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 -

CCC & Local Corps

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.

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

Corpsmembers

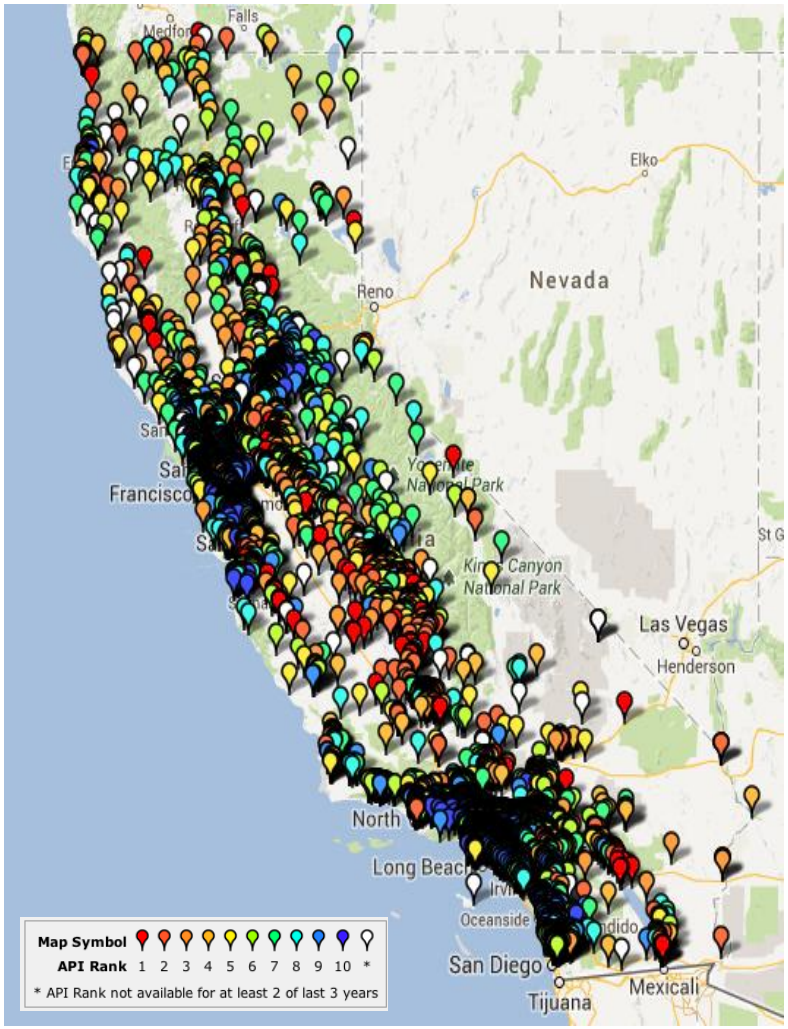
Prop 39 Funding

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:

1 **'Low Cost' Energy Opportunity Surveys For LEAs (ASHRAE)**

2 **'Low Cost' Retrofit Projects For LEAs (Materials & Related Costs Only)**

Proposition 39 Service Offerings

Energy Opportunity Surveys
- Whole Building Survey
- HVAC Systems
- Control Systems
- Plug Load
- Building Weatherization

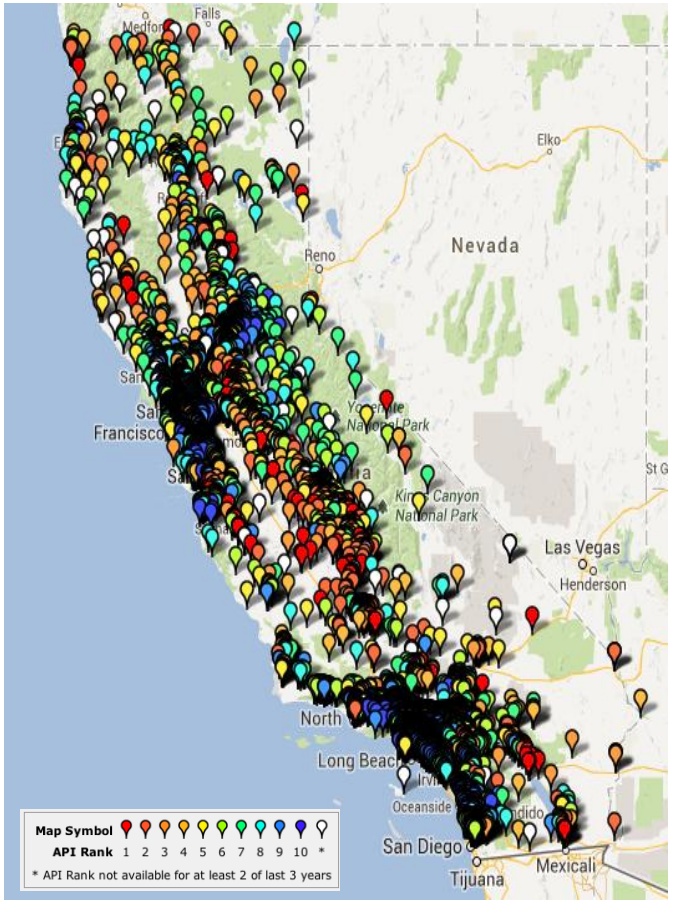
CCC ECI Services

Energy Efficiency Retrofits
- Retrofit Direct Installs
- Retrofit Projects Under Contract
- Post Install Checks
- Maximize Utility Rebates

LEAs K-12 Schools

3 **'No Cost' & 'Low Cost' Energy Efficiency Classroom Presentations, Cooperative Education & Other Educational Opportunities Provided For LEAs**

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"		Totals by Calendar Years				
			2017	2016	2015	2014	2013
Total LEAs Requesting Services	439		7	32	25	246	129
Total Number of Project Sites	1,429		92	192	161	979	5
Total Number of Completed Projects	1,420		83	192	161	979	5
Total Energy Surveys Completed	1,327		69	156	134	963	5
Total Buildings Surveyed	13,822		1,169	1,532	1,397	9,677	47
Total Square Footage Surveyed	79,002,745		9,331,848	6,563,081	9,115,576	53,773,464	218,776
LEAs Surveyed - Total	415		7	16	19	244	129
LEAs Surveyed - Over 5,000 ADA	81	20%	2	5	7	41	26
LEAs Surveyed - Under 5,000 ADA	334	80%	5	11	12	203	103
LEAs Surveyed - Over 50% FRPM	265	64%	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.

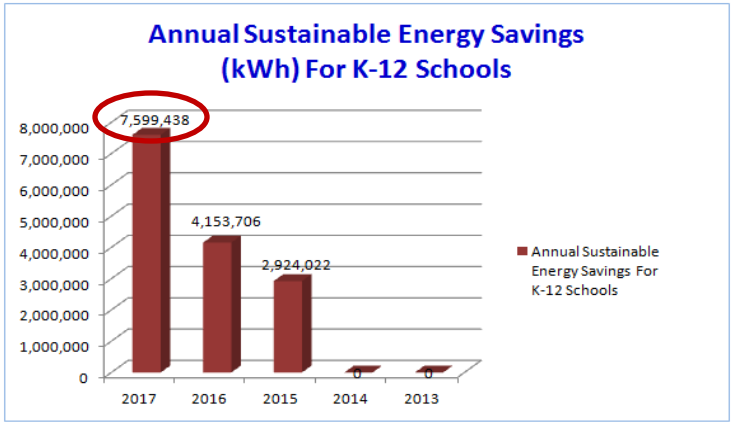
During 2017 there were an average of 7 Proposition 39 Funded Energy Corps Crews assigned to perform EE Lighting and Controls Retrofit Installations for K-12 LEAs. The status of Proposition 39 funded EE Lighting and Controls Retrofit Installations provided during 2017, and cumulatively "to date" by the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

Proposition 39 Funded EE Retrofit Installations	"To Date"		Totals by Calendar Years				
			2017	2016	2015	2014	2013
Total LEAs Requesting Services	439		7	32	25	246	129
Total Number of Project Sites	1,429		92	192	161	979	5
Total Number of Completed Projects	1,420		83	192	161	979	5
Total Retrofit Projects Completed	93		14	36	27	16	0
Total Number of Lighting Retrofits	124,005		8,783	78,696	36,526	0	0
Total Number of Controls Retrofits	8,583		0	4,693	3,890	0	0
Estimated kWh Reduction Per Year	7,599,438		521,710	4,153,706	2,924,022	0	0
Estimated CO2 Reduction (Metric Tons)	1,807		124	988	695	0	0
Total LEAs Retrofitted - Total	54		14	17	9	14	0
LEAs Retrofitted Over 5,000 ADA	21	39%	6	6	4	5	0
LEAs Retrofitted Under 5,000 ADA	33	61%	8	11	5	9	0
LEAs Retrofitted Over 50% FRPM	29	54%	7	9	6	7	0

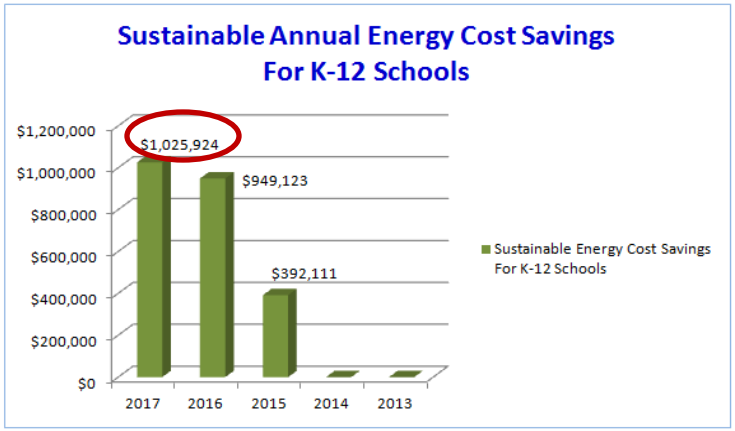
Energy Corps Program

- *Proposition 39 Funded Program Status* -

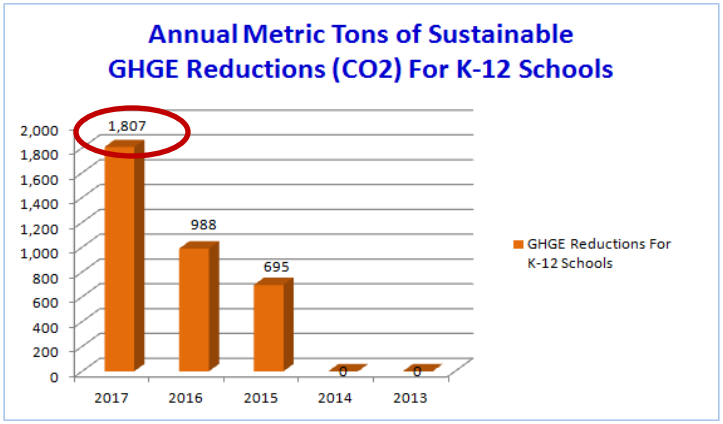
2 **Status – Retrofit Energy, Cost & GHGE Savings**: In mid 2015, the CCC's Energy Corps began providing Proposition 39 funded EE Lighting and Controls Retrofit Installation services for LEAs throughout the State. The status of Proposition 39 funded Energy, Cost & GHGE Savings cumulatively "to date"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

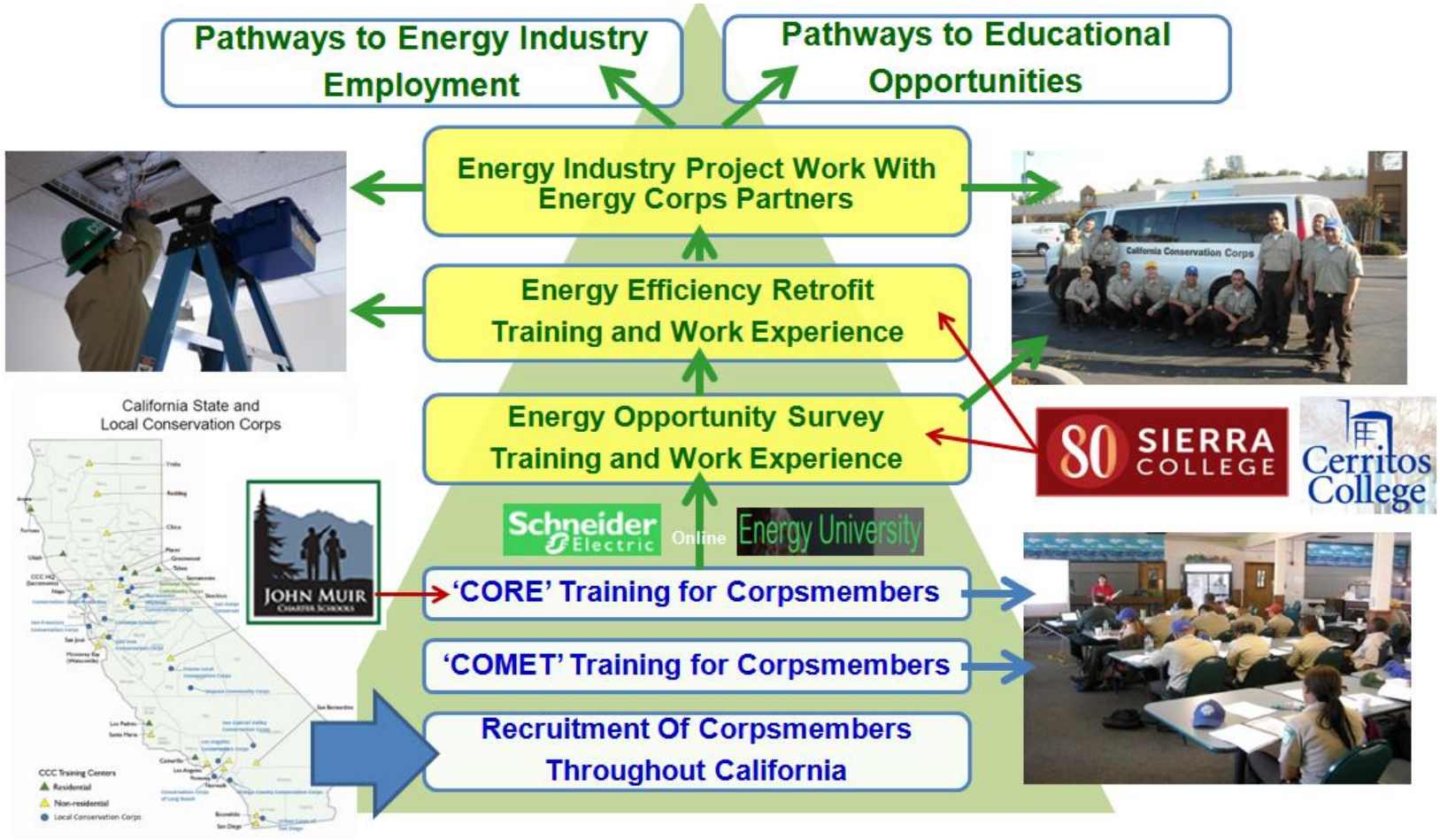


Green House Gas Emissions – For K-12 Schools - **more than 1,807 Metric Tons of annual and sustainable GHGE (CO_2) have been reduced**.

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

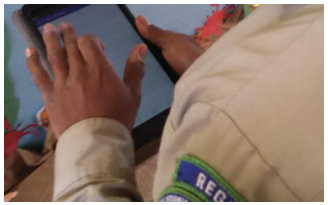
- *Proposition 39 Funded Program Status* -

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		Totals By Calendar Years									
			2017		2016		2015		2014		2013	
CCC Corpsmembers	Trainees	Hours	Trainees	Hours	Trainees	Hours	Trainees	Hours	Trainees	Hours	Trainees	Hours
EO Survey Training	708	32,592	155	6,200	104	4,240	177	7,272	143	6,624	129	8,256
OSHA 10/30 Training	458	3,995	113	1,115	70	640	95	880	123	930	57	430
Retrofit Training	408	32,649	107	8,560	69	5,529	88	7,040	101	8,080	43	3,440
Presentation Training	90	450	0	0	0	0	0	0	90	450	0	0
Energy University Courses	248	1,688	32	64	36	132	56	475	36	297	88	720
Corpsmember Hours Trained		71,374	155	15,939	104	10,541	177	15,667	143	16,381	129	12,846
CCC Staff	Trainees	Hours	Trainees	Hours	Trainees	Hours	Trainees	Hours	Trainees	Hours	Trainees	Hours
Initial EO Survey Training	48	2,788	11	756	2	80	9	488	18	952	8	512
OSHA 10/30	31	250	6	40	2	20	3	30	16	130	4	30
Retrofit Training	24	1,920	2	160	2	160	3	240	14	1,120	3	240
Presentation Training	2	10	1	5	0	0	0	0	1	5	0	0
Energy University Courses	9	21	5	9	1	3	2	6	0	0	1	3
Staff Hours Trained		4,989	25	970	7	263	17	764	49	2,207	16	785

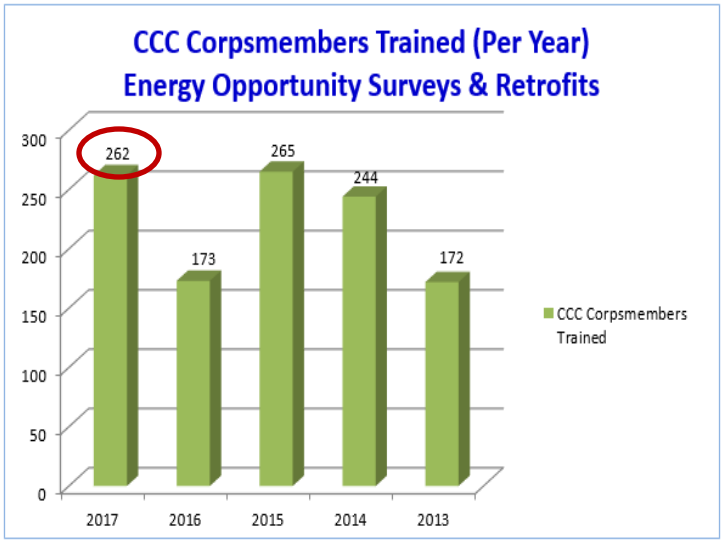
Total CMs & Staff Trained	756	Total number of individual Corpsmembers and Staff trained - many of whom receive two or more types of training
Total Training Hours	76,363	Total number of trianing hours received by all Corpsmembers and Staff trained - for several types of training

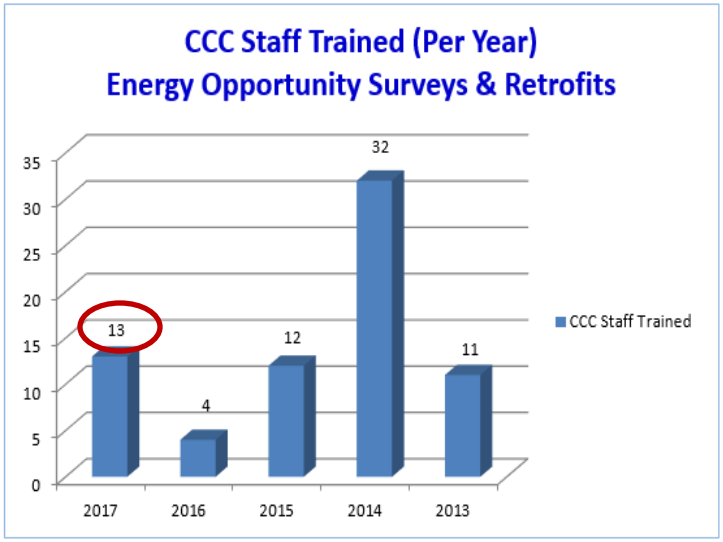


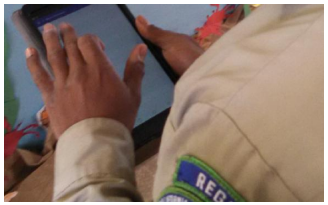
Energy Corps Program

- *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.



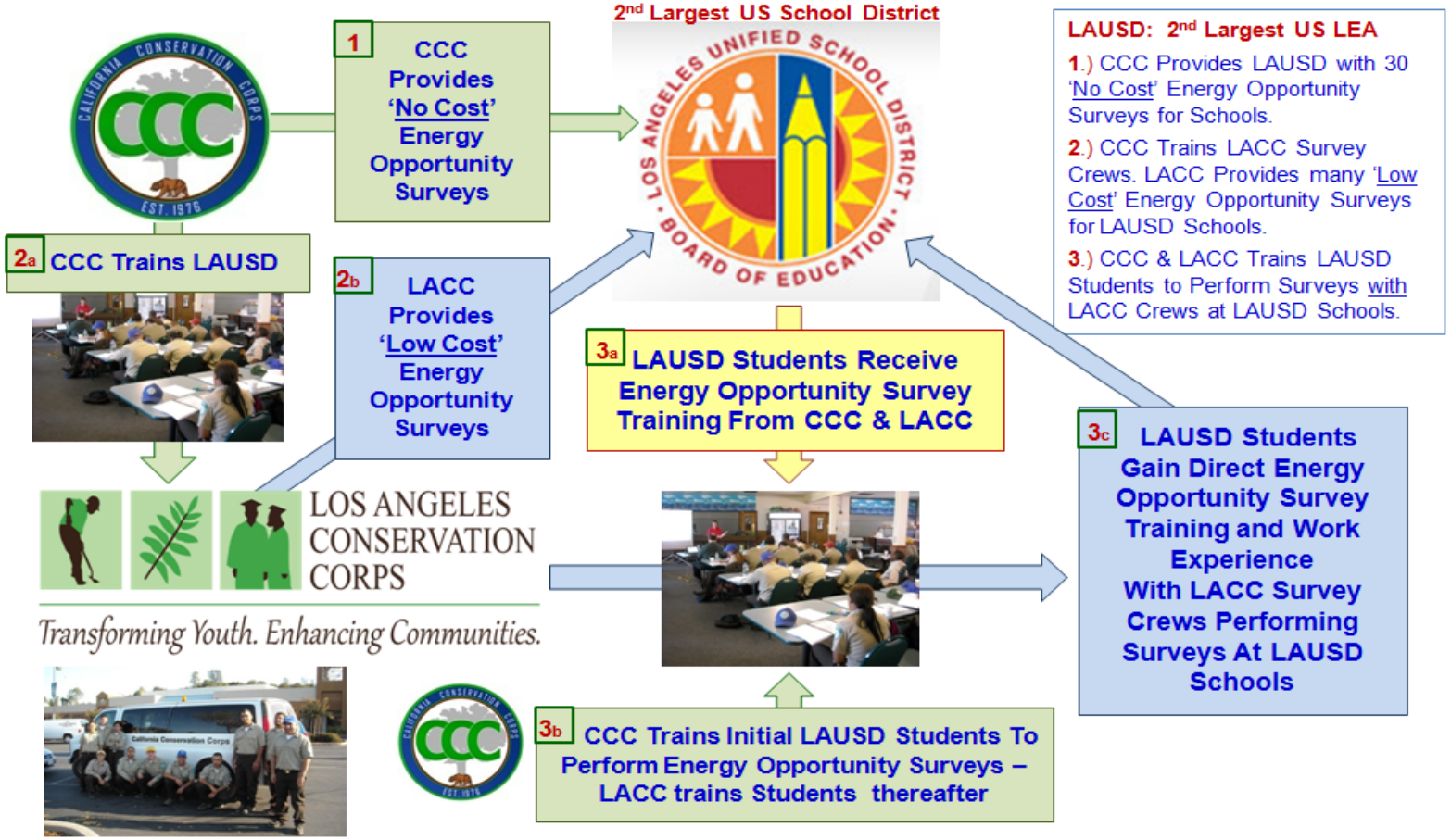




CCC Energy Corps

- 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* -

"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