

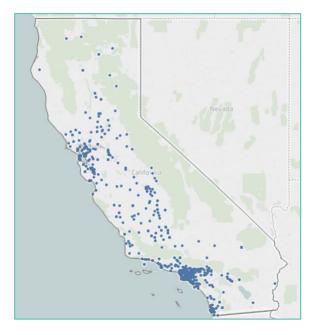
# **Combined Heat and Power (CHP) Snapshots – California**

# Western CHP Technical Assistance Partnership (TAP) Quick Facts

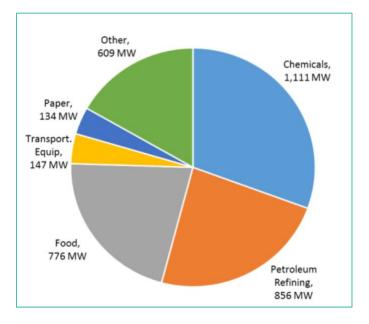
- The Western CHP TAP works with regional partners to promote and assist in transforming the market for CHP, waste heat to power, and district energy technologies throughout the West coastal region of the U.S.
- The Western CHP TAP serves the states of Arizona, California, Hawaii, and Nevada.

| State      | Number of<br>Current<br>Sites | Total CHP<br>Capacity<br>(MW)<br>Deployment | Number<br>of<br>Potential<br>Sites | Total CHP<br>Technical<br>Potential<br>(MW) | CHP TAP Activities (2014-2017) |                       |                          |
|------------|-------------------------------|---------------------------------------------|------------------------------------|---------------------------------------------|--------------------------------|-----------------------|--------------------------|
|            |                               |                                             |                                    |                                             | Technical<br>Assistance        | End-User<br>Education | Policymaker<br>Education |
| Arizona    | 12                            | 83                                          | 5,703                              | 2,422                                       | 26                             | 5                     | 19                       |
| California | 1,217                         | 8,584                                       | 28,968                             | 11,772                                      | 221                            | 41                    | 28                       |
| Hawaii     | 10                            | 437                                         | 1,292                              | 563                                         | 19                             | 3                     | 21                       |
| Nevada     | 14                            | 316                                         | 2,399                              | 1,378                                       | 10                             | 4                     | 3                        |
| Total      | 1,253                         | 9,420                                       | 38,362                             | 16,135                                      | 276                            | 53                    | 71                       |

### California CHP Installations



#### **CHP Technical Potential by Industrial Sector**





### **California CHP Project Snapshots**

- Houweling's Tomatoes (Camarillo, CA) In 2012, the facility installed a 12.5 MW reciprocating engine CHP system to provide electricity and greenhouse heating. By setting up a Power Purchase Agreement with the local utility, the greenhouse can run the CHP system at all times, exporting excess electricity to the grid during the day and utilizing it onsite at night. The energy cost savings from the CHP system has made the greenhouse competitive with agricultural imports from Mexico.
- Twentynine Palms Marine Corps Air Ground Combat Center (Twentynine Palms, CA) The Marine Corps Air Ground Combat Center in Twentynine Palms, CA installed two CHP systems totaling 16.7 MW over the past 15 years. The base is at the end of an electric line and was experiencing frequent power outages. The CHP system allows the base to seamlessly carry out its mission of providing training, facilities, and services for more than 28,000 military and civilian personnel.

## **Testimonials from CHP TAP Beneficiaries in California**

"Sierra Nevada Brewing Co. has found incredible value in the CHP Technical Assistance Program. Having the availability of third party, unbiased technical advice on complicated technologies made us feel much more informed in the energy decisions we have made for our brewery."

Cheri Chastain, Sustainability Manager Sierra Nevada Brewing Chico, CA

"The [Western CHP TAP] team was able to evaluate different economic and technological opportunities to see what would best fit Paradise Valley. There were a few resizing's of the systems as well as certain technologies that were nixed due to their improbability. This approach of fine-tuning created a certain level of comfort when the final report came along. The breadth of knowledge with the up-front rebates, technologies and forecasted performance-based incentive programs also lent well in addition to their engineering expertise."

David Baker, Corporate Energy Manager and Facilities Operations Prime Healthcare Ontario. CA

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<sup>1</sup> U.S. DOE, December 2016, "Combined Heat and Power Installation Database" (<u>https://doe.icfwebservices.com/chpdb/</u>). <sup>2</sup> U.S. DOE, March 2016, "Combined Heat and Power (CHP) Technical Potential in the United States" (<u>https://energy.gov/eere/amo/downloads/new-release-us-doe-analysis-combined-heat-and-power-chp-technical-potential</u>).