MWh Lithium-Ion BESS reduces energy costs for Parris Island and enhances the reliability and security of on-site power generation assets. The BESS captures a substantial amount of excess PV energy generation and stores this electricity for later use to reduce power and energy purchases from the utility. As designed, the 4.0 MW/8.1 MWh system stores over 1,120,000 kWh of annual excess PV generation, reducing the curtailment requirement of the PV from 23% of its total annual generation to 11%. In addition, the BESS is used during grid-paralleled operation to provide reactive power control to the site and to provide capacity redundancy to the CHP, firming its 3.5 MW of

generating capacity if the CHP were to temporarily trip offline. During islanded (microgrid) operation, the BESS provides up to 4.0 MW of instantaneous power generation, bridging to backup diesel generation and enhancing the site's seamless islanding capability. During a long-term utility outage, the BESS serves as a dispatchable resource to balance generation and load and support power quality management throughout the site's electric distribution system. The PV and BESS systems were commissioned in 2018. In June 2019, the CHP plant and MCS were commissioned and fully operational.

The MCS monitors and coordinates dispatch of CHP, PV, BESS, and Emergency Generators as required in response to site electrical and thermal loads. A fast load shedding capability is included in the controls package to provide an uninterrupted transition from utility power to islanding mode. For the duration of islanding operations, the MCS will ensure the support of mission-critical systems from these on-site generating assets.

Benefits

This state-of-the-art infrastructure provides Parris Island the capability to maintain reliable operations in the event of loss of utility services. This comprehensive project also features solar photovoltaic (PV) arrays that add another 6.7 MW of on-site generation capacity. The PV systems displaces the purchase of electricity from the serving utility, and the carport PV system provides shading at the primary parking area for visiting family members. Together with demand reduction energy conservation measures (ECMs), these improvements result in:

- 75% reduction in utility energy demand
- 25% total water reduction
- 10 MW onsite electrical generation
- Combined annual carbon reduction of 37,165 metric tons of CO2

The CHP plant also eliminates the site's current use of fuel oil #6 and its reliance on expensive temporary boilers. This system also provides 30 days of fuel oil storage for curtailment and security, improves site maintenance and safety regimes, and provides optimal siting for on-site utility access, the capacity for black start and backup power production, and multiple backup options for steam production. Overall, the project revitalizes Parris Island's existing infrastructure and enhances the reliability and functionality of site buildings and facilities.

Ontario IESO Utility Scale Battery Energy Storage System - Newmarket, Ontario

Objective

In 2015 Ameresco Canada, Inc. finalized a contract with Ontario's Independent Electricity System Operator (IESO) to provide a 5MW/16MWh battery energy storage facility as part of the IESO's plan to secure a total of 50 MW of energy storage in Ontario. The system is demonstrating the ability of a battery to support system reliability by responding to changing grid conditions.

Measures

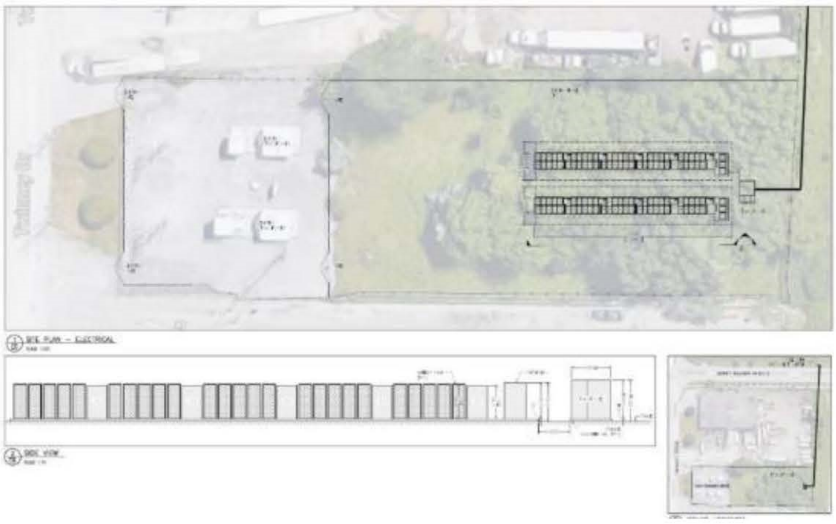
5,000 kW / 16,000 kWh Li-ion BESS

Technology Description

Ameresco has designed, installed, commissioned, and now operates two solid state battery energy storage systems each of 2.5MW/8MWh capacity to make up the total system installed at a Newmarket Hydro distribution station. These systems, owned by Ameresco, are interconnected to the electric distribution system and provide energy, arbitrage, capacity, and ancillary services to assist the IESO in ensuring the reliability of the Ontario electricity system as a whole.

Benefits

This 5MW/16MWh Battery Energy Storage System will, in conjunction with the larger IESO procurement, serve to demonstrate the ability of advanced energy storage to reliably support response to changing grid conditions at a utility scale. It will help to strengthen the IESO electrical system and improve service to electricity customers. The project will help Ontario's IESO better understand how energy storage technologies can support the operation of the grid by providing fast response and operational flexibility. The project reached commercial operation in June of 2019.



ESTCP – Microgrid, Energy Storage, & Ancillary Services Demonstration Project - Portsmouth Naval Shipyard, ME

Objective

In Q1 2016, Ameresco successfully completed commissioning of a micro-grid demonstration project at the Portsmouth Naval Shipyard in Kittery, Maine. This demonstration project was funded by a $3.6 million grant from the Department of Defense (DoD) Environmental Security Technology Certification Program (ESTCP). The technical objective of this project was to demonstrate that the emerging technologies of Microgrid Control Systems (MCS) and Battery Energy Storage Systems (BESS) can be integrated with on-site generation at military bases to enhance the security and reliability of electric service to the base and generate cost savings for the government.

Measures

- A Fast Load Shed (FLS) Microgrid Control System (MCS) which integrates the BESS and a variety of existing on-site generation assets and allows for intelligent selection of loads to be shed in order to balance with available supply.
- A 500 kW / 580 kWh Lithium-ion Battery Energy Storage System (BESS) to assure power quality on base during transitions from grid power to island power and to provide ongoing voltage and frequency control to the ISO.

Technology Description

This project integrated several innovative technologies to provide cost-effective solutions for military energy security. Those technologies include: a new MCS; dozens of new relays and metering at existing breakers serving the major loads at the Shipyard; a 500 kW / 580 kWh Lithium-ion Battery Energy Storage System (BESS); a variety of existing on-site generation assets including two 5.2 MW combustion turbine generators and two 1.5 MW emergency diesel generators; and a new "fast load shed" control system. The existing on-site generation assets – while considerable at 13 MW total – do not have enough capacity to serve the entire Shipyard in the event of a loss of utility power. Thus, the MCS intelligently selects loads to shed in order to assure that the most critical loads are served by the available on-site generation.

Benefits

This investment significantly enhances the energy security of the Shipyard by maintaining power to all critical loads in the event of a loss of grid supply, avoiding otherwise lost production time and costs. By deploying existing generation assets (which most military bases already have) in new ways through the systems demonstrated here, the government benefits from enhanced energy security in a cost-effective way.

Since the time that this demonstration project was commissioned and proven, the Navy decided to considerably expand the MCS and to add 18 MW of on-site generation capacity in the form of another 7.5 MW combustion turbine generator, three more 2.0 MW stand-by diesel generators, and a new BESS of increased size. The previous 500 kW BESS installed under the demonstration project has since be removed. Ameresco is currently in the design phase of this expanded project.

CALIFORNIA DISTRIBUTED ENERGY EXPERIENCE

Ameresco has deep experience in the California distributed energy Market; below are representative projects that we successfully executed;

General Services Administration Region 9 San Diego Service Center

The project scope included energy and water conservation measures and advanced building envelope solutions, as well as the deployment of 644.5 kilowatts of solar on carports and rooftops across the facilities. Additionally, Ameresco deployed a 750 kW / 1500 kWh Tesla Battery Storage System for Advanced Demand Response (ADR) to work together with the solar PV to reduce the facility's total demand and thus its electric utility bills.

Ameresco built the total project ahead of schedule and under budget to the satisfaction of the GSA. The variety of ECMs, number of sites, and the need to mobilize in different states with slightly different work requirements presented a significant project management challenge. Ameresco addressed these challenges through frequent communication with the customer, and close coordination of all construction activities. For the battery and PV work at the San Diego site, Ameresco's in-house engineers led the interconnection process with the utility (SDG&E). This allowed us to successfully complete the commissioning and testing of the electrical interconnection on schedule.

Total Project Size: 645 kW DC Solar System, 750 kW Battery Storage System

Sutter Health Solar PPA

Following the completion of a 1.5 MW solar carport canopy and ground mount systems at Sutter Health's Fairfield Medical Campus, Ameresco recently completed construction of a 1.6 MW solar energy system at the Sutter Santa Rosa Regional Hospital (SSRRH). The 84-bed acute-care facility is one of 24 hospitals in the Sutter Health network and is known as one of the greenest hospitals in Northern California.

Sutter Fairfield Medical Campus

The solar photovoltaic (PV) arrays installed at two sites on the SSRRH campus underscore Sutter Health's broader commitment to environmental stewardship through the use of renewable energy, setting the Sutter Health Standard for solar. Carport solar panels installed at the hospital's main parking lot and on the roof of the Bill and Elizabeth Shea House – a private, four-bedroom residence for families of hospitalized children – are expected to generate more than 2.4 million kWh of electricity annually – the equivalent of powering 206 households for one year.

Sutter Health Santa Rosa Hospital

The solar panels installed by Ameresco are projected to offset 40 percent of the hospital's overall electricity usage and 89 percent of electricity used at the Shea House. As an on-site source of renewable energy, SSRRH will avoid 1,725 metric tons of CO2 emissions annually or the equivalent of 194,021 gallons of gasoline consumed.

In addition to the 1.6 MW solar panel system, Ameresco replaced the hospital's parking lot lighting fixtures with high-efficiency LEDs. These will generate additional energy cost savings for the hospital over time and create brighter, safer spaces on campus for patients, visitors and employees.

> *"Clean sustainable solar power benefits patients, employees and the environment",* said Michael Purvis, CEO of SSRRH and Novato Community Hospital. *"The addition of an eco-friendly energy source, along with our hospital's green construction, recycling program and water conservation, helps deepen our commitment to a healthier community."*

Ameresco designed, constructed, owns, and operates the systems under a Power Purchase Agreement (PPA).

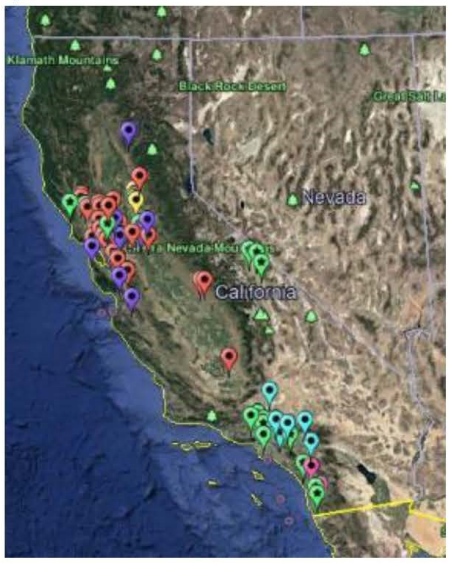
Large Health Care Provider Solar and Storage EPC

Ameresco has partnered with a prominent healthcare provider to develop and install a solar portfolio throughout 105 sites totaling 72 MW in California and Hawaii. Projects include rooftop, ground mount, parking garage canopy superstructure, and parking lot carport installations. As of May 2019, there are 45 facilities with solar completed by Ameresco totaling 20.8 MW. Projects in development and construction include BESS.

These projects include a beautiful **972 kW-DC solar superstructure** in Pleasanton, CA. As noted previously, this particular project included a 60' clear-span superstructure which utilizes the entire roof deck of the garage while still providing an open-air, and pleasant, dappled light environment. Ameresco's design team was able to play off the existing architectural vocabulary of the garage incorporating the perimeter steel framing members and structural accents into the new solar steel framing infrastructure. A fresh coat of marine-grade, Tenemec paint finished the new garage steel framing and seamlessly integrated the new generation element as if it were part of the original design.

To minimize parking disruption while facilitating uninterrupted services to their members, Ameresco's construction team utilized phasing strategies, off-site and valet parking, as well as off-hour work for specific construction tasks and utility shutdowns. Through disruption planning coordination with each Site Service Administrator and their respective team, Ameresco proactively mitigated any potential disruption to the daily operations during the installation phase.

Permitting and Interconnection with Local Utility



As a leading distributed solar photovoltaic energy provider, Ameresco has been implementing energy and renewable energy projects in California for nearly two decades and provides the expertise needed to design systems that meet the utility's technological requirements (e.g., permitting, site interconnection regulations, and equipment specifications).

The proper interconnection methodology for a solar PV array is a vital element of a system's overall design. The final design must follow applicable government and utility codes and regulations, so that the array can safely and efficiently provide power back to the grid. An electrical engineer will provide stamped interconnection drawings that will be used for the permit and interconnection application.

Engineers will consider the City's specific requirements, including temporary power provisions, required shutdowns, and the ability to provide power for critical and emergency loads when designing the interconnection methodology.

With decades of experience implementing projects throughout California, Ameresco is well-versed in working with all of the major utilities in the State.

CALIFORNIA LFG/RNG EXPERIENCE

Ameresco is also one of the largest LFGTE developers in North America, with more recent California LFG experience than any other LFGTE developer. In the past 20 years, Ameresco has developed over 175 megawatt (MW) (effectively) of operational LFGTE projects with another 26 MW (effectively) in either development/design or construction.

Our ten (10) California LFGTE plants are capable of generating nearly 45 MW of green power. **We are in the process of developing new RNG Projects as well as converting existing electric generating assets over the RNG.**

The common thread among all our LFGTE projects is that the Ameresco team was able to find a way to overcome barriers to complete projects and realize significant economic and environmental benefits for our clients through consistently and successfully designing, building, and operating our facilities.

Ox Mountain Landfill – Half Moon Bay, CA

EPA's Project of the Year (2009)

The Ox Mountain Landfill has been part of the Half Moon Bay community since 1976 and will continue for another 35 years. Republic Services, Inc., the landfill owner, has been committed to collecting the LFG to reduce methane emissions (a potent greenhouse gas). To further enhance the landfill, Republic Services and Ameresco worked in partnership to use the LFG, a fuel source that was previously being wasted. In 2009, Ameresco completed an LFGTE project in California's Bay Area, which produces 11.4 MW of renewable energy. The output from the plant is sold to existing customers and project partners, City of Palo Alto and Alameda Municipal Power.

This landfill is located within the jurisdiction of the BAAQMD and has some of the strictest emission limits in California and the US. The air permit issued by the BAAQMD requires backend emission control equipment to reduce NOx and CO emissions.

Chiquita Canyon Landfill, Northern Los Angeles County, CA

Ameresco Chiquita Energy LLC designed, permitted, and constructed a 9.145 MW LFGTE plant at the Chiquita Canyon Landfill located in Valencia, CA. The project utilizes two Solar Mercury 50 gas turbines, each of which has a rated output of 4.572 MW and cumulatively consume approximately 3,798 scfm of LFG. The landfill is currently owned and operated by Waste Connections (formerly owned by Republic Services). The development was entirely funded by Ameresco.

The Chiquita Canyon landfill has been in operation since 1972. The landfill accepts between 5,000 and 6,000 tons of waste per day. In 2006, Ameresco Chiquita LLC entered into a gas purchase agreement with Republic in which Ameresco will pay a royalty for each mmBtu purchased. The term of the gas purchase agreement is for twenty-five years.

Since the project became operational, Ameresco assumed responsibility for operating and maintaining the LFGTE plant, including certain responsibilities for the LFG collection system. To ensure maximum operational efficiency Ameresco installed a Dominick Hunter gas clean up system. This gas cleanup system removes siloxanes from the LFG prior to combustion. To maintain compliance with the permit to operate issued by the SCAQMD, Ameresco was required to install a continuous emission monitoring system to monitor particulate matter concentrations.

Vasco Road – Livermore, CA

Ameresco developed a 4.3 MW LFGTE plant at the Vasco Road Landfill in Livermore, CA owned by Republic Services. Ameresco designed, permitted, constructed and now operates the LFGTE plant This project provides clean power to homes and businesses in the Santa Clara and San Francisco Bay Area. The LFG produced over the 20-year energy agreement is equivalent to removing approximately 30,000 cars off of the road. This project created 35 new jobs regionally and approximately 90 jobs nationally during the construction phase.

Keller Canyon Landfill – Pittsburgh, CA

In 2009, Ameresco completed construction on an LFGTE project, which produces 3.8 MW of renewable energy. Ameresco designed, permitted, constructed and now operates the LFGTE plant. Using engines from General Electric (Jenbacher), the facility generates approximately enough to power nearly 2,200 homes. The electricity is sold, via a power purchase agreement (PPA), to the cities of Alameda and Palo Alto. By using the LFG for this beneficial reuse project and replacing fossil fuels, the direct and avoided emissions are equivalent to removing approximately 30,000 cars from the road or plant more than 36,000 acres of pine or fir trees.

Foothill Landfill – Linden, CA

In 2010, Ameresco and San Joaquin County signed 20-year agreements to begin work on a 4.3 mW LFG plant at the Foothills Landfill. Through a competitive solicitation process, San Joaquin County selected Ameresco to develop, own, and operate this multi-million dollar LFG-to-energy power plant. To supply fuel for this plant landfill gas is extracted from the landfill through a series of wells and is piped to the LFG utilization plant, which is equipped with specialized GE/Jenbacher engines.

Ameresco selected GE/Jenbacher engine generator sets for this project due their low emission rates and high electrical efficiency rates. This landfill is located within the jurisdiction of the San Joaquin Valley Air Pollution Control District and has some of the strictest emission limits in California and the US. The air permit issued by the San Joaquin Valley Air Pollution Control District requires backend emission control equipment to reduce NOx and CO emissions. Ameresco partnered with The City of

Palo Alto, California via a 20-year power purchase agreement to buy all the power and RECs generated at this project. This LFGTE plant has been successfully and safely operating since early 2014.

Forward Landfill – Manteca, CA

The Forward Landfill located in Manteca, California is owned and operated by Republic Services; a private waste management company. Ameresco, in partnership with Republic Services, utilizes the LFG as fuel source for a 4.3 MW LFGTE plant. By utilizing the LFG, a valuable fuel source is no longer wasted and fossil fuel is displaced.

Ameresco selected GE/Jenbacher engine generator sets for this project due their low emission rates and high electrical efficiency rates. This landfill is located within the jurisdiction of the San Joaquin Valley Air Pollution Control District and has some of the strictest emission limits in California and the US. The air permit issued requires backend emission control equipment to reduce NOx and CO emissions.

Ameresco began construction on the LFGTE plant in April 2013 and reached commercial operations early the following year. The renewable energy from the plant will delivered to Silicon Valley Power to help meet their renewable energy goals.

Neal Road Landfill, Butte County – Paradise, CA

In 2012, Ameresco completed a 2.1 MW LFGTE plant located at the Neal Road Landfill in Paradise, CA in Butte County. Ameresco has a gas agreement with Butte County to purchase the LFG for use in the LFGTE plant and a long-term PPA with Alameda Municipal Power to buy the renewable energy. The Neal Road project created approximately 16 new regional full-time jobs during construction and yielded $5 million to the community, while reducing carbon dioxide emissions by 10,600 tons/year.

Johnson Canyon – Gonzales, CA

In late 2012, Ameresco completed a 2.1-megawatt MW landfill LFGTE plant at the Johnson Canyon Landfill in Gonzales, CA. The estimated employment impact of this project will yield up to 16 jobs in the region. Ameresco Johnson Canyon, LLC has a gas agreement with the Salinas Valley Solid Waste Authority (SVSWA) to purchase the LFG for use in LFGTE plant and a long-term PPA with the City of Palo Alto to buy the renewable energy.

All Purpose Landfill – Santa Clara, CA

The City of Santa Clara and its municipal electric utility, Silicon Valley Power, partnered with Ameresco to redevelop this project that was abandoned by the previously developer. Ameresco designed, built, owns, and operates the LFGTE project at the City's All-Purpose Landfill located in Santa Clara, CA. LFG is captured to generate 750 kWh of electricity, which is sold to the City's utility. This unique redevelopment project uses microturbine technology that meets stringent BAAQMD air regulations while utilizing LFG containing low concentrations of methane.

Buena Vista Landfill – Watsonville, CA

This LFGTE plant became operational in December 2005 with a ribbon-cutting ceremony in late February 2006, which included local and state officials.

In a four-way initiative, Ameresco purchases LFG from Santa Cruz County's solid waste disposal facility and uses it to produce renewable energy for sale to the City of Palo Alto and Alameda Municipal Power. The facility generates 3.2 MW of renewable energy - enough power for 3,000 homes. This project was highlighted in a global warming documentary titled "Forecast Earth," which aired on Earth Day 2007.

"The Santa Cruz County Department of Public Works has been working many years to develop this renewable energy resource as part of our overall commitment to preservation of natural resources through conscientious waste management practices. Beneficial use of the landfill methane derived from our community's waste stream has been one of our highest resource conservation priorities and we are pleased to be working with such a committed partner as Ameresco," said Patrick Mathews, Solid Waste and Recycling Services Manager, Santa Cruz County Public Works.

Environmental benefits of this project include use of a wasted fuel source as well as reduced air emissions for the City. The renewable energy source also saves on the usage of more traditional, fossil fuel energy production, significantly reducing air emissions.

PROJECTS UNDER CONSTRUCTION

London District Catholic School Board (LDCSB) JPII Carbon Free Microgrid London, Ontario, Canada

Objective

The ultimate objective of this project it to demonstrate how the integration of new energy technology products that include a broad spectrum of energy generation, consumption, storage, and analytics systems can not only provide a building with a majority of its energy needs, but also set the stage to use those same assets to provide services to the electrical grid it is connected to such as energy, regulation, ramping and other ancillary services while also being ready to participate in demand response and the future capacity market now under development at the IESO. It will lower electrical costs for the owners of the building it is connected to as there will only be a small requirement for it to use energy from the grid and it will ultimately demonstrate how this model, once widely deployed, will save all ratepayers money as the requirement for the future buildout and maintenance of expensive large bulk transmission grid scale generation along with transmission and distribution infrastructure will be greatly minimized moving forward.

Measures

- 1,200 kW / 2,200 kWh Li-ion BESS
- 400 kw Carport Solar
- 600 kw Roof top Solar
- 600 tones Geothermal
- Intelligent, fast load shed capable microgrid control system with grid islanding
- Site wide energy conservation measures
- Standard Level II Electric Vehicle charging stations
- School Bus Fast DC Level III charging infrastructure

Technology Description

This project involves reducing the energy consumption and eliminating the greenhouse gas (GHG) emissions at JPII Catholic Secondary School (JPII) in London Ontario by eliminating the need for all on-site natural gas utilization and installing an embedded carbon free energy generation microgrid system. The planned architecture of the microgrid system is such that the microgrid controller can be set up so that the IESO, Hydro One, and London Hydro would have visibility into and limited control for both safety and operational requirements.

An embedded carbon free microgrid energy system will be installed at the school featuring both real time grid islanding and ancillary local distribution company (LDC) and transmission grid support capability. The system will come online as an Ontario Electricity Market participant. On-site electrical energy generation will be provided by an 804kWDC solar PV rooftop and carport array which will be firmed and supported by a 1.1 MW Power – 2.2MWh Energy electrical energy storage system. Load management of the school will be migrated to an integrated building control system featuring building analytics, circuit level metering, and automated load shedding capability for certain selected large energy consumption loads such as building heat pumps, school wide lighting systems and electric vehicle (EV) charging stations.

The total project will provide energy resilience, the elimination of all on-site natural gas usage (except what is used for cooking and class lab work), a reduction of current overall energy use, demonstration to both parents and students of how Solar PV can provide firm, high quality, power and energy for most of the high school's energy requirements.

In addition, low-grid-impact intelligent carbon free electric vehicle charging stations will be installed designed to service both electric cars and school buses as they emerge to serve public sector education.

Benefits

All the technology components required to implement this solution exist today in commercially proven forms and in a few cases, have already been integrated together at some level. Main obstacles in the project are in technical integration, the stability of current tariffs along with the predictability of future energy markets, and the cost of certain components that are on a downward pricing trend. Demonstrating that this system can be integrated and deployed reliably will address the significant skepticism gap that, once eliminated, will open a huge new energy system market that will create employment, increase economic output and greatly reduce carbon emissions.

Yucaipa Valley Water District Energy Project Proposal

September 17, 2020

Prepared for:

Kathryn Hallberg, MSES, MBA
Implementation Manager
Yucaipa Valley Water District
12770 Second Street
Yucaipa, California 92399

Prepared by:

ENGIE
1420 Iowa Avenue, Suite 210
Riverside, California 92507

Ashu Jain, PE
Senior Manager
714-473-7837

September 17, 2020

Kathryn Hallberg, MSES, MBA
Implementation Manager
Yucaipa Valley Water District
12770 Second Street
Yucaipa, California 92399

Dear Ms. Hallberg:

Yucaipa Valley Water District (the District) can create over $63 million in net savings over the life of the program and reduce electricity consumption by 85%, the equivalent to removing the emissions from 1,926 vehicles from the road for one year, while increasing resiliency by partnering with ENGIE Services U.S. Inc. (ENGIE Services)

ENGIE Services understands the District seeks to reduce electrical energy costs, add emergency resiliency, reduce its carbon footprint through solar PV, BESS and Natural Gas Gensets.

ENGIE Services is uniquely suited to serve the District's objective. ENGIE Services is a trusted name with a **46-year history of delivering turnkey energy projects** that are tailored to the unique needs of water districts. With the full backing of our parent company, ENGIE, we are committed to renewables. With decarbonization at its strategic core, ENGIE Services has installed over **315 MW of solar PV** for public entities in California and is the largest independent installer of battery storage systems in the state.

Key differentiating features of ENGIE Services include:

- **Financial Strength:** ENGIE Services is a subsidiary of ENGIE, the largest independent power producer in the world with **$67 billion in 2019 revenue**. ENGIE has been continuously in operation for **over 175 years**. ENGIE offers a strong balance sheet, a proven financial track record and a favorable credit rating. As an ENGIE backed company, ENGIE Services is empowered to support the District's commitment to sustainability by seamlessly deploying the latest global technologies to help achieve its goals. ENGIE Services U.S. Inc. currently has a $75 million single project bonding limit, with an aggregate bonding capacity of $1 billion.

- **California Experience and Team:** ENGIE has strong local experience, partnering with Riverside County, Adelanto Unified School District, City of Moreno Valley, City of San Jacinto and many more. With **over 180 employees in California and 30 credentialed professional engineers**, we have more local resources to devote to this project than any other company. ENGIE Services will deliver the project through our full service local Riverside office. The team responsible for

developing the project will also deliver the project. ENGIE Services manages seamless project oversight with no project turnover and eliminates project risks.

- **Solar PV, BESS and Microgrid Expertise:** ENGIE Services has installed more than **300 MW** of customer-sited solar PV projects in California and our solar PV projects performed at over 109% of their stated outputs for the most recently reconciled year. ENGIE has also installed over **190 battery storage systems**, providing **57.9 MWh of storage capacity with 30 MWh enrolled** and participating **in eight grid** services programs throughout the country. ENGIE has more experience than most other companies in the industry having installed the first microgrid in the state at Alameda County's Santa Rita Jail more than eight years ago.

- **Quality Performance:** While our customer references and repeat business can speak to the customer satisfaction and quality of our work, our actual guaranteed performance speaks to our quality performance as well. Our measurement and verification (M&V) team oversees a guarantee portfolio in excess of $700 million with a national average inception-to-date performance against guarantee is 132%. This performance is among the leaders in the energy services industry. In addition, we have several Quality Control and Commissioning processes that contribute to our performance. **If project performance does not meet or exceed our guaranteed performance, ENGIE writes the customer a check for the difference, without delay or legal hassle**.

Thank you for the opportunity to provide Yucaipa Valley Water District with a proposal. For questions regarding our proposal, please contact: Ashu Jain, P.E., Senior Manager at (714) 473-7837 or ashu.jain@engie.com.

Sincerely,

Ashu Jain, PE
Senior Manager
714-473-7837
ashu.jain@engie.com

Table of Contents

Overview of Firm

Over four decades of practice unifying strong legacy companies has allowed ENGIE to evolve with our customers and become a leader in energy efficiency, renewables, and infrastructure development across the U.S. To date, we have **completed over 10,000 energy projects for our customers nationwide, including more than 500 public sector agencies.**

ENGIE has engineered, financed, and implemented comprehensive energy programs as the prime design-build general contractor for more than 100 public sector agencies in California, as illustrated in Figure 1. Special Districts are a specialty of our firm, and our track record successfully serving California Water Districts on similar projects — including Antelope Valley- East Kern Water Agency, Indian Wells Valley Water District, Montara Water & Sanitary District and Selma- Kingsburg-Fowler County Sanitation District— is a testament to our high-performance and capabilities.

Our track record of successful municipal energy projects designed and implemented across California—many of them **funded, engineered, and constructed across multiple phases of work**—are the best demonstration of our ability to deliver savings to the District through thoughtfully designed energy infrastructure programs.

K-12		Cities & Counties		Higher Education	Special Districts
Adelanto Unified School District	Morgan Hill Unified School District	City of Alhambra	City of Port Hueneme	Antelope Valley College	Antelope Valley-East Kern Water Agency
Alisal Union School District	Mount Baldy Joint Elementary School District	City of American Cany	City of Richmond	Butte Community College District	Contra Costa County Fire Protection District
Alpaugh Unified School District	Nuview Union School District	City of Atwater	City of Saint Helena	California State University, East Bay	Cosumnes Community Services District
Alum Rock Union Elementary School District	Oak Grove School District	City of Benicia	City of Salinas	California State University, Fresno	Indian Wells Valley Water District
Aromas San Juan Unified School District	Oakland Unified School District	City of Brea	City of San Jacinto	California State University, Sonoma	Montara Water & Sanitary District
Banning Unified School District	Orange Unified School District	City of Concord	City of San Jose	Chabot-Las Positas Community College District	Monterey Regional Airport
Barstow Unified School District	Paso Robles Joint Unified School District	City of Delano	City of Simi Valley	Compton Community College	San Diego County Regional Airport
Berryessa Union School District	Perris Union High School District	City of Dinuba	City of Union City	Contra Costa County Community College District	Selma-Kingsburg-Fowler County Sanitation District
Burbank Unified School District	Rim of the World Unified School District	City of Dublin	City of Waterford	Copper Mountain College	
Capistrano Unified School District	Saddleback Valley Unified School District	City of Firebaugh	City of Yuba City	Foothill-DeAnza Community College District	
Chula Vista Elementary School District	Salinas City Elementary School District	City of Fremont	Alameda County	Glendale Community College	
Compton Unified School District	Salinas Union High School District	City of Garden Grove	Contra Costa County	Hartnell College	
Desert Sands Unified School District	San Bernardino County Superintendent of Schools	City of Gonzales	Kings County	Irvine Valley College	
East Side Union High School District	San Diego Unified School District	City of Grass Valley	Los Angeles County	Los Angeles Community College District	
El Camino Real Charter High School	San Dieguito Union High School District	City of Greenfield	Madera County	Los Rios Community College District	
Escalon Unified School District	San Gabriel Unified School District	City of Hanford	Merced County	Mt. San Antonio College	
Escondido Union School District	San Jose Unified School District	City of King City	Orange County Fire Authority	Peralta Community College District	
Fountain Valley School District	San Lorenzo Unified School District	City of La Habra	Placer County	San Bernardino Community College District	
Franklin-McKinley School District	San Miguel Joint Union School District	City of La Puente	Riverside County	San Diego Community College District	
Gonzales Unified School District	Santa Ana Unified School District	City of Lakeport	Sacramento County	San Mateo County Community College District	
Grossmont Union High School District	Santa Cruz County Office of Education	City of Lemoore	San Benito County	Santa Clarita Community College District	
Helendale School District	Santa Maria Joint Union High School District	City of Livermore	Santa Clara County	Santa Monica College	
Huntington Beach City School District	Solana Beach School District	City of Lomita	Shasta County	Solano Community College	
Huntington Beach Union High School District	Soledad Unified School District	City of Lompoc	Solano County	St. Mary's College	
Jefferson Elementary School District	South San Francisco Unified School District	City of Madera	Sutter County	State Center Community College District	
Jurupa Unified School District	Temple City Unified School District	City of Marysville	Tulare County	University of California, Davis	
La Mesa-Spring Valley Schools	Tulare Joint Union High School District	City of Mendota	Yuba County	University of California, San Francisco	
Lake Elsinore Unified School District	Walnut Valley Unified School District	City of Millbrae			
Lemon Grove School District	Wasco Union Elementary School District	City of Moreno Valley			
Lemoore Union High School District	West Contra Costa Unified School District	City of Norco			
Live Oak School District	Westminster School District	City of Palm Springs			
Los Angeles Unified School District		City of Patterson			
Lucia Mar Unified School District		City of Pismo Beach			
Magnolia School District					
Manhattan Beach Unified School District					
Millbrae School District					
Milpitas Unified School District					
Montebello Unified School District					

1: ENGIE's Customers in California

We maintain a very local focus, and our team responsible for this project has years of experience managing countless projects the Riverside and San Bernardino County Region, as highlighted in Figure 2, and our growth in that region which will lead to further economies of scale, and better response to your needs.

$167 Million of Successful Programs in the Region	
Riverside County	$54.0 million
City of La Puente	$11.9 million
City of San Jacinto	$4.0 million
City of Moreno Valley	$2.9 million
City of Norco	$0.8 million
Adelanto School District	$2.0 million
Moreno Valley Unified School District	$21.6 million
Nuview Union School District	$9.2 million
Rim of the World Unified School District	$0.8 million
Banning Unified School District	$7.8 million
Barstow Unified School District	$3.6 million
Jurupa Unified School District (4 Phases)	$38.7 million
Lake Elsinore Unified School District	$4.6 million
Perris Union High School District	$2.0 million
San Bernardino Supt of Schools	$3.7 million

Figure 2: Our Valued Riverside & San Bernardino Region Customers

ENGIE is a wholly owned subsidiary of ENGIE, a $68 billion global energy company and the number one supplier of energy efficiency and renewable services in the world. With the full backing of our parent company, **we bring global resources and financial viability along with a local track record of performance for hundreds of public sector clients in California.**

For more than 46 years, we have built our reputation on the simple principle of helping our customers save money, improve the environment, and strengthen the reliability and resiliency of millions of square feet of infrastructure. The company has provided **more than $2.7 billion in energy savings** for our customers, largely comprised of state and local government agencies.

Our national footprint is comprised of 34 offices, with eight offices spread throughout California including offices in Oakland, Orange, Pasadena, Riverside, Sacramento, Salinas, San Diego, and San Jose. The project will be managed out of our Riverside office.

Firm's Experience with Similar Projects

Antelope Valley-East Kern Water Agency, CA

PROJECT HIGHLIGHTS

- Offsets carbon emissions equivalent to removing 1,958 cars from highways annually
- Utilized the Renewable Energy Self-Generation Bill Credit Transfer Program (RES-BCT) allowing AVEK to export energy to the grid and receive generation credits for other benefiting accounts within the Agency
- Funded the program with a combination of General Fund contribution and Clean Renewable Energy Bonds, as well as $87,000 in energy efficiency incentives from Southern California Edison
- Expected to reduce electricity spending by 66%

Riverside County

PROJECT HIGHLIGHTS

- Created 287 green jobs during construction using 80% local labor
- Solar installations contribute to progress on the General Plan and Climate Action Plan goals to revert to 1990 greenhouse gas emission levels by 202
- Will offset 385,000 metric tons of CO_2, the equivalent to removing more than 81,000 cars from the road for one year

Selma-Kingsburg-Fowler County Sanitation District

PROJECT HIGHLIGHTS

- Expected to create the equivalent of 244 jobs resulting from the economic multiplier effect over the program life
- Expected to reduce the District's electricity spending by 70%
- Expected to reduce carbon emissions equivalent to removing 700 cars from highways annually

$15 million
in savings over the life of the project
2.4 MW ground-mounted solar PV system
32 kW solar PV parking structure
500 kW/1,000 kWh energy storage system with cloud-based software
LED lighting retrofits
HVAC unit replacements

Indian Wells Valley Water District

PROJECT HIGHLIGHTS

- Reduces District electricity spend by approximately 63%
- Provides shaded parking for employees and visitors to the District Office
- Expected to reduce carbon emissions equivalent to removing 574 cars from highways annually

$9MM
in savings over the program life
2.08 MW of solar PV across six sites
Indoor/outdoor LED lighting and HVAC upgrades at the District Office

Firm's Expertise with Resiliency Solutions

- ENGIE Services has installed more than **300 MW** of public sector customer-sited solar PV projects in California and our solar PV projects performed at over 109% of their stated outputs
- ENGIE has also installed over **190 battery storage systems, providing 57.9 MWh of storage capacity with 30 MWh enrolled** and participating in eight grid services programs throughout the country
- ENGIE has more experience than most other companies in the industry having installed **the first microgrid in the state** at Alameda County's Santa Rita Jail more than eight years ago
- ENGIE has a dedicated team of battery storage and microgrid subject matter experts that focus on resiliency solutions for our customers

Firm	Number of Interconnected Solar PV Systems in California as of Apr 30, 2020
ENGIE	511
Ameresco	23
Schneider Electric	0
NextGrid	0
Scale Microgrid Solutions	0

Firm	Number of Interconnected Battery Storage Systems in California as of Dec 31, 2019
ENGIE	127
Ameresco	1
Schneider Electric	0
NextGrid	0
Scale Microgrid Solutions	0

Source: https://www.californiadgstats.ca.gov/downloads/

Scope of Work

- **Solar**
  - WWTP: 4,077 kW
  - WTP: 2,766 kW
- **Battery Storage Systems**
  - WWTP: 1,482 kW / 5,930 kWh
  - WTP: 1,001 kW / 4,185 kWh
- **Natural Gas Genset**
  - WWTP: Two (2) 750 kW
  - WTP: Two (2) 500 kW

Wastewater Treatment Plant Solar PV – 4,077 kW

Water Treatment Plant Solar PV – 2,766 kW

Battery Energy Storage System

- **Install Battery Energy Storage Systems utilizing Lithium-Ion Batteries:**
  - WWTP: 1,482 kW / 5,930 kWh
  - WTP: 1,001 kW / 4,185 kWh
- **Benefits Include:**
  - Provides back-up power
  - Peak demand shaving
  - Energy arbitrage
  - Demand response
  - Work in coordination with solar (solar firming)
  - Battery storage systems completely funded through Self Generation Incentive Program

Natural Gas Genset

- **Install Natural Gas Back-up Generator Sets**
  - WWTP: Two (2) 750 kW
  - WTP: Two (2) 500 kW
- **Benefits Include:**
  - Resiliency for critical facilities
  - Quieter compared to diesel gensets
  - Environmentally friendly, easy to permit
  - Continuity of fuel source
  - Safer – no need to store diesel at site

Scope of Work Not Included

- **Interconnection costs with SCE**
- **Access and fire road**
- **Natural gas piping for the backup gensets**
- **CEQA compliance**

Financial Cash Flow Analysis

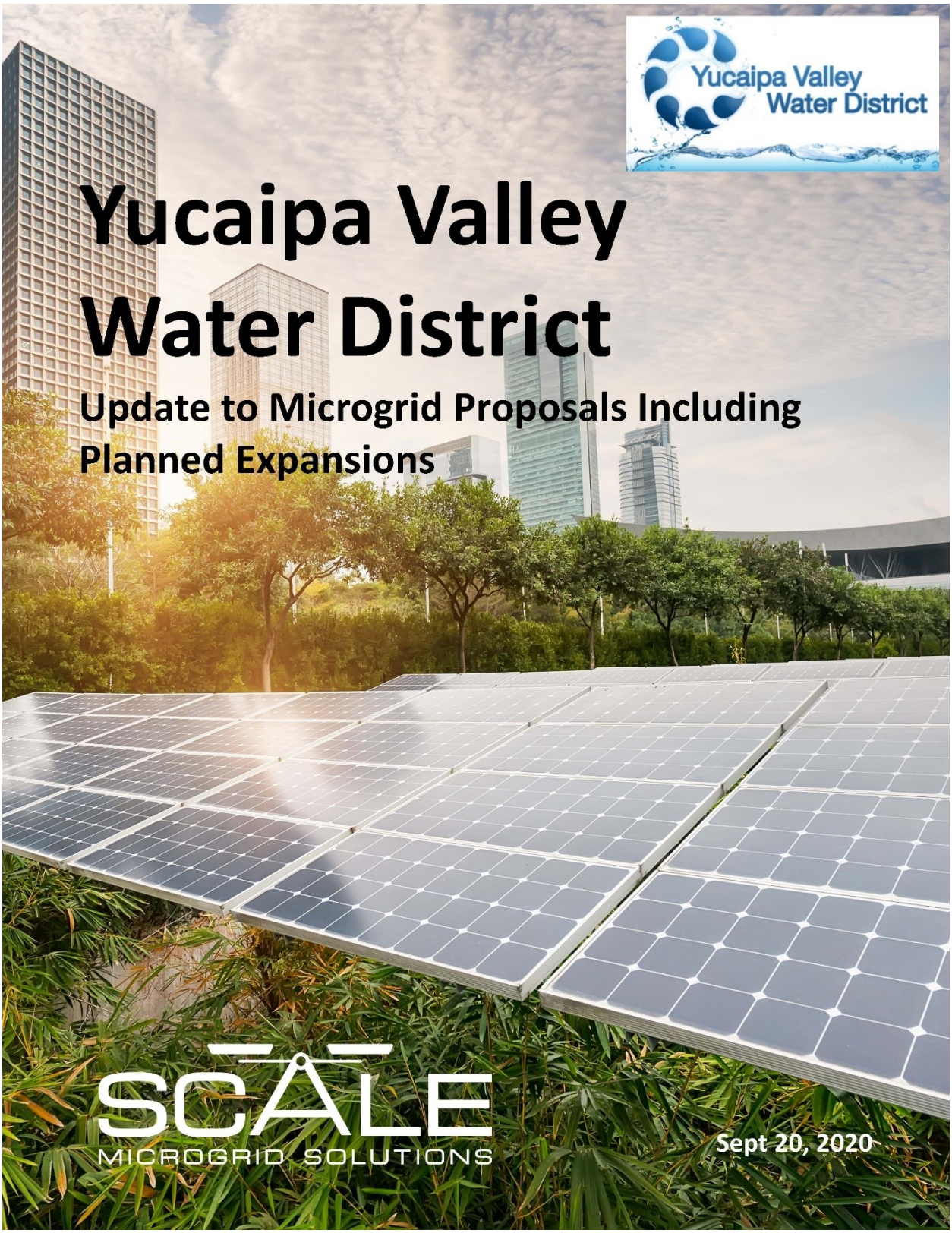
Total Solar System Size (kW)											6,843
Total Battery Storage Size (kW/kWh)											2,528/10,112
Total Natural Gas Genset Size (kW)											2,500
Power Purchase Agreement (PPA) Term											28
Annual Escalation of PPA Electricity Price											0.00%
Annual Escalation of Electricity Price											5.00%
Annual Escalation of O&M Price											2.00%
Annual Solar Panel Degradation											0.50%
Year	Electricity Generation kWh	Solar Project Savings $	Battery Storage Project Savings $	Total Project Savings $	Total Avoided Cost $/kWh	PPA Price	Annual PPA Cost	Buyout Price	Maintenance Cost	Total Project Costs	Net Savings
Year 1	12,611,337	$1,251,814	$347,922	$1,599,736	$0.1268	$0.0713	$899,756	$0	$0	$899,756	$699,980
Year 2	12,548,280	$1,307,833	$365,318	$1,673,151	$0.1333	$0.0713	$895,257	$0	$0	$895,257	$777,894
Year 3	12,485,539	$1,366,358	$383,584	$1,749,942	$0.1402	$0.0713	$890,781	$0	$0	$890,781	$859,161
Year 4	12,423,111	$1,427,503	$402,763	$1,830,266	$0.1473	$0.0713	$886,327	$0	$0	$886,327	$943,939
Year 5	12,360,996	$1,491,384	$422,901	$1,914,285	$0.1549	$0.0713	$881,895	$0	$0	$881,895	$1,032,389
Year 6	12,299,191	$1,558,123	$444,046	$2,002,169	$0.1628	$0.0713	$877,486	$0	$0	$877,486	$1,124,683
Year 7	12,237,695	$1,627,849	$466,248	$2,094,097	$0.1711	$0.0713	$873,098	$0	$0	$873,098	$1,220,999
Year 8	12,176,506	$1,700,695	$489,561	$2,190,256	$0.1799	$0.0713	$868,733	$0	$0	$868,733	$1,321,523
Year 9	12,115,624	$1,776,802	$514,039	$2,290,840	$0.1891	$0.0713	$864,389	$0	$0	$864,389	$1,426,451
Year 10	12,055,046	$1,856,313	$539,741	$2,396,054	$0.1988	$0.0713	$860,067	$0	$0	$860,067	$1,535,987
Year 11	11,994,770	$1,939,383	$566,728	$2,506,111	$0.2089	$0.0713	$855,767	$0	$0	$855,767	$1,650,344
Year 12	11,934,797	$2,026,171	$595,064	$2,621,235	$0.2196	$0.0713	$851,488	$0	$0	$851,488	$1,769,747
Year 13	11,875,123	$2,116,842	$624,817	$2,741,659	$0.2309	$0.0713	$847,231	$0	$0	$847,231	$1,894,429
Year 14	11,815,747	$2,211,571	$656,058	$2,867,629	$0.2427	$0.0713	$842,994	$0	$0	$842,994	$2,024,634
Year 15	11,756,668	$2,310,538	$688,861	$2,999,400	$0.2551	$0.0713	$838,779	$0	$0	$838,779	$2,160,620
Year 16	11,697,885	$2,413,935	$723,304	$3,137,239	$0.2682	$0.0713	$834,586	$0	$0	$834,586	$2,302,654
Year 17	11,639,395	$2,521,959	$759,469	$3,281,428	$0.2819	$0.0713	$830,413	$0	$0	$830,413	$2,451,015
Year 18	11,581,198	$2,634,816	$797,443	$3,432,259	$0.2964	$0.0713	$826,261	$0	$0	$826,261	$2,605,999
Year 19	11,523,292	$2,752,724	$837,315	$3,590,039	$0.3115	$0.0713	$822,129	$0	$0	$822,129	$2,767,910
Year 20	11,465,676	$2,875,909	$879,181	$3,755,089	$0.3275	$0.0713	$818,019	$0	$0	$818,019	$2,937,071
Year 21	11,408,348	$3,004,606	$0	$3,004,606	$0.2634	$0.0713	$813,929	$0	$0	$813,929	$2,190,677
Year 22	11,351,306	$3,139,062	$0	$3,139,062	$0.2765	$0.0713	$809,859	$0	$0	$809,859	$2,329,203
Year 23	11,294,549	$3,279,535	$0	$3,279,535	$0.2904	$0.0713	$805,810	$0	$0	$805,810	$2,473,725
Year 24	11,238,077	$3,426,294	$0	$3,426,294	$0.3049	$0.0713	$801,781	$0	$0	$801,781	$2,624,513
Year 25	11,181,886	$3,579,621	$0	$3,579,621	$0.3201	$0.0713	$797,772	$0	$0	$797,772	$2,781,849
Year 26	11,125,977	$3,739,809	$0	$3,739,809	$0.3361	$0.0713	$793,783	$0	$0	$793,783	$2,946,026
Year 27	11,070,347	$3,907,165	$0	$3,907,165	$0.3529	$0.0713	$789,814	$0	$0	$789,814	$3,117,351
Year 28	11,014,995	$4,082,011	$0	$4,082,011	$0.3706	$0.0713	$785,865	$0	$0	$785,865	$3,296,146
Year 29	10,959,920	$4,264,681	$0	$4,264,681	$0.3891	$0.0000	$0	$377,894	$119,138	$497,032	$3,767,648
Year 30	10,905,121	$4,455,525	$0	$4,455,525	$0.4086	$0.0000	$0	$0	$121,521	$121,521	$4,334,004
Totals	**352,148,401**	**$76,046,829**	**$11,504,363**	**$87,551,192**			**$23,564,066**	**$377,894**	**$240,659**	**$24,182,620**	**$63,368,572**

Energy Program Benefits

- **Create $63.4 million** in net savings after paying for all costs over the life of the program
- **Reduce District's electricity spend by 85%**
- **Provide resiliency for critical facilities** paid out of project savings
- Hedge against rising SCE energy costs
- **ENGIE guarantees 90% of energy generation**
- **20-year guaranteed life of battery** storage system
- Avail of lower PPA prices due to **30% ITC through ENGIE** even though ITC is 26% this year and goes down to 22% next year
- **Free 4-hour battery storage systems** due to Self Generation Incentive Program
- Stimulate local economy and provide local jobs
- Carbon emissions reduction equivalent of removing **1,926 cars** of the road annually

Tentative Energy Program Roadmap

- **Feasibility Study:** July 2020 – September 2020
- **Staff and Board Selection:** September 2020 – October 2020
- **Contract Approval:** November 2020 – December 2020
- **Engineering:** January 2021 – March 2021
- **Implementation:** April 2021 – December 2022


Yucaipa Valley Water District
Yucaipa Valley Water District
Update to Microgrid Proposals Including Planned Expansions
SCALE
MICROGRID SOLUTIONS
Sept 20, 2020

1.0 Introduction

Over the course of the past several months, it has come to light that the District is planning significant expansion projects at both facilities located on Oak Glen and County Line roads. Scale has worked with Kathryn Hallberg and John Weaver to obtain engineering estimates for the projected electrical load from the new equipment.

The proposal herein details the revised system designs as well as indicative economics, sustainability impact, and other relevant metrics for the District to evaluate. It is estimated that for the projects considered, **YVWD can expect savings of $623,000 in the first year of operation and cumulative savings of more than $30 million over the 25-year tenor.**

In addition, the District wishes to evaluate the utilization of on-site biogas for power generation at County Line. We have included our initial analysis and suggested product for this application, see attachment A, ***"Biogas Adder".*** Scale and the District have discussed that a more cost-effective solution might be possible after completing the planned expansion. For this reason, details of the biogas project have not been included in this financial analysis.

As always, Scale welcomes input from the District as a part of a collaborative process. The numbers included in this analysis are not representative of a 'best case scenario' but rather represent a conservative analysis given the information available. We are committed to doing whatever it takes to develop the best solution together and we're confident that we are the right partner to achieve the District's ambitious goals.

Sincerely,

Shea Hughes
Director of Business Development
Scale Microgrid Solutions

About Us

Scale Microgrid Solutions

Scale Microgrid Solutions combines technical expertise with innovative financial solutions to help our customers to reach their collective goals. We help move businesses forward with measurable impact by leveraging 100s of MW of distributed energy design, construction, financing, and maintenance projects. We are undisputed energy experts across all disciplines. Our end-to-end capabilities allow us to step in at any point of a distributed energy project to lead developers and our customers to cleaner, cheaper and more resilient energy.

Warburg Pincus

Established over 50 years ago, Warburg Pincus has invested more than $79 billion in more than 880 companies in more than 40 countries around the world. Years of private equity experience, deep industry knowledge, and unparalleled networks of resources complement Scale's deep energy expertise to provide capital that works harder to power growth for our developers, partners, customers, and technology companies.

Schneider Electric

Schneider Electric is leading the Digital Transformation of Energy Management, Automation, and Microgrids in Homes, Buildings, Data Centers, DoD bases, Infrastructure, and Industries. With revenues of €25 billion in FY2016, Schneider Electric's 144,000+ employees serve customers in over 100 countries, helping them to manage their energy and process in ways that are safe, reliable, efficient, and sustainable. As the indisputable leader in Power Management, Schneider Electric provides integrated energy efficiency solutions, combining energy, automation, and software. In its global Ecosystem, Schneider Electric collaborates with the largest Partner, Integrator and Developer Communities on its Open Platform to deliver real-time control and operational efficiency.

Hyde Engineering

Hyde Engineering Services (HES) is a multi-disciplinary engineering and technical services firm focused on advanced energy and battery projects in the utility, industrial, transportation, and marine sectors. HES provides services for all aspects of the project development lifecycle specializing in projects combining solar PV, battery storage, or combustion engine generation systems. In addition to being licensed Professional Engineers in 13 US states , HES has completed 1200MWh of battery projects in the US, the Caribbean, China, Ecuador, Japan, Nigeria, Myanmar, and Nepal.

2.0 Executive Summary

Given the information provided, Scale developed the following solution designs for the District, providing nearly **indefinite resiliency**, almost **90% reduction in greenhouse gases**, saving **$623,000** in the first year and almost **more than $30 million** cumulative savings.

	880 County Line	35477 Oak Glen	Total
Baseline Energy (including expansion)	12,869 MWh	8,330 MWh	21,199 MWh
MICROGRID COMPONENTS			
Solar PV Array	6.7 MWdc	3 MWdc	9.7 MWdc
Battery Energy Storage System	1.5 MW/ 6 MWh	1.25 MW/ 5 MWh	2.75 MW/ 11 MWh
Dispatchable Asset	1.5 MW	0.56 MW	2.06 MW
PERFORMANCE			
Solar Production	12,576 MWh	5,830 MWh	18,406 MWh
ECONOMICS			
MSA Costs	$1,094,000	$532,000	$1,626,000
Year One Net Savings	$425,000	$198,000	$623,000
Cumulative Savings	$20,435,000	$9,599,000	$30,034,000
ENVIRONMENTAL			
Greenhouse Gas Reduction (%)	97%	69%	87%

3.0 Baseline Information & Economic Inputs

	County Line	Oak Glen
Electric Utility	Southern California Edison	Southern California Edison
Pre-Project Electric Tariff	TOU-8-D	TOU-8-D
Post-project Electric Tariff	TOU-8-E (renewable option)	TOU-8-E (renewable option)
Peak Load*	2075 kW	1,327 kW
Blended Utility Rate (2020)	$0.1386/kWh	$0.1312/kWh
Gas Utility	SoCal Gas	SoCal Gas

**New load as estimated by SPI engineering was added to existing load. In the case of the County Line facility, Scale assumes that of the 1MW of new planned load, the load shape does not change but increases by approximately 70%. For Oak Glen, SPI indicated that 616kW of new load would be added and run continuously.*

4.0 Proforma Economics

See attachment B, Microsoft Excel file titled ***"YVWD Proforma".***

5.0 Next Steps

If Scale is selected for the projects, both parties would enter into a Memorandum of Understanding (MOU) to initiate a detailed engineering study at each site. During this period Scale's engineering team will work to further develop the projects and eliminate any risks or uncertainties.

After the detailed engineering studies are completed, Scale will present a final design and contract to the District for each project. If the proposed projects are agreeable, both parties will begin contractual negotiations for the Microgrid Services Agreement(s). See attachment C, ***"Microgrid Services Agreement template".***

Thank you for the opportunity to be the District's trusted partner on this exciting project.

Contact

Shea Hughes
Director of Business Development
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+1 (813) 434-5672

Yucaipa Valley Water District

Director Memorandum 20-145

Date: September 29, 2020

Prepared By: Joseph Zoba, General Manager

Subject: Consideration of a Memorandum of Understanding Regarding Overlying Water Rights Transfer and a Commitment to Provide Water Service to the Oak Valley Project

Recommendation: That the Board authorize the President to execute the Memorandum of Understanding and authorize the General Manager to sign the commitment to provide water service for the Oak Valley Project.

The Yucaipa Valley Water District has been working with the owners of the Oak Valley Project to develop and implement regional infrastructure to provide drinking water, recycled water, and sewer service to the master planned development.

While the District is already providing services to the Oak Valley Project, the proposed Memorandum of Understanding and commitment to provide service will encapsulate the numerous activities and assurances made by the District and the owners of the Oak Valley Project over the past several decades.

Copies of the proposed documents are currently being reviewed by legal counsel and will be reviewed and discussed at the board meeting.

Board Reports and Comments

Yucaipa Valley Water District

Yucaipa Valley Water District

FACTS ABOUT THE YUCAIPA VALLEY WATER DISTRICT

Service Area Size: 40 square miles (sphere of influence is 68 square miles)

Elevation Change: 3,140 foot elevation change (from 2,044 to 5,184 feet)

Number of Employees: 5 elected board members
72 full time employees

FY 2019-20 Operating Budget: Water Division - $14,455,500
Sewer Division - $12,217,712
Recycled Water Division - $1,301,447

Number of Services: 13,794 drinking water connections serving 19,243 units
14,104 sewer connections serving 22,774 units
111 recycled water connections serving 460 units

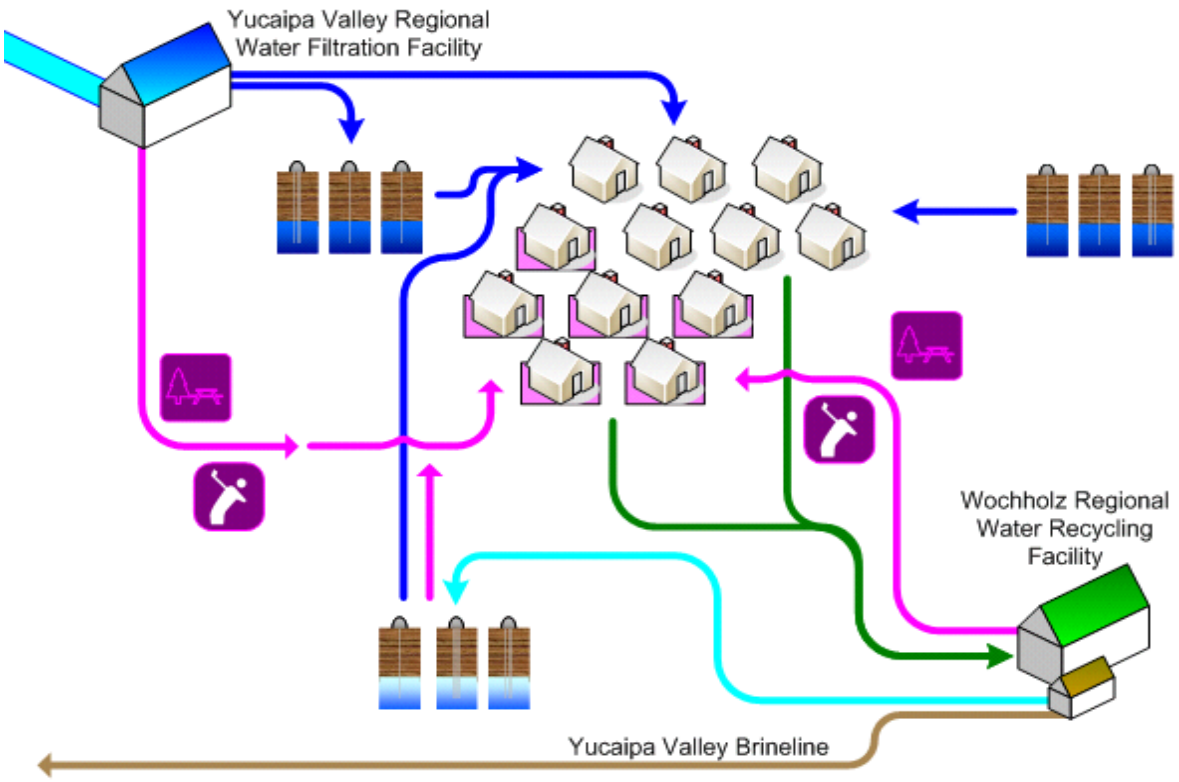
Water System: 223 miles of drinking water pipelines
2,033 fire hydrants
27 reservoirs - 34 million gallons of storage capacity
18 pressure zones
2.958 billion gallon annual drinking water demand
Two water filtration facilities:
- 1 mgd at Oak Glen Surface Water Filtration Facility
- 12 mgd at Yucaipa Valley Regional Water Filtration Facility

Sewer System: 8.0 million gallon treatment capacity - current flow at 3.5 mgd
213 miles of sewer mainlines
4,504 sewer manholes
5 sewer lift stations
1.27 billion gallons of recycled water produced per year

Recycled Water: 22 miles of recycled water pipelines
5 reservoirs - 12 million gallons of storage
0.681 billion gallon annual recycled water demand

Brine Disposal: 2.2 million gallon desalination facility at sewer treatment plant
1.756 million gallons of Inland Empire Brine Line capacity
0.595 million gallons of treatment capacity in Orange County

Sustainability Plan: A Strategic Plan for a Sustainable Future: The Integration and Preservation of Resources, adopted on August 20, 2008.



Typical Rates, Fees and Charges:

- Drinking Water Commodity Charge:

1,000 gallons to 15,000 gallons	$1.429 per each 1,000 gallons
16,000 gallons to 60,000 gallons	$1.919 per each 1,000 gallons
61,000 gallons to 100,000 gallons	$2.099 per each 1,000 gallons
101,000 gallons or more	$2.429 per each 1,000 gallons

- Recycled Water Commodity Charge:

1,000 gallons or more	$1.425 per each 1,000 gallons

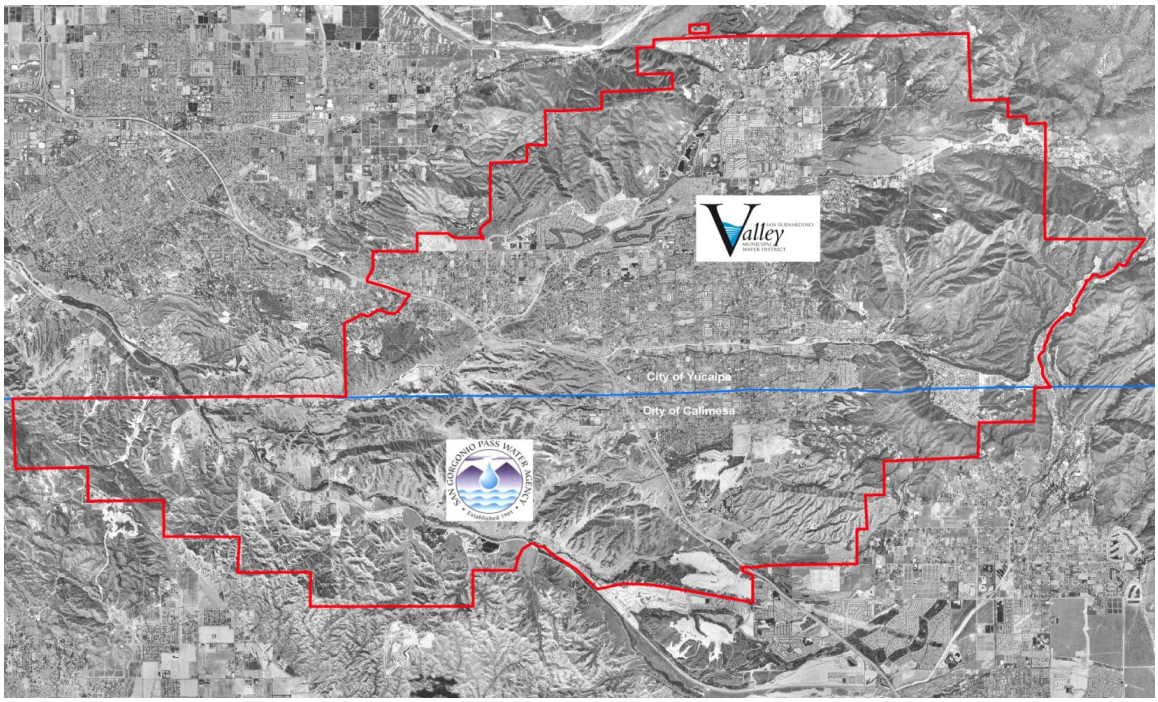
- Water Meter Service Charge (Drinking Water or Recycled Water):

5/8” x 3/4” Water Meter	$14.00 per month
1” Water Meter	$23.38 per month
1-1/2” Water Meter	$46.62 per month

- Sewer Collection and Treatment Charge:

Typical Residential Charge	$42.43 per month

State Water Contractors: San Bernardino Valley Municipal Water District
San Gorgonio Pass Water Agency



	San Bernardino Valley Municipal Water District	San Gorgonio Pass Water Agency
Service Area Size	353 square miles	222 square miles
Table "A" Water Entitlement	102,600 acre feet	17,300 acre feet
Imported Water Rate	$125.80 / acre foot	$399 / acre foot
Tax Rates for FY 2019-20	$0.1425 per $100	$0.1775 per $100
Number of Board Members	Five (5)	Seven (7)
Operating Budget FY 2019-20	$58,372,000	$9,551,000

Imported Water Charges (Pass-through State Water Project Charge)

- San Bernardino Valley Municipal Water District - Customers in San Bernardino County or City of Yucaipa pay a pass-through amount of $0.270 per 1,000 gallons.

- San Gorgonio Pass Water Agency - Customers in Riverside County or City of Calimesa pay a pass-through amount of $0.660 per 1,000 gallons. A proposed rate change to $0.857 per 1,000 gallons is pending future consideration by YVWD.

Yucaipa Valley Water District

GLOSSARY OF COMMONLY USED TERMS

Every profession has specialized terms which generally evolve to facilitate communication between individuals. The routine use of these terms tends to exclude those who are unfamiliar with the particular specialized language of the group. Sometimes jargon can create communication cause difficulties where professionals in related fields use different terms for the same phenomena.

Below are commonly used water terms and abbreviations with commonly used definitions. If there is any discrepancy in definitions, the District's Regulations Governing Water Service is the final and binding definition.

Acre Foot of Water - The volume of water (325,850 gallons, or 43,560 cubic feet) that would cover an area of one acre to a depth of 1 foot.

Activated-Sludge Process - A secondary biological wastewater treatment process where bacteria reproduce at a high rate with the introduction of excess air or oxygen and consume dissolved nutrients in the wastewater.

Annual Water Quality Report - The document is prepared annually and provides information on water quality, constituents in the water, compliance with drinking water standards and educational material on tap water. It is also referred to as a Consumer Confidence Report (CCR).

Aquifer - The natural underground area with layers of porous, water-bearing materials (sand, gravel) capable of yielding a supply of water; see Groundwater basin.

Backflow - The reversal of water's normal direction of flow. When water passes through a water meter into a home or business it should not reverse flow back into the water mainline.

Best Management Practices (BMPs) - Methods or techniques found to be the most effective and practical means in achieving an objective. Often used in the context of water conservation.

Biochemical Oxygen Demand (BOD) - The amount of oxygen used when organic matter undergoes decomposition by microorganisms. Testing for BOD is done to assess the amount of organic matter in water.

Biosolids - Biosolids are nutrient rich organic and highly treated solid materials produced by the wastewater treatment process. This high-quality product can be recycled as a soil amendment on farmland or further processed as an earth-like product for commercial and home gardens to improve and maintain fertile soil and stimulate plant growth.

Capital Improvement Program (CIP) - Projects for repair, rehabilitation, and replacement of assets. Also includes treatment improvements, additional capacity, and projects for the support facilities.

Certificate of Participation (COP) – A type of financing where an investor purchases a share of the lease revenues of a program rather than the bond being secured by those revenues.

Coliform Bacteria - A group of bacteria found in the intestines of humans and other animals, but also occasionally found elsewhere used as indicators of sewage pollution. E. coli are the most common bacteria in wastewater.

Collections System - In wastewater, it is the system of typically underground pipes that receive and convey sanitary wastewater or storm water.

Conjunctive Use - The coordinated management of surface water and groundwater supplies to maximize the yield of the overall water resource. Active conjunctive use uses artificial recharge, where surface water is intentionally percolated or injected into aquifers for later use. Passive conjunctive use is to simply rely on surface water in wet years and use groundwater in dry years.

Consumer Confidence Report (CCR) - see Annual Water Quality Report.

Contaminants of Potential Concern (CPC) - Pharmaceuticals, hormones, and other organic wastewater contaminants.

Cross-Connection - The actual or potential connection between a potable water supply and a non-potable source, where it is possible for a contaminant to enter the drinking water supply.

Disinfection by-Products (DBPs) - The category of compounds formed when disinfectants in water systems react with natural organic matter present in the source water supplies. Different disinfectants produce different types or amounts of disinfection byproducts. Disinfection byproducts for which regulations have been established have been identified in drinking water, including trihalomethanes, haloacetic acids, bromate, and chlorite

Drought - a period of below average rainfall causing water supply shortages.

Fire Flow - The ability to have a sufficient quantity of water available to the distribution system to be delivered through fire hydrants or private fire sprinkler systems.

Gallons per Capita per Day (GPCD) - A measurement of the average number of gallons of water use by the number of people served each day in a water system. The calculation is made by dividing the total gallons of water used each day by the total number of people using the water system.

Groundwater Basin - An underground body of water or aquifer defined by physical boundaries.

Groundwater Recharge - The process of placing water in an aquifer. Can be a naturally occurring process or artificially enhanced.

Hard Water - Water having a high concentration of minerals, typically calcium and magnesium ions.

Hydrologic Cycle - The process of evaporation of water into the air and its return to earth in the form of precipitation (rain or snow). This process also includes transpiration from plants, percolation into the ground, groundwater movement, and runoff into rivers, streams, and the ocean; see Water cycle.

Levels of Service (LOS) - Goals to support environmental and public expectations for performance.

Mains, Distribution - A network of pipelines that delivers water (drinking water or recycled water) from transmission mains to residential and commercial properties, usually pipe diameters of 4" to 16".

Mains, Transmission - A system of pipelines that deliver water (drinking water or recycled water) from a source of supply the distribution mains, usually pipe diameters of greater than 16".

Meter - A device capable of measuring, in either gallons or cubic feet, a quantity of water delivered by the District to a service connection.

Overdraft - The pumping of water from a groundwater basin or aquifer in excess of the supply flowing into the basin. This pumping results in a depletion of the groundwater in the basin which has a net effect of lowering the levels of water in the aquifer.

Pipeline - Connected piping that carries water, oil, or other liquids. See Mains, Distribution and Mains, Transmission.

Point of Responsibility, Metered Service - The connection point at the outlet side of a water meter where a landowner's responsibility for all conditions, maintenance, repairs, use and replacement of water service facilities begins, and the District's responsibility ends.

Potable Water - Water that is used for human consumption and regulated by the California Department of Public Health.

Pressure Reducing Valve - A device used to reduce the pressure in a domestic water system when the water pressure exceeds desirable levels.

Pump Station - A drinking water or recycled water facility where pumps are used to push water up to a higher elevation or different location.

Reservoir - A water storage facility where water is stored to be used at a later time for peak demands or emergencies such as fire suppression. Drinking water and recycled water systems will typically use concrete or

steel reservoirs. The State Water Project system considers lakes, such as Shasta Lake and Folsom Lake to be water storage reservoirs.

Runoff - Water that travels downward over the earth's surface due to the force of gravity. It includes water running in streams as well as over land.

Santa Ana River Interceptor (SARI) Line - A regional brine line designed to convey 30 million gallons per day (MGD) of non-reclaimable wastewater from the upper Santa Ana River basin to Orange County Sanitation District for treatment, use and/or disposal.

Secondary treatment - Biological wastewater treatment, particularly the activated-sludge process, where bacteria and other microorganisms consume dissolved nutrients in wastewater.

Service Connection - The water piping system connecting a customer's system with a District water main beginning at the outlet side of the point of responsibility, including all plumbing and equipment located on a parcel required for the District's provision of water service to that parcel.

Sludge - Untreated solid material created by the treatment of wastewater.

Smart Irrigation Controller - A device that automatically adjusts the time and frequency which water is applied to landscaping based on real-time weather such as rainfall, wind, temperature, and humidity.

South Coast Air Quality Management District (SCAQMD) - Regional regulatory agency that develops plans and regulations designed to achieve public health standards by reducing emissions from business and industry.

Special district - A form of local government created by a local community to meet a specific need. Yucaipa Valley Water District is a County Water District formed pursuant to Section 30000 of the California Water Code

Supervisory Control and Data Acquisition (SCADA) - A computerized system which provides the ability to remotely monitor and control water system facilities such as reservoirs, pumps, and other elements of water delivery.

Surface Water - Water found in lakes, streams, rivers, oceans, or reservoirs behind dams. In addition to using groundwater, Yucaipa Valley Water District receives surface water from the Oak Glen area.

Sustainable Groundwater Management Act (SGMA) - Pursuant to legislation signed by Governor Jerry Brown in 2014, the Sustainable Groundwater Management Act requires water agencies to manage groundwater extractions to not cause undesirable results from over production.

Transpiration - The process by which water vapor is released into the atmosphere by living plants.

Trickling filter - A biological secondary treatment process in which bacteria and other microorganisms, growing as slime on the surface of rocks or plastic media, consume nutrients in wastewater as it trickles over them.

Underground Service Alert (USA) - A free service (https://www.digalert.org) that notifies utilities such as water, telephone, cable and sewer companies of pending excavations within the area (dial 8-1-1 at least 2 working days before you dig).

Urban runoff - Water from city streets and domestic properties that carry pollutants into the storm drains, rivers, lakes, and oceans.

Valve - A device that regulates, directs, or controls the flow of water by opening, closing, or partially obstructing various passageways.

Wastewater - Any water that enters the sanitary sewer.

Water Banking - The practice of actively storing or exchanging in-lieu surface water supplies in available groundwater basin storage space for later extraction and use by the storing party or for sale or exchange to a third party. Water may be banked as an independent operation or as part of a conjunctive use program.

Water Cycle - The continuous movement water from the earth's surface to the atmosphere and back again.

Water Pressure - Water pressure is created by the weight and elevation of water and/or generated by pumps that deliver water to customers.

Water Service Line - A water service line is used to deliver water from the Yucaipa Valley Water District's mainline distribution system.

Water table - the upper surface of the zone of saturation of groundwater in an unconfined aquifer.

Water transfer - a transaction, in which a holder of a water right or entitlement voluntarily sells/exchanges to a willing buyer the right to use all or a portion of the water under that water right or entitlement.

Watershed - A watershed is the region or land area that contributes to the drainage or catchment area above a specific point on a stream or river.

Water-Wise House Call - a service which provides a custom evaluation of a customer's indoor and outdoor water use and landscape watering requirements.

Well - a hole drilled into the ground to tap an underground aquifer.

Wetlands - lands which are fully saturated or under water at least part of the year, like seasonal vernal pools or swamps.

Yucaipa Valley Water District

COMMONLY USED ABBREVIATIONS

AQMD	Air Quality Management District
BOD	Biochemical Oxygen Demand
CARB	California Air Resources Board
CCTV	Closed Circuit Television
CWA	Clean Water Act
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
FOG	Fats, Oils, and Grease
GPD	Gallons per day
MGD	Million gallons per day
O & M	Operations and Maintenance
OSHA	Occupational Safety and Health Administration
POTW	Publicly Owned Treatment Works
PPM	Parts per million
RWQCB	Regional Water Quality Control Board
SARI	Santa Ana River Inceptor
SAWPA	Santa Ana Watershed Project Authority
SBVMWD	San Bernardino Valley Municipal Water District
SCADA	Supervisory Control and Data Acquisition system
SGMA	Sustainable Groundwater Management Act
SSMP	Sanitary Sewer Management Plan
SSO	Sanitary Sewer Overflow
SWRCB	State Water Resources Control Board
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Load
TSS	Total Suspended Solids
WDR	Waste Discharge Requirements
YVWD	Yucaipa Valley Water District