

Office of Economic  
Resource Development  
Workforce Development  
1305 E. Pacific Coast  
Highway, EE 164  
Long Beach, CA 90806

Funding Sources



## The Clean Energy Workforce Training Program at LBCC: Building Networks to Accelerate Job Growth and Community Development



Photo courtesy Ameco Solar, Paramount CA



July 21, 2010

Presented by Gail Schwandner  
Dean of Workforce Development  
Long Beach City College



Partners Include:

**SIEMENS**

Pacific Gateway  
WORKFORCE INVESTMENT NETWORK



# Key Messages

-  Economic recovery depends on new jobs being created by the green economy and a skilled workforce to fill them
-  Partnering with industry-based organizations, small businesses, local government, utility company's and SBDCs are key components of green collar workforce development
-  Federal, state, and local policies, initiatives and partnerships are drivers for market transformation and sustainability in the built environment.
-  Feedforward *and* Feedback: We need to strengthen the bridge between training and incentive programs

## CEWTP at LBCC

Learn More

Green Jobs at  
CA.gov:

<http://www.energy.ca.gov/greenjobs/index.html>

Tags  
CEWTP

- ♻️ Stackable credential training in green building and efficiency upgrades for both incumbent and new entrants
- ♻️ Incumbent training in green vehicle
- ♻️ Made possible by 3 CEWTP grants totaling over \$2.4 million
- ♻️ LBCC was the only single Community College in California to receive more than one grant.

## Targeted Industries in Greater Long Beach

- ♻️ Design and Construction of New Buildings – Port of LB Middle Harbor and LB Airport
- ♻️ Deep Building Retrofit
- ♻️ Retro-Commissioning of Existing Buildings
- ♻️ Transit and heavy duty Port of LB/LA and municipal vehicles

## Learn More

COE Environmental  
Scans

<http://www.coecc.net/energy/>

## Tags

Centers of Excellence

# Revisit Job Forecasts

Information Used in Grant Submission has Changed Significantly  
–COE growth forecast for 12 mo. has not been fully realized.

## Indication that Jobs are coming:

 2009 survey of Los Angeles Area: 6,500 new jobs over the next three years in eight high demand occupations in Energy Efficiency

– Source: BW Research Partnership/Centers of Excellence

## What Jobs are coming?

 Out of the eight occupations studied, building performance/retrofitting specialists is expected to add the most jobs, over 1800 in the next three years. This occupation, along with energy auditors, showed the fastest growth at 69 and 39 percent respectively over the same time period. [1]

## Learn More

City of LB Action Plan

[http://www.longbeach.gov/citymanager/sustainability/sustainable\\_city\\_plan.asp](http://www.longbeach.gov/citymanager/sustainability/sustainable_city_plan.asp)

USGBC Public Policy Search (by city / state /entity, etc)

<http://www.usgbc.org/PublicPolicy/SearchPublicPolicies.aspx?PageID=1776>

## Tags

USGBC Policy Search,  
Sustainable City Action Plan,  
Long Beach,  
Green Port

## Local Initiatives = Green Collar Job Creation

- 🌱 California requires new public structures be built to U.S. Green Building Council Standards through the **LEED** Rating System (visit the link on the left to find your applicable policy)
- 🌱 City of Long Beach
  - Municipal Green Building Policy requiring LEED Silver for NC projects over 7,500sqft, and addresses Existing Buildings
  - Green Building Requirements for Private Development for commercial over 5000sqft, or residential/mixed use over 50 units (LEED Certified)
  - Created an Office of Sustainability and has a “Sustainable City Action Plan” on February 2, 2010
- 🌱 The Port of Long Beach adopted a Green Port Policy to use the best available technology to reduce environmental impacts; 8-10 LEED Facilities estimated

LEED Silver  
Mark Twain  
Library



LEED Platinum Animal Care  
Center at the Aquarium



LEED  
Platinum  
Watershed  
Exhibit at the  
Aquarium

Solar  
Electric (PV)  
on the LB  
Convention  
Center



## Implementation at LBCC

### Clean Energy Workforce Training Program (CEWTP)

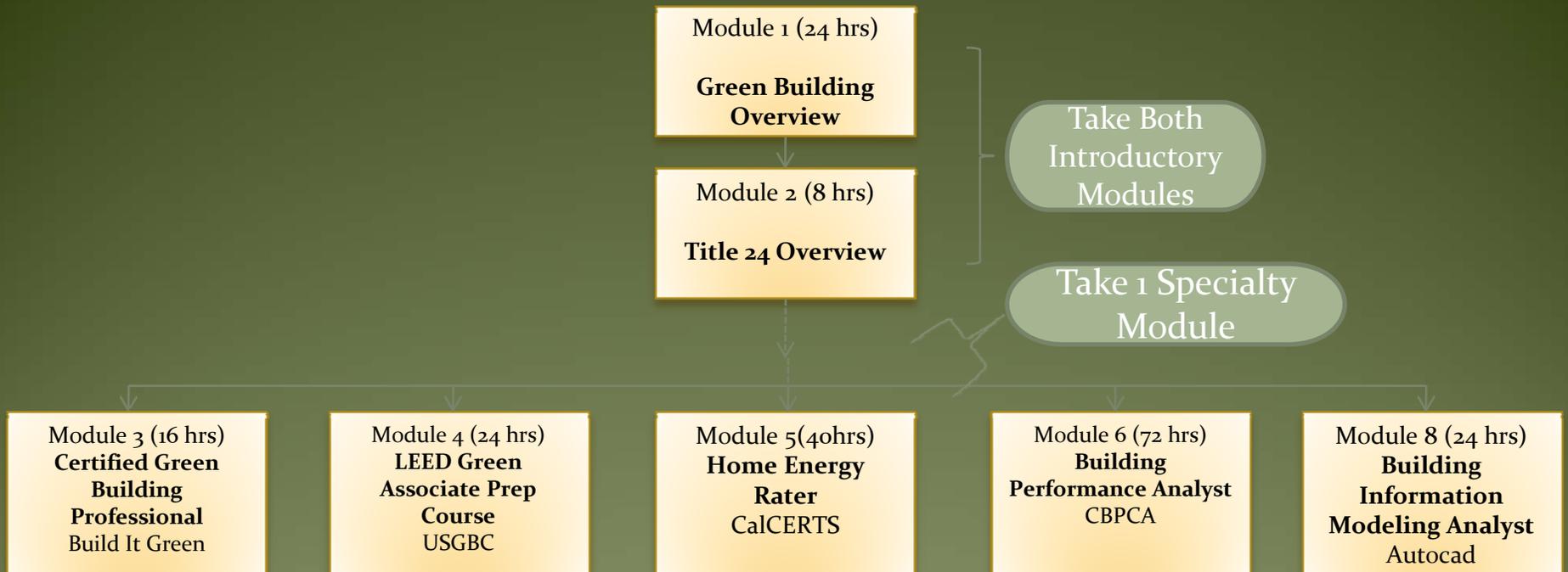
- Sustainable Technology Education Program (S.T.E.P.)
- 2-3 weeks of introduction to environmental literacy, green building, and energy
- Choose specialty training
- Engage in Job Placement Services
- Access SBDC for Small Business Development

#### Tags

LBCC CEWTP, USGBC LEED Green Associate, Built it Green CGBP, CBPCA, HERS, CalCERTS, GreenPlumbers, Autodesk, Water Energy Efficient Retrofits, Solar Hot Water, Solar Electric, Sustainable Landscape



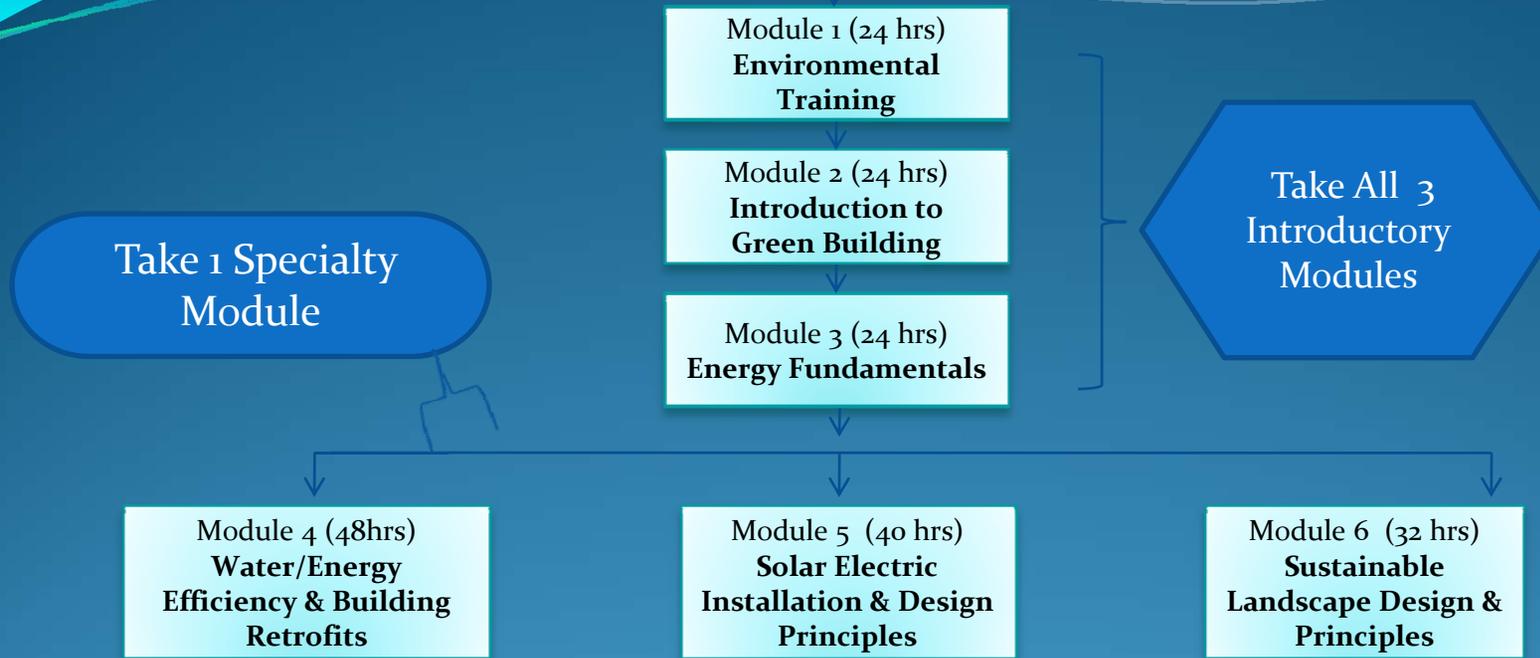
# Green Building & Energy/ Water Efficiency Re-Training- Category 1



Training Track	Occupations	Training Modules	Length of Training	Expected Wages
Track 1	LEED Green Associate Architect/ Designer	Modules 1,2,4, or 8	56 Hours	\$26.00 - \$39.00
Track 2	Home or Building Energy Rater	Modules 1,2,5	72 Hours	\$21.35 - \$31.25
Track 3	Building Performance Analyst	Modules 1,2,6	104 Hours	\$20.83 - \$31.25

# CEWTP Pre-Apprenticeship- Category 2

## Basic Skills



## Soft and Job Readiness Skills

Training Track	Occupations	Training Modules	Length of Training	Expected Wages
Track 1	Resource Conservation Specialist	Modules 1, 2, 3	72 Hours	\$10.00 - \$16.00
Track 2	Basic Weatherization Specialist	Modules 1, 2, 3, 4	120 Hours	\$12.35 - \$20.25
Track 3	Retrofitting Specialist	Modules 1, 2, 3, 4	120 Hours	\$12.83 - \$21.35
Track 4	Solar Electrical Installer Assistant	Modules 1, 2, 3, 5	112 Hours	\$12.83 - \$21.35
Track 5	Landscape Designer Assistant	Modules 1, 2, 3, 6	104 Hours	\$12.35 - \$20.25

On-campus  
capacity for  
hands-on and  
field training

- Solar PV
- Water/Energy  
Retrofits
- Weatherization
- Audits
- HERS testing
- Building  
Performance

**School of Trades  
& Industrial Technology**  
**Green Technology Lab**

Funded by:

Chancellor's Office of Community Colleges



Architecture • Carpentry • Electrical • H.V.A.C. • Sheet Metal

## Weatherization Field Training (Category 2)

Credible trainers & introductory modules are critical to setting a baseline of knowledge.



## HERS Training & Certification (Category 1)

Module Strengths:

Industry-Certification

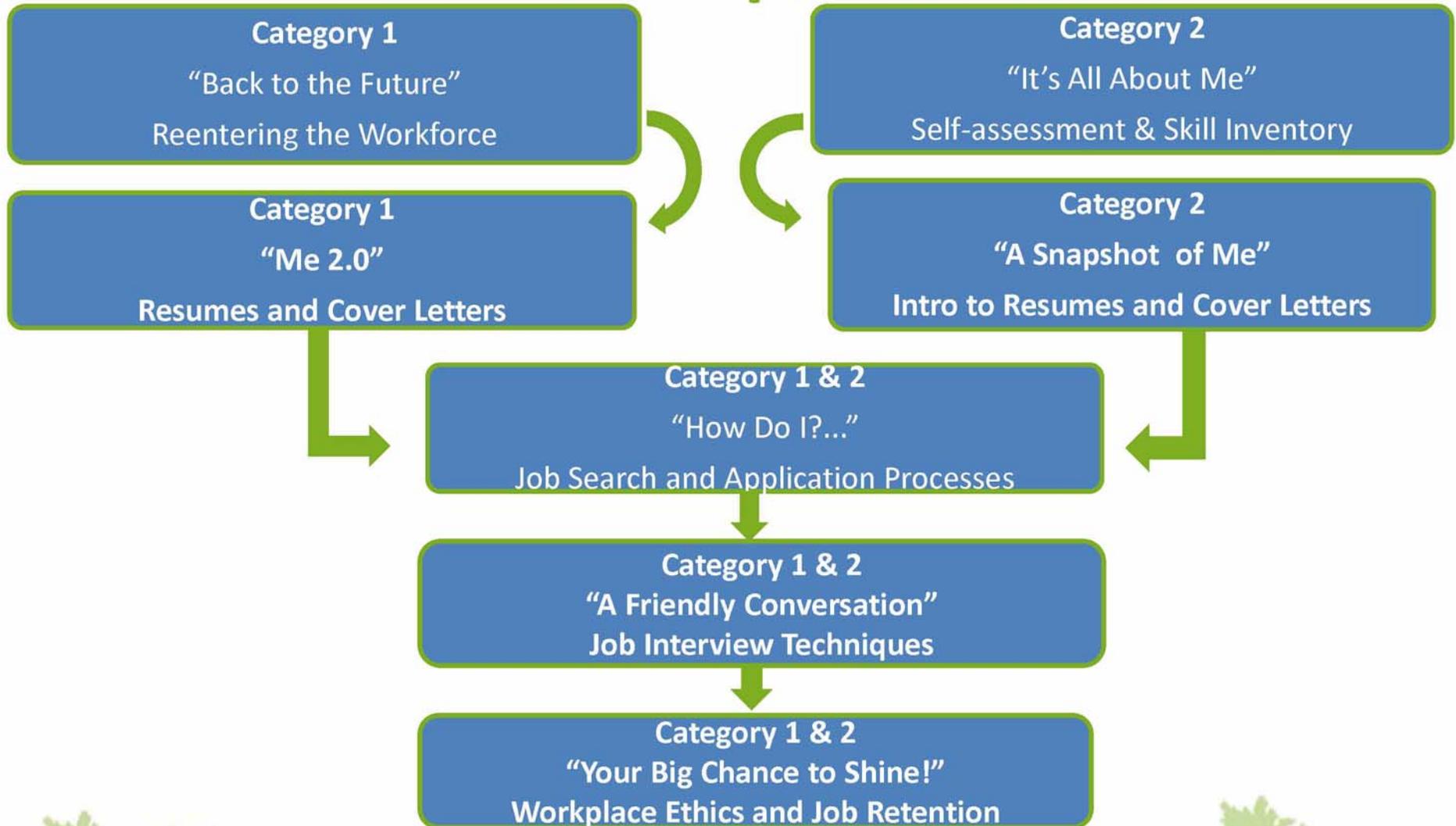
On-site testing and lab facilities

Built capacity by acquiring Blower Door and Duct Blaster

- Successful participants come from diverse backgrounds and existing skill sets
- Certification gives value across multiple rating systems and building requirements
- Equipment costs are noted as barriers to employment



# Career Development Tracks



## Learn More

SBCD at LBCC

[http://lbsbdc.lbcc.edu/  
index.htm](http://lbsbdc.lbcc.edu/index.htm)

## Tags

SBDC LBCC, Market Barriers  
and Solutions in *Recovery  
Through Retrofit*

# Whole Systems Approach at LBCC

- ♻️ In providing **Workforce Training, Raising Awareness of Retrofit and Clean Energy Financing Tools and Products**, and by connecting individuals to **Business Development** through the Small Business Development Center at LBCC we are:
  - Implementing a strategic plan to overcome market barriers that will lead to the creation of an upskilled and enhanced workforce that can connect with a receptive and market demand for sustainability in the built environment
  - Creating a self-sustaining model for training and market transformation in clean energy / water efficiency retrofits by locally partnering with our city, the Port, unions, industry organizations, private companies, and our community

## Partnerships

Industry Orgs

Trainers

Community  
Partners

Note the  
considerable  
overlap between the  
nature of the  
partnerships

- USGBC – Los Angeles
- Build it Green
- CBPCA
- CalCERTS
- Energy Efficiency Management
- Harding Construction and Sustainable Solutions
- Greenside Consulting
- Waterwise Consulting
- LA County Office of Sustainability
- Port of Long Beach
- City of Long Beach
- Long Beach Office of Sustainability
- Long Beach Community Action Partnership
- LA Conservation Corps
- Pacific Gateway WIN

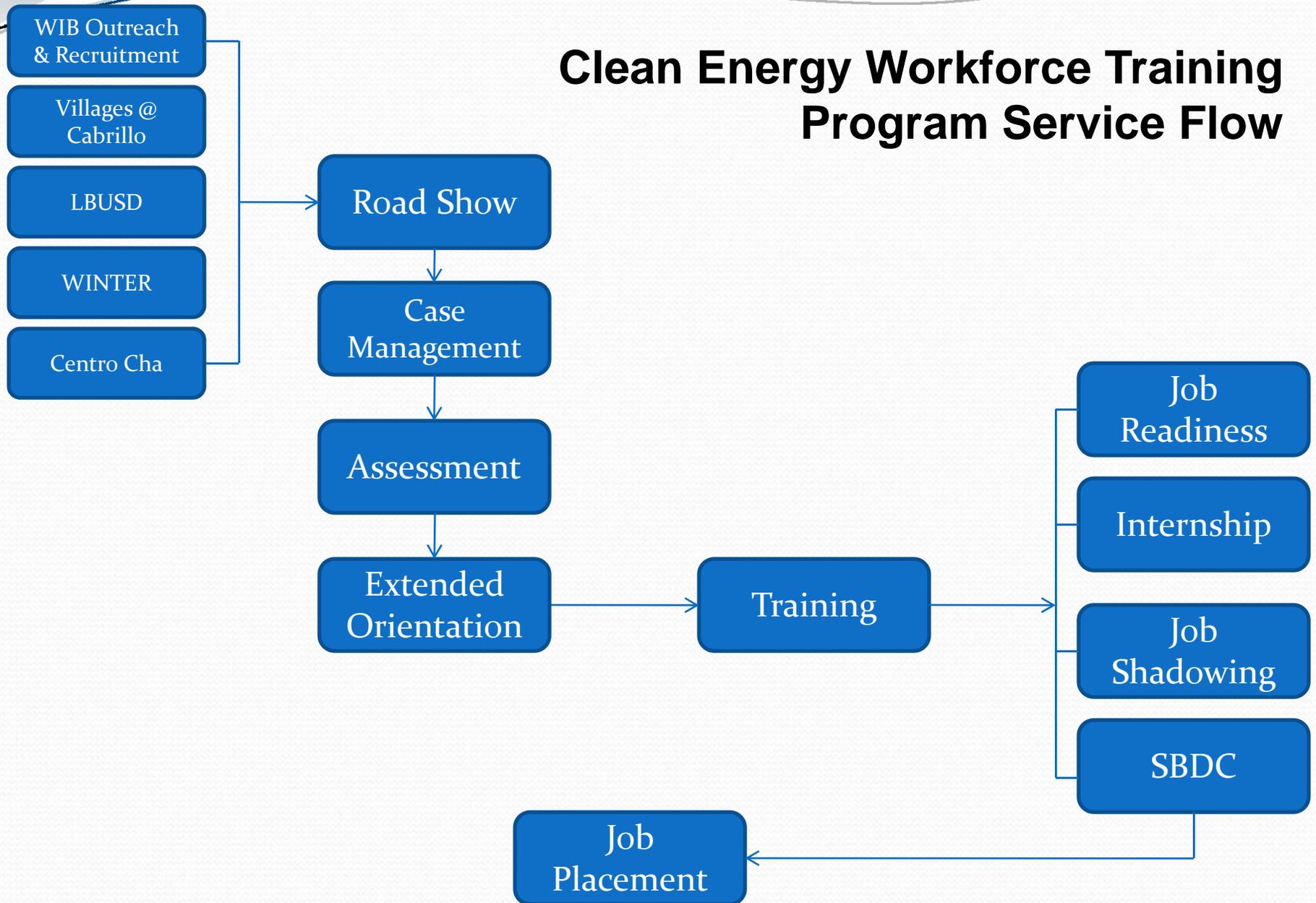
## LBCC Developing Partnerships

- Park Bixby Tower
  - 187 unit, 17 story, \$120k/yr energy bills
  - Elderly Occupants in Downtown Long Beach
  - LBCC + Everyday Energy + Energy Efficiency Management & Harding Construction and Sustainable Solutions in partnership
  - Mentorship, hands-on training, increased occupant comfort, lowered operating costs, community enrichment, energy & water efficiency, and utilization of incentive programs are areas of interest
- RFP for Suburban Civic Center Revitalization
  - Developing a template for Community Colleges pipelining students into joint venture projects that are not necessarily ARRA funded
  - Ancillary jobs and highly-trained skills are both necessary for employment
  - Initial concept discussed with The CSI Company for mentorship/project leads + Zinner Consultants for expertise + LBCC for workforce supply
- Career Corner / Virtual Job Shadow + LBCC
  - Creating a resource to be used across the State and other Community Colleges and entities for outreach and recruitment in clean energy jobs.
  - 7 Production videos will be filmed, with accompanying market data and occupational trends and resources.

## LBCC Developing Partnerships

- LB Community Action Partnership
  - \$17mil Awarded for Various Assistance Programs in LA County
  - Opportunity to give Industry-Recognized training to community based organizations (LA Conservation Corps)
  - Pipeline participants into organization management and customer service
- RFP for IOU Training and Quality Assurance
  - Energy Services and Technologies is leader in community for placement and expertise, Community Colleges provide training
- LA County and Long Beach Offices of Sustainability
  - Collaborating on implementation and development of incentive programs as well as outreach efforts, training and on the job training
- USGBC-LA
  - Providing exposure to leadership and access to knowledge, resources, networking and recognition for sustainability in the built environment
- Southern California Gas Company
  - Providing unparalleled education and irreplaceable community awareness in their low-cost and free training at the Downey ERC

# Clean Energy Workforce Training Program Service Flow



## Next Opportunities

Tuesdays in July and August

2:00 – 3:00pm

LBCC PCC Campus

FF104

Call 562.938.3064

Email [cleanenergy@lbcc.edu](mailto:cleanenergy@lbcc.edu)

## WANT A CAREER IN THE GREEN BUILDING, ENERGY & WATER EFFICIENCY INDUSTRY?

### Long Beach City College has the Training for you...

#### Develop/Improve or Acquire the skills to become:

- Home or Energy Rater
- Water and/or Energy Auditor
- Green Landscape Designer
- Solar Hot Water Installer
- Solar Electric Installer
- Retrofit Specialist
- And many more....

#### Upcoming Informational Session:

Tuesday, August 3rd	2:00-3:00pm
Thursday, August 5th	2:00-3:00pm
Tuesday, August 10th	2:00-3:00pm
Thursday, August 12th	2:00-3:00pm
Tuesday, August 17th	2:00-3:00pm

#### Location:

LBCC- Pacific Coast Campus  
1305 E. Pacific Coast Highway  
Long Beach, CA 90806  
Room FF104

#### **Desirable Qualifications:** (required by some employers)

- GED/ High School Diploma
- Clean background
- Pass drug test
- Valid driver license
- Strong willingness & motivation in career planning and management



To attend an informational session please contact us at  
(562) 938-3064 or email [vrodriguez@lbcc.edu](mailto:vrodriguez@lbcc.edu)

#### PLEASE NOTE!

**Bring any combination of the following documents with you to register:** State ID/Driver's License and Social Security Card OR School ID Card AND Social Security Card AND Birth Certificate OR U.S. Passport AND any proof of Social Security Number. Please bring your unexpired Permanent Resident Card (Green Card) if applicable. Males born on or after January 1, 1960, must be registered with the Selective Service, for more information call (847) 688-3117 or [www.sss.gov](http://www.sss.gov)

## Newsletter

### Highlights

- \*Success Stories
- \*Industry Highlights
- \*Partner Spotlight
- \*Upcoming Training
- \*Resources and upcoming community events.

## Long Beach City College Environmental Technology Program



### Newsletter

Issue 2  
June 21, 2010

#### In This Issue

- [Participant Success Story](#)
- [Industry Events](#)
- [Industry Partner Spotlight](#)
- [Job Development Announcements](#)
- [Solar Electric Training](#)

#### Funding Sources



#### Industry Partners



Dear Marc,

We hope you enjoy the second issue of our bi-weekly newsletter. In this edition, we are proud to further highlight our outstanding participants and industry partners, as well as share upcoming activities and opportunities relevant to the training being offered at LBCC. Please send any feedback or ideas for future issues to [cleanenergy@lbcc.edu](mailto:cleanenergy@lbcc.edu).

We would like to encourage you to stay up-to-date with the policies impacting the future of the green industry. A list of important legislation that has passed or is slated to go through the House or Senate may be found by viewing the U.S. Green Building Council's [Top 10 Pieces of Green Building Legislation](#).

Now that summer is officially here, temperatures are rising and so is energy consumption. For easy ways to make your home more efficient while lowering your utility bills, check out the California Energy Commission's [Summertime Energy Saving Tips](#).

➔ **CEWTP Success Story:**  
**Brett Taylor and Albert Andres**



#### Industry Partners



#### Training Partners



#### SUMMER OFFICE HOURS

Monday - Thursday  
7:30am - 6:00pm



Brett Taylor and Albert Andres participated in the first round of the LBCC Clean Energy Workforce Training Program, specializing in Home Energy Rating Systems (HERS). Since being awarded their certification, the two have teamed up to effectively combine their contacts to form an impressive client base and are now working on both residential and commercial projects.



From Brett:

"Albert and I have currently been doing some pro-bono surveys on existing residences using the HERS rater process and taking it to the next level by performing a base whole house survey to analyze the homes' current performance. With Albert's contacts in the commercial market, we now have an approved contract to do the first phase of an energy survey of the Super Mex Restaurant in Lakewood, which will provide us with a base for future commercial projects.

We are planning to continue our training with CalCERTS to take the additional levels of certification as they become available and to become Build It Green Raters/Advisors. These additional certifications will give us greater levels of flexibility to offer the most services to both residential and commercial clients. In addition to this, I have worked on school district projects throughout Southern California and have been in contact with individuals that I know to describe how the energy audit surveys could be of benefit to educational facilities, even though they are not required to perform HERS tests. In many of the school modernization projects that I have done, "mechanical" frequently came up as being one of the deferred maintenance items due to the initial capital cost. We also hope to perform HERS rater projects as our client base begins to expand from the energy surveys we have done.

The training at LBCC provided us with a starting point on which we will continue to build our business and service offerings to residential and

## Strategies

Trainers are first target for mentorship and field training

LBCC houses the Regional HQ for SBDC; participants have access to the on campus satellite office

Job development manager coaches personalized occupational mobility courses

Individual Placements

Seeking bulk placements and opportunities for introductory experience

Integrating and introducing participants into networks of local industry-based organizations

Advocating continued education

## Recognition & Next Steps

♻️ 2 Rounds, 8 Cohorts have successfully completed CEWTP Category 1 and 2 Training. Round 3 starts in August



•Victor Orozco – Combined retrofit training with background in real estate & finance to develop multiple business partnerships and make a name for himself in the industry



•Brett Taylor – HERS Rater, entrepreneur.

Performed free audits to build portfolio; now successfully self-employed.



## Contact

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