



## #lifechange: Environmental Career Worker Training Programs


Los Angeles, CA

**ICMA**

 **EPA**

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# What is the Environmental Career Worker Training Program (ECWTP)?

- Funded by NIEHS  National Institute of Environmental Health Sciences  
*Worker Training Program*
- Focus on delivering comprehensive training to disadvantaged and underrepresented minority workers in areas such as environmental restoration, construction, hazardous materials/waste handling, and emergency response
- Emphasis on Life Skills and Job-Readiness Training
- Success through partnerships
- Produces Positive Results





## *Moderator:*

**Steve Surtees**

Environmental Career Worker Training Program Director  
CPWR – The Center for Construction Research and Training

## *Panelists:*

**Yodit Semu**

Environmental Career Worker Training Project Coordinator  
UCLA – Labor Occupational Safety & Health Program

**Adewale OgunBadejo**

Workforce Development Manager  
GRID Alternatives

**Mollie Dowling**

Executive Director  
OAI, Inc.



# UCLA – Labor Occupational Safety & Health Program / Western Region Universities Consortium

**Yodit Semu**

*Environmental Career Worker Training Project Coordinator,  
UCLA-LOSH*



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## Environmental Career Worker Training Program (ECWTP)

- The Western Region Universities Consortium (WRUC):
  - UCLA- LOSH - **ECWTP**
  - UC-BERKLEY
  - ARIZONA STATE UNIVERSITY
  - UNIVERSITY OF WASHINGTON – **ECWTP**
    - *Constructing Hope*, Portland
    - *PACE*, Seattle
    - *RACEJT*, Alaska
- ECWTP started at UCLA-LOSH and University of Washington in 2010



# What we do, Who we Serve



## • H&S Training

- Hands-on
  - We rely on professionals who are experts in their fields
- 
- HAZWOPER (40-hour)
  - 8-hour Refresher
  - OSHA 10
  - OSHA 30
  - American Red Cross CPR/First Aid
  - Lead Awareness
  - Asbestos Awareness
  - Confined Space
  - Heat Illness Prevention
  - HazCom
  - Respiratory Protection
  - Life Skill, Mentorship
  - Math and Comprehensive Reading

# Good, Green Job Opportunities

## Area of Focus

- Union jobs / Construction Projects
- Clean-Up
- Energy



## Los Angeles Opportunities

- Major projects (PLA, Workforce Diversity)
- Aging workforce
- Initiatives: Zero-waste by 2030, innovative WFD programs





# Program Impact

Period	Trained	Completed	Placed	placement rate
August 1, 2015 to July 31, 2016	108	66	64	97%
August 1, 2016 to July 31, 2017	173	164	116	71%
August 1, 2017 to July 31, 2018	154	147	107	73%
August 1, 2018 to July 31, 2019	241	227	195	86%
<b>TOTAL</b>	<b>676</b>	<b>604</b>	<b>482</b>	<b>80%</b>



# Partners and Stakeholders



- LOSH
  - LABWC
  - WINTER
  - DTSC
  - CRC
  - CEO
  - GRID Alternatives



**People. Planet. Employment**

Solar program for Low-Income Communities





# GRID Alternatives

**Adewale OgunBadejo**  
*Workforce Development Manager*





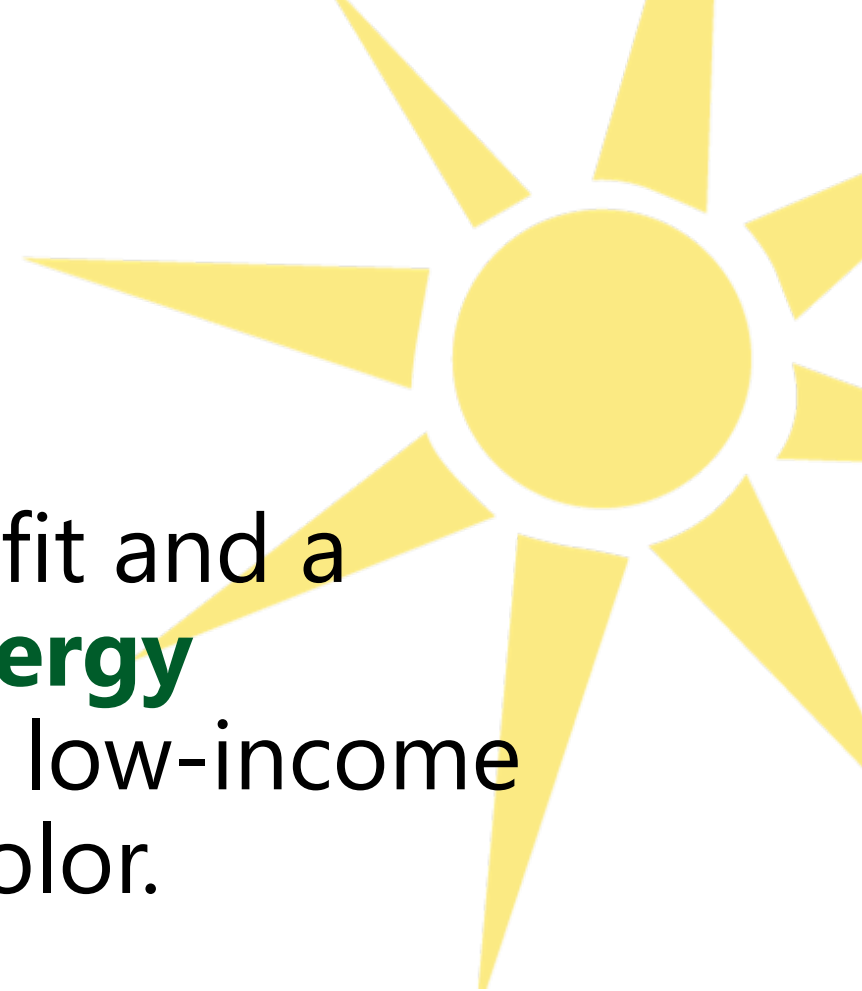
**Workforce Development at GRID LA**

**Adewale OgunBadejo  
Workforce Development Manager**



**People. Planet. Employment**  
**Solar program for Low-Income Communities**

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GRID Alternatives is 501 c3 non-profit and a national leader in **making clean energy technology and jobs accessible** to low-income communities and communities of color.



## Vision:

At GRID, we believe that a successful transition to clean energy must include everyone.

## Triple bottom line

- People
- Planet
- Employment





## Our Work

1. Policy and program development
2. Solar Installation
3. Workforce Development



# Driving equity in energy policy

GRID Alternatives is a leading voice in renewable energy access, **driving policies at the state and local level that support solar access for underserved communities** and helping design and implement low-income solar programs.







# Workforce Development

Connecting people that need good jobs with an industry that needs good people.



# Opening career pathways

GRID's workforce development programs provide hands-on installation experience that helps prepare participants for careers in solar, **connecting people that need good jobs with an industry that needs good people.**



# GRID Alternatives IBT Certificate Program

- Hands-on focused training program to prepare trainees for solar careers
- Documented training that can be used on resumes
- Job search support and industry connections



## What certificates are earned through the GRID Alternatives IBT Certificate Program?

### Array Installation Basics

Job Site Safety  
Fall Protection  
Array Layout  
Racking Installation  
Microinverter Installation  
Module Installation

### Electrical Installation Basics

Job Site Safety  
Electrical Safety  
Electrical Layout and Mounting  
Conduit Bending and Installation  
Electrical Wiring

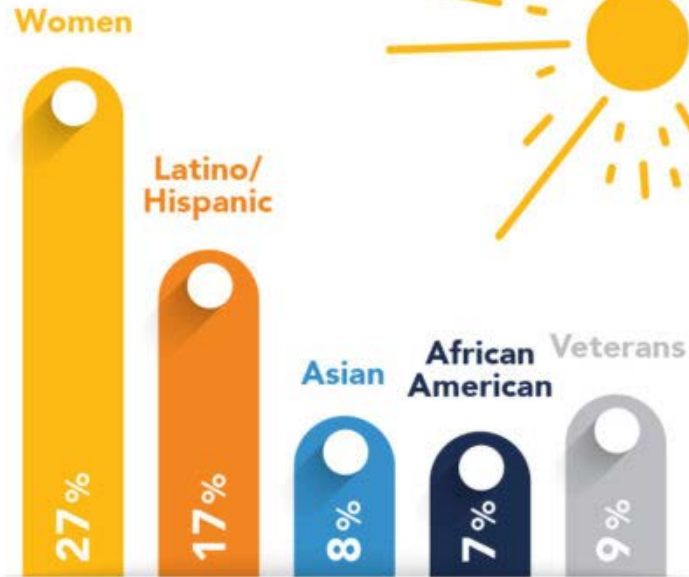
# U.S. SOLAR JOBS BY YEAR





# Solar Job Market

Diverse workforce



**79%**  
of solar  
companies  
overall

**93%**  
of solar  
installation  
companies



Low barriers to employment


[Jobs](#)

[Claims](#)

[Employers](#)

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## Top 100 Fastest Growing Occupations in California, 2016-2026

Occupation Title	Employment		Percent Change
	2016	2026	
Solar Photovoltaic Installers	4,900	11,300	130.6%
Home Health Aides	26,600	37,500	41.0%
Software Developers, Applications	134,200	188,000	40.1%
Personal Care Aides	622,000	870,000	39.9%
Nurse Practitioners	13,100	17,700	35.1%
Statisticians	4,300	5,800	34.9%
Taxi Drivers and Chauffeurs	28,700	38,700	34.8%
Physician Assistants	10,200	13,700	34.3%
Physical Therapist Aides	6,500	8,700	33.8%
Occupational Therapy Assistants	1,900	2,500	31.6%
Physical Therapist Assistants	5,200	6,800	30.8%
Health Specialties Teachers, Postsecondary	15,400	20,000	29.9%
Operations Research Analysts	14,800	19,200	29.7%
Medical Assistants	84,800	109,600	29.2%
Massage Therapists	26,900	34,700	29.0%
Physical Therapists	21,900	28,200	28.8%
Phlebotomists	12,900	16,600	28.7%
Nurse Anesthetists	1,400	1,800	28.6%

# Special Programs & Initiatives



Women In Solar

GLA  
WFD



Reentry Initiative



# Special Programs & Initiatives, Continued



**Opportunity Youth**

GLA  
WFD



**Troops to Solar**

# Educational Programs



**Solar Futures**



**Collegiate Network & Solar Spring Break**





## Internship Model!

- In 2018 we secured funding to provide 12 paid internships for formerly incarcerated individuals
- In 2019 we provided paid internships for 52 local community members
- In 2020 we will provide close to 90 paid internships for local community members





# Internships

## Watts Rising Workforce Development Program 2019-2021





# Drake Residence Long Beach, CA

Two day install  
September  
10<sup>th</sup> & 11<sup>th</sup>

128 total hours  
of training and  
hands-on  
experience



4.8 kW system

16 Solar Panels  
providing close  
to \$900 in  
annual savings  
over 20+ years



# Formal Partners



- **Los Angeles Trade Technical College**



- **Santa Monica College**

- **Homeboy Industries**



- **Los Angeles Conservation Corps**



- **Coalition for Responsible Community Development**



- **Conservation Corps Long Beach**



# Employer Network



# Does Workforce Development Work?

GRID Trainees getting hired!

- Since 2012 more than 537 individuals that have trained with GRID have found employment in the solar industry.
- From 2015 to present, more than 324 solar industry placements have been recorded.
- In 2018, 76 individuals that trained with GRID found employment in the solar industry.







**Spark solar careers**





**Invest in local communities**



# OAI, Inc.

**Mollie Dowling**  
*Executive Director*





Chicago-based **OAI** is a nationally recognized pioneer in workforce development. Our work opens career pathways; fuels business success; promotes health, safety, and the environment; and supports community development. For more than 40 years, we've been delivering real economic benefit to individuals, employers, and communities across the country.



# Future Energy Jobs Act (FEJA)

Senate Bill 2814 was one of the most significant pieces of energy legislation ever to pass the Illinois General Assembly. It was passed during the December 2016 Session.

**Stimulate** job creation with new investments in energy efficiency, renewables, and energy innovation

**Enhance** Illinois' position as a leader in the clean energy economy, attracting investment and new companies to Illinois

**Preserve** Illinois' low energy rates for residents and businesses





# Overview

OAI aims to train 160 low-income students including returning citizens, minorities, current and former foster children, women and veterans living in and around environmental justice communities in solar photovoltaic (PV) systems for solar employment generated by the Future Energy Jobs Act (FEJA) over the 4-year period (2018 – 2021).





# Goals (2017 – 2021)

OAI will offer a total of 8 cycles of training to cohorts of 20 students each to reach the goal of training 160 students over a four-year period.

Outreach and Recruitment #	# Selected to participate in Tryouts	Participants Enrolled in the Program	Graduates Completing Program	Graduates Placed in Solar-related Positions
1300	780	160	136 (85%)	116 (85%)



# Accomplishments (2017 – 2019)

OAI has offered 6 cycles of training to a total of 128 students over the past two years.

Outreach and Recruitment #	# Selected to participate in Tryouts	Participants Enrolled in the Program	Graduates Completing Program	Graduates Placed in Solar-related Positions
755	290	128	90 (set to be 111) 21 are currently enrolled	74 (82%)

## Goals

Outreach and Recruitment #	# Selected to participate in Tryouts	Participants Enrolled in the Program	Graduates Completing Program	Graduates Placed in Solar-related Positions
1300	780	160	136 (85%)	116 (85%)



# Career Guidance & Power Skills Training

- Non-technical courses include: financial empowerment, cultural diversity, conflict resolution, critical thinking, fitness and nutrition, time and stress management, goal setting, and self-esteem.
- Career Guidance includes: resume building, interviewing, building relationships, individual employment plan development, and overcoming ex-offender employment barriers.
- Power Skills courses also include: Environmental Literacy, Computer Literacy, Industry Math, and Industry Spanish.
- A minimum of **88 hours** of training is offered to each trainee.



# Career Specific Technical Training

- Solar Installer: Electricity Basics, Solar Energy Fundamentals, PV Module Fundamentals, System Components, Site Assessment & Evaluation, PV System Sizing Principles, PV System Electrical Design, PV System Mechanical Design, Performance Analysis, Maintenance and Troubleshooting
- Basic Carpentry, First Aid/CPR, OSHA 10-hour, OSHA Fall Protection, HAZWOPER 40-hour, and Forklift Operations.
- This component includes classroom and hands-on lab training totaling approximately **232 hours**.





# Outputs

- Provide career guidance and placement of all graduates into an initial job.
- Track and conduct follow-up of all participants for minimum of one year beyond the end of each training cohort.
- Conduct training that applies current thinking in adult education principles and methods—blended student-centered learning, participatory and cooperative learning, hands-on exercises and experiential learning.
- Provide curricula that includes two components: Career Guidance/ Power Skills Training and Career-Specific Technical Training.
- Prepare students for entry-level employment as a designer, installer, troubleshooter, and maintenance technician for solar-photovoltaic power systems.
- Prepare students to perform successfully on the NABCEP PV Associate Exam.



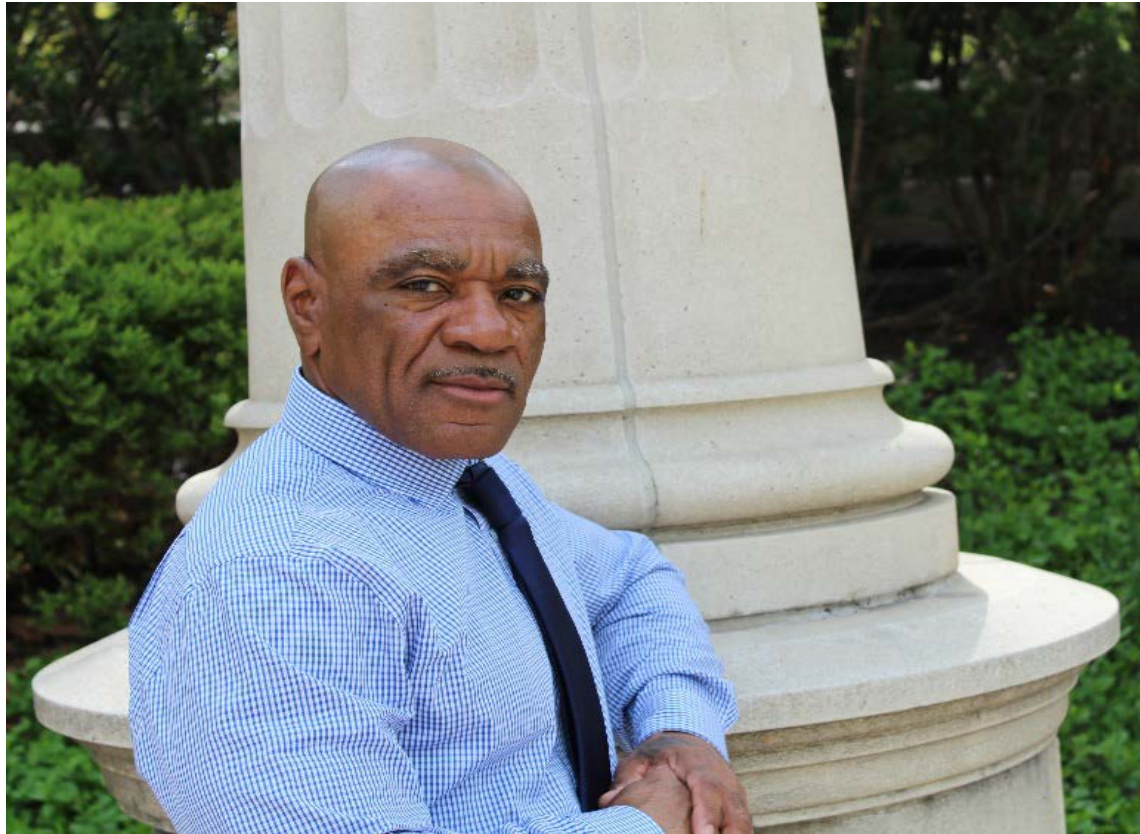


# Cynthia Myers, Solar Installer, ReThink Electric





# Sedwrick Torry, Manufacturing Technician, Ferrera





# Questions?

# Thank you!

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