



**Training Proposal for:  
California Labor Federation, AFL-CIO  
Agreement Number: ET09-0425**

Panel Meeting of: **January 23, 2009**

ETP Regional Office: **San Francisco Bay Area**

Analyst: D. Woodside

**PROJECT PROFILE**

Contract Type:	SET Frontline - Retrainee	Industry Sector(s):	Construction
	Priority/SB<100		Green Technology
	Priority/Retrainee		

Counties Served:	Statewide	Repeat Contractor:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Union(s):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Priority Industry:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	State Building and Construction Trades Council of California		

Turnover Rate %	Manager/Supervisor %
≤20%	N/A

**FUNDING DETAIL**

Program Costs	Support Costs	Total ETP Funding	In-Kind Contribution
\$1,354,860	\$140,410	\$1,495,270	Inherent

## TRAINING PLAN TABLE

Job No.	Job Description (by Contract Type)	Type of Training	Estimated No. of Trainees	Range of Hours		Estimated Cost per Trainee	Post-Retention Wage
				Class / Lab	CBT		
1	SB<100 Retrainee	Business Skills, Commercial Skills, Computer Skills	1,080	24-120	0	\$1,119	\$23.64
				Weighted Avg: 39			
2	SET Priority/Retrainee	Business Skills, Commercial Skills, Computer Skills	370	24-120	0	\$775	\$23.64
				Weighted Avg: 39			

**Minimum Wage by County:** SET Frontline Worker statewide average hourly rate is \$23.64.

**Health Benefits:**  Yes  No This is employer share of cost for healthcare premiums – medical, dental, vision.

**Used to meet the Post-Retention Wage?:**  Yes  No  Maybe

Participating employers may use health benefits to meet the Post-Retention Wage.

Wage Range by Occupation	
Occupation Title	Wage Range
Sheet Metal Worker	
Plumber	
Electrician	
Iron Worker	
Foreman	

## INTRODUCTION

In this proposal, the California Labor Federation, AFL-CIO, (CalFed), in conjunction with the State Building & Construction Trades Council of California (Council), seeks funding for a statewide “Building Green Skills” training program. The project will retrain journey-level workers in California’s construction trades to transition into the new green economy as outlined below:

CalFed is an umbrella organization comprised of 1,200 unions, representing 2.1 million union members in manufacturing, retail, construction, hospitality, the public sector, health care, entertainment, and other industries in California. The CalFed is eligible to receive Panel funding under California Unemployment Insurance Code, Section 10205(c) as a Workforce Investment Act (WIA) grant recipient. CalFed will be the contractor for ETP Agreement purposes.

The Council represents more than 350,000 unionized construction workers in California. It has 185 affiliated local unions from 13 crafts and 22 county and multi-county Building Trades Councils. The Council works closely with the California Apprenticeship Coordinators Association, the network of joint union-employer training programs such as the Joint Apprenticeship Training Committees (JATCs) across the state; as well as with a wide range of employer organizations and major construction industry employers (often referred to as contractors). The Council will market the Building Green Skills program to secure the participation of additional JATCs and employers. The construction industry to be served under this Agreement is designated as a Priority Industry by the Panel.

## Special Employment Training

This proposal has been identified for SET funds because the construction industry does not face out-of-state competition. Thus, trainees in both Job Numbers must be earning at least the statewide average hourly wage at the end of the retention period. (Unemployment Insurance Code 10214.5. Title 22, California Code of Regulations (CCR), Section [4409\(a\)](#).)

## Impact of Green Technology

CalFed reports that recent legislation, emerging green technology developments, and the recession have and will continue to impact workers and employers in the building trades. Examples of such “green” public policy initiatives in California include:

- California’s Global Warming Solutions Act of 2006 (AB 32) – this law, which will go into full force in 2012, seeks to lower California’s greenhouse gas emissions to 25% below 1990 levels by 2020 and to 80% below 1990 levels by 2050. This legislation creates new challenges and opportunities for the building trades. Jobs throughout the economy, not just in new industries, will require new skills as businesses change production processes to reduce their carbon footprint. The implementation of AB 32 will impact construction, energy generation, ventilation, and air conditioning businesses throughout the State. Furthermore, more and more building owners are choosing to adopt the Leadership in Energy and Environmental Design (LEED) green building rating system certification which supports sustainable green building and development practices. Yet, many of the journey-level workers do not currently have the skills needed to meet employer needs. Journey-level workers will need to upgrade their skills so they can make the shift to tomorrow’s new green technologies.
- Renewable Portfolio Standard Legislation – Governor Schwarzenegger recently signed an Executive Order calling for 33% of state energy to come from renewable sources. Currently, the state legislature is negotiating a bill to implement this Order. Such policy will create an increased demand for green workforce skills.
- Renewable Fuel Technology Financing of 2007 (AB 118) – this measure uses additional smog-check fees to create funds for renewable fuel technologies and includes funding for workforce development.
- Green Jobs Regional Initiative of 2007 (AB 3018) – this measure calls for regional collaboration and meeting of stakeholders engaged in efforts to create green jobs. The state Workforce Investment Board is in charge of implementing this effort.
- The Solar Hot Water and Efficiency Act of 2007 – this law directs the California Public Utilities Commission to establish a statewide incentive program to encourage the installation of solar water heating systems.
- The Million Solar Roofs Program – this initiative has a goal to install 3,000 megawatts of new, solar-electric systems by 2017. It requires publicly-owned utilities to adopt, implement, and finance a solar incentive program. It also encourages energy efficiency because building owners have to meet certain efficiency requirements in order to obtain the incentives.
- The California Air Resources Board (ARB) - this agency, charged with determining how the AB 32 goals will be reached, plans to reduce emissions through a variety of strategies,

including sector-specific regulations, market mechanisms, voluntary measures, fees, incentives, and other policies and programs. ARB has and will continue to encourage the state to develop green building measures for new construction and existing buildings, but no set structure is in place. Current measures include: increasing building and appliance efficiency; implementing a major energy efficiency program for state buildings; encouraging combined heat and power systems; and implementing stringent efficiency standards for new construction.

Both the CalFed Biennial Convention in July 2008 and CalFed's Executive Council in April 2008 adopted policies stating support of California's green initiatives. CalFed's Workforce and Economic Development's (WED) annual conference was "Growing California's Green Economy." CalFed also has a section of its website, "The Green Room," dedicated to disseminating information about the green movement. Moreover, CalFed has been very active in providing public comment on AB 32 and on the Western Climate Initiative, which is a regional state effort to curb carbon emissions. CalFed also formed a Working Group on AB 32 and climate policy which has met with the leadership of the Air Resources Board.

It is the goal of CalFed and the Council to play a significant and positive role in assisting primarily small business employers by jointly developing a Building Green Skills training program. The program will assist construction union members, hit hard by the economic downturn, to acquire new skills and to build stable career pathways for the green economy. CalFed reports that most of these jobs can continue to provide high wages with good benefits if the workers' skill sets are enhanced. In addition, the green skills outlined in this training plan can reduce periods of unemployment for construction trade workers in an industry severely affected by the current economy. Further, CalFed and the Council believe that retraining will prevent workers from suffering economic hardship as a result of addressing global warming or other environmental challenges.

In fact, CalFed and the Council representatives believe that future growth in the construction industry will be realized as a result of green initiatives and developing technologies and states: "AB 32 and other legislation that will follow could be the fuse that ignites California's next construction boom. But it will happen only if our joint union/employer apprenticeship programs and California's public school system can continue to produce a new generation of construction workers that are trained in the increasingly complex technologies of the future." (Bob Balgenorth, President, Council) The journey-level workers participating in this project will be able to work on the construction of hospitals; the expansion and retrofitting of public schools, colleges and airports; the retrofitting of public and private business space; and the construction of wind turbines and other commercial and public works projects generated as a result of green initiatives.

## **PROJECT DETAILS**

CalFed and the Council believe that the proposed Building Green Skills training program can work well with the state's already-established Building Trades JATCs because of the key role of construction occupations in new green building, energy efficiency building retrofits, solar energy installation, and construction of renewable energy plants. Under this proposal, ETP will fund retraining of journey-level electricians, sheet metal workers, plumbers, iron workers, and foremen through JATCs which do not currently have active ETP Agreements. All the class/laboratory training included in this training curriculum will take place at the JATCs.

JATCs are all labor-management training organizations formed pursuant to a collective bargaining agreement and are administered by trustees designated by the participating

employers and union locals. More than 100 employers contribute to the JATCs listed below and all of the participating employers are subject to unemployment insurance fund contributions. Approximately 75-80% of the initial employers who will participate in the proposed training will meet ETP's definition of a small business with less than 100 full-time employees (Job Number 1 trainees). Job Number 2 will fund training for larger construction industry employers. The following JATCs represent the initial programs committed to participate under this Agreement:

JATC	Area Served	# of Journey Level Members	# of Trainees in Proposed Program
Plumbers (UA) Local 467 JATC	Santa Clara	900	144
Santa Clara County Electrical JATC	Santa Clara	1500	72
Kern County Electrical JATC	Bakersfield	400	158
Fresno, Madera, Kings, and Tulare Counties of CA Electrical JATC	Fresno	600	288
Tri-County Electrical JATC	Castroville	350	218
San Joaquin – Stanislaus, Plumbers, Pipe and Refrigeration Fitters JATC	San Joaquin	540	119
	Totals:	4,290	999

### Marketing and Additional JATC/Employer Recruitment

Council has been and will continue to market this project statewide. Currently, it is working with additional JATCs to solidify their training needs through the following qualification process. For this reason, additional slots have been allocated in the training plan to meet the identified needs of the sheet metal and iron worker trades. The six JATCs listed above were selected in the following way:

1. A Building Green Skills presentation was given at the 2008 CalFed Convention as well as at the California Construction Academy.
2. Follow-up was made to the JATCs to ensure that they had the capacity and interest to offer green training to their journey-level workers.
3. Interested JATC representatives filled out an initial one-page application to signify their interest and support of the program.
4. Applications were reviewed and only applications demonstrating commitment and readiness to conduct journey-level green training were accepted.
5. Calls were made to applicants whose information supported the goals of the Building Green Skills initiatives.
6. Applicants filled out a second application.
7. Second applications were reviewed.
8. CalFed and the Council held follow-up meetings with individual JATCs statewide.
9. Qualified JATCs were selected and training plans developed.

Council staff will promote the Building Green Skills training program at labor-management and industry meetings, site visits to local schools, and trade shows. An informational flyer will be mailed to potential employers and will be handed out when calling on businesses, at trade shows and other employer meetings. The flyer will be targeted to business owners, company presidents, human resource managers, and other senior executives in the industry. The JATCs will also publicize the availability of training through direct mailings, paycheck inserts by contractors, brochures/flyers, personal contacts, telephone calls, public service announcements, and e-mail announcements.

CalFed expects to recruit additional JATCs in the face of many challenges. For instance, the Council reports that while some employers are actively pursuing "green" work related to their craft, others have been slow to get involved in a new endeavor. Many employers are not bidding on current green projects because they do not feel secure in their workers' abilities to perform these new jobs and retrofits. Hence the marketing of this project includes not just marketing to employees through the JATCs, but also includes outreaching to the hundreds of small business California-based construction employers to: (1) learn more about current and future green legislation and its impact on their industry; (2) understand that green technology training is available through the training centers; and (3) gain confidence in their employees' skills to perform these new green projects.

Staff recommends that CalFed receive 12% support costs to assist in recruiting and qualifying additional participating employers and building trade JATCs for this program.

### **Curriculum and Employer Needs Assessment**

The Council and CalFed have targeted the building trades that will be most affected by the green economy, such as electricians who will set up solar power systems; plumbers who will install water-saving, environmentally friendly appliances; sheet metal workers who will service more fuel-efficient air systems; and iron workers who are installing wind turbines. The workers who will be trained in this project bring electricity, air control, and water into residences, schools, businesses, offices, and industrial buildings. They plan, layout, install, repair, monitor, and maintain equipment that provides light, heat, communications, water, and power.

Currently, there are minimal green certifications implemented in the industries listed in this project. By proactively training the workers now, CalFed and the Council hope to lead the green movement by having the training in place before green certification becomes required.

CalFed reports that the curriculum in this proposed project was jointly developed by local union and employer representatives and is based on requirements specific to the needs of the participating employers and as predicted by the new green technologies and practices.

The following training types will address employer needs created by the current impact on the construction industry of the turndown in the economy, LEED certification, AB 32, pending green legislation and commercial interest in developing, retrofitting and maintaining greener buildings:

**Commercial Skills** training will cover energy-efficient technologies and products such as solar photovoltaic panels, wind turbine systems, new motor controls, green building materials; advanced welding skills including Tungsten Inert Gas (TIG), Metal Inert Gas (MIG) and/or Stick Welding; climate energy efficiency and consumption greenhouse gas abatement; solar hot water and water efficiency installation and retrofitting; reuse/recycled water and wastewater treatment systems; and green materials testing and audit equipment.

The need to install and maintain new kinds of equipment, work with new materials, and meet the latest complex and quickly changing standards means building trades workers need to learn additional new safety and work skills. For example, because workers often work with high voltage, the potential for injury or death for themselves and bystanders is significant. Therefore, contractors and property owners have demanded that workers undergo training above and beyond CAL-OSHA requirements so that their skills are up-to-date and can be performed efficiently and safely in public places. Training includes codes related to solar panel installation, AC/DC principles, grounding, industrial motor codes, programmable logic controls, and electrical design. CalFed represents that safety training is, and will continue to be, provided in accordance with all pertinent requirements under state and federal law.

**Computer Skills** training will give trainees such skills as the ability to modify blueprints; look up project requirements, budgets and timelines; and adjust computerized systems. For example, many of the monitoring systems require setting up and maintaining automated computerized ventilation systems. If an airflow system is incorrectly calibrated, it will not work correctly. Unless a worker knows how to set or reset a control, the system will continue to malfunction, leading to greater energy use and costs. Training will also include Computer-Aided Design (AutoCAD) and operation of software related to scheduling and planning jobs.

**Business Skills** workers are faced with understanding new national building codes and green practices; following LEED certification guidelines; using more collaborative bidding and project development practices; meeting budgets; interacting more while on projects with other types of construction workers; and figuring out green solutions in traditional work environments. The proposed training will give trainees the tools to plan, organize and manage their construction projects so that they can complete them efficiently and on time. Training for foreman will include team-building and leadership skills so that they can lead a team in an effective manner and manage projects while performing new and challenging green projects.

### **Frontline Worker**

Training will be allowed for workers designated as “foreman.” Based on the nature and scope of their job duties, these employees are eligible for overtime compensation and meet the Panel’s definition of frontline workers. (Title 22, CCR, Section 4400(ee).)

### **Commitment to Training**

CalFed represents that ETP funds will not displace the existing financial commitment to training made by its participating employers. Current training funds for the JATCs are based on monies contributed by employers and workers based on hours worked and have focused largely on supporting the apprenticeship programs. In some cases, the JATCs have used their own limited resources to develop journey-level green training.

For example, the IBEW has held solar panel installation training throughout the state. Yet the training included in this training proposal seeks to help the IBEW meet the growing need not just for solar panel installation, but also deliver the computer and business training to help their employers to write up bids on solar jobs or offer green suggestions to customers. In addition three of the affiliated trade unions, The United Association (UA) of Plumbers & Pipefitters (Plumbers), the IBEW, and the Sheet Metal Workers Union, have JATCs who have appointed green representatives to research and educate training centers on green initiatives and efforts. However, without ETP funding, the actual provision of green-related course offerings planned for 1,450 journey-level workers would not be financially feasible.

Further, the Building Green Skills training outlined in this proposal will only include courses that participating JATCs have not offered previously and will assist the JATCs expand to serve more journey-level workers than would normally be possible. Some of the centers currently offer some of these skill classes, but ETP funding would allow them to expand their programs to focus on green technology and new, more environmentally-sound materials. Newly-developed training, equipment and materials add to the expense of program implementation. Panel assistance will help employers and workers defray these costs.

The participating JATCs are committed to ongoing journey-level training after the ETP Agreement has ended. The newly-created green training program infrastructure and specially designed curriculum can be used in the future and will make it much more affordable to continue to offer ongoing classes. Indeed, CalFed anticipates that the opportunity for enhanced ETP funding will help the centers to offer on-going and newly-developed, green skill classes to its journey-level members.

### **RECOMMENDATION**

For the reasons set forth above, staff recommends approval of this proposal.

### **DEVELOPMENT SERVICES**

CalFed retained Strategy Workplace in San Mateo to assist with development of this proposal at no cost to CalFed.

### **ADMINISTRATIVE SERVICES**

CalFed may retain Strategy Workplace in San Mateo and the Council in Sacramento to perform administrative services in connection with this proposal for a fee to be determined. Administrative costs can not exceed 13% of payment earned; and support costs can not exceed \$140,410 or 12% of training costs earned.

### **TRAINING VENDORS**

Each JATC will be reimbursed for training costs based on actual Panel funds earned for the number of trainees, class/lab hours, and employment retention completed by individual trainees. Additional JATCs will be identified for ETP record-keeping purposes as they are retained by CalFed.

## Exhibit B: Menu Curriculum

### Class/Lab Hours

24 – 120

Trainees will receive any of the following:

### COMMERCIAL SKILLS

(For Electricians)

#### Solar Panel Installation

Codeology

- National Electrical Code
- Other Recognized Standards (Installation Changes)
- Plan, Build and Use
- Related Standards (Mandatory and Permissive Rules)
- Special Occupancies and Equipment
- Arc Flash

AC/DC Principles

- Math for Electricians
- Ohm's Law
- Generators
- Inductance/Reactance
- Series/Parallel Circuits

Grounding

- Grounding and Bounding
- National Electrical Code Article 100-Definitions & Provisions
- National Electrical Code Article 110-Requirements
- National Electrical Code Article 90-Introduction
- National Electrical Code Article Chapters 1-4

Fire Alarm Systems and Installations

- Definitions and Systems
- Initiating Devices and Notification Systems
- National Electrical Code and Installation Requirements
- Start Up and Check Out Procedures
- National Fire Protection Act, 1972 (NFPA 72)

Fire Life Safety

- National Electrical Code Chapters 1-3 & 5 (relating to fire alarms)
- National Electrical Code Article 725
- National Electrical Code Article 760
- NFPA 72
- Principles of Electronics

Industrial Motor Control

- Control Relays and Timers
- Jogging and Plugging Controls
- Manual Starters and Magnetic Coils

- Push Buttons, Selector Switches and Mechanical Devices
- Solid State Electronic Devices
- Variable Frequency Drives

#### Programmable Logic Control (PLC)

- Developing Ladder Programming
- Introduction to Programmable Equipment
- Programming Programmable Logic Controllers
- Using Timers and Counters in Logic Programs
- Writing a Program

#### Electrical Design

- 3 & 4-Way Switching
- Design of Electrical Circuits
- Magnetic Motor Control and the Code
- LonWorks and Building Automation
- Transformers and the Code

#### Voice, Data and Video

- Audio Distribution
- CCTV Security Surveillance
- Computer Networking
- Fiber Optics
- Telephonic Interconnect

#### Industry Specific Skills

- Confined Space Entry
- Specialized Tools
- Conduit Bending
- Rigging
- Firestop Installation
- Blueprints and Schematics
- Work Flow and Resources

#### (For Sheet Metal)

- HERS (California Home Energy Rating System Program)
- Ducts Maintenance
- Upgrading Lead Handling and Asbestos Removal Skills
- Advanced Welding Skills and Certification Preparation
- Tungsten Inert Gas (TIG), Metal Inert Gas (MIG), and/or Stick Welding
- Leadership in Energy and Environmental Design (LEED) and Title 24 Awareness [Green Training]
- Metal Building Methods and Materials

(For Plumbers)

- Climate Energy Efficiency and Consumption
- Greenhouse Gas Abatement
- Solar Hot Water Installing and Retro Fitting
- Water Efficiency Products and Installations
- Hydronics Systems and Refrigeration
- Reuse/Recycled Water
- Medical Gas Installation
- Septic Tanks/Wastewater Treatment Systems

(All)

- Proper Installation and Use of Testing and Auditing Materials and Equipment (Green Training)
- Understanding New Technologies and Changes to Industry Standards (Green Training)
- Proper Equipment Set-Up (Green Training)
- Safe Working Practices
- Advanced Instrumentation and Motor Controls
- Programmable Logic Controllers
- Advanced Welding
- Architecture Designs and Advanced Plan Reading
- Management and Monitoring of Materials
- Testing Materials and Equipment – Proper Set-Up and Use (Green Training)
- Understanding Changes to Industry Standards (Green Training)

**COMPUTER SKILLS**

- Auto Computer-Aided Design (AutoCAD)
- Scheduling & Planning Jobs
- Job Tracking System
- Automated Systems Applications

**BUSINESS SKILLS**

- Advanced Teambuilding Skills
- Green Awareness Training and Green Certifications
- Advanced Leadership Skills
- Advanced Customer Service Skills
- Advanced Conflict Resolution
- Advanced Problem Solving
- Advanced Decision Making Skills
- Advanced Inventory Checklist
- Creating Master Plan for Future Improvements
- Advanced Time Management
- Filling Out Work Documents And Reports Accurately
- Advanced Project Management and Supervision
- Creating Project Bids