## Digest of Green Reports and Studies

| Title                      | Growing Green: The Potential for Green Job Growth in Tennessee   |
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| Organization               | Tennessee Department of Labor and Workforce Development, Employment Security Division,<br>Labor Market Information Section   |
| Author Contact             | N/A  |
| Publication Type           | Report – Results from Case Study   |
| Publication Date           | November 2008  |
| # of Pages                 | 100 pp   |
| URL                        | http://bree.tnanytime.org/energy/sites/default/files/GrowingGreenInTN2008.pdf  |
| Summary                    | This report is an overview of green energy development in Tennessee. The focus of the article is on the increasing amount of green jobs available in the state. The report discusses how new technology, new legislation, and new initiatives will improve the environment and improve Tennessee's economy. The case study was conducted by the Tennessee Department of Labor and Workforce Development in November 2008.  |
| Key Findings               | <ul> <li>Tennessee has moved forward with energy efficiency in the last few years, and it is expected that there will be many new green sector jobs in the state.</li> <li>"A coalition of 16 of the nation's leading business organizations is calling for doubling the number of degrees awarded in science, technology, engineering, and math by 2015."</li> <li>"Scientists say that in 40 minutes, enough solar energy falls on the earth to meet 100% of the world's energy needs for a year. Enough wind power blows through the Midwest corridor daily to meet 100% of U.S. electricity demand."</li> <li>"The Tennessee Valley Authority (TVA) currently has a goal of reducing peak electricity use by 1,400 MW within 5 years."</li> </ul>                      |
| Recommendations            | <ul> <li>Tennessee needs to specify green jobs that the state hopes to develop and expand.<br/>This will also help to clarify what training is needed to fill the new jobs that are being created.</li> <li>Evaluation techniques should be used to measure the success of energy industry growth.</li> <li>"Use of energy efficiency and renewable standards such as LEED, RPS, and the like can be used as an economic and job development tool, to spur market development."</li> <li>Using existing plants for new energy technology will save the state money and time.</li> <li>Tennessee has a high poverty rate (15%), therefore "an important goal of green job creation can be to provide new opportunities to those with basic skills, incumbent low</li> </ul> |
| Definition of              | <ul> <li>wage workers and the underemployed to move into more highly skilled jobs with<br/>higher pay."</li> <li>The Tennessee Department of Labor has not yet determined a universal definition of "green."</li> </ul>  |
| "Green"                    | , ,  |
| Methodology                | Literature Research  |
| Data Sources Cited         | U.S. Bureau of Labor Statistics, U.S. Energy Information Administration, TVA, Governor's Task Force on Energy, Battelle Institute  |
| Report Geography           | Tennessee  |
| Green Occupations<br>Cited | Occupations in the Green Building Sector<br>Chief Executives<br>General and Operations Managers<br>Financial Managers<br>Construction Managers<br>Cost Estimators<br>Accountants and Auditors<br>Computer Programmers<br>Computer Programmers<br>Computer Support Specialists<br>Architects, Except Landscape and Naval<br>Civil Engineers<br>Architectural and Civil Drafters<br>Landscaping and Groundskeeping Workers<br>Sales Representatives, Wholesale and Manufacturing, Technical and Scientific<br>Products<br>Sales Representatives, Wholesale and Manufacturing, Except Technical and<br>Scientific Products  |
|                            | <ul> <li>First-Line Supervisors/Managers of Office and Administrative Support Workers</li> </ul>   |

| <ul> <li>Bookkeeping, Accounting, and Auditing Clerks</li> </ul>  |
|---|
| <ul> <li>First-Line Supervisors/Managers of Construction Trades and Extraction Workers</li> </ul>                                       |
| <ul> <li>Brickmasons and Blockmasons</li> </ul>   |
| Carpenters  |
| <ul> <li>Cement Masons and Concrete Finishers</li> </ul>  |
| Construction Laborers   |
| <ul> <li>Operating Engineers and Other Construction Equipment Operators</li> </ul>  |
| Electricians  |
| <ul> <li>Insulation Workers, Floor, Ceiling, and Wall</li> </ul>  |
| Insulation Workers, Mechanical  |
| Painters, Construction and Maintenance  |
| Roofers   |
| Sheet Metal Workers   |
| Helpers—Carpenters  |
| Mobile Heavy Equipment Mechanics, Except Engines  |
| Heating, Air Conditioning, and Refrigeration Mechanics and Installers   |
| Industrial Machinery Mechanics  |
| Maintenance and Repair Workers, General   |
| First-Line Supervisors/Managers of Production and Operating Workers   |
| Structural Metal Fabricators and Fitters  |
| Team Assemblers   |
| Machinists     Molderer Cutters Selderers and Brazers   |
| Welders, Cutters, Solderers, and Brazers     Truck Drivers, Light or Delivery Services  |
| Truck Drivers, Light or Delivery Services Occupations in the Biofuels Sector  |
| Chief Executives  |
| General and Operations Managers   |
| Farm, Ranch, and Other Agricultural Managers  |
| Wholesale and Retail Buyers, Except Farm Products   |
| Accountants and Auditors  |
| Computer Programmers  |
| Chemical Engineers  |
| Industrial Engineers  |
| Mechanical Engineers  |
| Chemists  |
| <ul> <li>First-Line Supervisors/Managers of Non-Retail Sales Workers</li> </ul>   |
| <ul> <li>Sales Representatives, Wholesale and Manufacturing, Technical and Scientific</li> </ul>  |
| Products  |
| Sales Representatives, Wholesale and Manufacturing, Except Technical and  |
| Scientific Products   |
| First-Line Supervisors/Managers of Office and Administrative Support Workers     Deside an and Auditing Clarks                          |
| Bookkeeping, Accounting, and Auditing Clerks     Customer Service Representatives   |
| <ul> <li>Customer Service Representatives</li> <li>First-Line Supervisors/Managers of Farming, Fishing, and Forestry Workers</li> </ul> |
| <ul> <li>First-Line Supervisors/Managers of Farming, Fishing, and Forestry Workers</li> <li>Agricultural Inspectors</li> </ul>          |
| Agricultural Equipment Operators  |
| <ul> <li>Farmworkers and Laborers, Crop, Nursery, and Greenhouse</li> </ul>   |
| Electricians  |
| <ul> <li>First-Line Supervisors/Managers of Mechanics, Installers, and Repairers</li> </ul>   |
| Farm Equipment Mechanics  |
| Mobile Heavy Equipment Mechanics, Except Engines  |
| Industrial Machinery Mechanics  |
| <ul> <li>Maintenance and Repair Workers, General</li> </ul>   |
| <ul> <li>First-Line Supervisors/Managers of Production and Operating Workers</li> </ul>   |
| Team Assemblers   |
| Machinists  |
| <ul> <li>Welders, Cutters, Solderers, and Brazers</li> </ul>  |
| Chemical Equipment Operators and Tenders  |
| Truck Drivers, Heavy and Tractor-Trailer  |
| Laborers and Freight, Stock, and Material Movers, Hand  |
| Occupations in the Wind Energy Sector   |
| Industrial Production Managers  |

|   | Environmental Engineers   |
|---|---|
|   | Industrial Engineers  |
|   | Mechanical Engineers  |
|   | Sales Representatives, Wholesale and Manufacturing, Except Technical and                            |
|   | Scientific Products   |
|   | <ul> <li>Bookkeeping, Accounting, and Auditing Clerks</li> </ul>                                    |
|   | Customer Service Representatives  |
|   | <ul> <li>Production, Planning, and Expediting Clerks</li> </ul>                                     |
|   | Construction Laborers   |
|   | <ul> <li>Operating Engineers and Other Construction Equipment Operator</li> </ul>                   |
|   | Electricians  |
|   | Sheet Metal Workers   |
|   | <ul> <li>Heating, Air Conditioning, and Refrigeration Mechanics and Installers</li> </ul>           |
|   | Industrial Machinery Mechanics  |
|   | <ul> <li>Maintenance and Repair Workers, General</li> </ul>   |
|   | Millwrights   |
|   | <ul> <li>Structural Metal Fabricators and Fitters</li> </ul>  |
|   | Team Assemblers   |
|   | <ul> <li>Computer-Controlled Machine Tool Operators, Metal and Plastic</li> </ul>                   |
|   | <ul> <li>Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and</li> </ul> |
|   | Plastic   |
|   | <ul> <li>Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and</li> </ul>  |
|   | Tenders, Metal and Plastic  |
|   | Machinists  |
|   | <ul> <li>Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic</li> </ul>        |
|   | Tool and Die Makers   |
|   | <ul> <li>Welders, Cutters, Solderers, and Brazers</li> </ul>  |
|   | <ul> <li>Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic</li> </ul>      |
|   | <ul> <li>Inspectors, Testers, Sorters, Samplers, and Weighers</li> </ul>                            |
|   | <ul> <li>Coating, Painting, and Spraying Machine Setters, Operators, and Tenders</li> </ul>         |
| 0 | occupations in the Solar Energy Sector  |
|   | Construction Managers   |
|   | Industrial Engineers  |
|   | Mechanical Engineers  |
|   | <ul> <li>Sales Representatives, Wholesale and Manufacturing, Except Technical and</li> </ul>        |
|   | Scientific Products   |
|   | <ul> <li>Bookkeeping, Accounting, and Auditing Clerks</li> </ul>                                    |
|   | Customer Service Representatives  |
|   | <ul> <li>Production, Planning, and Expediting Clerks</li> </ul>                                     |
|   | <ul> <li>Operating Engineers and Other Construction Equipment Operators</li> </ul>                  |
|   | Electricians  |
|   | <ul> <li>Plumbers, Pipefitters, and Steamfitters</li> </ul>   |
|   | Sheet Metal Workers   |
|   | <ul> <li>Electrical and Electronics Repairers, Commercial and Industrial Equipment</li> </ul>       |
|   | Industrial Machinery Mechanics  |
|   | <ul> <li>Maintenance and Repair Workers, General</li> </ul>   |
|   | Maintenance Workers, Machinery  |
|   | <ul> <li>Structural Metal Fabricators and Fitters</li> </ul>  |
|   | Team Assemblers   |
|   | <ul> <li>Computer-Controlled Machine Tool Operators, Metal and Plastic</li> </ul>                   |
|   | Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic                    |
|   | Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and                     |
|   | Plastic   |
|   | Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal                     |
|   | and Plastic   |
|   | <ul> <li>Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic</li> </ul>        |
|   | <ul> <li>Welders, Cutters, Solderers, and Brazers</li> </ul>  |
|   | <ul> <li>Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic</li> </ul>      |
|   | Extruding and Forming Machine Setters, Operators, and Tenders, Synthetic and                        |
|   | Glass Fibers  |
|   | Chemical Plant and System Operators   |
|   | <ul> <li>Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and</li> </ul>    |

|                  | Tenders   |
|------------------|---|
|                  | <ul> <li>Inspectors, Testers, Sorters, Samplers, and Weighers</li> </ul>                          |
|                  | Coating, Painting, and Spraying Machine Setters, Operators, and Tenders                           |
|                  | Truck Drivers, Heavy and Tractor-Trailer  |
|                  | <ul> <li>Laborers and Freight, Stock, and Material Movers, Hand</li> </ul>                        |
|                  | Occupations in the Geothermal Energy Sector   |
|                  | General and Operations Managers   |
|                  | Construction Managers   |
|                  | Cost Estimators   |
|                  | Accountants and Auditors  |
|                  | Architects, Except Landscape and Naval  |
|                  | Civil Engineers   |
|                  | Electrical Engineers  |
|                  | Architectural and Civil Drafters  |
|                  | Civil Engineering Technicians   |
|                  | Electrical and Electronic Engineering Technicians   |
|                  | Sales Representatives, Wholesale and Manufacturing, Except Technical and                          |
|                  | Scientific Products   |
|                  | First-Line Supervisors/Managers of Office and Administrative Support Workers                      |
|                  | <ul> <li>Bookkeeping, Accounting, and Auditing Clerks</li> </ul>                                  |
|                  | Customer Service Representatives  |
|                  | Shipping, Receiving, and Traffic Clerks   |
|                  | <ul> <li>Secretaries, Except Legal, Medical, and Executive</li> </ul>                             |
|                  | <ul> <li>First-Line Supervisors/Managers of Construction Trades and Extraction Workers</li> </ul> |
|                  | Carpenters  |
|                  | Cement Masons and Concrete Finishers  |
|                  | Construction Laborers   |
|                  | Operating Engineers and Other Construction Equipment Operators                                    |
|                  | <ul> <li>Electricians</li> </ul>  |
|                  | Pipelayers  |
|                  | <ul> <li>Plumbers, Pipefitters, and Steamfitters</li> </ul>                                       |
|                  | Sheet Metal Workers   |
|                  | Helpers—Electricians  |
|                  | <ul> <li>HelpersPipelayers, Plumbers, Pipefitters, and Steamfitters</li> </ul>                    |
|                  | <ul> <li>First-Line Supervisors/Managers of Mechanics, Installers, and Repairers</li> </ul>       |
|                  | <ul> <li>Heating, Air Conditioning, and Refrigeration Mechanics and Installers</li> </ul>         |
|                  | <ul> <li>Maintenance and Repair Workers, General</li> </ul>                                       |
|                  | <ul> <li>Welders, Cutters, Solderers, and Brazers</li> </ul>                                      |
| Green Industries | Energy efficiency   |
| Cited            | <ul> <li>renewable energy</li> </ul>  |
| •••••            | Wind  |
|                  | Photovoltaics   |
|                  | Solar Thermal   |
|                  | Hydroelectric Power   |
|                  | Geothermal  |
|                  | Biomass   |
|                  | Ethanol   |
|                  | Biodiesel   |
|                  | Biomass Power   |
|                  | Fuel Cells  |
|                  | Hydrogen  |
|                  | Insulation  |
|                  | <ul> <li>ESCO (Energy Service Co.)</li> </ul>   |
|                  | Recycling   |
|                  | <ul> <li>Recycling</li> <li>Vehicle Manufacturing</li> </ul>                                      |
|                  | •   |
|                  | Household Appliances and     Lighting   |
|                  | <ul> <li>Lighting</li> <li>Windows and Doors</li> </ul>   |
|                  |   |
|                  | <ul> <li>Computers, copiers and FAX machines</li> <li>TV video, and audio equipment</li> </ul>    |
|                  | <ul> <li>TV, video, and audio equipment</li> <li>HVAV systems</li> </ul>                          |
|                  | ·   |
|                  | Industrial and related machinery  |

|                          | <ul> <li>Miscellaneous durable manufacturing</li> <li>Nondurable manufacturing</li> <li>Utilities</li> <li>Construction</li> </ul> |
|--------------------------|--|
| Konwordo                 |  |
| Keywords                 | Photovoltaic power; biodiesel.   |
| Legislation Cited        | Green Jobs Act, Energy Independence and Security Act (EISA), Green Energy Tax Credit   |
| -                        | Legislation  |
| Bibliography (Y/N)       | Υ  |
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