

Willdan Clean Energy Academy [CEA]

Cohort 3 Reporting

Project Director: Antuan Cannon

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The Willdan Clean Energy Academy [CEA] supported by NYSERDA PON 3981 funding, successfully completed the third cohorts of the training, with 19 graduates, in April of 2020. Each student participated in 72 hours of online virtual classroom training. The training took place from Monday through Friday, from 11:30am - 6:30pm over a two and a half-week training period.

The training curriculum consisted of the following lessons:

- Green Economy
- Lighting Systems
- HVAC-R Systems
- Energy Efficiency Software
- COVID-19 Health & Safety

The 24 candidates were selected to participate in this online training program out of 63 applications received and 31 scheduled interviews completed. Class began on Monday 4/6/2020 and completed on 4/22/2020 with a final exam.



The candidates that participated came from a variety of backgrounds and professional experiences including; NYIT energy management students, Green City Force program participants, a military veteran, a general contractor, and students from across NYS. While the program began with 24 participants, 19 completed the training program and made it to graduation. The attrition rate was slightly higher than our in person training due to the effects of COVID-19, but the feedback from our first online training delivery was overwhelmingly positive from all of the students who participated through to completion.

Class #3 (19 students)

Location:

Online Training Delivery

Instructors:

- Clayton Gregory (Clay@greentechleaders.com)
- Alejandro Alvarez (aalvarez@soulfulsynergy.org)
- Antuan Cannon (acannon@willdan.com)

Training Overview

The Willdan Clean Energy Academy has risen to the challenge of providing vital professional development and training for participants seeking career advancement in the energy efficiency industry. The COVID-19 pandemic began just as we were preparing to run our third in person training course in mid-March. The uncertainty created by the virus put in question the reality of conducting a training of this magnitude and whether or not participants would be able to complete the full training; if their health or the health of their loved ones was in jeopardy.

At that time in March we had collected 59 applications from interested participants for our March cohort. Many were referrals from our CBO partners as well as individuals we met while doing field recruitment at job fairs and community events around the city. We sent those interested applicants a survey to gauge their interest in participating in an online training program and what potential start dates and class schedules would be ideal for them to attend. We received very quick responses with over 30 applicants responding to the survey in less than 48 hours. We knew there was an appetite for the training and an ability to turnaround our training delivery to an online platform.

The process of transitioning to a completely online training program and delivery entailed several major components:

Outreach & Recruitment

Our virtual recruitment process has the same goal as our in-person recruitment process; which is to attract, engage, interview and screen applicants to find the most suitable candidates to be placed into the program. Through technology we are able to utilize efficient methods for this practice. Applications can be filled out online using a "Google Forms" platform that captures pertinent information related to work history, green industry experience, and reasons for applying. Upon completion of the application, the recruitment team sends out a follow up email with vital information about the program and a "Calendly" link that students use for scheduling a 30 minute interview time block, during the designated interview dates that best meets their availability.

Online Virtual Interviews

Interviews are conducted using a web conferencing platform called "Google Hangouts Meet", where applicants can share their resume on screen with the interviewer and engage in meaningful dialogue about their past work experience and future career ambitions. At the end of each interview, applicants are asked to complete a brief self evaluation aimed to help them identify areas of improvement for future program and job interviews. Our recruiters also complete a similar evaluation form to assess the strengths and weaknesses of each applicant. This entire process can be completed seamlessly through online delivery and allows for the data collection needed to ensure quality control.

Development of LMS

The transition from in-person to online training delivery required the development and build out of a cohesive Learning Management System in order to ensure high quality training delivery during class time and the assignment offline of homework and quizzes to students. Although various mobile and web applications have been determined to deliver and support current, ongoing, online training, we continue to iterate, test, and collect user experience feedback, until we have identified a suite of digital tools that provide the best instructional experience for program trainers and training participants.

Integrations of Training Materials in LMS

The need to integrate the training curriculum as well as the classroom assignments into the course in an accessible way for students has been crucial to the success of the program and the retention of information absorbed by our participants.

- Depository of content - tools shown are used primarily to store and manage training material in the following way:
 - Google Classroom: provide library of Willdan CEA training content, organized by topic as training progresses, for instructors and training participants
- Feedback-based learning - tools used to inform on the effectiveness of content being delivered in the following ways:
 - Kahoot: enables trainers to provide training participant with an informal, entertaining approach to reinforcing content being taught
 - Quizlet: is a mobile and web-based study application that allows students to study information via learning tools and games.

Training Delivery via Virtual Platforms

The online program utilizes Cisco Webex as the main delivery platform, which allows instructors the ability to interact with 30+ students by video chat at any time. The instructor is also able to share his/her screen and display any file, presentation, website or video, from his/her desktop or phone. Additionally, the platform has a number of key features that allow highly effective instructions, including the ability for students to raise their hand and ask questions, as well as the ability for students to share their screens, to show their work. These built-in tools and techniques, which are further complimented by a number of other online resources, allow our instructors to deliver the highly engaging and interactive learning experience, that is as effective or more than traditional in-person delivery.

Streamlined Communication (internally and externally)

Constant communication between the program management team and the student participants is a crucial component of maintaining the culture and integrity of the training. The internal management team leverages technology to communicate minute by minute and hour to hour needs regarding the program through a Slack mobile group text thread. During the evenings once classroom sessions have completed the internal team uses Webex platform to host a daily debrief discussion to cover any needed improvements surrounding the classroom environment and training experience. To communicate externally with the students we have created a "group text" thread using Slack that allows us to relay in real time vital information about the program. We can send the Webex login details for the daily virtual classroom, we can share assignments updates, students can ask questions to their peers or ask for clarification from instructors. The use of these tools to communicate has aided in the cohesiveness of the group and allowed them to develop additional bonds amongst themselves, their instructors and the management team.

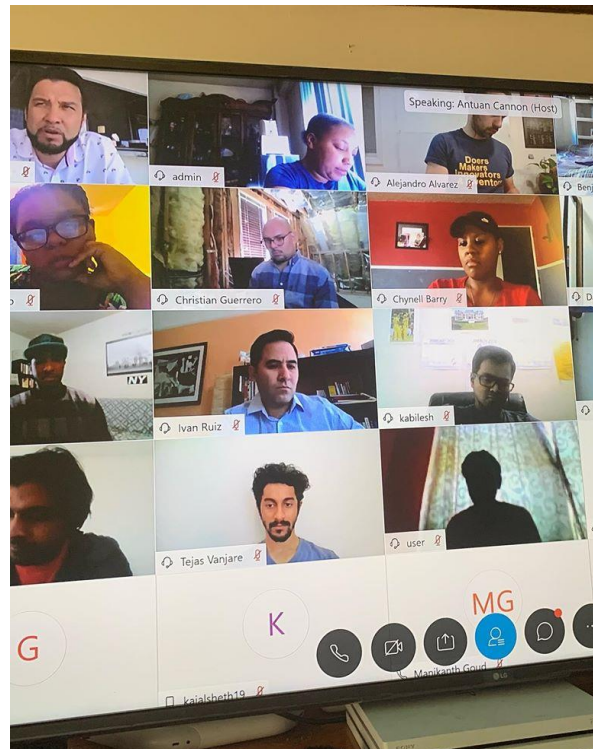
Remote Communication - tools used to deliver content and other important training information in the following ways:

- *G-Suite*: integrated approach to communicating messages and sharing content through email with training participants
- *Slack*: messaging and content sharing capability allows for an additional communication channel, during and outside of classroom hours among fellow training participants and trainers
- *Cisco Webex*: used for telecommunication during Willdan CEA sessions. This platform has here are the application functionalities that are being utilized for live asynchronous learning sessions

- *Miro*: digital whiteboard enabling training instructors to replicate experience of being in a classroom, writing diagrams to illustrate concepts, and allowing training participants to follow along with the lesson
- *Wacom Intuos S Bluetooth Black*: give instructor ability to write on a tablet and transcribe writing on digital whiteboard to replicate in-person training sessions
- *Fireflies.ai*: seamlessly capture training sessions by converting audio form teleconferencing to text form to address hearing impaired students as well as learners that are more inclined to learn through reading and writing
- *Doodle*: this will be used to create surveys and reports that will gather feedback from training participants and trainers

Managing Student Attrition

One of our concerns at the beginning of this training was whether or not students would have the attention span to participate in an online training course from their homes for 60 hours per week. Although we knew they would be confined to their homes due to the statewide mandate, it was not a guarantee that they would not have competing obligations with family, or other commitments. Another concern was the potential health risks associated and how the virus would play a role in their health or the health of those close to them. We thought about the fact that students may have to miss classes or even drop out if they had family members sick in the hospital or even experienced death close to home. We are thankful that the majority of our participants did not have this become their reality but there were a few.



Over the course of the two week training we had a 20% attrition rate which is actually fairly standard for a training program whether in-person or online, but still slightly higher than our past performance. Sadly three students had family related health matters that caused them to need to leave the course, one student decided the material and training was not right for them at this time, and one student wanted to finish, but midway through the program found employment as a Project Manager and wasn't able to meet the scheduling demands. We believe that the success of this program and the modest attrition rate has a lot to do with the consistent communication methods used via Slack , G Suite, Google Classroom and others in order to provide an engaged learning experience.

Student Testimonials:

Testimonial #1:

“Thank you Antuan, Clay, Dwayne, Omar, Melika, and the rest of the team. I loved the teaching method of repetition and enlargement which has really facilitated learning and not memorization. It was a wonderful experience learning, interacting with, and advancing in this great work. This “Win Win Campaign” has been a challenging yet awesome tool and game changer. I wish all and their families continued success as you endeavor to change the world for the better one class at a time. I had heard of the statement that applied knowledge is power, but it is in this class that I first heard that perfect practice makes perfect. Thank you for the many gems.”

Trecia Alexander, WCEA Cohort #3 Graduate
Environmental Justice Advocate

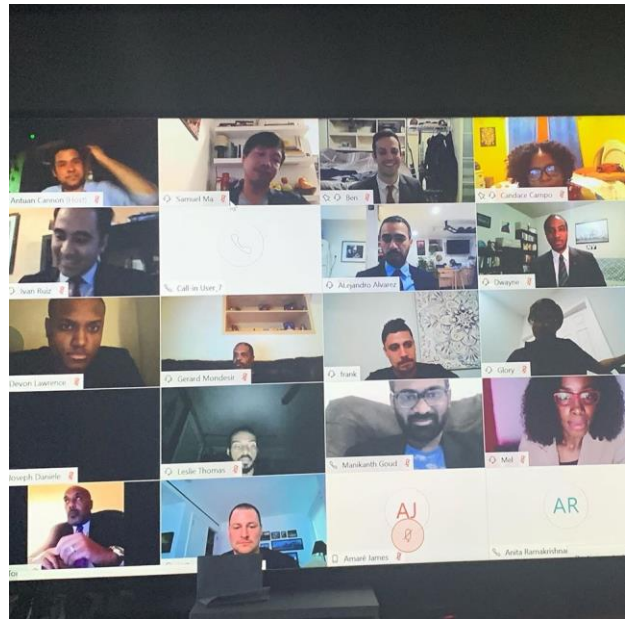
Testimonial #2:

“I could not recommend this program more. I'll be honest, I had some discouragement coming out of school wondering where I would fit in in this green economy.

This program has changed all of that. We got a clear breakdown of different career paths and the requirements to pursue them, something that was honestly missing for me in my grad program.

To be honest, I wish I skipped the masters degree and found the Win Win clean energy academy 3 years ago, it would have saved me a lot of time and money.” -

Benjamin Altman, WCEA Cohort #3 Graduate
Columbia University, MS Environmental Engineering



Energy Efficiency and Clean Technology Workforce Training Metrics Table

Contractor Information		
Contractor Name		Willdan Lighting & Electric, Inc.
Agreement Number		142989
Reporting Period (MM/DD/YYYY – MM/DD/YYYY)		04/01/2020 - 04/27/2020
Metrics Summary		
Enter <u>cumulative</u> totals for the project to date:		
A	Total number of individuals receiving training	19
B	Breakdown of training types (total of rows B1, B2, and B3 should equal row A)	
B1	Number of individuals receiving training – Online Training	19
B2	Number of individuals receiving training – In Person Training	0
B3	Number of individuals receiving training – Combination of Online and In-Person Training	19
C	Number of individuals from priority populations receiving training	
C1	Veterans	1
C2	Native Americans	0
C3	Individuals with disabilities	0
C4	Low Income individuals*	4
C5	Unemployed power plant workers	0
C6	Previously incarcerated individuals	0
C7	18- to 24-year olds in work preparedness training programs that include energy related technical training**	7
D	Number of trainers trained	0
E	Number of new curricula developed	0
F	Number of curricula modified	1
G	Certifications earned	19
H	Individuals interviewed for job placement	6
I	New workers placed in jobs within 9 months of completion of training	1
J	<p>Project-specific metrics related to trainees’ achievements (e.g., additional training, credentials earned, advancements, wages, wage growth, internships, pre-apprenticeships, apprenticeships) as outlined in Contractor’s plan for tracking trainee post-training. Provide in the report narrative if more space is needed.</p> <p>Given the current public health crisis, and the dampening impact it has had on hiring new workers, we are continuing to innovate, and make different type of career advancement opportunities available to the graduates, including: Additional continuing education through weekly webinar series; participating in service learning projects with our contractor partners, ongoing wrap-around and career support services like resume and cover letter writing, and facilitation of mock as well as real interviews.</p>	

* Low-income individuals are defined as those whose household’s total income is below or at 60% of the State Median Income, or the household has been determined eligible for or is receiving assistance through the Home Energy Assistance Program (HEAP), Temporary Assistance for Needy Families (TANF), Supplemental Nutrition Assistance Program (SNAP), or other human service benefit program

**Youth work preparedness programs such as BOCES, technical high schools, Conservation Corps, Youthbuild, AmeriCorps, etc

Cost Overview

The total cost per student to recruit, interview, deliver the training, pair with an employer, and track all of the necessary data, after the in-kind contribution is accounted for, comes out to a total cost of **\$1,979.67** per student.

Given that for Cohort #3, we graduated 19 students, to total costs for this cohort is: **\$37,613.73**

Expenses by Task

Expenses by Task	
Task	Amount
Project Administration	\$2,603.73
Project Management	\$10,000.00
Training Delivery	\$8,000.00
Tech Support	\$5,750.00
Outreach & Recruitment	\$7,500.00
Career Services	\$3,750.00
TOTAL	\$37,613.73

Expenses by Personnel

Expenses by Personnel			
Role	Rate	# of Hours	Total Cost
Program Director	\$150	17.33	\$2,603.73
Program Manager	\$100	50	\$5,000.00
Program Coordinator	\$50	100	\$5,000.00
Trainer	\$75	80	\$6,000.00
Training Assistant	\$40	50	\$2,000.00
Outreach Specialist	\$60	125	\$7,500.00
Career Specialist	\$85	44	\$3,750.00
Tech Support	\$75	77	\$5,750.00
TOTAL		526	\$37,613.73