

California Green Transportation Jobs

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EDD's Labor Market Information Division

Cynthia Solorio, Occupational Research Group Manager

Brandon Hooker, Statewide Information Systems Group

Laurie Ahtelik, Occupational Research Group

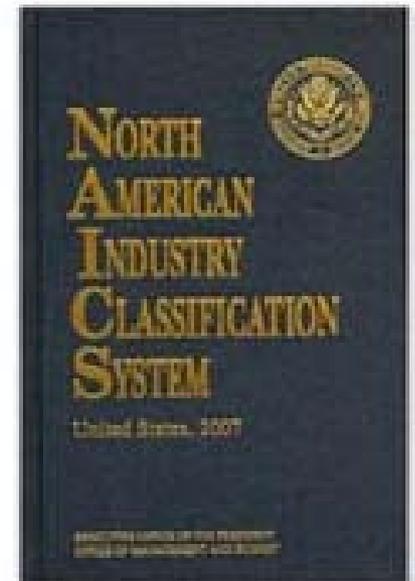
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Overview

- CEC Standard Agreement
 - CA Green Economy Survey Analysis
 - Green Transportation Trends and Projections
- Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP)
 - Quarterly Census of Employment and Wages (QCEW)
Firm/Employment Trends Analysis
 - Industries
 - Occupations

North American Industry Classification System (NAICS)

- NAICS is the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy.



LMID's

Working Definition of Green Jobs

Green jobs produce (“supply”) goods or services that result in:

- **G**enerating and storing renewable energy
- **R**ecycling existing materials
- **E**nergy efficient product manufacturing, distribution, construction, installation, and maintenance
- **E**ducation, compliance and awareness
- **N**atural and sustainable product manufacturing

For the complete definition see:

<http://www.labormarketinfo.edd.ca.gov/contentpub/GreenDigest/Californias-Draft-Definition-Green-Industries.pdf>

California's Green Economy Survey



- Completed January 2010
- Surveyed businesses across the California economy; all industries, all sizes, all areas
 - Creates a baseline measure of:
 - Number of workers in green or clean product manufacturing and/or services
 - Number of businesses that have adopted green practices
 - Emerging occupations for further study related to skills and workforce needs
 - Provides awareness of sustainability practices
- Nearly 15,200 employers responded

California's Green Economy 2009

- 7.9 percent of employers report employees working on green products and services
- About 3.4 percent of all California workers are working on green products and services (433,000)
- About 61 percent of green workers spend more than half time on green aspects of job (263,000)
- 63 percent of employers report using at least one green business practice

ARFVTP Industry Categories and Green Employment

□ Identify ARFVTP Industry Categories

- Alternative Advanced Vehicles
- Alternative Fuels
- Transportation Systems



□ ARFVTP Baseline Green Employment

Estimated 90,132

ARFVTP FIRM TRENDS

ARFVTP FIRM TRENDS

	Total Employment in Matched Firms 2007:Q3	Total Employment in Matched Firms 2009:Q3	Percentage of Firms that ADDED JOBS	Percentage of Firms that LOST JOBS	Percentage of Firms With the Same Number of Jobs
Alt. Adv. Vehicles	418,296	367,492	22%	51%	27%
Alt. Fuels	637,724	659,828	26%	41%	33%
Transportation Systems	398,946	364,125	22%	43%	34%
All Firms in Green Survey	10,725,803	10,082,276	26%	45%	30%

ARFVTP JOB TRENDS

ARFVTP <u>JOB</u> TRENDS					
	Total Employment in Matched Firms 2007:Q3	Total Employment in Matched Firms 2007:Q3	JOBS ADDED	JOBS LOST	NET JOB TOTALS
Alt. Adv. Vehicles	418,296	367,492	21,803	-72,607	-50,804
Alt. Fuels	637,724	659,828	114,072	-91,968	22,104
Transportation Systems	398,946	364,125	33,639	-68,460	-34,821
All Firms in Green Survey	10,725,803	10,082,276	919,204	-1,562,731	-643,527

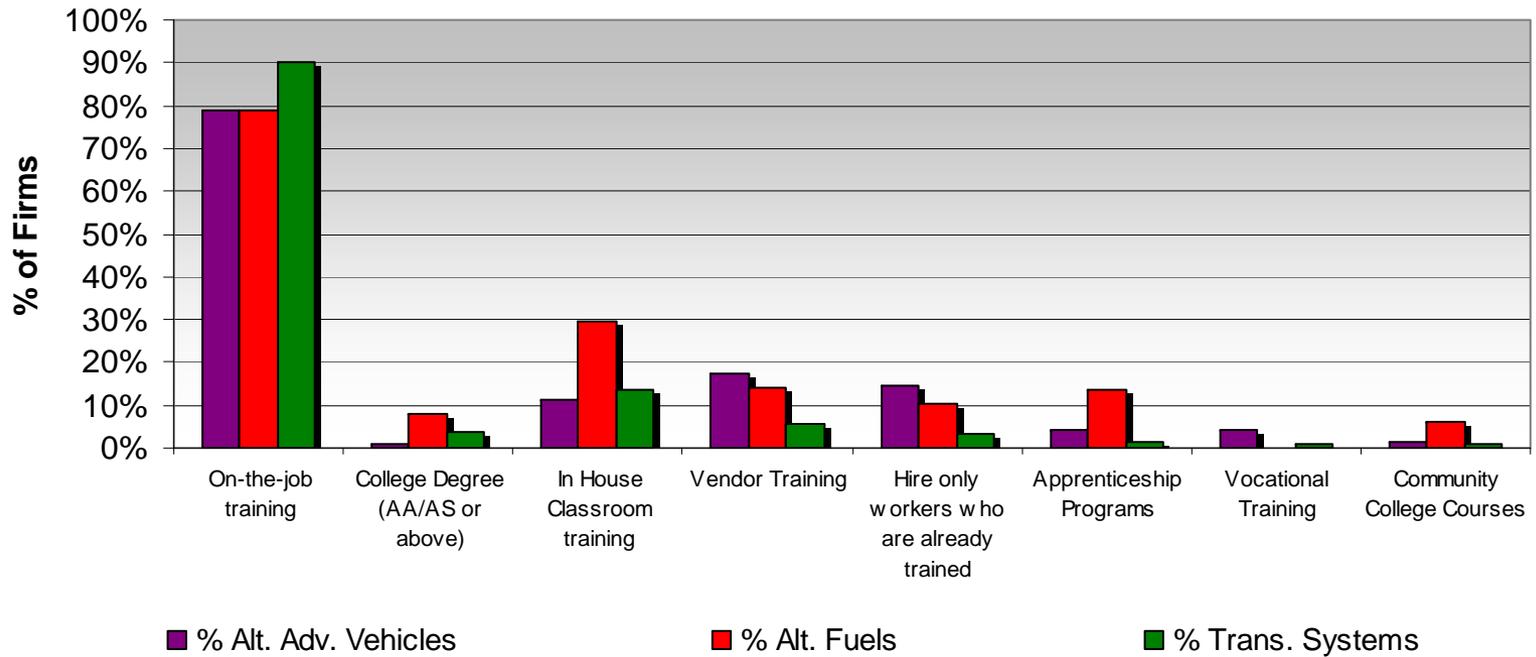
ARFVTP JOB TRENDS

ARFVTP: TOP 5 LARGEST JOB CREATING INDUSTRIES

Industry Title	JOBS ADDED
Support Activities for Crop Production	63,751
Scientific Research and Development Services	16,453
Management, Scientific, and Technical Consulting Services	11,355
Architectural, Engineering, and Related Services	9,980
Electric Power Generation, Transmission and Distribution	7,288

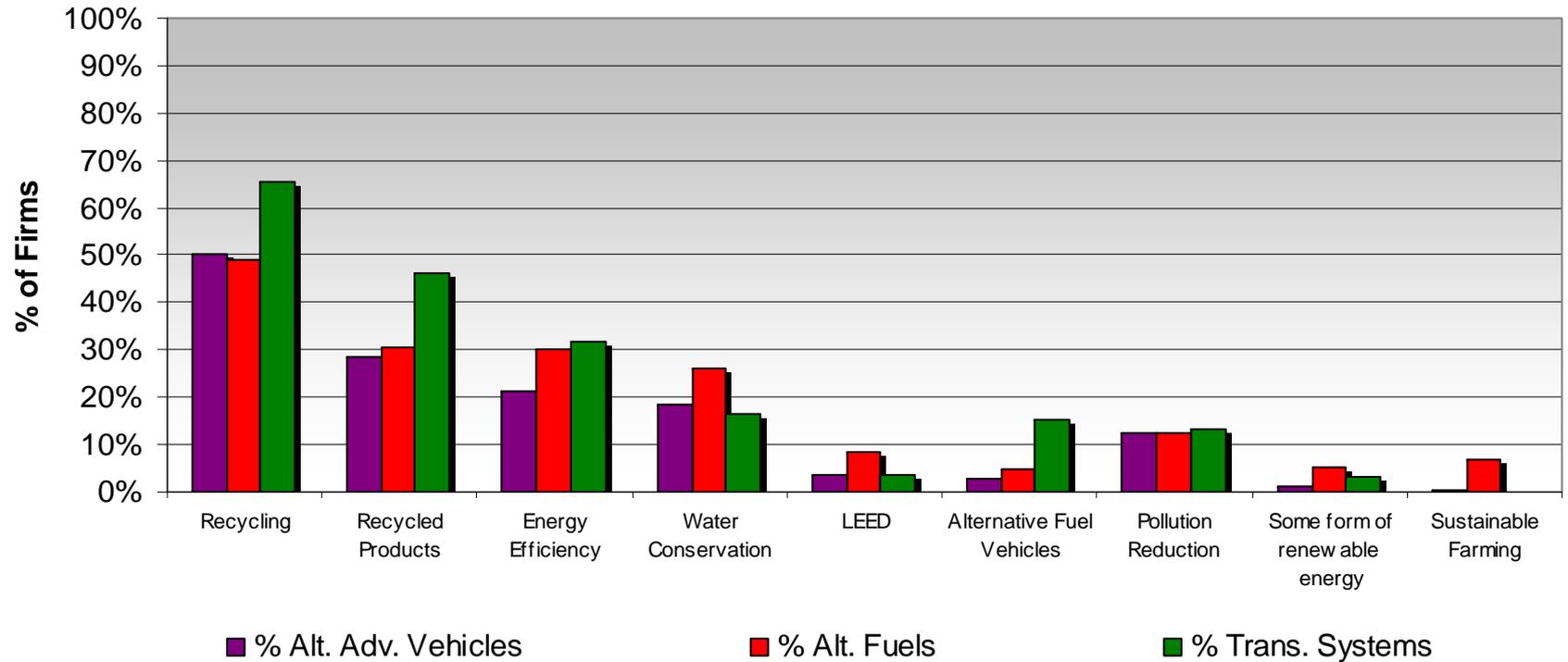
California Green Economy Survey

What Methods Are Used At Your Firm To Prepare Current Workers To Do This Work?



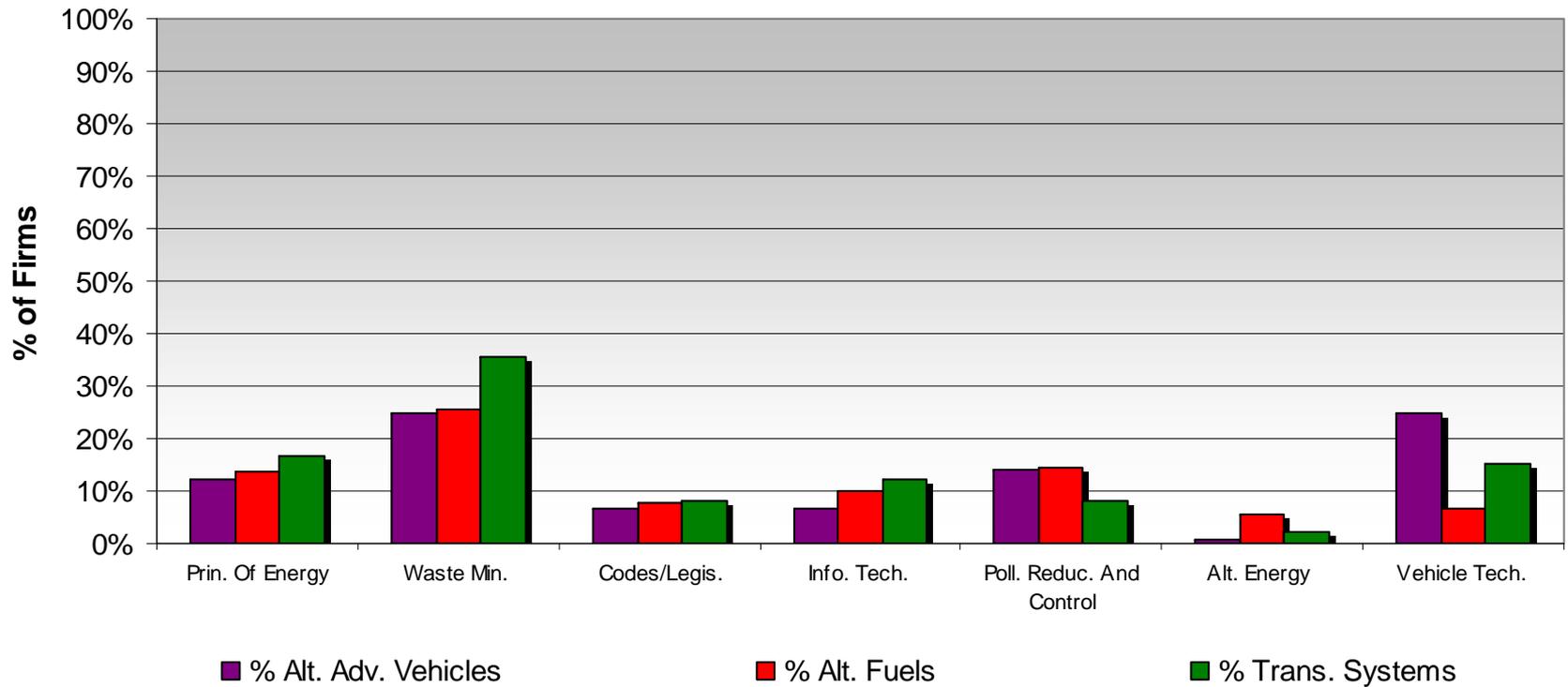
California Green Economy Survey

If your business makes use of "green" practices, services or products, what does your firm currently USE on site?



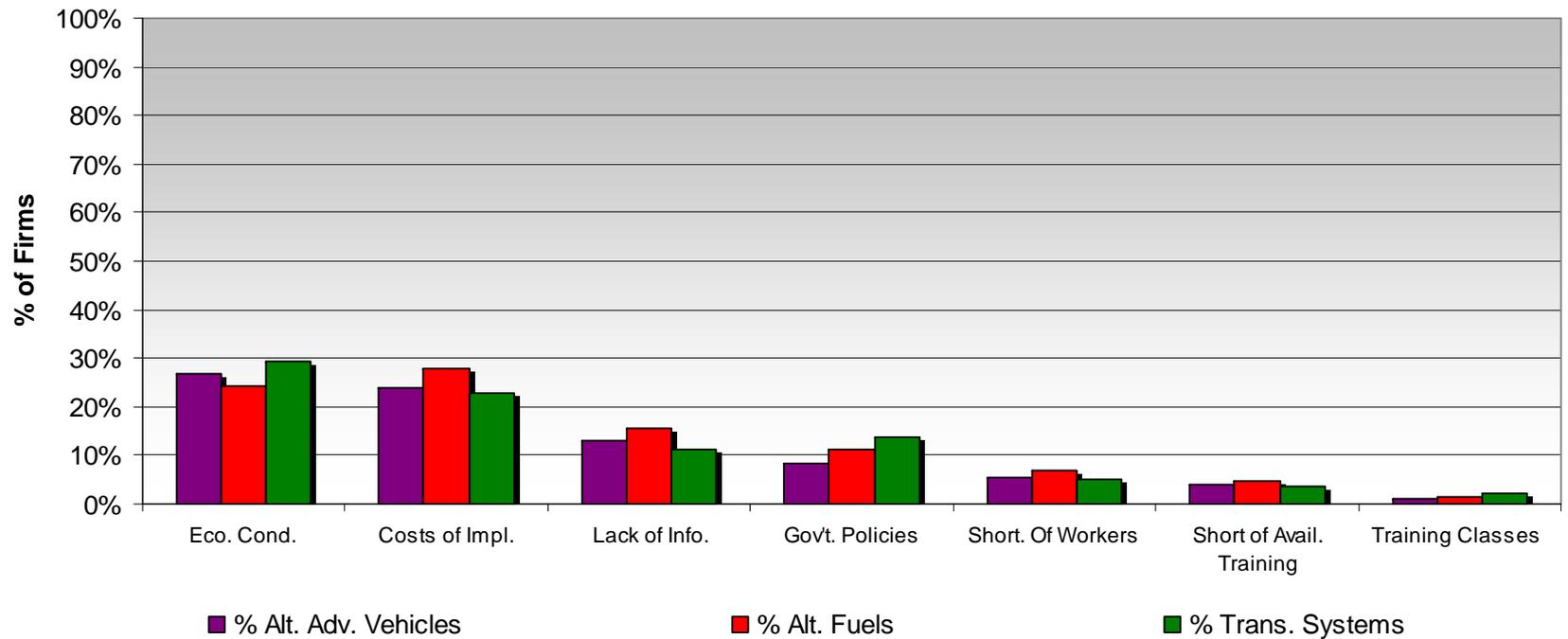
California Green Economy Survey

What new skills or knowledge will future employees need in order to perform "green" activities at your firm?



California Green Economy Survey

What barriers, if any, stand in the way of implementing "green" practices at your firm?



Occupations Related to ARFVTP

Selected in Cooperation with CEC

Occupations Relevant to ARFVTP included in the California Green Economy Survey	Additional Occupations Relevant to ARFVTP
Alternative Energy Engineers	Biofuels Technicians
Alternative Fuel Vehicle Technicians	Bus and Truck Mechanics
Battery and Energy Storage Project Engineers	Fuel Cell Technicians
Electrical Engineers	Geothermal Technicians
Industrial Production Managers	Machinists
Mechanical Engineers	Maintenance and Repair Workers, General
	Mechanical Engineering Technicians
	Plant and Systems Operators

Occupational Research Goals:

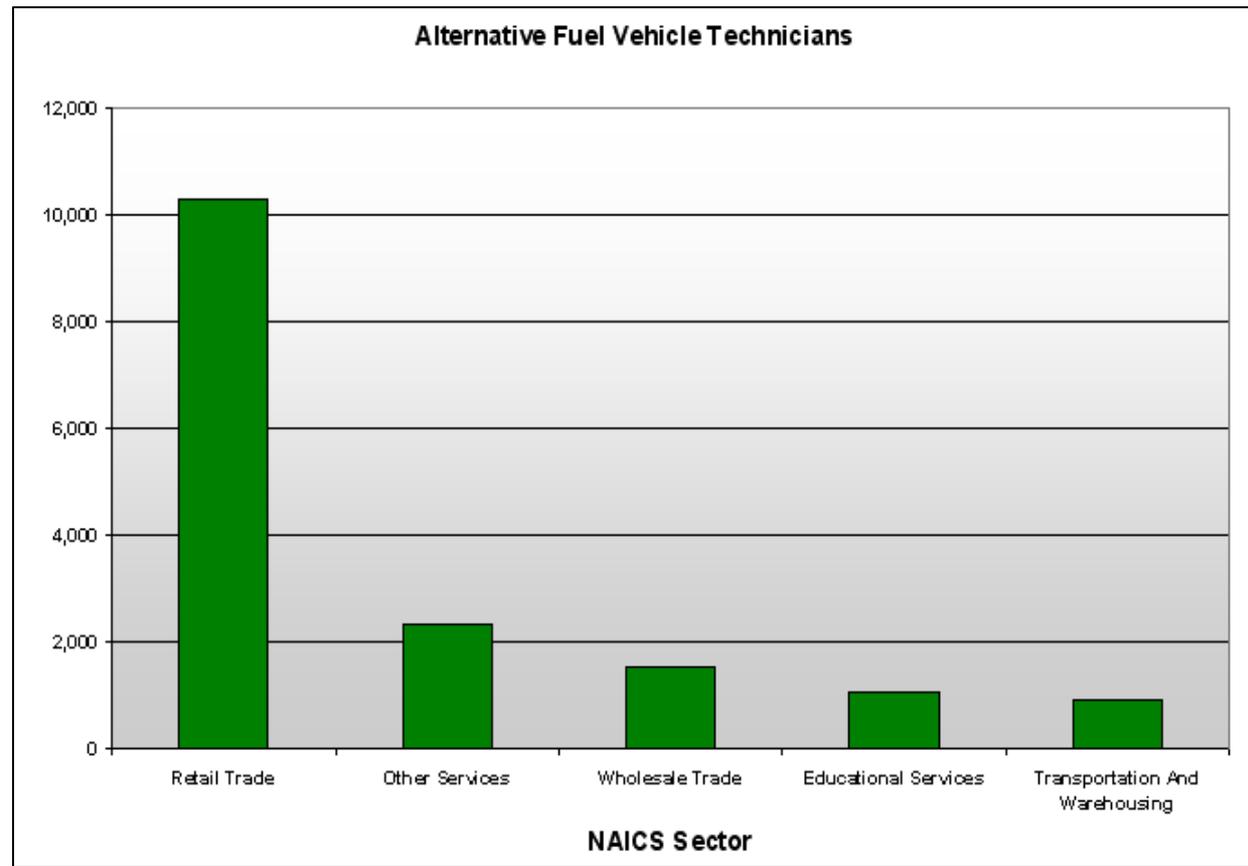
Increase knowledge of:

- Job-specific Tasks
- Current Employment
- Employer Demand
- Labor Market Information



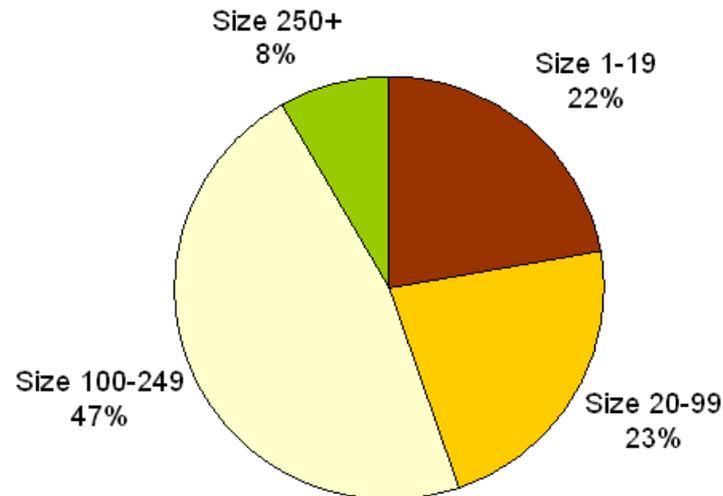
Profile Survey Results for (Alternative Fuel Technicians)

- Estimated Green Employment
- Top Industries

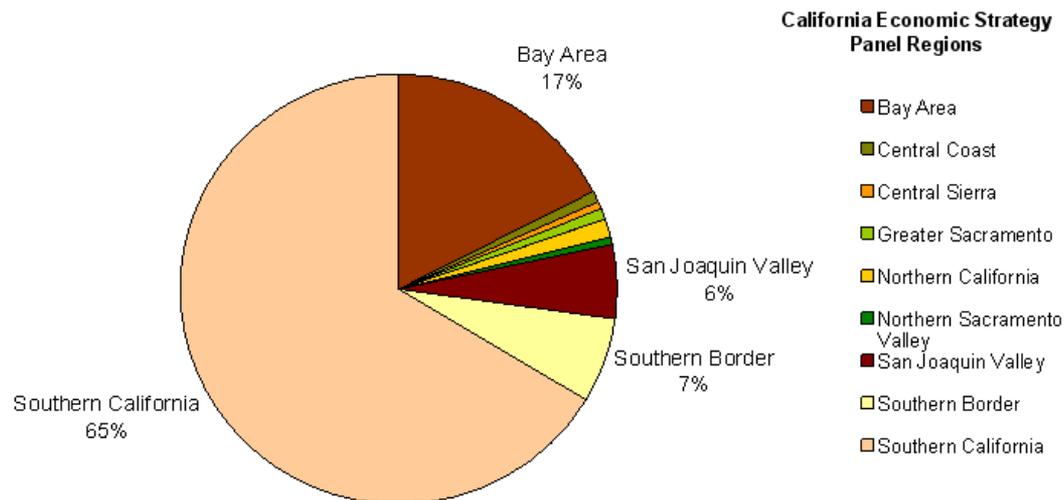


Profile Survey Results (continued)

Size of Firm



Top Regions



Profile Survey Results – Supply Indicators

- Training Programs
- Program Completers
- Types of Training
- Average Age of Worker
- Percentage Workers over 55



Profiles, Cont. – Demand Indicators

- California Job Listings - Help Wanted OnLine
- One-year period



Profiles, Cont. – Employment Data

□ Estimated Employment

□ Average Earnings

□ Training Levels



Getting at Demand Using Keywords

Used Help Wanted OnLine Job Listings Data Tool

Keywords Applied to <i>HWOL</i> Tool	No. Job Listings*	Sample of Advertising Employers	AB 118-Related Jobs Represented	CA Counties with Most Job Listings
Alternative and fuel (combined)	220	<ul style="list-style-type: none"> ▪ Parsons ▪ General Electric ▪ PG&E ▪ Quantum Technologies 	<ul style="list-style-type: none"> ▪ Environmental Engineers ▪ Industrial Engineers ▪ Engineering Managers ▪ Emissions Lab Technicians 	<ul style="list-style-type: none"> ▪ Los Angeles ▪ San Francisco ▪ Contra Costa
Battery	1,015	<ul style="list-style-type: none"> ▪ Tesla Motors ▪ PG&E ▪ ThinkEnergy ▪ Allegis Group 	<ul style="list-style-type: none"> ▪ Electrical Engineers ▪ Mechanical Engineers ▪ Industrial Engineers ▪ Electronics Engineers 	<ul style="list-style-type: none"> ▪ Los Angeles ▪ Santa Clara ▪ San Francisco ▪ San Diego
Biofuel	290	<ul style="list-style-type: none"> ▪ Sapphire Energy ▪ EdiniQ Inc. ▪ Lawrence Berkeley National Lab ▪ Cobolt Biofuels 	<ul style="list-style-type: none"> ▪ Industrial Engineers ▪ Chemical Engineers ▪ Engineering Managers ▪ Electronic Engineering Technicians 	<ul style="list-style-type: none"> ▪ San Diego ▪ Alameda ▪ Contra Costa

Next Steps

- Collect Data from Subject Matter Experts
 - Skills and tasks performed
 - Training pathways
 - Producer or User?
 - Outlook

- Develop Green Training Inventory
 - Post-secondary – Including Certificate Programs
 - ROP
 - Courses

Questions



Cynthia Solorio

E-mail: cynthia.solorio@edd.ca.gov / 916-262-2202

Brandon Hooker

E-mail: brandon.hooker@edd.ca.gov / 916-262-2295

Laurie Ahtelik

E-mail: laurie.achtelik@edd.ca.gov / 916-262-2254