

Digest of Green Reports and Studies

Title	<i>Michigan Green Jobs Report: Occupations and Employment in the New Green Economy</i>
Author	None Given
Organization	Michigan Department of Energy, Labor, and Economic Growth; Bureau of Labor Market Information and Strategic Initiatives
Author Contact	For further information: (313) 456-3100
Publication Type	Report- Results from original survey and case study
Publication Date	May 2009
# of Pages	76 pp
URL	http://www.michigan.gov/documents/nwlb/GJC_GreenReport_Print_277833_7.pdf .
Summary	<p>This report presents a summary of the 2009 Michigan green job study conducted by the Michigan Department of Energy, Labor, and Economic Growth. The study included quantitative, qualitative, and analytical research. Part of the study included an employer survey that received 6,434 responses. The study showed that Michigan has 109,067 green jobs (both direct and support). These green jobs were broken into five main categories: increasing energy efficiency, agriculture and natural resource conservation, pollution prevention and environmental cleanup, renewable energy production, and clean transportation and fuels. While Michigan has a large amount of green jobs already, there are vast opportunities to increase the amount of green jobs in the state.</p> <p>Focus groups met eight times throughout the study to “collect qualitative information on key workforce issues facing each sector,” in addition to promoting collaboration among employers in accordance with the Governor’s Green Jobs Initiative.</p>
Key Findings	<ul style="list-style-type: none"> • Michigan has 109,067 green jobs in the state (total). • Green jobs are currently 3% of private sector total employment. • The employer survey revealed that there are five main categories of green jobs in Michigan: Increasing energy efficiency, agriculture and natural resource conservation, pollution prevention and environmental cleanup, renewable energy production, and clean transportation and fuels. • Green workers still need the basic skills required by their job. • “Skills in science, technology, engineering and math will be important, and positions with these skills may be the most difficult to fill.” • “Thirteen of the top fifteen broad industries...paid more than the private sector average weekly wage.” • “The opportunity to create new jobs rests overwhelmingly with the clean energy, green-collar economy.” • “Firms in the renewable energy production cluster added nearly 1,900 jobs from 2005 to 2008, a growth rate of 30 percent.” • Occupations that “require specialized skills, education, and experience” will be the hardest to fill according to employers.
Recommendations	<ul style="list-style-type: none"> • Investments should be made in energy efficiency. • “The opportunity to create new Michigan jobs rests overwhelmingly with the clean energy, green-collar economy. We know the combination of these targeted efforts, coupled with the determination of Michigan’s workers’ to embrace the green economy, will help transform our state.” • “We can get Michigan moving again by growing this sector (energy storage), and by connecting an appropriately trained workforce to these high-tech green jobs.”
Definition of “Green”	<p>Green Economy: Industries that provide products or services related to renewable energy, increased energy efficiency, clean transportation and fuels, agriculture and natural resource conservation, and pollution prevention or environmental cleanup.</p> <p>Green Jobs: Includes primary occupations engaged in generating a firm’s green-related products or services, and the other support jobs created by the firm’s green-related revenue.</p> <p>Green-related Industry: A detailed industry sector that is likely to contain firms that produce parts, components, products or services related to the green economy. Industries and firms were classified as green-related based on their primary product or service; they were not classified as green based on whether they were taking internal steps to use less energy or be more environmentally responsible.</p> <p>Green-related Occupation: Job titles commonly utilized by green-related industries to produce products and services for the green economy. Green-related occupations can be found in a variety of educational and skill levels, such as:</p> <ul style="list-style-type: none"> • Scientists and engineers needed in energy research.

	<ul style="list-style-type: none"> • Skilled production workers utilized in a manufacturing setting. • Critical occupations at small start-up green firms, such as technical sales staff. • Construction laborers and skilled trades used in LEED construction projects.
Methodology	Survey (6,434 respondents), Focus groups
Data Sources Cited	Quarterly Census of Employment and Wages (QCEW)
Report Geography	Michigan
Green Occupations Cited	<ul style="list-style-type: none"> • Agricultural and food science technicians • Agricultural engineers • Agricultural sciences teachers, postsecondary • Architects, except landscape and naval • Architecture teachers, post secondary • Atmospheric, earth, marine, and space sciences teachers, postsecondary • Biological science teacher, postsecondary • Cartographers and photogrammetrists • Chemical engineers • Chemical technicians • Chemistry teachers, postsecondary • Chemists • Civil engineering technicians • Civil engineers • Commercial and industrial designers • Conservation scientists • Construction managers • Electrical and electronic engineering technicians • Electrical engineers • Electronic engineers, except computer • Engineering managers • Engineering teachers, postsecondary • Environmental Compliance inspectors • Environmental engineering technicians • Environmental engineers • Environmental science and protection technicians, including health • Environmental science teachers, postsecondary • Environmental scientists and specialists, including health • Farm and home management advisors • Farm, ranch, and other agricultural managers • Farmers and Ranchers • Fish and game wardens • Food scientists and technologists • Forest and conservation technicians • Forest fire inspectors and prevention specialists • Foresters • Geographers • Geography teachers – postsecondary • Geoscientists, except hydrologists and geographers • Grounds maintenance workers, all other • Health and safety engineers, except mining safety engineers and inspectors • Hydrologists • Industrial engineering technicians • Industrial engineers • Landscape architects • Landscaping and grounds-keeping workers • Material scientists • Materials engineers • Mechanical engineering technicians • Mechanical engineers • Natural sciences managers • Physics teachers, postsecondary • Soil and plant scientists • Surveying and mapping technicians • Surveyors • Tree trimmers and pruners

	<ul style="list-style-type: none"> • Urban and regional planners • Zoologists and wildlife biologists
Green Industries Cited	<ul style="list-style-type: none"> • 98145.452 • Air conditioning, warm air heating equipment, and commercial & industrial refrigeration equipment • Air purification equipment manufacturing • Aircraft engine and engine parts manufacturing • All other basic organic chemical manufacturing • All other Miscellaneous crop farming • All other miscellaneous electrical equipment component manufacturing • All other miscellaneous waste management services • All other miscellaneous wood product manufacturing • All other motor vehicle parts manufacturing • All other transit and ground passenger transportation • Architectural services • Automatic environmental control manufacturing • Automobile manufacturing • Bus transit systems • Carburetor, piston, piston ring, and valve manufacturing • Commercial and institutional building construction • Commercial, industrial, and institutional electric lighting fixture manufacturing • Corn Farming • Drywall and insulation contractors- nonresidential • Drywall and insulation contractors- residential • Electric bulk Power Transmission • Electric lamp bulb and part manufacturing • Electric power distribution • Electrical apparatus and equipment, wiring supplies wholesalers • Electrical contractors and other wiring installation contractors – residential • Electrical contractors and other wiring installation contractors – non residential • Engineering Services • Environment, conservation and wildlife organizations • Environmental consulting services • Floriculture Production • Forest Nursery/ Gathering Forest Products • Gasoline engine and engine parts • Geophysical surveying and mapping services • Glass and glazing contractors – nonresidential • Glass and glazing contractors – residential • Glass product manufacturing made of purchased glass • Hazardous waste collection • Hazardous waste treatment and disposal • Heating equipment except warm air furnaces • Household cooking appliance manufacturing • Household laundry equipment manufacturing • Household refrigerator and home freezer manufacturing • Hydroelectric power generation • Industrial building construction • Industrial design services • Industrial process variable instruments • Interurban and rural bus transportation • Landscape architectural services • Line-haul Railroads • Logging • Materials recovery facilities • Measuring and controlling devices • Mineral wool insulation materials manufacturing • Mixed mode transit systems • Motor and generator manufacturing • Motor vehicle air-conditioning manufacturing • Motor vehicle seating and interior trim • Motor vehicle transmission and power train components

- Motorcycle, bicycle, and parts manufacturing
- Natural gas distribution
- Nature parks and other similar institutions
- New housing operative builders
- New multi-family housing construction (except operative builders)
- New single-family housing construction (except operative builders)
- Nitrogenous fertilizer manufacturing
- Nursing and Tree Production
- Other electric power generation
- Other electronic component manufacturing
- Other lighting equipment manufacturing
- Other major household appliance manufacturing
- Other management consulting services
- Other nonhazardous waste treatment and disposal
- Other surveying and mapping services
- Other technical consulting services
- Other urban transit systems
- Other waste collection
- Paper (except newsprint)
- Pipeline transportation of natural gas
- Plastics material and resin manufacturing
- Plumbing, heating, and air conditioning contractors- nonresidential
- Plumbing, heating, and air conditioning contractors- residential
- Postharvest Crop Activities (except cotton ginning)
- Power distribution and Specialty transformer manufacturing
- Process and logistics consulting services
- Recyclable materials merchant wholesalers
- Relay and industrial control manufacturing
- Remediation services
- Research and development in the physical, engineering and life sciences (except biotechnology)
- Residential electric lighting fixtures manufacturing
- Residential remodelers
- Roofing Contractors – nonresidential
- Roofing contractors-residential
- Sawmills
- Semiconductor and related devices
- Sewage treatment facilities
- Siding contractor – residential
- Siding contractors – nonresidential
- Site preparation contractors
- Solid waste collection
- Solid waste landfills
- Soybean farming
- Storage battery manufacturing
- Sugarbeet Farming
- Support activities for forestry
- Switchgear and switchboard apparatus manufacturing
- Testing laboratories
- Timber Tract Operations
- Turbine generator and generator set units
- Unlaminated plastics film and sheet (except packaging)
- Water and Sewer line and related structures construction
- Water supply and irrigation systems
- Wheat Farming
- Windows and door, metal manufacturing
- Wood Container and pallet manufacturing
- Wood window and door manufacturing
- Zoos and botanical gardens

Keywords

Survey; Michigan; Clean Transportation and Fuels; Energy Efficiency; Agriculture and Natural Resource Conservation; Pollution Prevention and Environmental Cleanup; Renewable Energy Production.

Legislation Cited	2009 American Recovery and Reinvestment Act, Governor's Green Job Initiative
Bibliography (Y/N)	N
Reviewer Name/Org	D. Costello / Labor Market Information Division, California

NOTE: This Digest is provided for information purposes only. Employment Development Department does not necessarily endorse any of these reports or publications.