

WORKFORCE DEVELOPMENT BOARD OF VENTURA COUNTY

CLEAN/GREEN COMMITTEE MEETING

Friday, November 20, 2015 8:00 a.m. - 9:30 a.m.

VCCF Nonprofit Center (Community Room) 4001 Mission Oaks Blvd., Camarillo, CA

AGENDA

8:00 a.m.	1.0 Call to Order and Agenda Review	Kimberly Nilsson
8:03 a.m.	2.0 Public Comments Procedure: The public is welcome to comment. All comments not related to items on the agenda may be made at the beginning of the meeting only.	Kimberly Nilsson
8:05 a.m.	3.0 Approval of Minutes: September 18, 2015	Kimberly Nilsson
	4.0 Ventura County Regional Strategic Workforce Development Plan	1
8:08 a.m.	Clean/Green Committee Workgroup Report 2-Year Plan	Workgroup Members
8:18 a.m.	Clean/Green Committee 2-Year Plan: Update	Cheryl Moore
8:28 a.m.	Clean/Green Committee Planning	Cheryl Moore Committee Members
8:55 a.m.	Deputy Sector Navigator: Update	Margaret Lau
9:00 a.m.	5.0 Committee Spotlight	Patricia Duffy
	The PEAK Program of The Energy Coalition: PEAK Student Energy Actions Melanie Peck, Program Manager	
	A statewide environmental education program focused on energy, water and career pathway development, partnering with California investor-owned and municipal electric and water utilities, to empower students to be resource-wise.	
9:25 a.m.	6.0 Committee Member Comments	Committee Members
9:30 a.m.	7.0 Adjournment	Kimberly Nilsson
	Next Meeting January 15, 2016 (8:00 a.m 9:30 a.m.)	

Individuals who require accommodations for their disabilities (including interpreters and alternate formats) are requested to contact the Workforce Development Board of Ventura County staff at (805) 477-5306 at least five days prior to the meeting. TTY line: 1-800-735-2922.

VCCF Nonprofit Center (Board Room) 4001 Mission Oaks Blvd., Camarillo, CA



WDB Clean/Green Committee Meeting September 18, 2015

MINUTES

Meeting Attendees

Committee Members
Nancy Williams* (Chair)
Rebekah Evans
Dave Fleisch
Paul Grossgold
Teresa Johnson*
Margaret Lau
Anthony Mireles*
Kimberly Nilsson*
Douglas O'Brien
Mary Anne Rooney

WDB Staff Guest
Patricia Duffy Lisa Eklund (VCOE, VC Innovates)

Cheryl Moore Sally Harrison (County of Ventura CEO's Office)
Theresa Salazar Vital Jim Rose (OUHSD, Alliance for Linked Learning)

*WDB Members

1.0 Call to Order and Agenda Review

Nancy Williams called the meeting to order at 8:05 a.m. No changes were made to the agenda.

2.0 Public Comments

There were no public comments.

3.0 Approval of Minutes: July 31, 2015

Motion to approve: Dave Fleisch

Second: Margaret Lau Abstain: Mary Anne Rooney

Motion carried

Committee Chair Comments

Nancy Williams welcomed new Clean/Green Committee members Douglas O'Brien (The Energy Coalition) and Mary Anne Rooney (Ventura County Civic Alliance). Ms. Williams also congratulated WDB member Kimberly Nilsson (Solid Waste Solutions) on her appointment as the new Vice Chair of the Clean/Green Committee.

4.0 Ventura County Regional Strategic Workforce Development Plan

2014-2015 Year-End Review

Committee members reviewed the final version of the 2014-2015 Year-End Review, which included their insights from the previous meeting. The report was presented to the Workforce Development Board on August 27, 2015.

• 2015-2016 Clean/Green Committee Planning

Referring to the 2014-2015 Year-End Review and the current WDB Clean/Green Committee 2-Year Plan, the Committee engaged in a planning discussion. Members commented on how the focus and work of the committee has evolved since its formation in 2011, noting the

WDB Clean/Green Committee Page 1 of 2

increased involvement with education partners as a result of the opportunities presented by the California Career Pathways Trust grants.

Key points of the discussion of included the need to identify other businesses and agencies to invite to the table; increase opportunities for industry communication and information sharing, and find ways to move the needle for clean/green business practices and clean/green workforce career awareness, readiness, and education in the region.

A workgroup was formed to identify gaps between clean/green and workforce development needs; to consider ways to raise employer awareness and participation in green business practices and certifications; and to develop an action plan to bridge gaps and establish benchmarks to monitor progress.

Career Pathways Update

Mary Anne Rooney announced the October 5, 2015, ribbon-cutting ceremony to celebrate the opening of the new Rancho Campana High School in Camarillo. The school operates on the academy model in alignment with the Alliance for Linked Learning approach to career pathways.

5.0 Committee Member Comments

6.0 Adjournment

Nancy Williams adjourned the meeting at 9:40 a.m.

Next Meeting

Friday, November 20, 2015 (8:00 a.m. - 9:30 a.m.) VCCF Nonprofit Center (Community Room) 4001 Mission Oaks Blvd., Camarillo, CA

WDB Clean/Green Committee Page 2 of 2

<u>Clean/Green Committee 2-Year Plan (Draft Revision 11/20/15)</u> Workforce Investment Board of Ventura County

<u>Goal:</u> Develop a pipeline of skilled workers in clean/green occupations to address the workforce needs of employers, working in collaboration with business, economic development, education, labor, government, and community-based organizations.

Focus Areas: Recycling/reuse, Energy efficiency, Natural and sustainable product manufacturing, Renewable energy, Water conservation, Infrastructure and Services

Action Plan:

- 1) Engage a core team of Ventura County employers, agencies, education, labor, and other organizations most involved in clean/green workforce development:
 - Waste Facilities/ Recycling Centers
 - Water/Wastewater
 - Trash Haulers
 - Utilities/Energy
 - Landscapers
 - Architects
 - Contractors
 - Agriculture
 - Automotive Others

- Ventura County Office of Education
- Adult education
- Ventura County Community College District
- California Lutheran University
- California State University, Channel Islands
- 2) Develop ways to identify, engage, and communicate effectively with the core team and other clean/green workforce partners.
- 3) Conduct annual research to evaluate clean/green workforce needs and changes.
- 4) Inventory current training providers in the region.
 - Certification programs
 - · Apprenticeships, Pre-Apprenticeships
 - Internships
 - High school academies
 - Externships

- Regional Occupational Program
- Adult school programs
- · Community colleges
- Universities
- Trade associations
- Community organizations
- 5) Determine focus area priorities for clean/green workforce development.
 - Sector workforce readiness
 - Career pathways
 - Sector certifications
 - Stackable credentials
 - Pre-apprenticeship and apprenticeship programs
- Business participation:
 - Curriculum development
 - Job shadowing
 - Internships
 - Externships
 - On-the-job training
 - Career awareness/outreach
- 6) Monitor identified gaps and continue to identify new gaps between education and clean/green workforce development needs.

- 7) Many employers, particularly small businesses, in Ventura County are not aware of the activities of the Work Force Development Board Clean Green Committee in developing a pipeline of skilled workers for clean green jobs. As such, we need to:
 - **Create awareness** throughout all business communities and the public sector of clean green jobs and certification programs that exist to provide skilled workers.
 - **Develop understanding** by employers and managers of the importance clean green practices in their operation (regardless of size) and how hiring skilled clean green workers will improve their organization's performance. Emphasize that virtually every job, in every industry, should incorporate clean green practices.
 - **Encourage involvement** by leaders in business and the public sector, in the education of skilled clean green workers through engagement in the classroom, providing internships or job training programs for students or externships for faculty.
 - Complete integration of clean green practices and workers in all components of the work force in businesses and the public sector in Ventura County
- 8) The progress of the Clean/Green Committee is measured by the Year-End Review and a review of the 2-Year Plan.



<u>California's current definition of clean/green:</u> recycling/reuse; energy efficiency (product manufacturing and distribution, construction, installation and maintenance, transportation); natural and sustainable product manufacturing; renewable energy; compliance; education and awareness; water conservation

WDB CLEAN/GREEN COMMITTEE WORKGROUP DRAFT DEFINITIONS

- Sector workforce readiness
- Career pathways
- Sector certifications
- Stackable credentials
- Pre-apprenticeship programs
- Apprenticeship programs

- Business participation:
 - Curriculum development
 - Job shadowing
 - Internships
 - On-the-job training
 - Career awareness/outreach
 - Externships

Sector workforce readiness: These are identified skills that are needed for certain industry sectors. Each of the skills categories are defined by the sectors' chief activities.

Career pathways: The pipeline of education and training that moves students from secondary education through post-secondary education to the entry-level job.

Sector certifications: Certifications that are particular to a given industry that can be obtained through a community college program or trade school. In a few instances some certifications can be obtained in a secondary program such as CISCO-EENT or Red Cross First Aid and CPR.

Stackable credentials: These are credentials earned in different levels of programs within industry sectors. For example, a student might earn a CNA in high school, a HHA in Adult Ed and move into a nursing program in college.

Pre-apprenticeship and apprenticeship programs: Formalized training programs, usually sponsored or organized by post-secondary agencies, in which skills development is based on number of hours of work experience and On the Job Training combined with a requisite amount of class time. At the end of a certified apprenticeship, a certification is obtained.

Curriculum development: The partnership between industry representatives and educators to collaborate in the development of curriculum that reflects the needs of industry.

Job shadowing: The opportunity for students to observe the actions of an industry employee while they are engaged in the common functions of their job. It is usually limited to a few hours in a day and is not a regularly occurring activity.

Internships: A paid/unpaid position within a business whereby a student does work of value to the organization while they are engaged in completing the educational program or training leading to an entry level job in that industry.

On-the-job training: An entry-level position in which the employee learns the essential skills of a job while he is engaged in the job usually under the tutelage of a senior employee.

Career awareness/outreach: Any variety of activities appropriate for the maturity level of a student that raises that student's awareness of an industry sector's job opportunities, or allows them to explore the variety of careers related to an industry sector.

Externships: Opportunities (paid or unpaid) for a teacher to work within a business so they can learn what that career is like from the inside out. Theoretically, the experience will help them speak with authority when they inform their students of work in that industry sector.



WORKFORCE DEVELOPMENT BOARD OF VENTURA COUNTY

Role

The Workforce Development Board of Ventura County (WDB) is a public board of leaders from business, labor, education, economic development, government, and community-based organizations, who are appointed by the Ventura County Board of Supervisors to:

- Administer federal Workforce Innovation and Opportunity Act (WIOA) funds.
- Provide oversight for workforce development programs and services to benefit job seekers, workers, youth, and employers in Ventura County.
- Facilitate regional collaboration, alignment, and leveraging of private/public resources to support the workforce needs of employers in Ventura County.

Vision

The Ventura County region will have a high quality, appropriately-skilled workforce that is ready and able to support the changing business needs of employers in a dynamic, competitive, global economic environment. The regional workforce strategy will include ongoing skills attainment that is supportive of regional growth industry sectors and clusters and enabled by a braided, leveraged workforce system that addresses business-driven demands and worker needs for well-paid, steady employment.

2013-2017 Goals

- <u>Business</u>: Meet the workforce needs of high-demand industry sectors in the Ventura County regional economy.
- <u>Job Seeker</u>: Increase the number of adults in the Ventura County region who obtain a
 marketable and industry-recognized credential or degree and are placed in a related sector
 job. Focus WIOA programs on unemployed, underemployed, low-skilled, low-income,
 veterans, individuals with disabilities, and other at-risk populations.
- Youth: Increase the number of youth in the Ventura County region who graduate prepared for post-secondary vocational training, further education, and/or a career. Focus WIOA programs on out-of-school youth.
- <u>Systems</u>: Support workforce development system alignment, service integration and continuous improvement in the Ventura County region.

Commitment

Working in partnership with other regional leaders, the WDB is committed to serving as a convener, workforce analyst, broker, facilitator, and unifying community voice in advancing the achievement of the *Ventura County Regional Strategic Workforce Development Plan 2013-2017* for the benefit of the Ventura County region and the people of California.

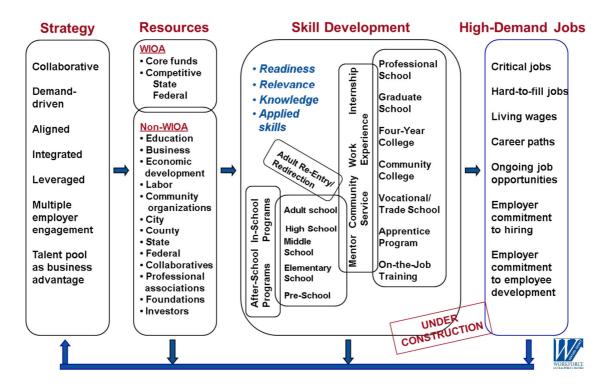


WORKFORCE DEVELOPMENT BOARD OF VENTURA COUNTY

Workforce Development Board at Work

- Executive Committee
- Clean/Green Committee
- Healthcare Committee
- Manufacturing Committee
- Membership Committee
- Outreach Committee
- Resource Development Committee
- Youth Council

BUILDING A COMPETITIVE WORKFORCE PIPELINE IN VENTURA COUNTY



WIOA Programs and Services

- Adult, dislocated worker, and youth support: job preparation and training, searches, transitions
- Employer support: recruitment and training, business transitions, business consulting
- American Job Center: in-person assisted services for job seekers and employers at locations in Oxnard and Simi Valley
- American Job Center: on-line resources for job seekers and employers at www.CalJOBS.org
- Other Ventura County workforce development resource connections
 - Regional information and services for employers: www.venturacountygrowsbusiness.com
 - Ventura County youth career awareness and preparation: www.vcjobswithafuture.org
 - Workforce Development Board: (805) 477-5306; www.workforceventuracounty.org



CLEAN/GREEN COMMITTEE 2-YEAR PLAN Workforce Development Board of Ventura County 2016-2018

Goal

The Clean/Green Committee will develop a pipeline of skilled workers in clean/green occupations to address the workforce needs of employers, working in collaboration with business, economic development, education, labor, government, and community-based organizations. Focus areas:

- Recycling/reuse
- Energy efficiency
- Natural and sustainable product manufacturing
- Renewable energy

- Water conservation
- Infrastructure
- Services

Components of Plan

1. Engage

Engage a core team of Ventura County employers, agencies, education, labor, and other organizations most involved in clean/green workforce development. Develop ways to identify, engage, and communicate effectively with the core team and other clean/green workforce partners

- Waste Facilities/ Recycling Centers
- Water/Wastewater
- Trash Haulers
- Utilities/Energy
- Landscapers
- Architects
- Contractors
- Agriculture
- Automotive

- California State University, Channel Islands
- Ventura County Community College District
- Ventura County Office of Education
- Adult education
- Others

2. Analyze Data

Conduct annual research to analyze clean/green workforce needs and changes.

3. Take Inventory

Inventory current training providers in the region.

- Industry-recognized certification programs
- Apprenticeships
- Pre-apprenticeships
- Internships
- Externships

- High school academies
- Regional Occupational Program
- Adult education
- Community colleges
- Universities
- Trade associations
- Community organizations



CLEAN/GREEN COMMITTEE 2-YEAR PLAN Workforce Development Board of Ventura County 2016-2018

4. Determine Priorities

Determine focus area priorities for clean/green workforce development.

- Sector workforce readiness
- Career pathways
- Sector certifications
- Stackable credentials
- Pre-apprenticeship programs
- Apprenticeship programs
- Business participation:
 - Curriculum development
 - Job shadowing
 - Internships
 - Externships
 - On-the-job training
 - Career awareness/outreach

5. Identify Gaps

Monitor identified gaps and continue to identify new gaps between education and clean/green workforce development needs.

6. Take Action

Many employers, particularly small businesses, in Ventura County are not aware of the activities of the Workforce Development Board Clean/Green Committee in developing a pipeline of skilled workers for clean/green jobs. As such, we need to:

- Create awareness throughout all business communities and the public sector of clean green jobs and certification programs that exist to provide skilled workers.
- Develop understanding by employers and managers of the importance clean green practices in their operation (regardless of size) and how hiring skilled clean green workers will improve their organization's performance. Emphasize that virtually every job, in every industry, should incorporate clean green practices.
- Encourage involvement by leaders in business and the public sector, in the education of skilled clean green workers through engagement in the classroom, providing internships or job training programs for students or externships for faculty.
- Complete integration of clean green practices and workers in all components of the workforce in businesses and the public sector in Ventura County.

7. Monitor Progress

The progress of the Clean/Green Committee is measured by the Workforce Development Board Year-End Review and a review of the Committee's 2-Year Plan.

VENTURA COUNTY ECONOMIC SUB-MARKET REGIONAL ECONOMIC ANALYSIS PROFILE*

Labor Market Information Division
California Employment Development Department
July 2015

WDBVC Sector Priorities Related LMID/EDD Industry Clusters

Clean/Green Committee Hospitality and Tourism (1)

Agriculture, Food, and Beverage Processing (4)

Construction Materials and Services (8) Transportation and Logistics (16) Oil and Gas Products and Services (21)

Energies and Utilities (23)

Forest Products, Forestry, and Primary Wood Processing (25)

Healthcare Committee Health Care Services (3)

Manufacturing Committee Fabricated and Other Metal Manufacturing (12)

Automotive Products and Services (18)

Manufacturing Industry (19)

Chemical Products Manufacturing (22)

Textile and Apparel (24)
Furniture Manufacturing (26)
Aerospace (not reported)
Biotechnology (not reported)

Other LMID/EDD Industry Clusters

Business Services (5)

Financial Services and Real Estate (7)
Professional and Technical Services (9)

Information and Communication Technologies (10) Entertainment, Media, Publishing, and Printing (15)

Education and Training (6)

Social Services (13)

Community and Civic Organizations (17)

Retail (2)

Wholesale and Distribution (11) Household Goods and Services (14) Personal Services: Non-Medical (20)

VENTURA COUNTY ECONOMIC SUB-MARKET REGIONAL ECONOMIC ANALYSIS PROFILE*

Labor Market Information Division
California Employment Development Department
July 2015

LIST OF SECTIONS IN INDUSTRY CLUSTER REPORTS

- a. Definition of the cluster
- b. Top 10 occupations in the cluster (based on projections of total new and replacement job openings 2012-2022)
- c. Top 10 occupations and recent job demand (total job openings; median hourly wage; median annual wage; entry level education; job ads)
- d. Top occupations by education level (bachelor's degree or higher; some college, postsecondary non-degree award, or associate's degree; high school diploma or equivalent or less)
- e. Skill requirements by occupation (18 skills: e.g., active listening)
- f. Work activities by occupation (27 activities: e.g., analyzing data or information)
- g. Other occupations (related to the top 10 occupations) by education level
- h. Local employers and demand for jobs in the cluster (recent job ads; prior year ads; numerical change; year-over percent change)
- i. Instructional programs at California community colleges related to top 10 occupations
- j. California map of counties and relative percentage of total county employment in the occupation cluster
- k. California map of counties and relative percentage of total county employment in the occupation cluster



Occupational Analysis: Construction Materials and Services Cluster

Ventura County Economic Sub-Market

July 2015





What is the Construction Materials and Services Cluster?

The Construction Materials and Services cluster comprises 14 industries related to the construction of buildings, bridges, and roads, as well as the manufacture of materials needed to erect them. Employers in this cluster include equipment and finishing contractors, builders of electrical, heating, and plumbing systems, and contractors who specialize in framing or tile work. Workers employed within this cluster often share skills and work activities both within the cluster and in many other industry clusters, suggesting the potential for skills transference and upward mobility with additional training.

Top 10 Occupations in the Construction Materials and Services Cluster

The graph below identifies the top 10 occupations in the Construction Materials and Services cluster, based on the Ventura County Economic Sub-Market's new job growth plus replacement openings. In sum, these 10 occupations represent more than one-half of the 6,737 total job openings projected in this cluster between 2012 and 2022. Moreover, many share the same required skills such as active listening, coordination, critical thinking, monitoring, reading comprehension, and speaking.⁸⁸



Source: California Employment Development Department, Projections of Employment 2012-2022. Industry and occupational employment projections for 2012-2022 in this report may not be directly comparable to the published 2012-2022 employment projections available online at www.labormarketinfo.edd.ca.gov.

⁸⁸ U.S. Department of Labor's Occupational Information Network (O*NET) at www.onetonline.org.

⁸⁹ New jobs are only openings due to growth and do not include job declines. If an occupation's employment change is negative, there is no job growth and new jobs are set to zero.

⁹⁰ Replacement job openings estimate the number of job openings created when workers retire or permanently leave an occupation and need to be replaced.

Top 10 Occupations and Recent Job Demand in the Construction Materials and Services Cluster

The table below further profiles the Ventura County Economic Sub-Market's top 10 occupations in the Construction Materials and Services cluster by listing the total job openings for 2012-2022, median hourly and annual wages, and entry-level education requirements. Also included are online job advertisements extracted from The Conference Board Help Wanted OnLine™ (HWOL) data series over a 120-day period. HWOL compiles, analyzes, and categorizes job advertisements from numerous online job boards, including CalJOBS™ (www.caljobs.ca.gov), California's online job listing system.

Occupations	Total Job Openings ⁹¹ (2012-2022)	Median Hourly Wage (2014)	Median Annual Wage (2014)	Entry Level Education ⁹²	HWOL Job Ads ⁹³ (120 days)
Construction Laborers	725	\$19.37	\$40,295	Less than high school	140
Cement Masons and Concrete Finishers	450	\$23.53	\$48,933	Less than high school	18
Carpenters	442	\$22.30	\$46,379	High school diploma or equivalent	154
Electricians	376	\$29.36	\$61,072	High school diploma or equivalent	112
Painters, Construction and Maintenance	324	\$15.32	\$31,867	Less than high school	88
Operating Engineers and Other Construction Equipment Operators	282	\$35.50	\$73,842	High school diploma or equivalent	14
First-Line Supervisors of Construction Trades and Extraction Workers	243	\$34.36	\$71,470	High school diploma or equivalent	133
Cost Estimators	226	\$28.37	\$59,006	Bachelor's degree	24
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	204	\$20.28	\$42,179	Postsecondary non-degree award	100
General and Operations Managers	194	\$51.15	\$106,377	Bachelor's degree	202

Source: California Employment Development Department, Projections of Employment 2012-2022; Occupational Employment Statistics Wage Survey, updated to 4th Q, 2014; The Conference Board Help Wanted OnLine™ (HWOL) Data Series, 120-day period ending July 24, 2015.

⁹¹ Total job openings are the sum of new jobs and replacement job openings.

⁹² U.S. Department of Labor, Bureau of Labor Statistics (BLS) 2012 education levels.

⁹³ Totals represent job advertisements from employers in all industries. One job opening may be represented in more than one job advertisement.

Top Occupations for the Construction Materials and Services Cluster by Education Level

The table below identifies the occupations with the most total job openings, categorized by Bureau of Labor Statistics (BLS) 2012 entry-level education requirements, within the Construction Materials and Services cluster. The table includes the Ventura County Economic Sub-Market's projected total job openings and median hourly and annual wages. In addition, recent totals of online job advertisements over 120-day period are included. Grouping occupations by education levels allows individuals to better gauge the potential for skills transference and upward mobility within the cluster.

Occupations	Total Job Openings ⁹⁴ (2012-2022)	Median Hourly Wage (2014)	Median Annual Wage (2014)	HWOL Job Ads (120 days)
Requires a Bachelor's Degree or Higher				
Cost Estimators	226	\$28.37	\$59,006	24
General and Operations Managers	194	\$51.15	\$106,377	202
Construction Managers	116	\$44.90	\$93,403	47
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	46	\$41.19	\$85,662	190
Accountants and Auditors	37	\$34.49	\$71,730	334
Requires Some College, Postsecondary Non-D	Degree Award, c	or Associate's D	egree	
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	204	\$20.28	\$42,179	100
Heavy and Tractor-Trailer Truck Drivers	112	\$22.09	\$45,961	606
Telecommunications Equipment Installers and Repairers, Except Line Installers	44	\$32.41	\$67,401	41
First-Line Supervisors of Production and Operating Workers	21	\$26.22	\$54,534	341
Electrical and Electronics Engineering Technicians	12	\$34.74	\$72,271	95
Requires a High School Diploma or Equivalen	t or Less			
Construction Laborers	725	\$19.37	\$40,295	140
Cement Masons and Concrete Finishers	450	\$23.53	\$48,933	18
Carpenters	442	\$22.30	\$46,379	154
Electricians	376	\$29.36	\$61,072	112
Painters, Construction and Maintenance	324	\$15.32	\$31,867	88

Source: California Employment Development Department, Projections of Employment 2012-2022; Occupational Employment Statistics Wage Survey, updated to 4th Q, 2014; The Conference Board Help Wanted OnLine $^{\text{TM}}$ (HWOL) Data Series, 120-day period ending July 24, 2015.

⁹⁴ Total job openings are the sum of new jobs and replacement job openings.

Skill Requirements in the Construction Materials and Services Cluster

The table below lists the 10 top skills required for top occupations in the Construction Materials and Services cluster, categorized by entry-level education requirements. Critical thinking, active listening, and reading comprehension are the most commonly shared skills, followed by monitoring and speaking. The skills and work activities identified for each occupation are from the U.S. Department of Labor's Occupational Information Network (O*NET).

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Occupations	Active Learning	Active Listening	Complex Problem Solving		Critical Thinking	Equipment Maintenance	Installation	Judgment and Decision Making	Learning Strategies	Management of Financial Resources	Management of Personnel Resources	Mathematics	Monitoring	Negotiation	Operation and Control	Operation Monitoring	Persuasion	Quality Control Analysis	Reading Comprehension	Repairing	Social Perceptiveness	Speaking	Systems Analysis	Time Management	Troubleshooting	Writing
Requires a Bachelor's Degree or Higher			1																							
Cost Estimators	•	•	•		•					•		•	•						•			•			$ \bot $	•
General and Operations Managers	•	•	<u>'</u>	•	•						•		•						•		•	•			\Box	•
Construction Managers		•	·	•	•			•					•	•					•			•		•		•
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	•	•		•	•									•			•		•		•	•				•
Accountants and Auditors95	•	•	•		•			•				•	•						•			•	•			•
Requires Some College, Postsecondary Non-D)e(gr	ee	A۱	wa	rd,	, OI	r A	ss	00	ia	te'	s [Эе	gre	ee										
Heating, Air Conditioning, and Refrigeration Mechanics and Installers ⁹⁶		•	,	•	•	•	•											•	•	•		•			•	
Heavy and Tractor-Trailer Truck Drivers		•	•		•	•							•		•	•			•			•		•		
Telecommunications Equipment Installers and Repairers, Except Line Installers		•	•		•								•			•		•	•	•		•			•	
First-Line Supervisors of Production and Operating Workers		•		•	•						•		•						•		•	•		•		•
Electrical and Electronics Engineering Technicians ⁹⁷	•	•	•		•							•	•			•		•	•						•	
Requires a High School Diploma or Equivalent	t o	r	Les	ss																						
Construction Laborers		•	•	•	•	•							•		•	•			•			•				
Cement Masons and Concrete Finishers		•	•	•	•							•	•		•			•				•		•		
Carpenters ⁹⁸		•		•	•			•				•	•					•	•			•		•		
Electricians				•	•	•	•		•				•					•	•	•					•	
Painters, Construction and Maintenance		•		•	•			•			•		•						•		•	•		•		

Source: U.S. Department of Labor's <u>Occupational Information Network (O*NET)</u> at www.onetonline.org.

⁹⁵ Skills represent Accountants, a specialty occupation of Accountants and Auditors.

⁹⁶ Skills represent Heating and Air Conditioning Mechanics and Installers, a specialty occupation of Heating, Air Conditioning, and Refrigeration Mechanics and Installers.

⁹⁷ Skills represent Electrical Engineering Technicians, a specialty occupation of Electrical and Electronics Engineering Technicians.

⁹⁸ Skills represent Construction Carpenters, a specialty occupation of Carpenters.

Work Activities in the Construction Materials and Services Cluster

The table below lists the 10 top work activities required for top occupations in the Construction Materials and Services cluster, categorized by entry-level education requirements. The most common include organizing, planning, and prioritizing work; making decisions and solving problems; communicating with supervisors, peers, or subordinates; and updating and using relevant knowledge.

subordinates, and updating and using rele														_	Nc	ork	· Δ	\C	tiv	iti	es											
Occupations	Analyzing Data or Information	Coaching and Developing Others	Communicating with Persons Outside Organization	Communicating with Supervisors, Peers, or Subordinates	Controlling Machines and Processes	Coordinating the Work and Activities of Others	Developing and Building leams	Documenting/ Recording Information	Dratting, Laying Out, and Specifying Technical Devices, Parts, and Equipment Establishing and Maintaining Internaceonal Balationships	Estimation the Organitiable Characteristics of Products Events or Information	Evaluating Information to Determine Compliance with Standards	Getting Information	Guiding, Directing, and Motivating Subordinates			terial		, or People		Monitoring and Controlling Decurses	es or Equipment		Performing Administrative Activities	Performing for or Working Directly with the Public	Performing General Physical Activities	Processing Information	Provide Consultation and Advice to Others	Repairing and Maintaining Electronic Equipment Repairing and Maintaining Machanical Equipment	Repolving and Maintaining Mechanical Equipment Resolving Conflicts and Negotiating with Others	Scheduling Work and Activities	Selling or Influencing Others	I hinking Creatively I Indating and I Ising Belevant Knowledge
	Requires a Bachelor's Degree or Higher																															
Cost Estimators	•		\vdash	•		4	4		-	•		•	-	L			4	+		+		•	╁			•		+	+	Н	4	_
General and Operations Managers		_		•	\dashv	•	4	+		+	-	L	L				4	+	•	•		•	\vdash		Ш	4	+	\perp	•	\vdash	_	•
Construction Managers			•	•		•	•	4	•			•	1				4	_(•	+	-	•			Ш	4	4	4	-			+
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products			•	•					•			•						(•			•					•		•		•	•
Accountants and Auditors99	•			•							•	•						-				•	•			•		\perp	L			
Requires Some College, Postsecondar	у	No	on.	-D	e	gre	ee	A	Wá	arc	d, c	or	A	SS	0	cia	ite	e's	D	еç	jre	e										
Heating, Air Conditioning, and Refrigeration Mechanics and Installers ¹⁰⁰	•				•									•		•		-	•			•			•		1	•				•
Heavy and Tractor-Trailer Truck Drivers					•				•	•		•		•	•	•		(•		•	•			•		T	T	T	П		T
Telecommunications Equipment Installers and Repairers, Except Line Installers			•						•					•								•		•	•			•				•
First-Line Supervisors of Production and Operating Workers		•		•	•	•			•				•	•												(•		•	•		
Electrical and Electronics Engineering Technicians ¹⁰¹				•			•		•								•	•	•							•	•	•	T			•
Requires a High School Diploma or Equivalent or Less																																
Construction Laborers				•	•									•		•		-	•		•	•			•		T	•	1			
Cement Masons and Concrete Finishers					•	1	1			Ī				•	•	•	1	-	•		•	•			•		T	T	T	П		•
Carpenters ¹⁰²				•	•	•							•	•					•		•	•			•							•
Electricians						•				I				•	•	•		•				•			•			•				•
Painters, Construction and Maintenance				•		•							•	•				-	•			•			•						-	•

Source: U.S. Department of Labor's Occupational Information Network (O*NET) at www.onetonline.org.

⁹⁹ Work Activities represent Accountants, a specialty occupation of Accountants and Auditors.

Work Activities represent Heating and Air Conditioning Mechanics and Installers, a specialty occupation of Heating, Air Conditioning, and Refrigeration Mechanics and Installers.

¹⁰¹ Work Activities represent Electrical Engineering Technicians, a specialty occupation of Electrical and Electronics Engineering Technicians.

¹⁰² Work Activities represent Construction Carpenters, a specialty occupation of Carpenters.

Related Occupations for the Construction Materials and Services Cluster

The table below lists top occupations in the Construction Materials and Services cluster by entry-level education requirements and provides a sample of related occupations. These related occupations match many of the skills, education, and work experience needed for the top Construction Materials and Services cluster occupations.

Construction Materials and Services Occupations	Related Occupations									
Requires a Bachelor's Degree or	Higher									
Cost Estimators	Financial AnalystsRisk Management SpecialistsTransportation Planners									
General and Operations Managers	 First-Line Supervisors of Office and Administrative Support Workers Logistics Managers Storage and Distribution Managers 									
Construction Managers	Architectural and Engineering ManagersEnergy EngineersGeneral and Operations Managers									
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	 Insurance Sales Agents Market Research Analysts and Marketing Specialists Personal Financial Advisors 									
Accountants and Auditors	 Bookkeeping, Accounting, and Auditing Clerks Financial Analysts Personal Financial Advisors 									
Requires Some College, Postsec	ondary Non-Degree Award, or Associate's Degree									
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	ElectriciansPipe Fitters and SteamfittersPlumbers									
Heavy and Tractor-Trailer Truck Drivers	Light Truck or Delivery Services DriversPile-Driver OperatorsService Unit Operators, Oil, Gas, and Mining									
Telecommunications Equipment Installers and Repairers, Except Line Installers	 Electrical and Electronics Repairers, Commercial and Industrial Equipment Electricians Heating and Air Conditioning Mechanics and Installers 									
First-Line Supervisors of Production and Operating Workers	 First-Line Supervisors of Construction Trades and Extraction Workers First-Line Supervisors of Mechanics, Installers, and Repairers Non-Destructive Testing Specialists 									
Electrical and Electronics Engineering Technicians	 Computer User Support Specialists Manufacturing Production Technicians Mechanical Engineering Technicians 									
Requires a High School Diploma	or Equivalent or Less									
Construction Laborers	 Cement Masons and Concrete Finishers Helpers -Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters Helpers -Carpenters 									
Cement Masons and Concrete Finishers	 Construction Carpenters Insulation Workers, Mechanical Reinforcing Iron and Rebar Workers 									
Carpenters	Brickmasons and BlockmasonsCement Masons and Concrete FinishersRough Carpenters									
Electricians	 Heating and Air Conditioning Mechanics and Installers Pipe Fitters and Steamfitters Refrigeration Mechanics and Installers 									
Painters, Construction and Maintenance	Helpers -CarpentersInsulation Workers, Floor, Ceiling, and WallRoofers									

 $Source: \textit{U.S. Department of Labor's } \underline{\textit{Occupational Information Network (O*NET)}} \text{ at www.onetonline.org.}$

Employer Demand for the Construction Materials and Services Cluster

The following table lists the Ventura County Economic Sub-Market employers in the Construction Materials and Services cluster who posted the most job advertisements during the 120-day period ending July 24, 2015. The table also includes the number of job advertisements from the previous year's period, as well as the numerical change and year-over percent change in these postings for the same 120-day period.

Construction Materials and Services Cluster Employers	Recent Job Advertisements ¹⁰³ (120-day period)	Prior Year Job Advertisements (120-day period)	Numerical Change	Year-Over Percent Change (HWOL Job Advertisements)
Solarcity	24	28	-4	-14.3%
Pentair	13	11	2	18.2%
Parker Hannifin, Corp.	13	11	2	18.2%
Thor Solutions, LLC	10	4	6	150.0%
Milgard Manufacturing, Inc.	8	27	-19	-70.4%
Pride Industries	7	3	4	133.3%
Michael Page	4	1	3	300.0%
Superior Fire, Inc.	4	0	4	_
Abrisa Glass	3	4	-1	-25.0%
American Water Company	3	0	3	_
Granite Construction, Inc.	3	3	0	0.0%
System Pavers, Inc.	3	5	-2	-40.0%
Lend Lease	2	0	2	_
Cabrillo Econonic Development, Corp.	2	8	-6	-75.0%
HBE Corporation	2	9	-7	-77.8%
American Concrete Institute	2	0	2	_
Navigant	2	0	2	_
Garnica's Construction, Inc.	2	0	2	_
Envel Design, Corp.	2	0	2	_
BKM Office Environments	2	0	2	_

Source: The Conference Board Help Wanted OnLine™ (HWOL) Data Series: Period ending July 24, 2015.

¹⁰³ Totals do not include employers with anonymous job advertisements.

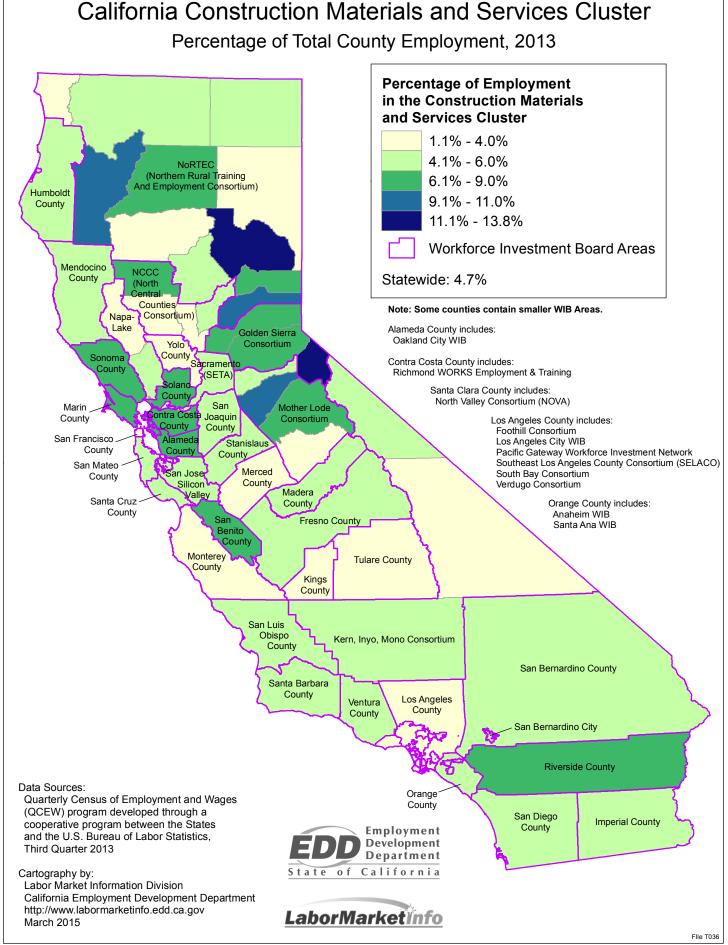
Instructional Programs for the Top Construction Materials and Services Cluster Occupations

The table below provides examples of instructional programs related to some of the top occupations in the Construction Materials and Services cluster, particularly those that require less than a bachelor's degree. These programs train individuals for occupations throughout many industries and are not limited to the Construction Materials and Services cluster. To view a more complete list of training programs, select the source links under the table below. The Taxonomy of Programs categorizes and describes instructional programs only for California Community Colleges.

Occupations	Classific	cation of Instructional Program (CIP)	Taxonomy of Programs (TOP)							
	CIP Code	CIP Title	TOP Code	TOP Title						
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	15.0501 47.0201	Heating, Ventilation, Air Conditioning and Refrigeration Engineering Technology/Technician Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician	094600	Environmental Control Technology						
Heavy and Tractor-Trailer Truck Drivers	49.0205	Truck and Bus Driver/Commercial Vehicle Operator and Instructor	094750	Truck and Bus Driving						
Telecommunications Equipment Installers and Repairers, Except Line Installers	47.0103	Communications Systems Installation and Repair Technology	N/A	N/A						
First-Line Supervisors of Production and Operating Workers	52.0205	Operations Management and Supervision	N/A	N/A						
Electrical and Electronics	15.0303	Electrical, Electronic and Communications Engineering Technology/Technician	N/A	N/A						
Electrical and Electronics Engineering Technicians	15.0305	Telecommunications Technology/ Technician								
	15.0399	Electrical and Electronic Engineering Technologies/Technicians, Other								
Cement Masons and Concrete Finishers	46.0402	Concrete Finishing/Concrete Finisher	N/A	N/A						
Carpenters	46.0201	Carpentry/Carpenter	095210	Carpentry						
Electricians	46.0302	Electrician	095220	Electrical						
Painters, Construction and Maintenance	46.0408	Painting/Painter and Wall Coverer	095270	Painting, Decorating, and Flooring						

Source: U.S. Department of Education <u>Integrated Postsecondary Education Data System (IPEDS)</u> at www.nces.ed.gov; <u>California Community Colleges TOP-to-CIP Crosswalk</u> 7th Edition (2010), www.ccco.edu.

California Construction Materials and Services Cluster Percentage of Total County Establishments, 2013 Percentage of Business Establishments in the Construction Materials and Services Cluster 2.4% - 5.0% 5.1% - 7.0% NoRTEC (Northern Rural Training 7.1% - 10.0% And Employment Consortium) Humboldt 10.1% - 12.0% County 12.1% - 14.6% Workforce Investment Board Areas Mendocino NCCC County Statewide: 5.1% (North Central Note: Some counties contain smaller WIB Areas. Counties Napa-Consortium) Lake Alameda County includes: Golden Sierra Oakland City WIB Yolo Consortium County Contra Costa County includes: County Sacramen Richmond WORKS Employment & Training SETA) Soland Santa Clara County includes: County North Valley Consortium (NOVA) San Marin Mother Lode Contra Costa Joaquin County Consortium Los Angeles County includes: County County Foothill Consortium San Francisco Alameda Los Angeles City WIB Stanislaus County County Pacific Gateway Workforce Investment Network Southeast Los Angeles County Consortium (SELACO) San Mateo San Jose Merced South Bay Consortium County County Silicon Verdugo Consortium Madera Valley Santa Cruz Orange County includes: County County Anaheim WIB Fresno County Santa Ana WIB Benito County Monterey Tulare County County Kings County Obispo Kern, Inyo, Mono Consortium San Bernardino County Santa Barbara County Los Angeles Ventura County San Bernardino City Riverside County Data Sources: Orange Quarterly Census of Employment and Wages County (QCEW) program developed through a San Diego Imperial County cooperative program between the States County **Employment** and the U.S. Bureau of Labor Statistics, Development Third Quarter 2013 Department State of California Cartography by: **Labor Market Information Division** California Employment Development Department http://www.labormarketinfo.edd.ca.gov LaborMarketinfo March 2015









AWET Deputy Sector Navigator Update for the Ventura County WDB Clean/Green Committee

November 20, 2015

Margaret Lau, CCA ETC Director and Regional AWET DSN Contact: margaret.lau@hancockcollege.edu; Phone 805-735-3366 ext. 5276

1. Regional DSN Activities

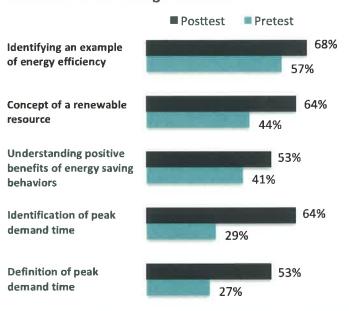
- Oil & Gas | Ag | Aerospace Safety Meeting, Oct. 15; Co-sponsored by Prop 39 Regional Grant (David Teasdale, Director) and industry partners. Keynote presentation by Paul Andersen, "How to Survive a Cal/OSHA Audit," with copy available for broad distribution.
- Academic Senate for the California Community Colleges, SoCal Course ID Discipline Input
 Group (Welding Technology (Oct 30 in Anaheim) -- supports Mechanized Ag pathways recruited and supported participation by three regional full-time faculty members; outcome
 was a preliminary draft model curriculum for certificate in Welding Technology
- Convened a South Central Coast Regional Water Faculty Collaborative WebEx; Fri., Nov 13;
 to be followed by face-to-face dinner meeting on Feb. 2, 2016
- Co-sponsoring VC Innovates Ag, Water, and Environment Industry Mentoring Dinner Meeting, Dec. 2, 5:30 PM; CSU Channel Islands
- Co-hosting the California Agricultural Teachers' Association South Coast Regional Faculty
 In-Service Day at Cal Poly, SLO, for 100 high school and community college ag faculty;
 Dec. 14.
- 2. One-Time Regional CTE Enhancement Projects for Ag, Water, and Environmental Technology Sector
 - Ongoing partnership with Center of Excellence on SCCR Water/Wastewater Employer Survey
 - Regional water management educational program marketing/promotion
 - Facilitating regional collaboration/planning input on Antelope Valley College's **Mobile Water Treatment Educational Outreach Trailer**
 - Facilitating regional water faculty collaboration on updating Open Educational Resource (OER) Textbooks for Basic and Advanced Water Math and Introduction to Water Treatment for broad dissemination and accessibility 24/7 over the internet
 - Facilitating regional water faculty collaboration to **create two new short instructional videos for a courses in waste water treatment and disposal**
 - Facilitating a unique private-public partnership involving Ventura College's Water Science student interns as research assistants supporting the development and proof-of-concept of an innovative portable water purification system.
 - Support of regional student leadership, field trips, professional development, equipment, etc.

EXECUTIVE SUMMARY

PEAK Student Energy Actions, an environmental education program of The Energy Coalition, aims to make high-quality, action-based, environmental education available and accessible to more classrooms throughout the state of California. In the 2014-2015 school year, PEAK collected 15,885 pretests and posttests from participating schools throughout the state. Below are highlights of what we learned.¹

KNOWLEDGE GAINS

The PEAK student population made highly statistically significant gains in every dimension of knowledge assessed.



SAVING WATER



75% of students say they are "pretty sure" or "definitely" sure that they save water more often than they used to because of PEAK.

SAVING ENERGY



69% of students say they are "pretty sure" or "definitely" sure that they save energy more often than they used to because of PEAK.

SHARING LEARNING



62% of students say they shared their learning with others.

TAKING ACTION WITH OTHERS



50% of students say they took more action with friends or family because of what they learned in PEAK.

INTEREST IN SCIENCE



77% of students agree or strongly agree that after participating in PEAK, they are more interested in science than they were before.

AWARENESS OF "GREEN" CAREERS



Five out of every six students (84%) agree or strongly agree that they know more about "green" and energy careers after participating in PEAK.

¹For more details about this evaluation and these key findings please see the full report, "PEAK Student Energy Actions Evaluation of Student Outcomes in the 2014-2015 School Year."

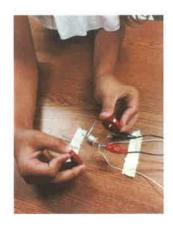


What is PEAK?

The Energy Coalition's PEAK program is a customizable, behavior change focused, Common Core and Next Generation Science Standards aligned environmental educational program designed to empower elementary and middle school students with the knowledge to manage energy and water use in their homes, schools and communities. Through hands-on learning, students are inspired to take action to create a more sustainable world and to educate others about how to use energy wisely.

Benefits of Participation

PEAK cultivates a generation of motivated individuals equipped to pursue S.T.E.M. (Science, Technology, Engineering, Mathematics) Careers and to take control of our energy future. PEAK's standards-based curriculum is easily incorporated into K-8th grade classrooms. Through participation, teachers receive professional development, a resource guidebook containing the curriculum, a toolkit of lab materials, educational posters and on-going support from the PEAK staff.



How Does PEAK Work?

During a full day teacher training, new PEAK teachers are guided through the program's curriculum, career connections and hands-on activities. Post-training, PEAK staff provides ongoing support through planning meetings, lab assistance, classroom visits and educational assemblies.

To inspire students to take action, PEAK focuses on the following "4 PEAK Student Energy Actions": 1) Shift Energy-demand off Peak Hours; 2) Shrink Energy-use through Cutting Waste; 3) Explore Renewable Energy; and, 4) Plug into New Technology.

Students come to understand and practice these four actions through PEAK lessons and events. PEAK's interactive website, www.peakstudents.org, includes engaging contests, games, and activities for students and online access to PEAK graphics, the curriculum and additional resources for teachers including online Professional Development e-learning courses and peer-to-peer connections.

Where Does PEAK Reach?

The PEAK program reaches approximately 85,000 students each year in various counties throughout California. In addition, PEAK reached approximately 6,000 students in Northern Illinois for a three year program period and continues to reach



approximately 9,000 students each year in Nacka and Göteborg, Sweden – reinforcing the importance of smart energy management in the global context

What Makes PEAK Unique?

PEAK recognizes that in order to truly empower students to manage energy and water use, students must understand the entire energy equation from the science of how energy is created to the environmental ramifications of electrical generation and the financial costs to the family. Using action-based learning as a framework, PEAK provides teachers with extension activities that enable students to apply what they learn in the classroom. In addition, PEAK provides sustained support through onsite activities, special events and classroom demonstrations, all while meeting CCSS and NGSS.

Who Supports PEAK?

PEAK is funded in part by CA utility customers and is administered by: Southern California Edison, San Diego Gas & Electric, SoCalGas and Pacific Gas and Electric Company in collaboration with The Energy Coalition, under the auspices of the California Public Utilities Commission. Additionally, PEAK is brought to neighborhood schools through a grant provided by the Los Angeles Department of Water and Power, a pilot project through Sacramento Municipal Utility District and in partnership with the Environmental Protection Agency.

How Do We Enroll in PEAK?

To submit an inquiry, contact us at: **education@energycoalition.org**To learn more about the program, visit our website at: **www.peakstudents.org**