

Bureau of Labor Statistics Green Jobs Initiative

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www.bls.gov

BLS green jobs products

- 1) Green Goods and Services (GGS): industry employment
- 2) GGS: occupational staffing patterns and wages for GGS industry employment
- 3) Green Technology and Practices (GTP): occupational staffing patterns and wages for employees engaged in green technologies or practices at establishments
- 4) Career information on selected green occupations

Defining green jobs

- Definition should be objective and measurable
- Use standard classifications to provide comparability to other data
 - North American Industry Classification System (NAICS)
 - Standard Occupational Classification (SOC)

Defining green jobs

- BLS background work
 - ▶ Reviewed the literature
 - **No widely accepted definition**
 - ▶ Examined international work
 - Statistics Canada, Eurostat
 - ▶ Consulted with stakeholders
 - Federal agencies, CEQ, industry associations, States
 - ▶ Green Jobs Study Group
 - <http://www.workforceinfocouncil.org/GreenJobs.asp>

Defining green jobs

- Solicited public comment
 - ▶ March 16, 2010, Federal Register Notice
 - ▶ Further consultation with Federal agencies during the comment period
- Final definition and summary of comments
 - ▶ September 21, 2010, Federal Register Notice

BLS green jobs definition

Green jobs are either:

- A. **Output:** Jobs in businesses that produce goods or provide services that benefit the environment or conserve natural resources.
- B. **Process:** Jobs in which workers' duties involve making their establishment's production processes more environmentally friendly or use fewer natural resources.

Measuring green jobs

- **Output** part of definition
 - ▶ Green Goods and Services (GGS) Survey
 - ▶ Occupational staffing of GGS jobs using the OES survey
- **Process** part of definition
 - ▶ Green Technologies and Practices (GTP) Survey

Identifying green goods and services

- Generally designated as green only goods and services that directly benefit the environment
 - ▶ Does not automatically include inputs or distribution of outputs, but evaluates these for direct environmental benefit
- Identified 333 detailed NAICS industries where green goods and services are classified. See www.bls.gov/green

Categories of green goods and services

1. Electric energy from renewable sources or nuclear
2. Energy efficient equipment, appliances, buildings and vehicles, and goods and services that improve the energy efficiency of buildings and the efficiency of energy storage and distribution
3. Pollution mitigation; greenhouse gas reduction; and recycling and reuse goods and services

Categories of green goods and services

4. Organic agriculture; sustainable forestry; and soil, water and wildlife conservation
5. Governmental and regulatory administration; and education, training, and advocacy goods and services

Examples of industries with green content

- Organic corn production (anything organic)
- Electric power production from wind, solar, biomass, hydroelectric or nuclear sources, etc.
- Manufacturing of energy efficient products (hybrid cars and batteries)
- Manuf. of Energy Star appliances, computers, etc
- Sewage treatment facilities, or their construction
- Construction using LEED approved materials
- Retrofitting buildings for energy efficiency
- Aluminum smelting - reintroducing recycled cans
- Urban mass transit
- Government development and enforcement of environmental regulations

Identifying green goods and services

- Within an industry – which products or services meet the BLS definition?
- where possible, BLS is using well-established, well-recognized “standards” for consistency, e.g.
 - ▶ Energy Star (EPA, DOE)
 - ▶ LEEDS, Green Globes
 - ▶ WaterSense (EPA)
 - ▶ Sustainable Forestry Initiative
 - ▶ UL Environment

Measuring green goods and services jobs

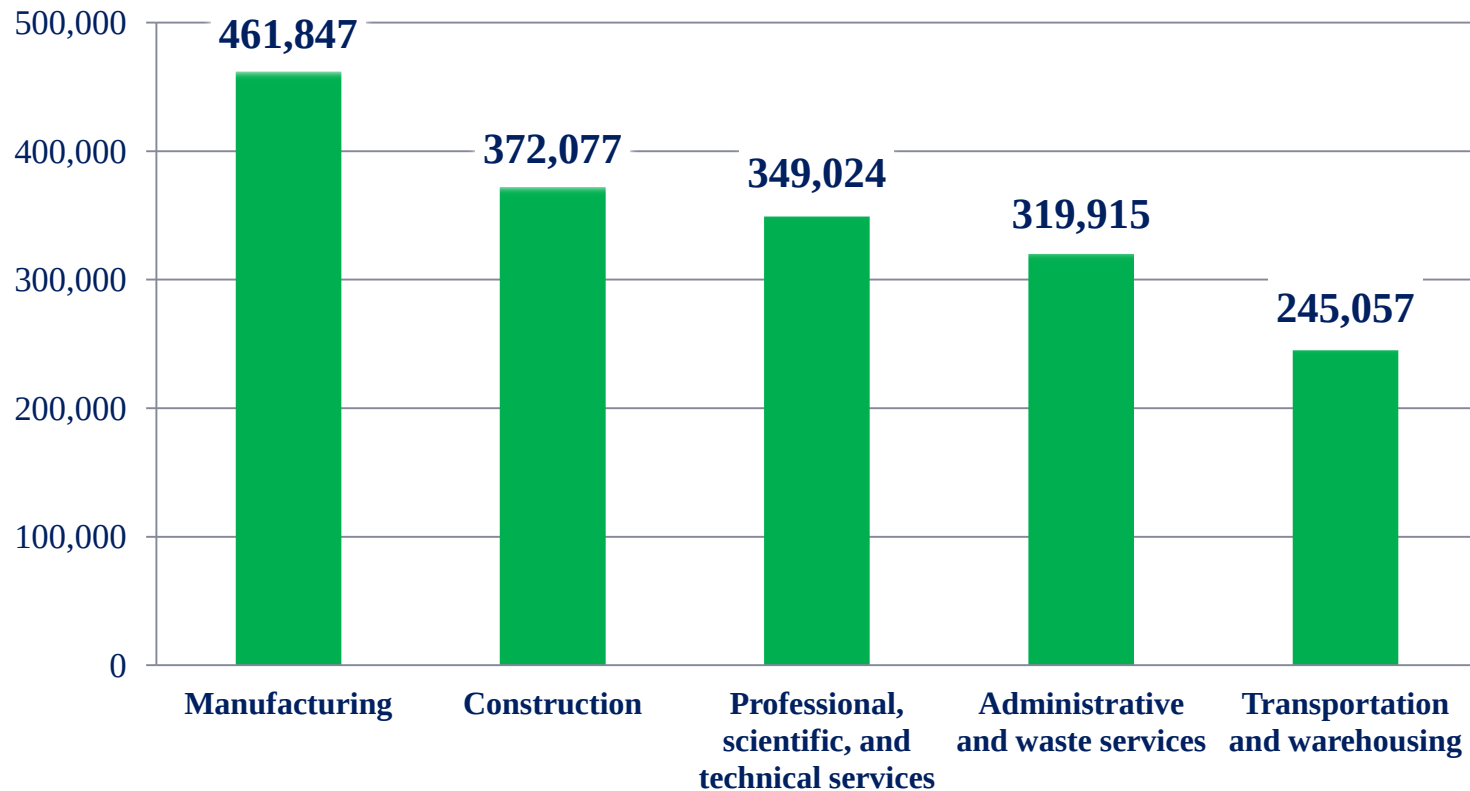
- Green Goods and Services (GGS) survey
 - ▶ Sample establishments in industries where green goods and services are classified
 - ▶ Present to respondents a description of green products or services classified in their industry
 - ▶ Request share of revenue accounted for by sale of green goods and services
 - ▶ Use share of revenue as proxy for share of employment

GGS Employment: US totals

- 3,129,100 Green Goods and Services (GGS) jobs in 2010
 - ▶ 2.4 percent of total employment
- 2,268,800 GGS jobs in private industry
 - ▶ 2.1 percent of total private
- 860,300 GGS jobs in government
 - ▶ 4.0 percent of total government

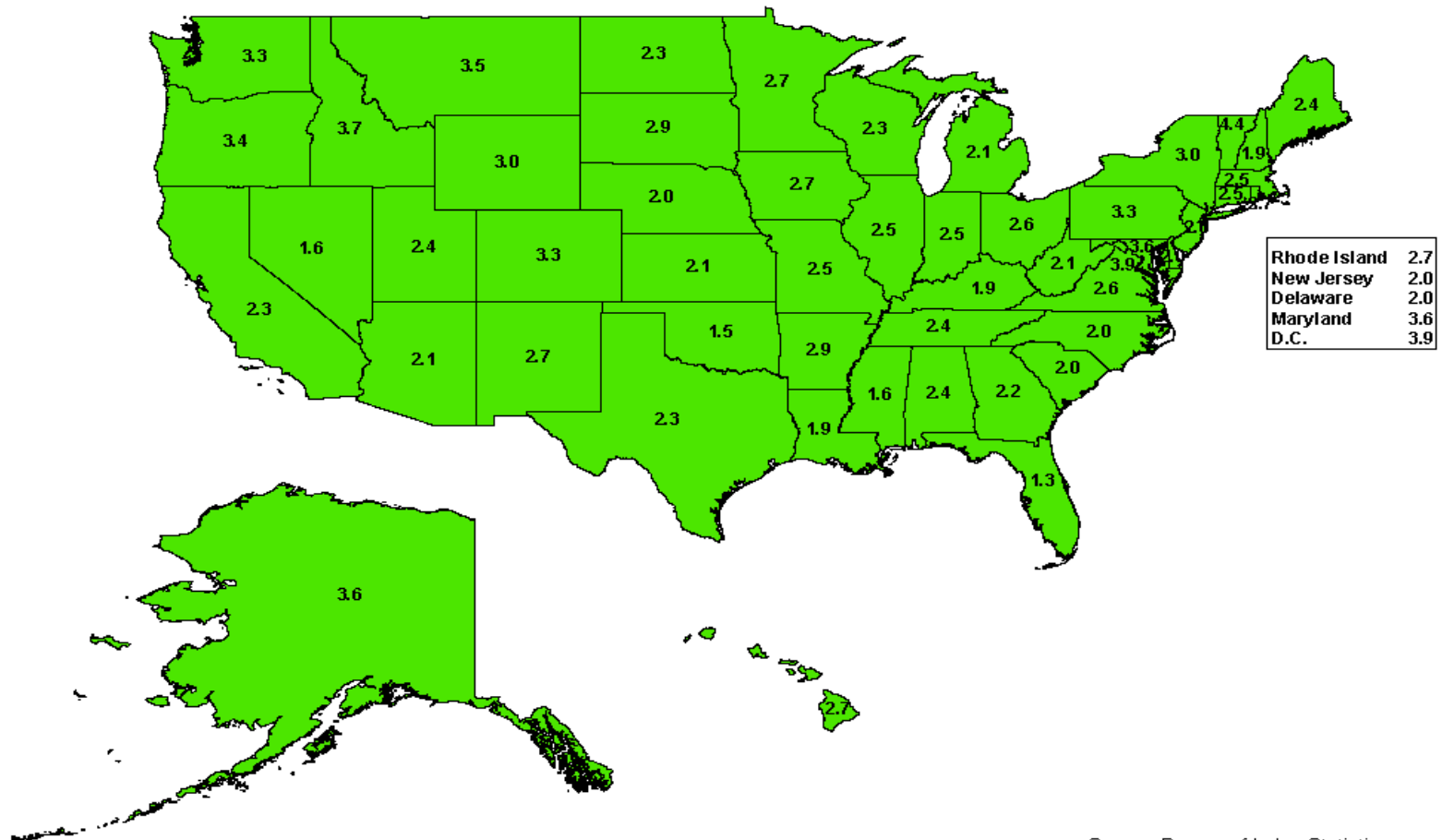
GGG Employment in Major Industries: Private Sector

Employment



GGGS Employment: States

Green Goods and Services employment as a percent of total state employment,
all ownerships, 2010 annual averages



Source: Bureau of Labor Statistics
March 2012

GGG industry data

- Data elements:
 - ▶ Number of jobs meeting BLS definition
 - “GGG employment”
 - ▶ Percent of total employment for that industry
 - ▶ Level of total employment in that industry
 - Annual average from published QCEW data (not CES)
 - QCEW is based on UI coverage (state and federal)
 - 97% of CES level
 - QCEW is employment benchmark for CES

Share of Revenue

- Distribution of responses and employment by percent of revenue reported from the sale of green goods and services

	Units	Employment
• No GGS revenue:	69%	0%
• Some revenue but less than 100%:	17%	41%
• 100% of revenue:	14%	59%

What are GGS jobs?

- Any type of job:
 - Mass transit: bus or subway drivers, accountants, management, human resources, etc.
 - Construction of hydroelectric plant: electricians, engineers, laborers, cement truck drivers, administrative staff, etc.

Measuring green goods and services jobs

- Occupational staffing of GGS jobs
 - ▶ Goal is to understand differences in occupational staffing and wages between businesses producing green goods and services and other businesses
 - ▶ Publication target—late September 2012
 - ▶ Administer the Occupational Employment Statistics (OES) survey to establishments in the GGS sample

Measuring green goods and services jobs--Occupations

- Use the natural overlap between the GGS sample and the large OES sample
 - ▶ 52% of establishments and 80% of employment
- Force additional overlap raises coverage
 - ▶ 56% of establishments; 81% of employment
- Field a supplement to OES to cover the GGS scope and provide more overlap with GGS—sampling unmatched GGS at about 50%
 - ▶ Brings match to 78% establishments and 96% of employment

Green Technologies and Practices (GTP)

- Special employer survey to measure number of jobs related to second part of BLS green jobs definition:
 - ▶ **Process:** Jobs in which workers' duties involve making their establishment's production processes more environmentally friendly or use fewer natural resources.

Types of green technologies and practices

1. Generating energy from renewable sources primarily for use within the establishment
2. Improving energy efficiency within the establishment
3. Reducing greenhouse gas emissions resulting from operations.

Types of green technologies and practices

4. Reducing or eliminating the creation of, or release of, pollutants or toxic compounds resulting from operations
5. Reducing or eliminating the creation of waste materials resulting from operations.
6. Conserving natural resources consumed during business operations.

Employment related to green technologies and practices

- ▶ More than 50 percent of the employee's time is spent:
 - Researching,
 - Developing,
 - Maintaining, or
 - Using technologies or practices related to the six categories of green activities.
 - Training workers at the establishment in one or more of the six categories of green activities.

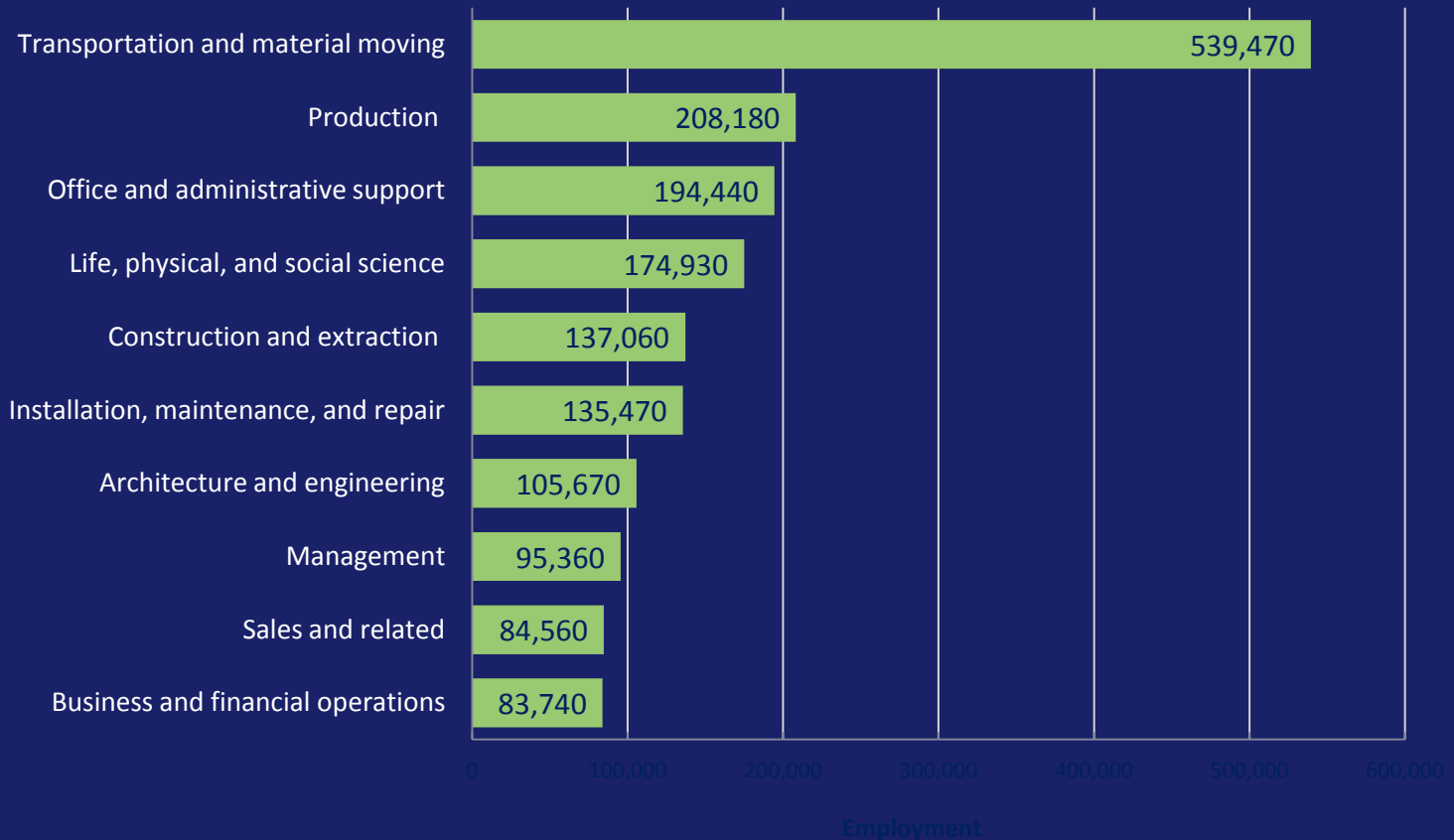
Measuring green technologies and practices jobs

- Green Technologies and Practices (GTP) Survey
 - ▶ Sample 35,000 establishments in all industries (except private households)
 - Stratified by region and industry
 - ▶ Present a list of green activities for respondents to evaluate whether or not they are used at the establishment
 - ▶ Request occupation and wage information for employees who spend more than 50 percent of their time in these green activities

Measuring green technologies and practices jobs

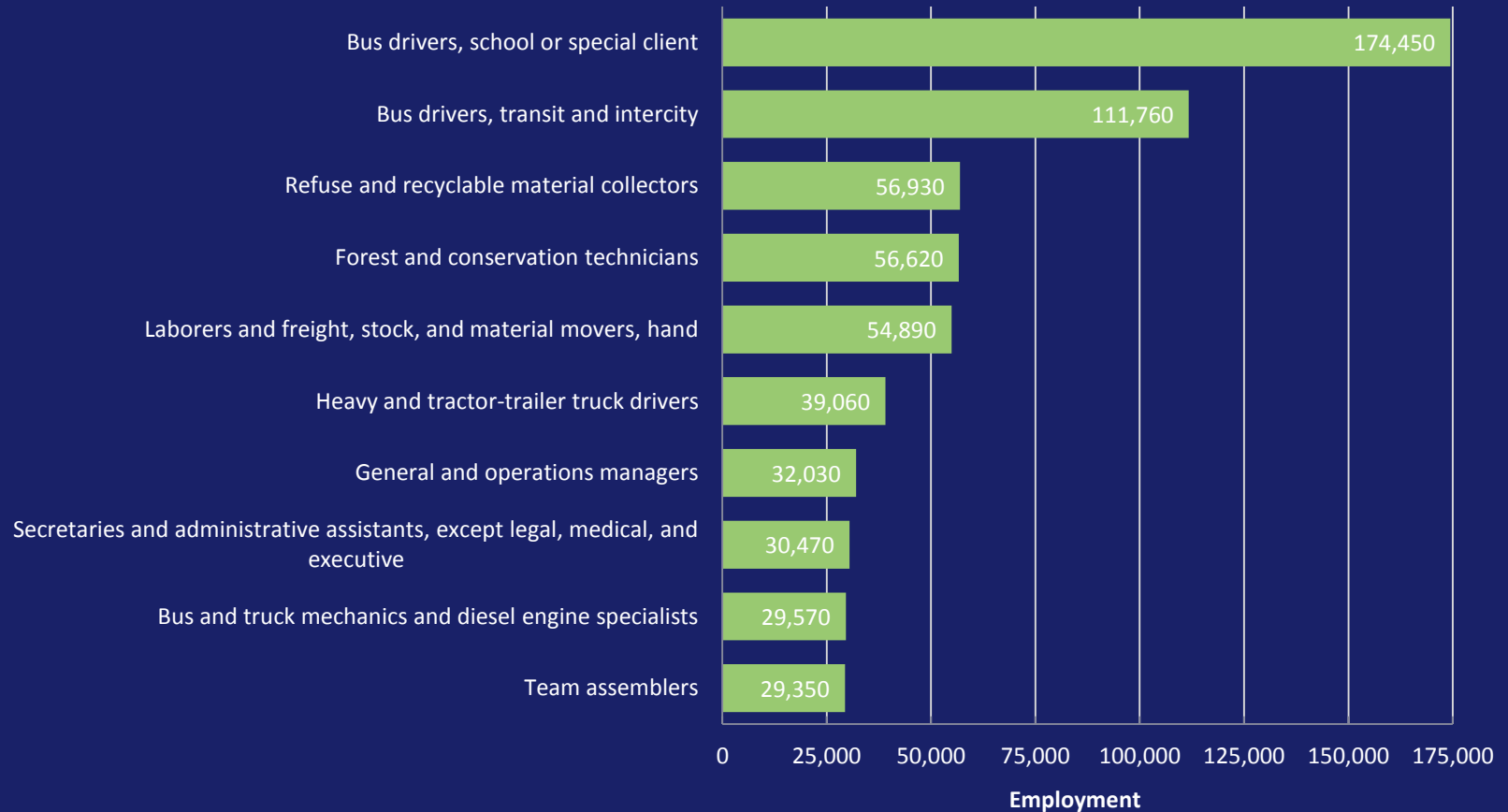
- Field tested the concepts and survey instrument—paper form and on-line collection
- Survey collection during 9/2011-3/2012
- Products
 - ▶ Percent of establishments with each type of activity
 - ▶ Occupations reported performing green activities and their wages
- Results in June 2012

Employment for the Largest Occupational Groups in All-Green Establishments, November 2011



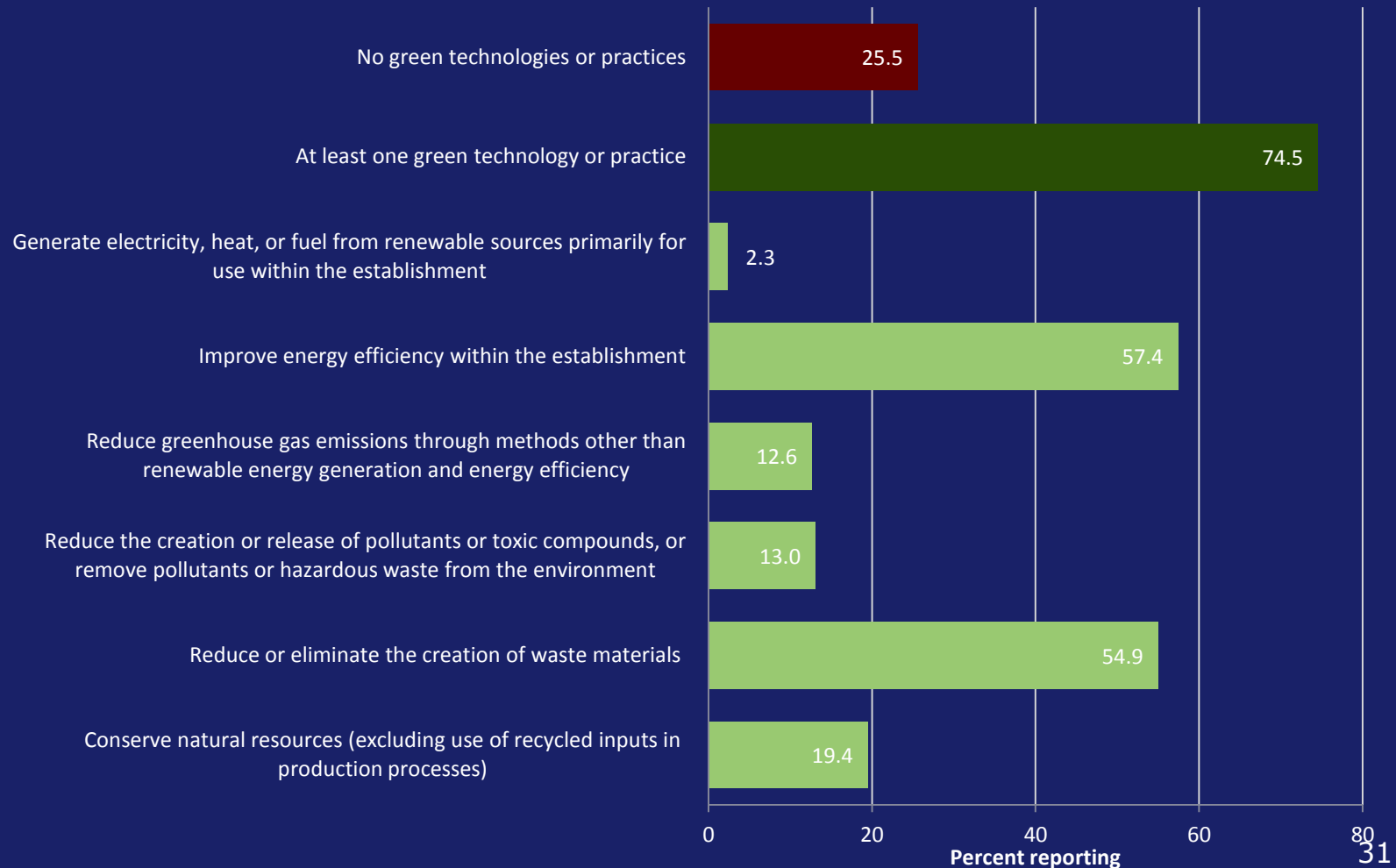
NOTE: Data represent the largest occupational groups in establishments that received all of their revenue from green goods and services.

Employment for the Largest Occupations in All-Green Establishments, November 2011

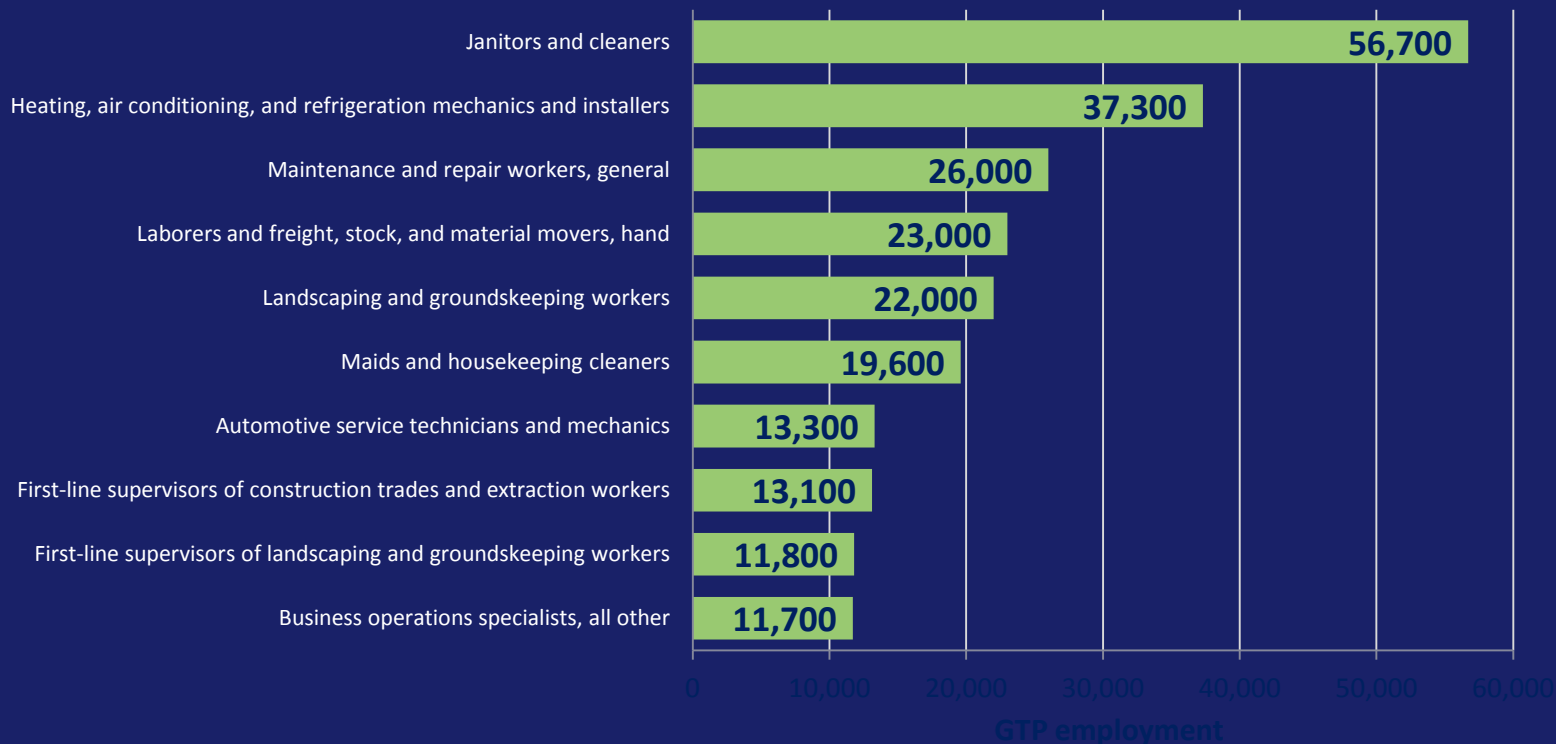


NOTE: Data represent the largest occupations in establishments that received all of their revenue from green goods and services.

Percent of Establishments Reporting Green Technologies and Practices, by Type of Technology or Practice, August 2011



Occupations with the Highest GTP Employment, August 2011



- 854,700 employees (0.7 percent of U.S. employment) spent more than half of their time involved in green technologies and practices

Green Career Information

- Articles currently available:
 - ▶ Wind Energy
 - ▶ Solar Power
 - ▶ Green Construction
 - ▶ Electric Vehicles
 - ▶ Recycling
 - ▶ Energy Auditors
- www.bls.gov/green/greencareers.htm

Contact Information

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