

The Evolution of the Brownfields/Minority Worker Training Programs and the Associated Cleanup Markets

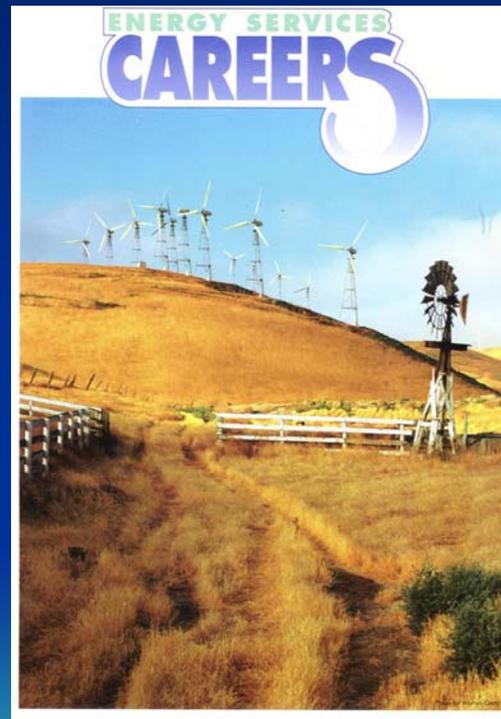


Overview of Emerging Environmental and Green Careers

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Partnership for Environmental Technology Education
(PETE)



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Both Reports are being revised in December 2007 and will be accessible at:

<http://www.ateec.org>



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Energy Services & Technology Model Curriculum

- Introduction to Energy Management Principles
- Alternative and Renewable Energy Sources
- Heating Systems
- Cooling Systems
- Electrical Lighting and Motors
- Energy Control Strategies/Technologies
- Energy Costs, Economic and Environmental Analysis
- Energy Efficiency Methods
- Energy Analysis Capstone



http://www.ateec.org/pete/docs/Energy_Program-CD.pdf

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President's High Growth Job Training Initiative

Fourteen Sectors fit the criteria of (1) they are projected to add substantial numbers of new jobs to the economy or affect the growth of other industries; or (2) they are existing or emerging businesses being transformed by technology and innovation requiring new skill sets for workers. The 14 sectors include:

Advanced Manufacturing
Aerospace
Automotive
Biotechnology
Construction
Energy
Financial Services

Geospatial Technology
Health Care
Homeland Security
Hospitality
Information Technology
Retail
Transportation

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Career Voyages is a collaborative effort between the U.S. Department of Labor and the U.S. Department of Education and in their list of “In-Demand Occupations” Energy was identified as a high growth industry.

<http://www.careervoyages.gov/energy-main.cfm>

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<http://www.careervoyages.gov/energy-main.cfm>

Five Categories of Energy Jobs Include:

- Electrical Power
- Nuclear
- Oil and Gas
- Mining
- Renewables

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<http://www.careervoyages.gov/energy-main.cfm>

By Clicking on “In-Demand” Occupations, you will find:

- Comprehensive Description of the Occupation
- Projected Need for Employees (2004 – 2014)
- Projected Growth of the Occupation
- Wages (Bottom 10%, Median, and Top 10%)
- Education & Training of those in the Occupation
- Comparison of National versus State Employment Outlook
- Introductory Video of the Occupation
- Spanish Language Option



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Careers in Renewable Energy:

<http://www.careervoyages.gov/includes/incsmallwindow-energy-greenenergy.cfm>

- Wind Energy
- Micro Renewables
- Solar Energy
- Marine Energy
- Wave Energy
- Sustainable Transport
- Environmental Impact
- Tidal Energy
- Hydro Energy
- Bioenergy
- Biofuels
- **Green Buildings**
- Energy Finance
- Carbon Management
- Waste Management



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JOB AREAS in “GREEN BUILDINGS” INCLUDE:

<http://www.greenenergyjobs.com/career-guide/green-building-jobs/>

- **Green Building**
Green Design
BREEAM, LEED standards
Ecological Design
Sustainable Materials
Construction
- **Micro Renewables**
Solar Water
PV
Micro-wind
Heat Pumps
Grid Tie
Inverter Systems
- **Planning**
Building Standards
Planning Strategy
Environmental
- **Energy Efficiency**
Thermal Insulation
Energy control systems
District Heating systems
- **Engineering**
Energy Management
Project Management
CAD

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Occupational Information Network (O*Net):

<http://online.onetcenter.org/>

- Provides a list of tasks, knowledge, skills, abilities, work activities, work context, job zone, work styles, and wages and employment trends. O*Net also provides the Standard Occupational Code (SOC) for each occupation, and a sample of reported job titles within the SOC.
- Note: O*NET OnLine was developed for the U.S. Department of Labor by the National Center for O*NET Development.

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National Wages & Employment Trends for Hazardous Materials Removal Workers (SOC: 47-4041.00)

<http://online.onetcenter.org/link/summary/47-4041.00>

- Median wages (2005) \$16.20 hourly, \$33,690 annually
- Employment (2004) 38,000 employees
- Projected growth (2004-2014) Faster than average (21-35%)
- Projected need (2004-2014): 22,000 additional employees

Note: State specific data is also available on this site

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Sample of Reported Jobs - Hazardous Materials Removal Workers (SOC: 47-4041.00)

- Asbestos Abatement Worker
- Decontamination / Decommissioning Operator (D & D Operator)
- Radiological Control and Safety Technician
- Waste Handling Technician
- Field Technician
- Hazmat Technician (Hazardous Materials Technician)
- Sampler
- Site Worker
- Nuclear Waste Handler

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A Few More Job Possibilities...

- Xeriscaping and Energy-Efficient Landscaping: Xeriscaping refers to landscaping in ways that do not require supplemental irrigation. It's promoted in areas that do not have easily accessible supplies of fresh water.
- Mold Remediation: Even though this is not necessarily new, it's the newest issue in the environmental remediation field. From a programmatic view it is also easy to add since few states actually accredit mold training. (Texas is the only one I know of).
- Clean-up of Meth Labs: While Meth lab busts in some states are declining, increasing state regulations drive new business. There are no national standards for cleanup, but about 15 states have adopted rules. The EPA has revised its definition of brownfields to include former meth labs.

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In Summary ...

Today, some of the fastest growing occupations are in the environmental sector. According to the U.S. Department of Labor, the "hottest jobs" include:

- **Environmental engineers**
- **Hazardous materials removal specialists**
- **Pollution prevention**
- **Energy efficiency**
- **Environmental science and protection technicians**

Other industry experts list additional emerging and expanding "hot jobs" including:

- **Conservation biologists**
- **Industrial ecologists**
- **Water and wastewater**
- **Environmental monitoring (satellite remote sensing, geographic information systems (GIS), nanotechnology, and global positioning systems (GPS))**
- **Environmental policy integration**

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Questions?

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