

# Pennsylvania's Department of Labor & Industry

## Summary on Green Jobs Strategy & Projects



### **Green LMI as a Tool for Recovery & Beyond**

**Sue Mukherjee, Director, CWIA**

**ETA Conference – February 16<sup>th</sup> 2011**

## Insight on 'Green' from Frederick W. Smith, CEO, FedEx

- Smith calls for the creation of electrification "deployment communities" using market-friendly way by encouraging communities to work with major employers, utilities, and other stakeholders to find the most cost-effective *pathways to electrification*
- "The technology is already here. People are rushing to buy the first all-electric Nissan Leafs and plug-in hybrid Chevy Volts. In fact, the real question about electric vehicles is not whether they will be built, but who will build them. .... The question **is how best to seize the opportunity** that electric vehicles offer "



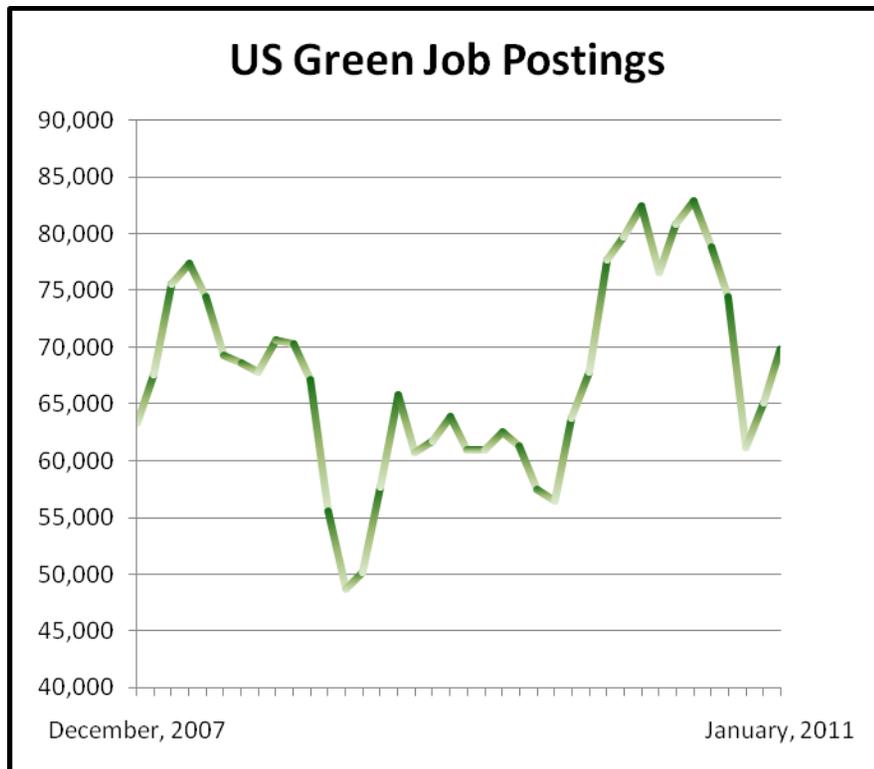
COURTESY: FEDEX

\* .... *real need to define, identify, promote opportunity*



# Employer Demand - Green Jobs

- Increased demand for green jobs; green job posting volume across the course of the recession has fluctuated but the average trend – upwards
- Green job posting share of total job posting remains low



Source: Wanted Analytics, Conference Board

**Philadelphia MSA – Job Postings**

Occupation	Over the Year Change
Electrical Engineers	23.9%
Environmental Engineers	27.3%
Heating and Air Cond. Mech. and Installers	-2.6%
Civil Engineers	2.9%
Mechanical Engineers	54.5%

Source: Wanted Analytics, Conference Board



# **Green job** – *a blended definition that continues to evolve . .*

## **Pennsylvania Dept. of L&I defines Green jobs:**

*Jobs that promote energy efficiency, contribute to the sustainable use of resources, prevent pollution and reduce harmful emissions or clean up the environment.*

### GREEN INDUSTRY SECTORS:

- Energy Efficiency
- Pollution Prevention & Environmental Cleanup
- Agriculture & Resource Conservation
- Clean Transportation
- Renewable Energy
- Education, Training, & Compliance (NEW)



# Green LMI Improvement in PA

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- *\$1.25 million ARRA funded competitive grant to study the **green** economy.*
  - Where are PA's **green** employers now, & in 2 years
  - What jobs are **green** & where is the demand?
  - What are the skills for in-demand **green** occupations?
  - Does PA have the capacity to meet employer demand?
- **Activities based on the award:**
  - **Listening Sessions**
  - **Surveying Pennsylvania's **Green** Economy (Jobs Survey/Skills Survey)**
  - **Inventory of **Green** Education Training Capacity**
  - **Job Task Analysis and Career Tool**

*\* **Green LMI, tool for recovery & beyond; how does this fit in?***



# Background (PA)

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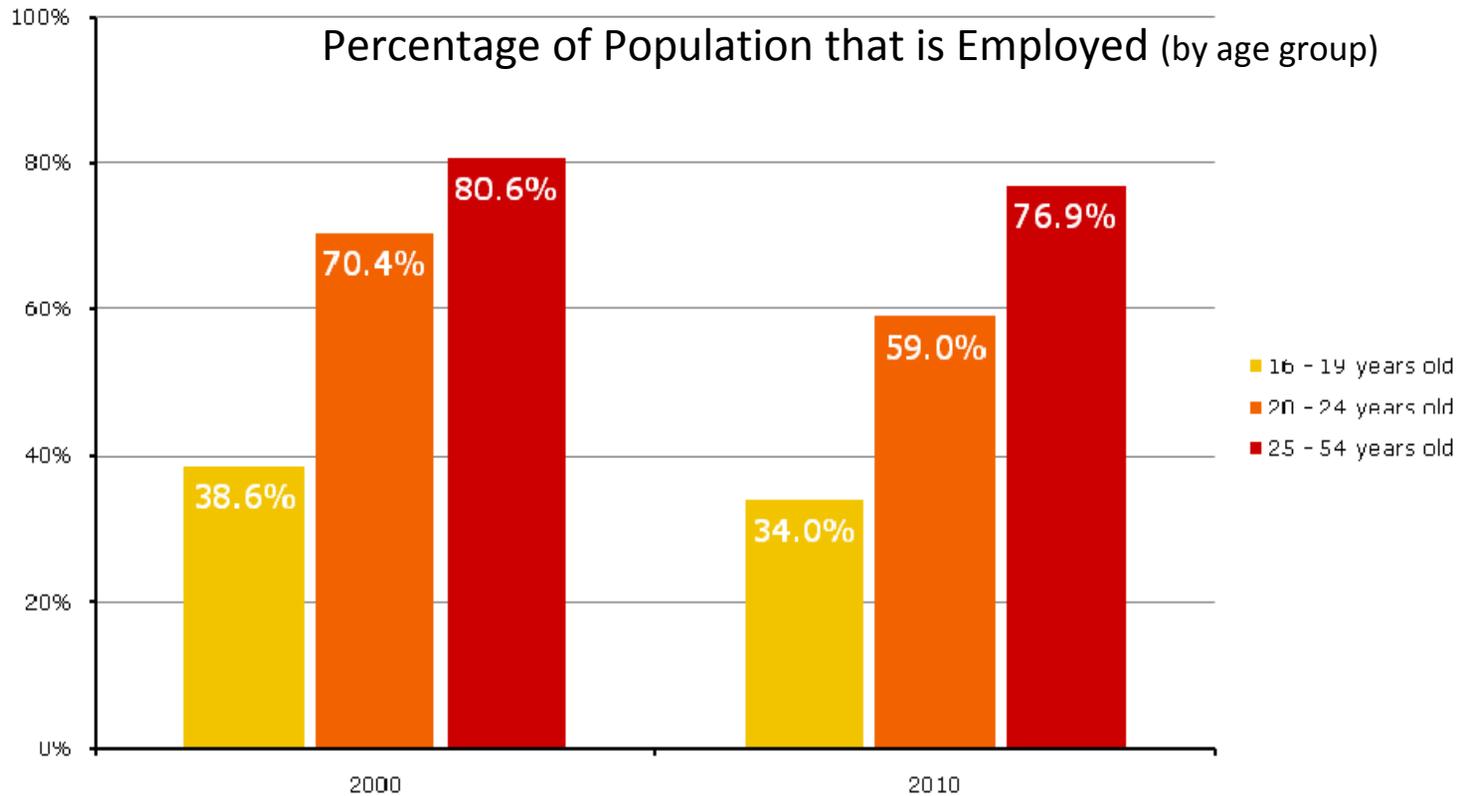
- Excess Capacity in Market:
  - 538,000 unemployed; 8.5% unemployment rate
  - 132,000 individuals projected to exhaust UC benefits by April 2011
- Hiring still taking place:
  - Dec. 2010: 151,100 online job postings; 18,100 more postings than Dec. 2009
  - 413,900 New Hires 1<sup>st</sup> Quarter 2010
  - Total Nonfarm Job increased by 24,200 since June 2009; 21,900 of these were Private Sector Jobs

*\* LMI Shops need to define, identify, promote opportunity*



# Background (PA)

Source: U.S. Census Bureau, Current population Survey.



*\*Teens/Young Adults hit hard – ‘green’ opportunities would appeal to them*



# Background (Philadelphia)

Over 9,000 people in Philadelphia County are projected to exhaust all benefits from January through April 2011 . . . . .

Pre-UC Industry	% of Total
Professional & Business Services	23.90%
Trade, Transportation & Utilities	19.40%
Education & Health Services	17.50%
Leisure & Hospitality	10.10%
Construction	7.00%
Manufacturing	6.50%
Financial Activities	6.30%

Source: Pennsylvania Unemployment Compensation System

*\* There is 'talent on the sideline' regionally – we need to connect them with opportunities*



# The Background

## Philadelphia New Hires by Industry

Industry		1st Qtr 2009	1st Qtr 2010	Volume Change	% Change
<b>22</b>	<b>Utilities</b>	<b>4</b>	<b>25</b>	<b>21</b>	<b>525%</b>
<b>23</b>	<b>Construction</b>	<b>1,209</b>	<b>1,505</b>	<b>296</b>	<b>24%</b>
<b>31-33</b>	<b>Manufacturing</b>	<b>658</b>	<b>799</b>	<b>141</b>	<b>21%</b>
42	Wholesale Trade	417	450	33	8%
44-45	Retail Trade	965	891	-74	-8%
48-49	Transportation & Warehousing	508	442	-66	-13%
51	Information	334	274	-60	-18%
52	Finance & Insurance	396	323	-73	-18%
53	Real Estate, Rental & Leasing	252	302	50	20%
54	Professional, Scientific, and Technical Services	2,901	2,761	-140	-5%
55	Management of Companies & Enterprises	337	345	8	2%
56	Admin. & Support & Waste Management & Remediation Services	2,847	2,782	-65	-2%
61	Educational Services	1,202	1,111	-91	-8%
<b>62</b>	<b>Health Care &amp; Social Assistance</b>	<b>3,934</b>	<b>6,197</b>	<b>2,263</b>	<b>58%</b>
71	Arts, Entertainment & Recreation	587	573	-14	-2%
72	Accommodation & Food Services	2,904	3,548	644	22%
81	Other Services (except Public Administration)	1,807	1,622	-185	-10%
92	Public Administration	1	11	10	-
99	Unknown NAICS	11	14	3	27%
<b>Total</b>		<b>21,274</b>	<b>23,975</b>	<b>2,701</b>	<b>13%</b>

*\*Employers are hiring in key sectors – some green*

Source: New Hires, PA Department of Labor & Industry



# Challenges

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- Employers report lots of applicants, often few qualified
- Job seekers unable to connect with jobs (especially for longer term unemployed)
- Geographic/education barriers
- Labor market less transparent than pre-recession

*\* Increased need for relevant, local data for individuals to make educated choices*



# LMI Perspective: *Addressing challenges*

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- Providing relevant data and conducting regular outreach
- Using/disseminating UC Exhaustee/Claimant information
- Using research on *'green jobs'*, *'STEM'*, *'Health Careers'* to engage job seekers, youth, incumbent workers to job market
- *Examples of products that seem to be helping: Fast Facts, Profile of the Unemployed, Green Survey Report, Green Job Task Analysis etc.*

*More details on Pennsylvania's 'Green Jobs' research ...*



# Green Jobs in Pennsylvania

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- Estimated **183,029 green jobs**; **3.4% of industry employment (64% RR)**
- Green jobs exist in all industry sectors; Few new/unique green job titles.  
*New sector: education/training/compliance*

Distribution by core areas (**large variations by WIA indicating 'market forces kicking' in**); statewide:

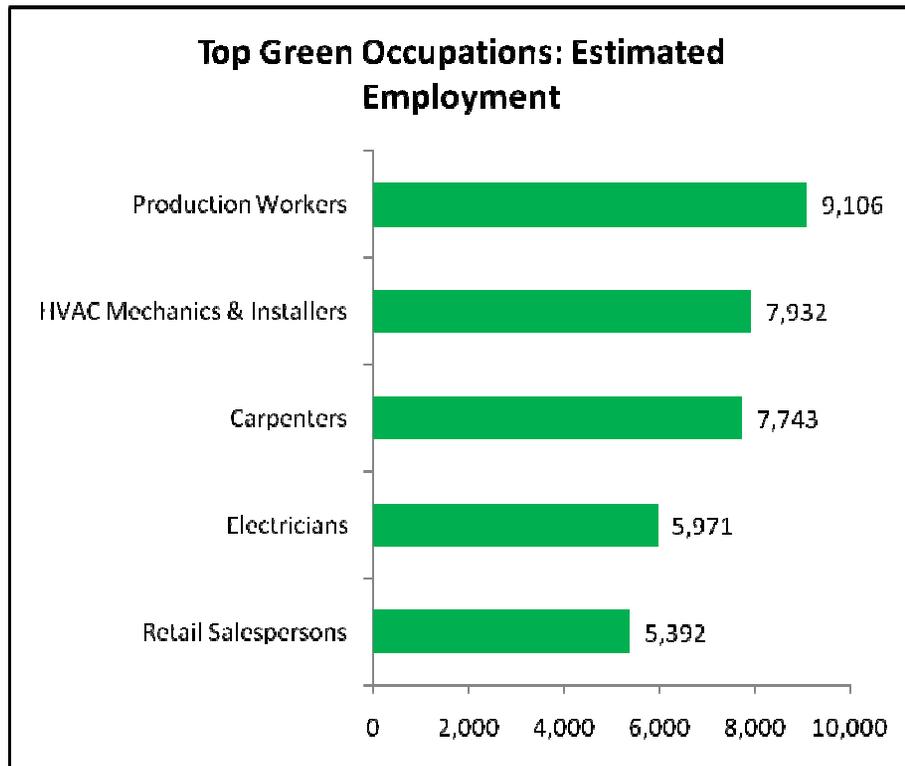
- ✦ **Energy efficiency:** 36% of all green jobs (65,100); 42% in construction
- ✦ **Sustainable use/renewable energy:** 22% (41,100); 41% in manufacturing
- ✦ **Prevent pollution:** 17% (30,500); includes management/public-sector jobs
- ✦ **Clean up environment:** Over 6% (11,600)
- ✦ **Reducing Emissions:** 6% (10,500); transportation /warehousing/retail
- ✦ **Green education/training, or compliance:** 13% (24,000); public admin, professional, scientific & technical services, and construction



# Green Employer Survey

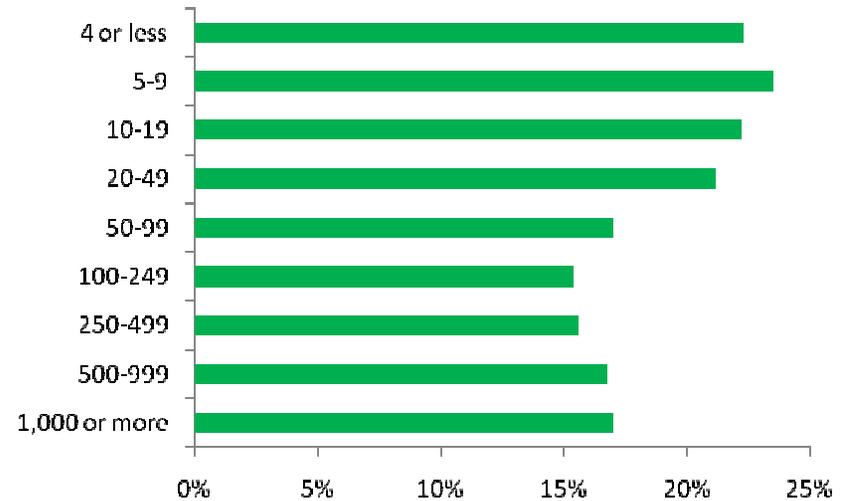
(see right)

Smaller companies (<50) are more likely to have some green employment than large companies (≥50)



Source: PA Employer Green Jobs Survey, August 2010

Percentage of Companies with Green Employment by Company Size



(see left)

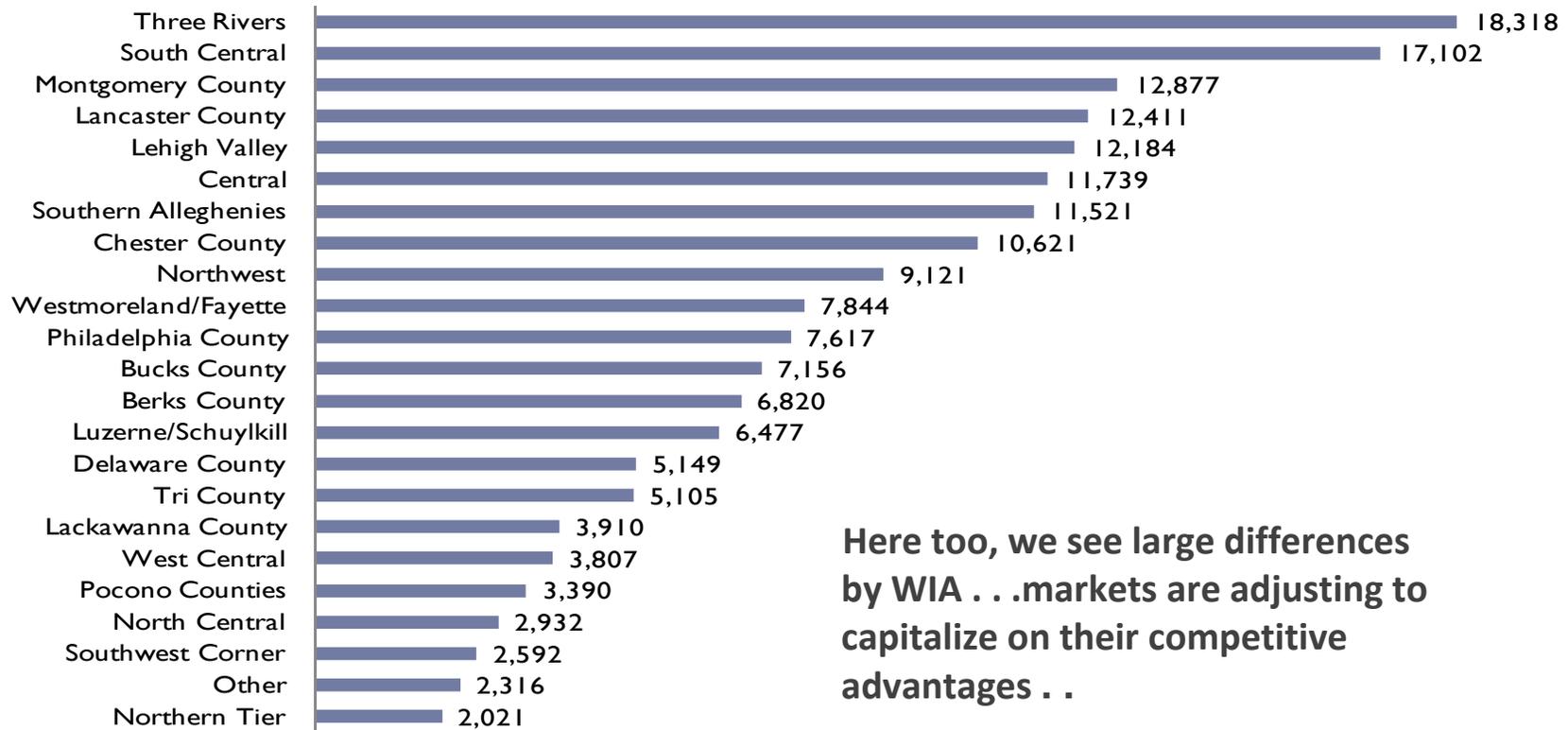
Production Workers dominate; top 5 occupations by employment account for 20% of green jobs



# Results by employment forecast

Employers asked to report the number of employees in green positions they expect to have in two years. Study estimate: total number of employees in green positions will increase by 23,000 in two years, to 206,261; annualized growth rate

## Green Jobs per Workforce Investment Area



Here too, we see large differences by WIA . . .markets are adjusting to capitalize on their competitive advantages . .



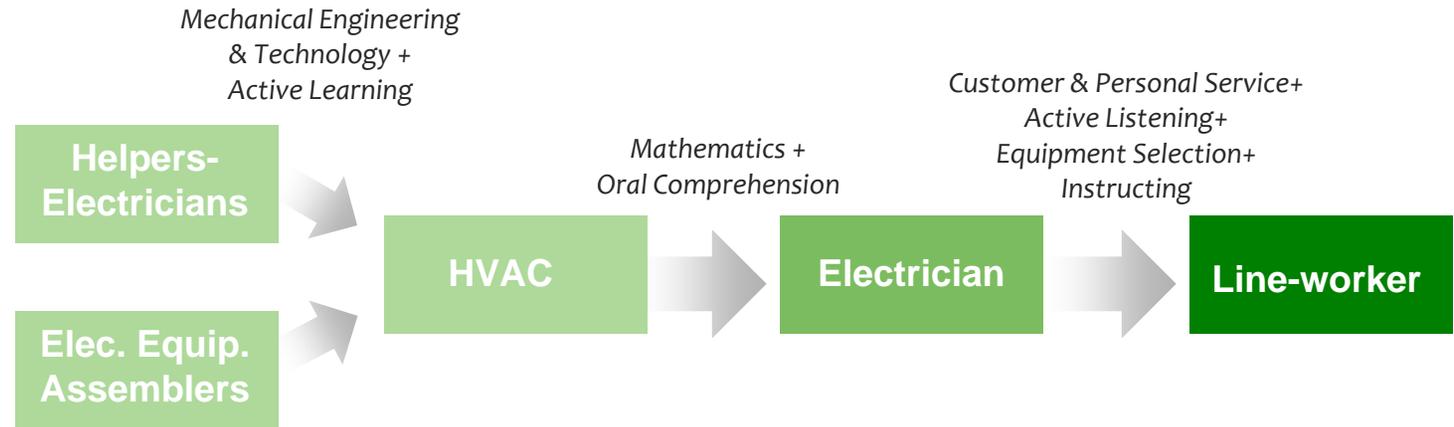
# Green Skills Survey

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- A follow-up “Skills Survey” sent to those employers reporting green employees in the “Employer Survey”
- To date 41.2% of these employers have responded; again, respondents have projected more than 6% annual growth in green jobs; this supports the previous survey results
- **Education:** 53.5% of the green occupations identified required some college; with 37% requiring at least a Bachelor’s Degree
- **Additional Skills Survey results will include information on:** licensing, specific skills, training sources, and school programs for each of the reported green occupations



# Green Jobs: Career Pathway Example



<b>2010 Jobs</b>	10,115	15,309	26,925	4,697
<b>2015 Jobs Change</b>	(762)	1,718	1,235	235
<b>5 year Demand</b>	1,036	2,950	4,490	1,068
<b>2010 Average Annual Earnings</b>	\$29,801	\$43,555	\$53,456	\$58,490
<b>Educational Level</b>	Short-term OJT	Long-term OJT	Long-term OJT	Long-term OJT



# Green Career Tool

- Assist job seekers learn **about occupations** and allow **search for job openings**
- Users can search by key word, occupations, by category (Green Sectors, STEM)
- Occupational searches will return **similar occupations**
- Job postings can be searched by ZIP Code, County, or WIA



Search for your occupation... or view occupations by category

**Accountants**  
Don't have any prior work experience? Just search for a job that interests you.  
Change Location

Here's a brief overview of your occupation. Click on it for more information!

Accountants	Job Postings	Training	Green	STEM	HPO
\$23.21 median hourly wage	4,957 employed in your area	✓	✓	✓	✓

No luck finding work in your occupation? Here are some similar jobs you might be able to do...

Financial Analysts	Job Postings	Training	Green	STEM	HPO
\$20.54 median hourly wage	1,324 employed in your area	✓	✓	✓	✓

Need Help?

**Career Coach**  
Watch a Video Tutorial

**Build a Resume**

**Resume Builder**  
Our tool makes it easy

**PA Green Jobs**

Pennsylvania defines green jobs as jobs that employ workers in producing or offering products or services that:

- Promote energy efficiency
- Contribute to the sustainable use of resources
- Prevent Pollution
- Clean up the environment
- Promote the reduction of harmful emissions

Please explore these resources to learn more about green jobs in Pennsylvania:

*Occupations are identified if they meet certain criteria:*

- Available Job Postings
- Training Availability
- Green
- STEM
- High Priority



# Concluding Thoughts

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**Overall goal** - identify green occupations/skills in demand; use LMI as a 'connector' to help people get jobs or better jobs. We know:

- Green occupations can draw from existing pool of workers with similar knowledge /skill sets, educational levels, work experience
- *Green occupations span the range of all occupations*
- For certain Green tasks, some additional technical training is needed
- Traditional career pathways apply, meaning entirely new set of Green educational and training programs need not be developed from ground up
- *Ongoing work:*
  - (I) Outreach to job seekers/students via One-Stops, Schools
  - (II) Use knowledge/employer response to inform traditional LMI programs

**Questions?? Thank you!**

