



California Conservation Corps 2017 Annual Report to the Proposition 39 Citizens Oversight Board



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Energy Corps Program

- CCC's Energy Corps -



Founded by Governor Brown in 1976, the CCC and its Corpsmembers have more than 30 years of successful engagement in Energy Efficiency (EE) and Renewable Energy (RE) projects and programs throughout California. In 2013 the CCC established the “Energy Corps” as an operational group within the CCC that provides:

- **Energy Industry Training & Work Experience** – CCC Corpsmembers and Staff are professionally trained to become very capable, efficient and cost effective resources for a variety of EE and RE projects and programs.
- **Cooperative Energy Industry Partnerships** – EE & RE project and program opportunities that provide energy industry training & work experience for Corpsmembers are developed between energy industry experts (Energy Corps ‘partners’), Sponsors/Recipients of Services, and the CCC.
- **Innovative Program Designs** - Working with Energy Corps partners to create new EE and RE Programs and Projects that engage Corpsmembers.
- **Energy Industry Services** - Provided to California LEAs, energy industry companies, utilities, State and Local Government Agencies, non-profit organizations, and others.
- **CCC Energy Centers** – 4 of the 26 CCC operating centers in 2017 were dedicated CCC “Energy Centers” (Sacramento, San Jose, Norwalk, and Vista), from which the CCC operates 10 Energy Corps Crews to provide energy conservation project and program services throughout the State. The CCC also based one 1 Energy Corps Crew operating out of the Fresno CCC Center.



Energy Corps Program

- CCC Resources and Infrastructure -

With a total of 26 CCC operating locations throughout the State, the CCC had 4 dedicated Energy Centers in 2017. 10 Proposition 39 funded Energy Corps Crews worked from 5 of these Centers to provide K-12 LEAs with professionally trained and managed Energy Corps Corpsmembers, infrastructure, and energy industry services for Energy Efficiency Projects.

CCC & Local Corps





Energy Corps Program

- Proposition 39 Goals -



The CCC's Energy Corps Program is designed to meet the following goals:

➤ **Provide Extensive Energy Industry Training and Work Experience**

- **Energy Industry Training** - Extensive energy industry training experience for Corpsmembers (young adults from 18 to 25, and recently returned veterans up to 29).
- **Energy Industry Work Experience** - Helping to develop the 'next generation' of energy industry workers through extensive energy industry work experience and a continuum of on-the-job training and education.
- **Create Energy Job Opportunity Pathways** - Creating partnerships with energy industry companies that develop into employment opportunity 'pathways' for Corpsmembers interested in pursuing careers in the energy industry.

➤ **Save Energy and Reduce Operating Costs for LEAs**

- **Energy Opportunity Surveys** - Conduct energy industry standard (ASHRAE compliant) 'low cost' whole building Energy Opportunity Surveys (energy audits) for LEAs (providing LEAs with detailed on-site sight data collection for all energy systems, energy use, operational data, physical building inventories, and plug loads necessary to identify, calculate, and recommend energy savings opportunities).
- **Retrofit Installation** - Perform 'low cost' Energy Efficiency Retrofit installations that generate immediate and substantial (and sustainable) energy & cost savings for LEAs.
- **"Best Practices"** - Provide LEA facility management and staff with detailed Operations and Maintenance (O&M) whole building 'Best Practices' guides for energy efficiency.



Energy Corps Program

- Proposition 39 Funded Services For LEAs -

Status – Proposition 39 Funding Allocated to the CCC:

| CCC Proposition 39 Funding Allocations - In Thousands | | | | |
|-------------------------------------------------------|----------|----------|----------|----------|
| FY 17-18 | FY 16-17 | FY 15-16 | FY 14-15 | FY 13-14 |
| \$ 5,816 | \$ 5,660 | \$ 5,406 | \$ 5,000 | \$ 5,007 |

CCC Providing
'Low Cost' &
'No Cost' EE & RE
Services
Statewide For LEAs

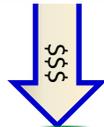


Prop 39 Funding
LEA Submits EEP to
CEC For Approval -
CDE Allocates
Funds to LEA



LEAs

'Low Cost' Energy Opportunity Surveys
'Low Cost' EE Retrofit Installations
'No Cost' & 'Low Cost' EE Education



Distribution of California LEAs

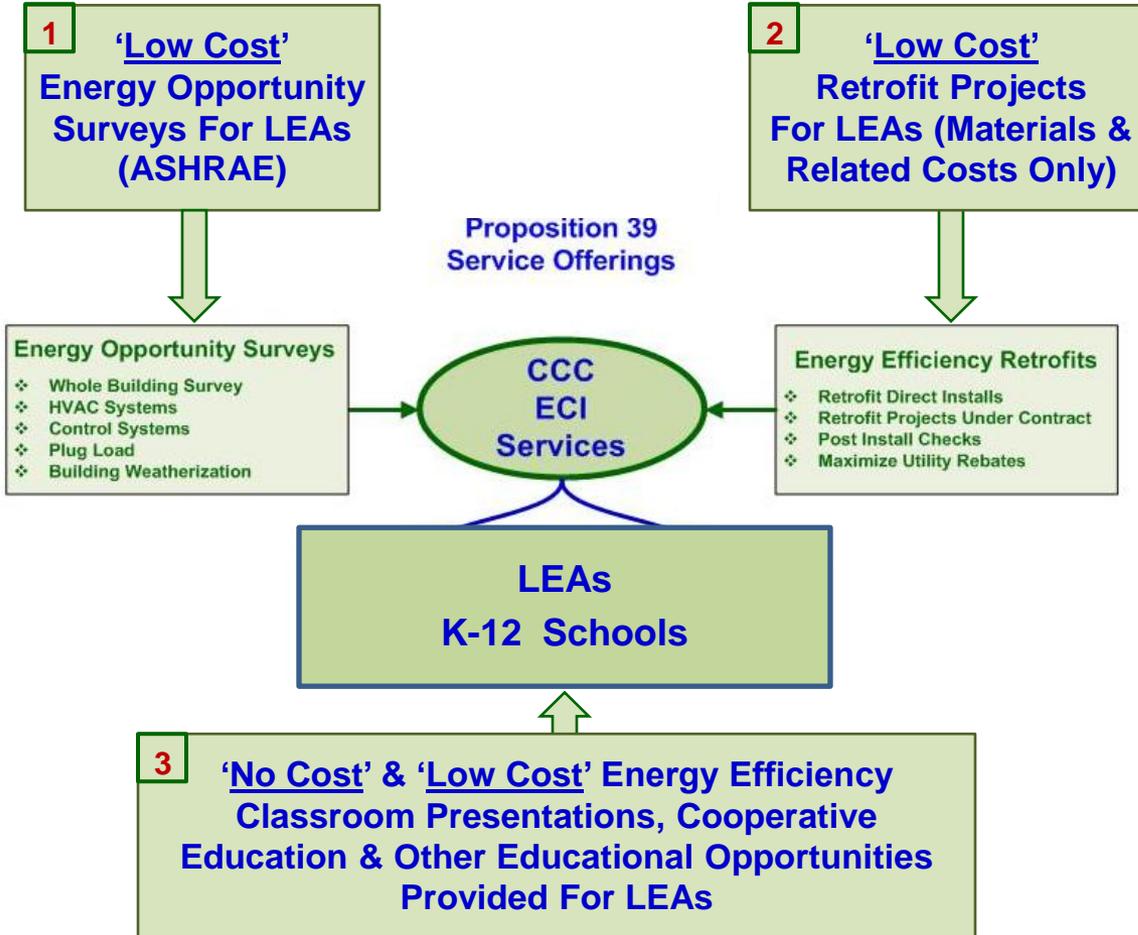




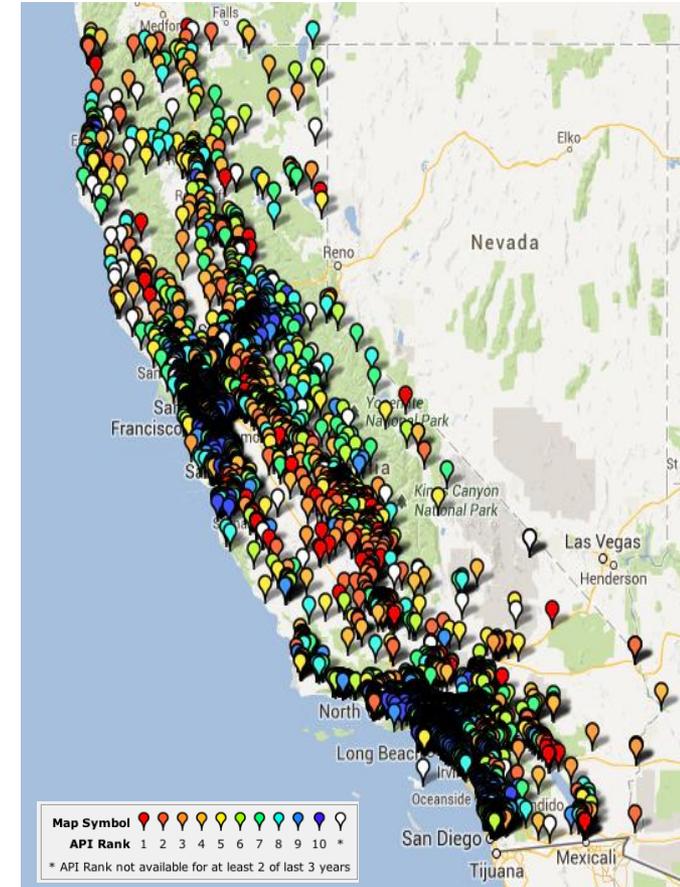
Energy Corps Program

- Proposition 39 Funded Service Offerings -

Status – Proposition 39 Funded Services Provided for K-12 LEAs by the CCC:



Distribution of California LEAs





Energy Corps Program

- Proposition 39 Funded Service Offerings -



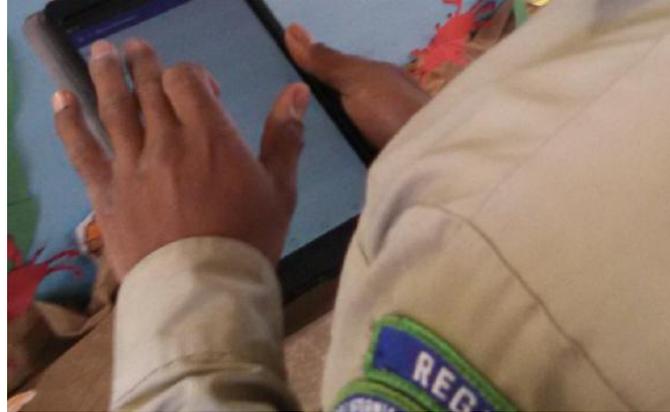
1 **Status: "Tablet" Based Energy Opportunity Survey:**

The CCC's Energy Corps has developed and implemented an ASHRAE Compliant 'Cloud based' Energy Opportunity Survey Software Application that operates on either Tablets or Smart Phone Platforms.

This CCC Tablet Based Energy Opportunity Survey is much more efficient than a paper based Survey processes, and it allows the Survey Data collected to be transmitted in 'real time' to a variety of recipients. Including review of the survey process and data collected by Survey management staff and data analytic resources.

Survey Content: Each CCC "Whole Building" Energy Opportunity Survey includes the following:

Building 'Envelope', Lighting & Control Systems, HVAC, internal Plug Loads, integrated Energy Management systems, Fenestration and 'O&M' Best Practices.





Energy Corps Program

- Proposition 39 Funded Program Status -

1 Status – Energy Opportunity Surveys: In January of 2014, the CCC’s ‘Energy Corps’ deployed **10** Proposition 39 Funded Crews of trained and supervised Energy Corps Corpsmembers to provide ASHRAE compliant ‘Whole Building’ Energy Opportunity Surveys (energy audits) for K-12 LEAs. **During 2017 there were an average of 3 Crews performing Energy Opportunity Surveys, with the balance of 7 Crews being performing EE Retrofit Installations for K-12 LEAs.** The status of Proposition 39 funded Energy Opportunity Survey provided during 2017, and cumulatively “to date” by the CCC, is as follows:

| Proposition 39 Funded Energy Opportunity Surveys | |
|--------------------------------------------------|-----------|
| | "To Date" |
| Total LEAs Requesting Services | 439 |
| Total Number of Project Sites | 1,429 |
| Total Number of Completed Projects | 1,420 |

| Totals by Calendar Years | | | | |
|--------------------------|------|------|------|------|
| 2017 | 2016 | 2015 | 2014 | 2013 |
| 7 | 32 | 25 | 246 | 129 |
| 92 | 192 | 161 | 979 | 5 |
| 83 | 192 | 161 | 979 | 5 |



| | | |
|---------------------------------|------------|-----|
| Total Energy Surveys Completed | 1,327 | |
| Total Buildings Surveyed | 13,822 | |
| Total Square Footage Surveyed | 79,002,745 | |
| LEAs Surveyed - Total | 415 | |
| LEAs Surveyed - Over 5,000 ADA | 81 | 20% |
| LEAs Surveyed - Under 5,000 ADA | 334 | 80% |
| LEAs Surveyed - Over 50% FRPM | 265 | 64% |

| | | | | |
|-----------|-----------|-----------|------------|---------|
| 69 | 156 | 134 | 963 | 5 |
| 1,169 | 1,532 | 1,397 | 9,677 | 47 |
| 9,331,848 | 6,563,081 | 9,115,576 | 53,773,464 | 218,776 |
| 7 | 16 | 19 | 244 | 129 |
| 2 | 5 | 7 | 41 | 26 |
| 5 | 11 | 12 | 203 | 103 |
| 4 | 11 | 15 | 163 | 72 |





Energy Corps Program

- Proposition 39 Funded Service Offerings -

1 **Status: Valuable Energy Use Data for K-12 Schools** – To date, the CCC has completed highly detailed ‘whole building’ inventory and energy use data collection for **13,822 K-12 School and other LEA District Buildings** in California, comprising more than **79 Million Square Feet** of conditioned building Space. The data for each of these buildings has also been analyzed by the CCC’s Energy Corps expert energy industry partners, with the results and recommendations reported back to each LEA receiving these services.

This K-12 LEA data represents one of the largest, most detailed and comprehensive in scope, and ‘current’ energy use and performance data sets available for any category of commercial class buildings (Schools and School District Buildings). It is also available in a consistent format for each facility Surveyed by the CCC that can be loaded into a variety of databases and then ‘data mined’ for various energy efficiency purposes. **In addition to serving the needs of the LEAs regarding their Proposition 39 Energy Efficiency Plans (EEP), going forward, the potential use of this data can help inform various energy efficiency policy decisions and assist in prioritizing the types and availability EE incentives that would be most appropriate and effective for this energy sector.**

Survey Content:

Each CCC “Whole Building” Energy Opportunity Survey includes the following:

Building ‘Envelope’, Lighting & Control Systems, HVAC, internal Plug Loads, integrated Energy Management systems, Fenestration and ‘O&M’ Best Practices.





Energy Corps Program

- Proposition 39 Funded Program Status -

2 Status – EE Lighting and Controls Retrofit Installations: In mid 2015, the CCC’s Energy Corps began providing Proposition 39 funded EE Lighting and Controls Retrofit Installation services for LEAs statewide.

During 2017 there were an average of 7 Proposition 39 Funded Energy Corps Crews assigned to perform EE Lighting and Controls Retrofit Installations for K-12 LEAs. The status of Proposition 39 funded EE Lighting and Controls Retrofit Installations provided during 2017, and cumulatively “to date” by the CCC, is as follows:

| Proposition 39 Funded EE Retrofit Installations | |
|-------------------------------------------------|---------|
| | To Date |
| Total LEAs Requesting Services | 439 |
| Total Number of Project Sites | 1,429 |
| Total Number of Completed Projects | 1,420 |

| Totals by Calendar Years | | | | |
|--------------------------|------|------|------|------|
| 2017 | 2016 | 2015 | 2014 | 2013 |
| 7 | 32 | 25 | 246 | 129 |
| 92 | 192 | 161 | 979 | 5 |
| 83 | 192 | 161 | 979 | 5 |



| | | |
|---------------------------------------|-----------|-----|
| Total Retrofit Projects Completed | 93 | |
| Total Number of Lighting Retrofits | 124,005 | |
| Total Number of Controls Retrofits | 8,583 | |
| Estimated kWh Reduction Per Year | 7,599,438 | |
| Estimated CO2 Reduction (Metric Tons) | 1,807 | |
| Total LEAs Retrofitted - Total | 54 | |
| LEAs Retrofitted Over 5,000 ADA | 21 | 39% |
| LEAs Retrofitted Under 5,000 ADA | 33 | 61% |
| LEAs Retrofitted Over 50% FRPM | 29 | 54% |

| | | | | |
|---------|-----------|-----------|----|---|
| 14 | 36 | 27 | 16 | 0 |
| 8,783 | 78,696 | 36,526 | 0 | 0 |
| 0 | 4,693 | 3,890 | 0 | 0 |
| 521,710 | 4,153,706 | 2,924,022 | 0 | 0 |
| 124 | 988 | 695 | 0 | 0 |
| 14 | 17 | 9 | 14 | 0 |
| 6 | 6 | 4 | 5 | 0 |
| 8 | 11 | 5 | 9 | 0 |
| 7 | 9 | 6 | 7 | 0 |

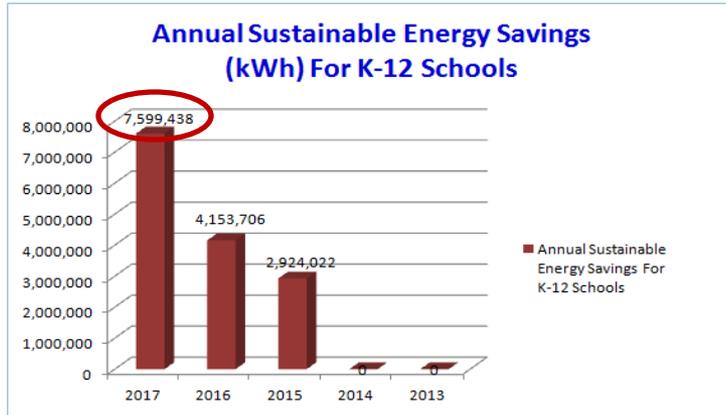




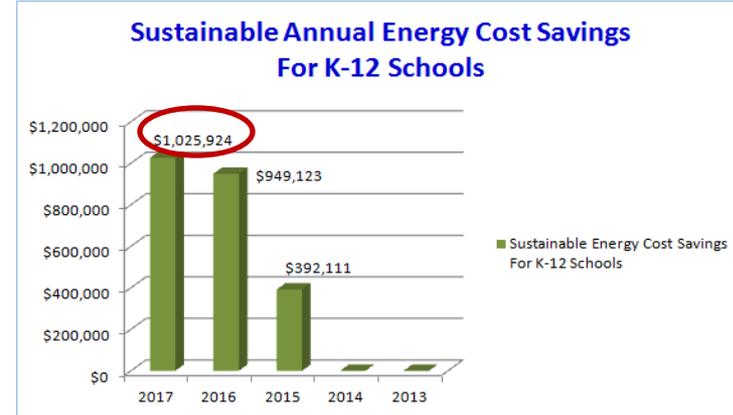
Energy Corps Program

- Proposition 39 Funded Program Status -

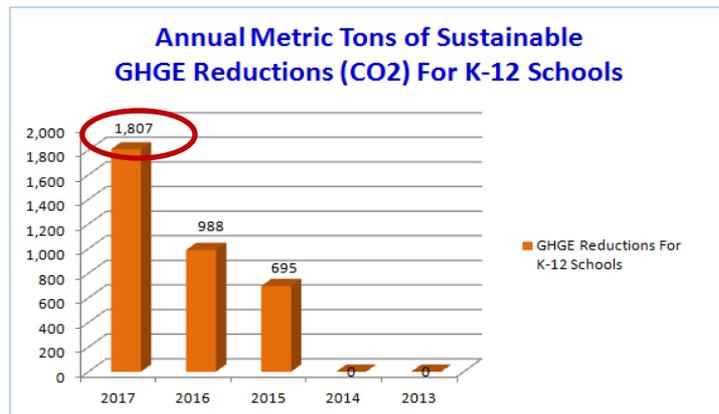
2 Status – Retrofit Energy, Cost & GHGE Savings: In mid 2015, the CCC’s Energy Corps began providing Proposition 39 funded EE Lighting and Controls Retrofit Installation services for LEAs throughout the State. The status of Proposition 39 funded Energy, Cost & GHGE Savings cumulatively “to date” by the CCC is as follows:



Energy Savings – For K-12 Schools - **more than 7.5 Million kWh saved annually and sustainably for LEAs.**



Energy Cost Savings – For K-12 Schools - **more than \$1.025 Million in sustainable annual energy cost savings.**



Green House Gas Emissions – For K-12 Schools - **more than 1,807 Metric Tons of annual and sustainable GHGE (CO₂) have been reduced.**

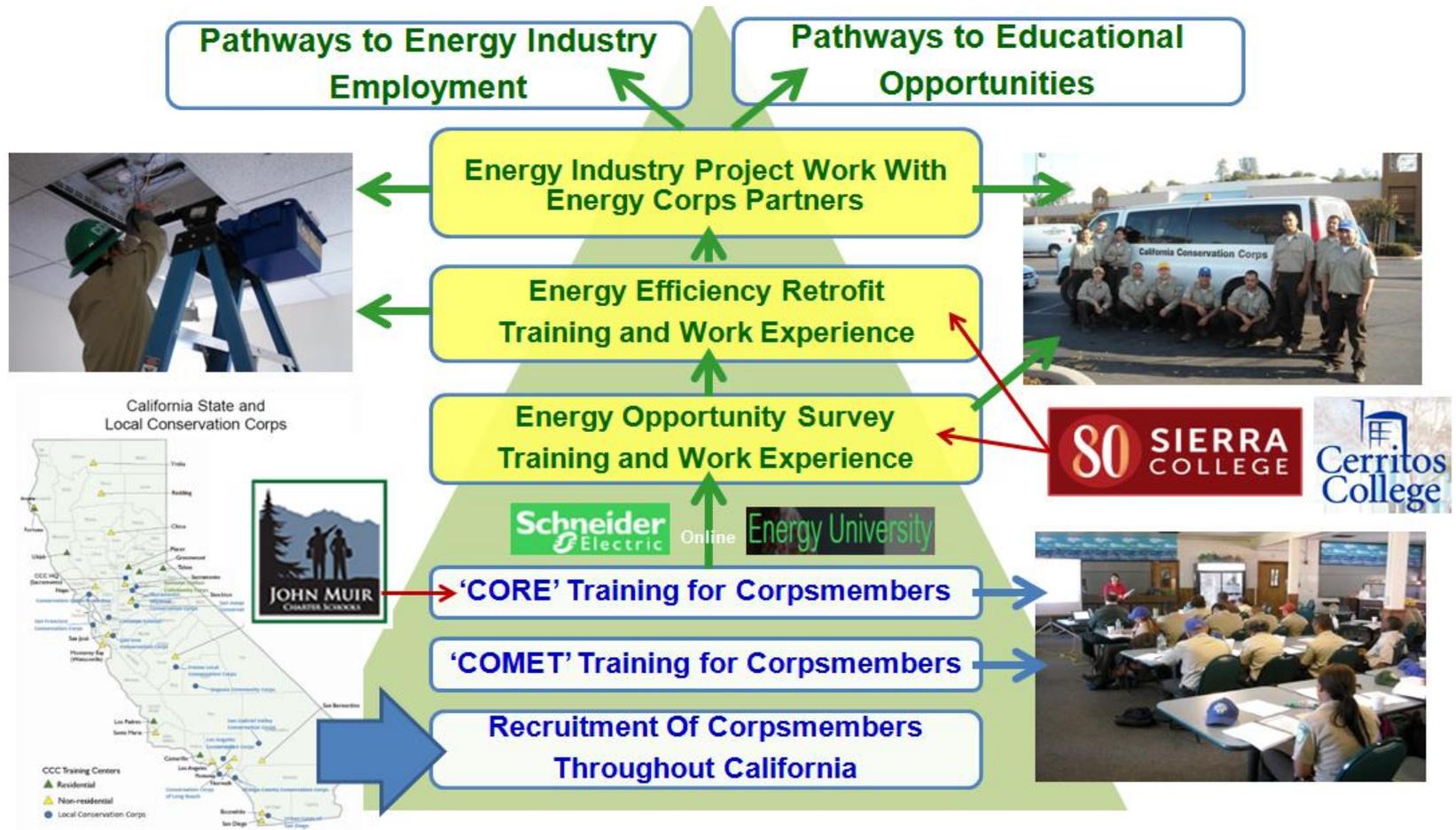




Energy Corps Program

- Proposition 39 Funded Program Status -

3 Status – EE Education – Multiple Levels of Energy Industry Training, Work Experience, and Energy Corps Partners Developing Educational and Employment Pathways for Corpsmembers





Energy Corps Program

- Proposition 39 Funded Program Status -

3 Status – EE Education - Training for Corpsmember and Staff: The status of Proposition 39 funded EE Training for CCC Corpsmembers and Staff during 2017, and cumulatively “to date” by the CCC, is as follows: To date, the CCC has trained **708** individual CCC Corpsmembers and **48** CCC Staff to perform **Energy Opportunity Surveys**. In addition, **408** of the Corpsmembers and **24** of the CCC Staff receiving Energy Opportunity Survey training have also been trained to perform EE Lighting and Controls **EE Retrofit Installations**.

Training for CCC Corpsmembers and Staff - Funded by Proposition 39

| Training Totals | Totals To Date | |
|--------------------------------------|----------------|---------------|
| | Trainees | Hours |
| CCC Corpsmembers | | |
| EO Survey Training | 708 | 32,592 |
| OSHA 10/30 Training | 458 | 3,995 |
| Retrofit Training | 408 | 32,649 |
| Presentation Training | 90 | 450 |
| Energy University Courses | 248 | 1,688 |
| Corpsmember Hours Trained | 71,374 | |
| CCC Staff | | |
| Initial EO Survey Training | 48 | 2,788 |
| OSHA 10/30 | 31 | 250 |
| Retrofit Training | 24 | 1,920 |
| Presentation Training | 2 | 10 |
| Energy University Courses | 9 | 21 |
| Staff Hours Trained | 4,989 | |
| Total CMs & Staff Trained | 756 | |
| Total Training Hours | | 76,363 |

| Totals By Calendar Years | | | | | | | | | | | |
|--------------------------|--------|----------|--------|----------|--------|----------|--------|----------|--------|----------|-------|
| 2017 | | 2016 | | 2015 | | 2014 | | 2013 | | | |
| Trainees | Hours | Trainees | Hours | Trainees | Hours | Trainees | Hours | Trainees | Hours | Trainees | Hours |
| 155 | 6,200 | 104 | 4,240 | 177 | 7,272 | 143 | 6,624 | 129 | 8,256 | | |
| 113 | 1,115 | 70 | 640 | 95 | 880 | 123 | 930 | 57 | 430 | | |
| 107 | 8,560 | 69 | 5,529 | 88 | 7,040 | 101 | 8,080 | 43 | 3,440 | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 90 | 450 | 0 | 0 | | |
| 32 | 64 | 36 | 132 | 56 | 475 | 36 | 297 | 88 | 720 | | |
| 155 | 15,939 | 104 | 10,541 | 177 | 15,667 | 143 | 16,381 | 129 | 12,846 | | |
| 11 | 756 | 2 | 80 | 9 | 488 | 18 | 952 | 8 | 512 | | |
| 6 | 40 | 2 | 20 | 3 | 30 | 16 | 130 | 4 | 30 | | |
| 2 | 160 | 2 | 160 | 3 | 240 | 14 | 1,120 | 3 | 240 | | |
| 1 | 5 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 0 | | |
| 5 | 9 | 1 | 3 | 2 | 6 | 0 | 0 | 1 | 3 | | |
| 25 | 970 | 7 | 263 | 17 | 764 | 49 | 2,207 | 16 | 785 | | |

Total number of individual Corpsmembers and Staff trained - many of whom receive two or more types of training
 Total number of training hours received by all Corpsmembers and Staff trained - for several types of training

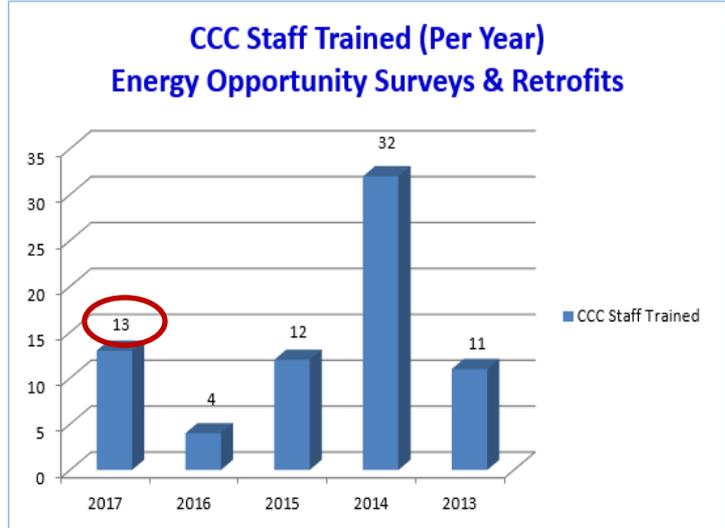
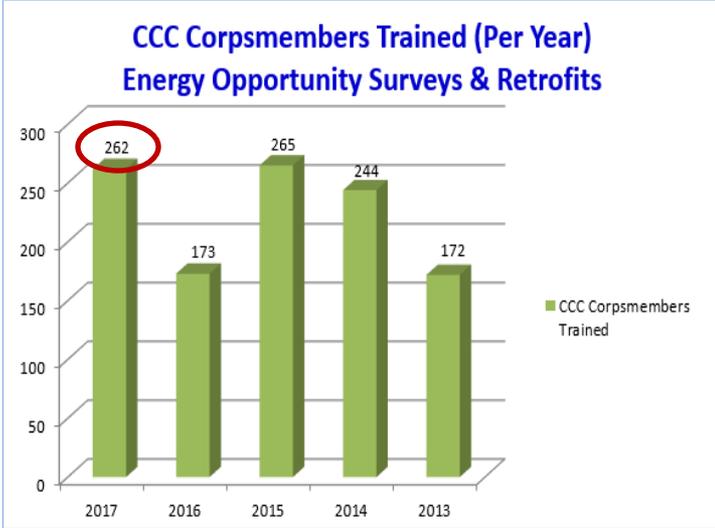




Energy Corps Program

- Proposition 39 Funded Program Status -

3 Status – EE Education - Training for Corpsmember and Staff: The status of Proposition 39 funded EE Training for CCC Corpsmembers and Staff for 2017 illustrates the process of Corpsmembers joining, leaving the Energy Corps for jobs, new Corpsmembers joining to fill these Proposition 39 funded positions, and new Corpsmembers and Staff being trained to carry on performing Energy Opportunity Surveys and Retrofit Installations that benefit K-12 LEAs throughout California.

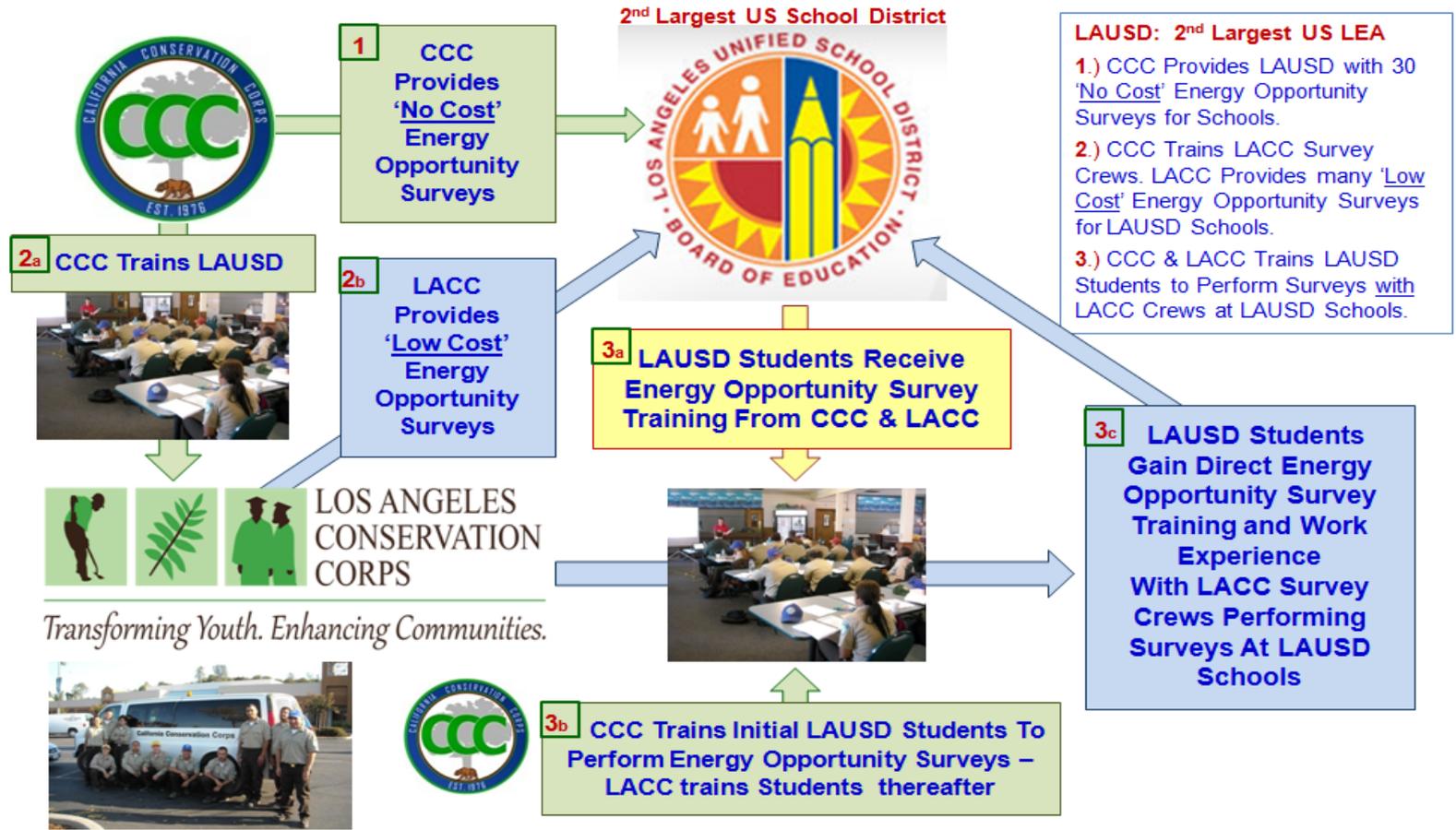




CCC Energy Corps

- Proposition 39 Funded Services: Education -

3 Status – EE Education: The CCC’s Proposition 39 funded Energy Corps provides LEAs with several types of educational engagements with the CCC regarding energy conservation. These range from classroom presentations by the CCC on EE and RE topics, to much more advanced work-learn programs, such as LAUSD’s “SEAT” Program:





Energy Corps Program

- Proposition 39 Funded Program Status -

4 **Status – Corpsmember Employment:** The following is the status of **hires and requests to hire** CCC Energy Corps Corpsmembers resulting from their Proposition 39 funded training and extensive project work experience:

The CCC relies upon “self reporting” by Corpsmembers upon their leaving the CCC, and has no other way currently to track either the initial or ongoing employment of Corpsmembers that do not self report their status upon leaving the CCC (or thereafter).

To date there have been **61** Energy Corps Corpsmembers completing their tenure with the CCC that have self reported accepting employment offers with employers **within the energy industry**, **59** Energy Corps Corpsmembers self reporting that they had accepted employment offers **with an unidentified employer** (which may or may not have been employers within the Energy Industry), and **77** Energy Corps Corpsmembers that **did not self report their actual or intended employment status** at the time that they completed their tenure with the CCC.





Energy Corps Program

- CCC's Energy Corps -



CCC ENERGY CORPS

CCC Energy Corps Proposition 39 Program Update

Short Video Clips of the Energy Corps

SAVING ENERGY THROUGH WORKFORCE INNOVATION

TRAINING THE WORKFORCE THROUGH RETROFIT PROJECTS



TRANSFORMING THE ENERGY EFFICIENCY MARKETPLACE



TRAINING AND CAREER OPPORTUNITIES FOR YOU



The CCC Energy Corps and UC Davis EEC – Transi



The CCC Energy Corps – Training and Career Opp

“Click Here”
To See a Video About The CCC’s Energy Corps and the Work That We Do !!

“Click Here” For more information about the CCC’s Energy Corps
Visit the CCC Website: <http://www.ccc.ca.gov>