Session 1B: Building a Green Workforce

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Ted Trabue Jr, DC Sustainable Energy Utility
Value Chain

Energy Efficiency Employment by Major Industry Sectors, Q2 2017

- Professional and Business Services: 396,482 (2016), 446,599 (2017)
Figure 54. Occupational Distribution – Energy Efficiency, Q4 2017

- Production/Manufacturing positions: 16.6%
- Installation or Repair positions: 7.2%
- Administrative positions: 3.8%
- Management/Professional positions: 32.1%
- Sales positions: 26.1%
- Other positions: 14.1%
### Demographics – Energy Efficiency, Q4 2017

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Employees</th>
<th>Percent of Sector</th>
<th>National Workforce Averages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>1,723,732</td>
<td>77%</td>
<td>53%</td>
</tr>
<tr>
<td>Female</td>
<td>524,792</td>
<td>23%</td>
<td>47%</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>337,402</td>
<td>15%</td>
<td>17%</td>
</tr>
<tr>
<td>Not Hispanic or Latino</td>
<td>1,911,122</td>
<td>85%</td>
<td>83%</td>
</tr>
<tr>
<td>American Indian or Alaska Native</td>
<td>32,288</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Asian</td>
<td>107,276</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>Black or African American</td>
<td>176,303</td>
<td>8%</td>
<td>12%</td>
</tr>
<tr>
<td>Native Hawaiian or other Pacific Islander</td>
<td>25,166</td>
<td>1%</td>
<td>&gt;1%</td>
</tr>
<tr>
<td>White</td>
<td>1,748,399</td>
<td>78%</td>
<td>78%</td>
</tr>
<tr>
<td>Two or more races</td>
<td>159,092</td>
<td>7%</td>
<td>2%</td>
</tr>
<tr>
<td>Veterans</td>
<td>238,162</td>
<td>11%</td>
<td>6%</td>
</tr>
<tr>
<td>55 and over</td>
<td>317,194</td>
<td>14%</td>
<td>23%</td>
</tr>
<tr>
<td>Union</td>
<td>239,364</td>
<td>11%</td>
<td>11%</td>
</tr>
</tbody>
</table>
**MORE ENERGY EFFICIENCY = MORE CONSTRUCTION JOBS**

- More than 1 out of every 6 US construction workers spend 50% or more of their time on Energy Efficiency (18%)
- Nearly 60% of energy efficiency’s 2.25 million employees work in construction (1.27 million)
- 80% of energy efficiency construction businesses say employees spend a majority of time on energy efficiency—an increase from last year (74%)

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**EE JOBS ACROSS THE COUNTRY**

- These jobs are local. 99.7% of U.S. counties have energy efficiency jobs
- Energy efficiency now employs workers in more than 3,000 of America’s 3,007 counties
- More than 300,000 Americans living in rural areas work in energy efficiency
- America’s Top 25 metro areas employ 900,000 workers in energy efficiency
- 35% of U.S. energy workers are involved in energy efficiency

**GROWTH ACROSS AMERICA**

There are 353,269 energy efficiency businesses in America

**GROWTH FOR THE FUTURE**

Energy efficiency businesses are projecting 9% growth in jobs for 2018

...and the job growth is expected across all major industries

**SMALL EE BUSINESS BY EMPLOYEE COUNT**

- 100+ (4%)
- 6-19 (33%)
- 20-99 (17%)
- 1-5 (46%)
Massachusetts Clean Energy Center

Tamika Jacques, Ed.D.

Director of

Workforce Development

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Our Mission

Grow the state’s clean energy industry while helping to meet the Commonwealth’s clean energy and climate goals.

ADOPT
Increase renewable energy adoption by residents, businesses and communities.

CONNECT
Connect employers, job seekers, students, communities and investors to the clean energy industry.

INNOVATE
Help to spur innovation through infrastructure, funding and technology development support.
FUNDING SOURCE

Massachusetts Utility Customers

5 Municipal Lighting Plant Customers

$23M annually
Collected via a surcharge equal to $.32/month for an average residential customer

CORE FUNCTIONS

Renewable Energy Generation

Investments

Innovation & Industry Support

Wind Technology Testing Center

Marine Commerce Terminal
Our Emerging Initiatives

- Offshore Wind
- Energy Storage
- Microgrids
- Water Innovation
Massachusetts Clean Energy by the Numbers

- **109,226 Jobs**
- **$50,000**
  - 68% of workers earn more than $50,000
- **81%**
  - Job growth since 2010
- **$11.4B**
  - in economic activity
- **2.3%**
  - of Massachusetts Gross State Product
Clean Energy Internship Program

Paid internship opportunities for college students at Massachusetts-based clean energy companies

Successes to Date
- Nationally recognized award-winning program (IREC/CESA)
- Placed over 3,000 interns at 385 companies since 2011
- Over 500 students have gained full or part-time employment at their host companies
- 271 companies, 1,351 students applied for the summer 2018 session
- Overwhelming participant satisfaction with the program to-date
- International students are eligible to participate.

Program Logistics
- Students and Employers apply via www.masscec.com/intern
- 3 sessions offered per year. Summer 2018 session runs from
- Companies may host up to 3 interns per session
- Employers reimbursed for 12 weeks of an intern’s work at the host company
- Employers find and reach out to students in our database directly
- Employers seek reimbursement from MassCEC at the conclusion of the session. Cap is $3,840/intern (spring/fall) $7,680/intern (summer)
Workforce Development

Workforce Capacity
Learn & Earn
Vocational Internship Program
Clean Energy Activity Day

Pathways Out of Poverty
Successful Women in Clean Energy

Disconnected Youth
Wastewater Treatment

Incumbent Workers
2019
Workforce Development

Presented by: Rick Nortz
Authorized Training Centers
+ Distributor Training Centers
Demonstration/Training Truck
Mobile Trainers
DCSEU Workforce Development

Train to Work + Teaching Technical Skills
Partnerships

Training:
Soft Skills

Curriculum:
Technical Skills
DCSEU Model:
4-Month Paid Externships
Building Operator Certification

Enroll Today
Save Energy & Money Tomorrow

Washington, DC
Begins May 7th!

Building Operator Certification® (BOC) is the leading training and certification program for facilities personnel. Our graduates make their buildings more efficient, comfortable, and sustainable.

Created and validated by industry experts and practitioners, BOC is the only credential program that is third-party verified to save energy, and the only program to require the completion of hands-on projects for certification.

Students demonstrate knowledge of their own building by completing projects involving documentation of building equipment, systems and controls; benchmarking the building’s performance using ENERGY STAR® Portfolio Manager™; updating occupancy profiles; reviewing HVAC systems and operation; and mapping the facility’s electrical distributions system.

Who should enroll? Those with two or more years of experience in building operation and maintenance who wish to broaden their knowledge of the total building system.

BOC graduates save an average of $10,500 each year in energy expenses.
2018-2019 Cohort
Thank You.

The DC Sustainable Energy Utility is a project of the Sustainable Energy Partnership under contract to the Department of Energy and Environment (DOEE).