Understanding Workforce Training & Development in the New Clean Energy Economy

Public Engagement Meeting

Just Transition Working Group

February 3, 2021
1:00-3:00 pm
Just Transition Working Group (JTWG)

Public Engagement Meeting Agenda
1. Welcome Remarks
2. Clean Energy Industry Trends
3. Panelist Presentations
   • NEW (Nontraditional Employment for Women)
   • 32 BJ
   • Green City Force
   • IBEW 43
4. Public Input
5. Next Steps / Closeout
Just Transition Working Group: Membership

Roberta Reardon, Co-Chair
Commissioner: Department of Labor

Doreen Harris, Co-Chair
Acting President & CEO: NYSERDA

RuthAnne Visnauskas
Commissioner: Homes & Community Renewal

John Rhodes
Chair: Public Service Commission

Vincent Albanese
Director of Policy and Public Affairs: LIUNA

Omar Freilla
Founder & Coordinator: Green Worker Cooperatives

Henry Garrido
Executive Director: DC 37

Patrick Jackson
Director of Global Energy Management: Corning, Inc.

Gary LaBarbera
President: Building and Construction Trades Council of Greater New York

Michael Padgett
Vice President of Energy: Alcoa

Brian Raley
Principal Staff Engineer: Global Foundries

James Shillitto
President: Utilities Workers Union of America Local 1-2

Maritza Silva-Farrell
Executive Director: ALIGN

Ted Skerpon
Chair: IBEW Local 97 & Utility Labor Council

Lara Skinner
Executive Director: The Worker Institute at Cornell University

Candis Tolliver
Political Director: 32BJ SEIU

Randy Wolken
President: MACNY & Manufacturers Alliance
Overview of New York’s Clean Energy Industry by BW Research
Part 1: CEIR Overview

The 4th edition of the New York Clean Energy Industry report:

> Measures, characterizes, and analyzes clean energy and traditional energy employment trends across technology sectors

> Provides an early look at COVID-19 impacts and recovery

> Explores clean energy employer needs and related workforce training and development opportunities
Clean energy jobs represented almost 1.7% of all employment within the State.

Between 2018 and 2019, clean energy employment increased by 3.2%, outpacing the total New York employment growth of 1.1%.

As of December 2020, New York lost 11,815 clean energy jobs cumulatively since February 2020, about 7.2% of the total clean energy workforce.
As of December, nearly 9,000 clean energy jobs had been restored under NY Forward since May.

Recovery trajectory indicates the economic resilience of NY’s clean energy sector.

- Nationwide, clean energy sector is down 12.4%
- NY only down 7.2%
## COVID Employment Impacts by Technology

<table>
<thead>
<tr>
<th>Technology</th>
<th>Employment</th>
<th>Change, 2018 - 19</th>
<th>%</th>
<th>Change, 2019 - Dec 2020</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Efficiency</td>
<td>117,339</td>
<td>123,292</td>
<td>126,739</td>
<td>3,447</td>
<td>3%</td>
</tr>
<tr>
<td>Renewable Electric Power Generation</td>
<td>22,064</td>
<td>22,023</td>
<td>23,491</td>
<td>1,467</td>
<td>7%</td>
</tr>
<tr>
<td>Clean and Alternative Transportation</td>
<td>7,881</td>
<td>8,624</td>
<td>8,579</td>
<td>-45</td>
<td>-1%</td>
</tr>
<tr>
<td>Renewable Fuels</td>
<td>2,590</td>
<td>2,654</td>
<td>2,656</td>
<td>2</td>
<td>0%*</td>
</tr>
<tr>
<td>Grid Modernization and Energy Storage</td>
<td>1,590</td>
<td>2,151</td>
<td>2,289</td>
<td>139</td>
<td>6.5%</td>
</tr>
</tbody>
</table>

> Impacts to renewable electric power generation were slightly less than other technology sectors.

> Renewable fuels has suffered a smaller percentage of job losses compared to other technologies.
### COVID-19 Impacts by Value Chain

<table>
<thead>
<tr>
<th>Employment by Value Chain, 2019</th>
<th>COVID job loss from 2019 to 2020</th>
<th>Number of jobs</th>
<th>Number of jobs</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation</td>
<td></td>
<td>97,197</td>
<td>-9,911</td>
<td>-10.2%</td>
</tr>
<tr>
<td>Professional Services</td>
<td></td>
<td>21,329</td>
<td>-1,153</td>
<td>-5.4%</td>
</tr>
<tr>
<td>Public or Private Utility</td>
<td></td>
<td>13,208</td>
<td>-13</td>
<td>0.1%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td></td>
<td>6,803</td>
<td>-442</td>
<td>-6.5%</td>
</tr>
<tr>
<td>Sales and Distribution</td>
<td></td>
<td>8,067</td>
<td>-238</td>
<td>-3.0%</td>
</tr>
<tr>
<td>Other Support Services</td>
<td></td>
<td>14,792</td>
<td>-800</td>
<td>-5.4%</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>2,359</td>
<td>-103</td>
<td>-4.4%</td>
</tr>
</tbody>
</table>

> Installation was most heavily impacted by COVID-19, with jobs down 10.2% from 2019 as of December 2020

> Manufacturing also struggled under COVID-19 at a higher rate than many other value chain categories
Clean energy firms that are still in business and were recontacted have brought back all lost employment.

Firms anticipate slight employment losses with a second wave at the beginning of 2021, but with a full rebound by the end of April 2021.

Heat pump installers report much more difficulty installing systems, acquiring financing, and reaching new customers now than September.

Solar firms report no change in difficulty operating.

Non-HVAC EE workers report slightly more difficulty acquiring new and maintaining current customers.
Regional Employment

Clean Energy Employment by REDC, per 1,000 total jobs (2019)

> Across REDCs, clean energy employment ranges from 11 (Mohawk Valley) to 20 (Long Island) jobs per 1,000 total jobs
Demographics

New York State and National Clean Energy Demographics

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<tr>
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</thead>
<tbody>
<tr>
<td>Female</td>
<td>52%</td>
<td>26%</td>
<td>28%</td>
<td>24%</td>
<td>25%</td>
</tr>
<tr>
<td>Male</td>
<td>48%</td>
<td>74%</td>
<td>72%</td>
<td>76%</td>
<td>75%</td>
</tr>
<tr>
<td>White</td>
<td>72%</td>
<td>72%</td>
<td>72%</td>
<td>74%</td>
<td>75%</td>
</tr>
<tr>
<td>Hispanic/Latinx</td>
<td>18%</td>
<td>15%</td>
<td>16%</td>
<td>14%</td>
<td>16%</td>
</tr>
<tr>
<td>Black</td>
<td>16%</td>
<td>8%</td>
<td>9%</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>Asian</td>
<td>10%</td>
<td>8%</td>
<td>9%</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>Native American</td>
<td>n/a</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>n/a</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

> New York’s clean energy industry employs significantly fewer women and people of color than the state’s broader labor force

> The energy efficiency sector employed a slightly higher share of women and people of color than the state’s clean energy industry as a whole
Wages & Benefits

Wages were high among most clean energy industries

> Wage premiums tend to be strong for entry level employees, but level off or reverse among higher level clean energy workers

> Clean energy jobs are more likely to offer benefits as compared to other sectors of the economy

> Unionization rates are highly correlated with higher wages and increased benefits.
About one fifth of the training programs are aimed at HVAC workers, followed by programs for engineering (11.6%), electrical (10.4%), and construction (10.4%) workers.

Colleges provide the largest number of training opportunities (23% 4-year, 20% community colleges)

123 training programs, are offered primarily online (25% of known programs)
Other Details & Next Steps

> Other notable topics in this report include:

- Deep dives and spotlights on Heat Pump Installation, Offshore Wind, Grid Modernization and Energy Storage, Alternative Transportation, Workforce Development in Disadvantaged Communities
- Hiring difficulties (results are pre-COVID)
- Industry Profiles on heat pumps, energy storage, alternative transportation, workforce development
Panelist Presentations
NEW
(Nontraditional Employment for Women)
“My life has changed drastically. I was in Section-8 housing and on public assistance. Now, I make six figures.”
— Kieli McKoy, NEW Graduate, Carpenter, New York City District Council of Carpenters

NEW’S MISSION

NEW prepares, trains, and places women in careers in the skilled construction, utility, and maintenance trades, helping women achieve economic independence and a secure future for themselves and their families. At the same time, NEW provides a pipeline of qualified workers to the industries that build, move, power, green, and maintain New York.

NEW’S HISTORY

For over 40 years, Nontraditional Employment for Women (NEW) has been a groundbreaking model that works for women and for New York City. NEW’s no-cost training program gives women the skills and knowledge they need to begin careers as union tradeswomen in the construction, transportation, and facilities management industries. **NEW is committed to changing the lives of women - providing the opportunity to move out of poverty and into prosperity through careers in the trades.**

Through 42 years of hard work and dedication, NEW has pushed the meter from 2% to 7% women represented in trade careers in New York City. In the last ten years, NEW has placed women in over 3,000 industry careers.

www.new-nyc.org | info@new-nyc.org | 212-627-6252
Women in Construction

Nationally, women represent a staggering 3% of all trade employees. Through 42 years of hard work and dedication, NEW has pushed the meter from 2% to 7% women represented in trade careers in New York City. **In the last ten years, NEW has placed women in over 3,000 industry careers.**

Long-term Financial Stability

Nearly 1 million working New Yorkers earn less than $20,000 per year. New York State minimum wage is $15.00 per hour. **NEW graduate wages, in the first year, average $19 per hour.** In addition to sustainable hourly wages, upon placement in apprenticeships, NEW graduates receive comprehensive benefits, career development, and union protection.
3,000
In the last decade, NEW has placed 3,000+ women in careers in the trades.

350
NEW serves 350+ students through core programs annually.

150
NEW is connected to 150+ employer partners, 36 of which are unions and apprenticeships.

$19
Average starting wages for our graduates range from $19+ per hour.

275
NEW places 275+ graduates in construction-related careers each year.
NEW Programs

Blue Collar Prep
Blue Collar Prep is a preapprenticeship program geared towards giving women a well-rounded introduction to the building trades and hands on training experience with tools and building materials. This hybrid training combines online and hands-on instruction. Classes are offered during the day Monday to Friday.

NEW at Night
NEW at Night is an evening program for women working during the day or have daytime commitments. This hybrid training combines online and hands-on instruction. Training is held three evenings per week and every Saturday.

Green Collar Prep
Aligned with the green initiatives of New York City and State, NEW's Green Collar Prep (GCP) incorporates environmental sustainability issues and practices with the foundational skills students acquire through NEW's core preapprenticeship programming. Using a hybrid model combining online and hands-on instruction, GCP integrates content directly linked to sustainability and efficiency practices, applies a green lens to NEW's core curriculum, and provides students with a comprehensive training in environmental construction techniques and literacy.

Young Women's Initiatives
Through Boot Camps, workshops and tradespeakers, NEW's Young Women's Initiatives connects young women and girls to career exploration and training opportunities connect to career pathways in NYC construction.

Advanced Training
Advanced Training is offered to NEW graduates and covers topics such as trade-specific entrance exam preparation, OSHA certifications, and interview skills that are tailored to provide extra support to graduates as they enter the workforce.
Green Collar Prep

GCP is a part of NEW's sustainability strategy to insure women are a part of the growing green economy. Trades jobs are the greenest jobs! The Blue Collar industry will be a driving force in greening and reclaiming the environment in New York.

GCP connects people who were passionate about stewardship and sustainability, but hadn't realized how this could translate to a career in the trades.

Beyond the preapprenticeship credential, GCP will provide graduates with the opportunity to see how basic concepts in sustainability apply, so they can standout and advance more quickly, when they enter into apprenticeships.

Incorporating sustainability into training positions NEW a resource for ready, knowledgable candidates to achieve workforce diversity goals on projects.
Signature Projects

Signature Projects were conceived to generate demand. NEW works with developers to set workforce participation goals.

In its tenth year, the NEW Signature Projects Program has grown to 60 projects across New York City. The NEW Signature Projects program increases the utilization of tradeswomen on New York City construction projects, ensures an adequate supply of skilled tradeswomen who are prepared for the demands of the industry, and helps industry leaders adopt best practices.
Eligibility

- Must be 18 years or older
- Eligible to work in the United States
- High school diploma or equivalency
- Interested in hands-on training to join a career path in the construction field
- NEW welcomes women, transgender, and nonbinary individuals to register

How to Sign Up

The first step in enrolling is attending an online information session, hosted by NEW every Monday at 6:00pm and Tuesday at 10:00am.

Use the form on our website www.new-nyc.org/enroll or call us today (646) 291-2375 to sign up for an information session.

After registering, you should expect a confirmation phone call from NEW within a few business days.
To learn more about how to partner and collaborate with NEW, contact

Amanda Kogut-Rosenau
VP Programs
Phone: (917) 881-7389
Email: akogut@new-nyc.org
32BJ Training Fund

Understanding Workforce Training & Development in the New Clean Energy Economy

February 3, 2021

James Barry
Senior Manager, Program Development
jbarry@32bjfunds.com

Michaela Boren
Manager, Green Programs
mboren@32bjfunds.com
The 32BJ Training Fund is a joint labor-management partnership that offers training to eligible participants at no cost. The fund is supported by contributions negotiated between 32BJ SEIU and participating employers.

**Mission:** To train every participant to grow to the next level.

**Goal:** Making it possible for our members to get the education, training, and skills they need to grow in the quickly changing property services industry.

Student Profile: Karen’s video (1 min. 34):
https://www.youtube.com/watch?v=R8ci-eRadTM&feature=youtu.be
32BJ SEIU

With 175,000 members in 12 states & the District of Columbia, 32BJ SEIU is the largest property service workers union in the country. We are an affiliate of SEIU, the Service Employees International Union.

32BJ Members Include:

- Supers
- Handypersons
- Doormen
- Maintenance workers
- Security officers
- Bus drivers and aides
- Window cleaners
- Food service workers
NYSERDA Funded Activities

BMS Training
3 BMS control boards; virtual buildings; 3-trimester class

Green Supers Training and Coaching (On-Site)

Multifamily Building Analyst (MFBA) Curriculum

LEED for Existing Buildings
- Hold LEED Existing Building test preparation sessions

Green Seminar Series with Steven Winters Associates
- The beginnings of the Green Buildings Supers course.
- 2004/2005 - 7 cycles
Training Approaches & Models

Student-Centered Teaching

- Classroom Set-Up: Students are involved in tasks through solo, pairwork and group work
- Understand the content and its challenges from a learner perspective
- Engagement: Variety of tasks and then have opportunities to figure things out, ask questions, discuss ideas, practice, and get feedback

Testing

- Offer testing in different languages
- Oral testing
- Picture-based tests
Training Approaches & Models

Hands-On

- Materials
- Equipment
- Field Trips

Scavenger Hunts/ Surveys

<table>
<thead>
<tr>
<th>Unit Tag Number</th>
<th>Device Name</th>
<th>Device Function/Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
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<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Training Approaches & Models

Hands-On: Air Sealing Course
Training Approaches & Models

Accessibility: Online

Mobile App
(especially for those who do not have laptops or have low tech skills)

360 videos
Training Approaches & Models

Communication

- Text message campaign & class reminders
- Offered in top 4 languages

Compliance & Employer Requirements

(Keeps the company and 32BJ members interested and engaged)

- COVID-19 for cleaners
- COVID-19 for security
- CPR/First Aid
- Online Workplace Harassment
- Green cleaning courses (LEED)

Course Availability in Other Languages

(Safety & Compliance)

- Spanish
- Albanian
- Polish
- Mandarin

Coronavirus Quick videos - https://training.32bjfunds.org/courses/coronavirus
32BJ Member: Wilfredo Carrero

Position: Resident Manager, 32BJ Training Instructor

Building: 315 East 72nd Street (1958)

Energy Star & Grade: 84 - B

Background:

- 1997 - Doorman at Gracie Gardens
- 1997-2015 - Porter, handyman, then resident manager
- 2010 - Took classes at the Training Fund and earned certifications
- 2014 - Became an instructor at 32BJ Training
- 2015/2016 - Moved to a larger and higher end building

When he became the super was at Gracie Gardens:

“Supers are afraid to be graded...But I wanted to know where my building stood.”
Understanding Workforce Training & Development in the New Clean Energy Economy

February 3, 2021

James Barry
Senior Manager, Program Development
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Michaela Boren
Manager, Green Programs
mboren@32bjfunds.com
Green City Force
Climate Leadership and Community Protection Act (CLCPA)
Just Transitions Group Presentation
February 2, 2021
WE ARE A MOVEMENT
WE ARE THE FORCE.

Cohort 17 in Service Boot Camp at Howard Houses

TRAINING LEADERS TO POWER THE GREEN ECONOMY, THROUGH SERVICE.
greencityforce.org @greencityforce
OUR VISION
One day we will live in green cities where everyone can thrive.

OUR MISSION
We train young leaders to power a green and inclusive economy, through service.

OUR PILLARS

OUR VALUES
GREEN CITY FORCE PROGRAM MODEL

**Service Corps**
- 18-24 year old residents of NYC public housing with high school diplomas or GED
- 6-8 month AmeriCorps service
- Impactful, skills-building environmental initiatives in NYCHA
- Pre-pre-apprenticeship level training

**Alumnihood**
- Direct employment, apprenticeships or college enrollment
- GCF sectoral training initiatives with employers
- GCF social enterprise
- Ongoing coaching and support
GCF CORPS MEMBER JOURNEY

Public Housing in NYC: a city within the city

RECRUITMENT & ORIENTATION
Residents 18-24 are unemployed at higher rates than their peers outside of NYCHA.
GCF connects the dots between young talent and climate change, health and equality imperatives and opportunity in emerging fields.

SERVICE & TRAINING
Greening NYCHA communities through visible, measurable, impactful, and skill-building paid service initiatives.
GCF’s Corps drives large-scale environmental initiatives in NYCHA to transform land, buildings & practices, engaging thousands of residents.

ALUMNIHOOD
Life-long commitment to alumni career development
Continued engagement, support, and training, coupled with employer cultivation.

Alumni power green and equitable cities

SOCIAL ENTERPRISE PROGRAMS
#Buminiators #Eim/power

Members earn stipends and an education award at graduation. GCF provides MetroCard, certifications & support services.
Professional development, hard + power skills, eco literacy, community building.
In 10 years, GCF has demonstrated young adults in NYCHA are ready to serve, can create large-scale environmental impact, build interest and skills for in-demand jobs and become standouts in the green economy.
Alumni in Energy & Buildings

This aspect of our sector includes careers related to:

- energy efficiency, utilities, renewables and behind the meter technology
- construction, operations, maintenance, and management of buildings

Examples of job titles include:

- Direct Installer
- Site Superintendent
- Porter/Handyperson
- Green Building Superintendent
Green City Force targets service-learning experiences, technical training and employer partnerships linked to jobs that relate to sustainable and resilient buildings and communities and encompass:

- energy efficiency, utilities, renewables and behind the meter technology;
- construction, operations, maintenance and management of buildings;
- waste management including recycling and composting;
- green infrastructure;
- maintenance and management of green spaces;
- horticulture and food production;
- community health and sustainability education outreach.
GCF ALUMNI NETWORK

Continued counseling, trainings, and leadership for green economy careers related to sustainable buildings and communities

Salonia Thompson, Cohort 13 Alum

Domingo Morales, Cohort 10 Alum
GCF EMPLOYERS
A growing community investing in young talent and racial equity in the sustainability sector

Multiple Hires

Individual Placements
GCF SOCIAL ENTERPRISE

Employing GCF alumni leveraging EmPower NY & NYCHA EPCs

Sectoral skill-building

Boosting NYC’s efficiency
Current Position:
Apprentice at IBEW Local 3

Achievements at Green City Force:
- Gained certification as a Green Building Professional (GPRO) from the U.S. Green Building Council.
- Obtained 10 & 30 hour Occupational Safety & Health (OSHA 10 & 30) certification
- Completed NYCHA Resident Training Academy
Markeys Gould

Worked as:
Superintendent at C&C Apartment Management

Achievements at Green City Force:
• Gained certification as a Green Building Professional (GPRO) from the U.S. Green Building Council;
• Earned Building Science Principles certificate from the Building Performance Institute (BPI BSP);
• Recognized as Energy Efficiency Technician (EET) by the Association for Energy Affordability.
FUNDING MODEL

Service Corps

⅓ AmeriCorps
⅓ City / State
⅓ Private

Alumni Initiatives & Social Enterprise

Fee for service
NYSERDA’s PRIORITY POPULATION LANGUAGE

Conservation corps participants are prioritized as part of New York State’s $70 million investment in clean energy workforce funding through NYSERDA.

“Priority populations” include the following groups:

- 18- to 24-year-olds participating in work preparedness training programs, that include energy related technical training, such as BOCES, technical high schools, Conservation Corps, Youthbuild, AmeriCorps, etc.
Join us! To learn more: GreenCityForce.org

Tonya Gayle
Executive Director
tonya@greencityforce.org

Aram Marcelle
Alumni Training and Advancement Manager
Aram@greencityforce.org
Public Input
Public Input

Framing Questions

> What specific opportunities and challenges do you anticipate for New York’s workforce in the transition to a clean energy economy in the State?
  * Particularly, where do you see opportunities and challenges pertaining to skills gaps and development?
  * What are you hearing from workers in terms of their concerns and hopes as the state transitions?

> How do you see the energy workforce changing over the coming decades, demographically or otherwise?

> What present state programs have been most supportive to the workforce, from your vantage point?

> For existing fossil fuel workers, what training opportunities are most promising for a transition a role in clean energy? What opportunities exist in adjacent industries/other sectors where existing skillsets may be readily transferable?

> Are you aware of successful training models that can be scaled up or replicated if demand for training increased rapidly?
Next Steps

> Please share additional feedback and comments to JTWG@nyserda.ny.gov.
> Next **Just Transition Working Group** meeting scheduled on February 23, 9-11am