Digest of Green Reports and Studies

Title	***Green Industries & Jobs in California***
Author	Compiled by Evgeniya Lindstrom
Organization	Centers of Excellence of the California Community Colleges Economic and Workforce Development
Author Contact	Email: elindstr@sbccd.edu Phone: (909) 382-4072
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Summary	This report presents results from a study that was conducted by the Centers of Excellence (COE) of the California Community Colleges Economic and Workforce Development program. The study researched green jobs within certain industries, and identified training programs available, and that should become available, at California Community Colleges for these occupations. The six green industries researched were; • Renewable Energy • Green Building & Energy Efficiency • Biofuels Production & Farming • Transportation & Alternative Fuels • Water, Wastewater & Waste Management • Environmental Compliance & Sustainability Planning The end of the report describes the second phase of the study which will begin in March 2009. The main purpose of phase two is to interview employers in order to gain a better understanding of green jobs and industries.
Key Findings	• Solar designers and engineers have the highest median wage in the state ($50,000 entry-level/$83,200 experienced). • The third most important skill that California Solar Employers are look for when hiring is a general understanding of the mechanics and engineering of solar power. • California Community Colleges are estimated to "train about 1,100 – 1,200 solar PV system installers this year." However, the estimated gap between supply and demand may be around 1,300 trained workers. • "There are over 25,000 wind turbines in the United States and less than 15 educational institutions in the nation training technicians." • Ninety-one percent of companies requiring wind turbine technicians will grow over 25% in the next two years. • "PG&E will need to replace thousands of workers soon because 68% of their 20,000 employees are baby boomers and 43% of these are retirement eligible over the next five years." • The need for engineering technicians is growing, and the gap between the demand and supply may be upwards of 420 workers. • Materials used in green construction vary from those that are used in traditional construction work, which makes specially trained cost estimators an important part of green construction. • Northern California Colleges lack alternative fuels curricula, which may lead to a shortage of natural gas and biodiesel vehicle technicians.
Recommendations	• Community Colleges should develop training programs that are aligned with green industry standards. • Community Colleges that are having trouble finding instructors for green sector training courses should look to the green industry for possible options. • Community Colleges should discuss implementing the curriculum developed by the Advanced Technology Environmental Education Center (ATTEC) and the Partnership for Environmental Technology Education (PETE). • In response to the high rate of failures on the engineering technician licensing examination, community colleges should consider offering a preparation course to students. • Community Colleges should focus on updating their automotive curriculum (including bus, trucks, and diesel engines), and pay special attention to the "diagnostic component of alternative fuel vehicles."
Definition of "Green"	"A *Green Job* is an occupation that: 1) directly works with policies, information, materials, and/or technologies that contribute to minimizing environmental impact, and 2) requires

	specialized knowledge, skills, training, or experience in these areas." "A *Green Firm* is an organization that provides products and/or services that are aimed at utilizing resources more efficiently, providing renewable sources of energy, lowering greenhouse gas emissions, or otherwise minimizing environmental impact."
Methodology	Interviews, Surveys
Data Sources Cited	U.S. Bureau of Labor Statistics (BLS), California Labor Market Information Division (LMID), Economic Modeling Specialists Inc.
Report Geography	California
Green Occupations Cited	• Solar System Installers • Wind Turbine Technicians • Cost Estimators for Green Building/Retrofitting projects • Ethanol and Biodiesel Production Technician • Alternative Fuel Automotive Technicians Included under the general title of "Energy Efficiency (cluster)": • Energy auditor or home energy rater • Building Performance or retrofitting specialist • Compliance analyst or energy regulation specialist • Project Manager for construction or design work • HVAC technicians, mechanics, or installers • Resource conservation or energy efficiency manager • Building controls systems technician • Building operator or building engineer
Green Industries Cited	• Energy Efficiency • Green Engineering • Green Building • Biofuels Production & Farming • Transportation • Waste Management • Environmental Compliance & Sustainability Planning
Keywords	Community College; training; clean technology; green economy.
Legislation Cited	• Assembly Bill 32 • CA Executive Orders S-14-08 • Million Solar Roofs Bill • Assembly Bill 1451 • Assembly Bill 2466 • Assembly Bill 2267 • California Green Building Code • Assembly Bill 118 • Green Jobs Act of 2007 • The Energy Efficiency and Renewable Energy Workforce Development Amendment
Bibliography (Y/N)	N
Reviewer Name/Org	D. Costello / Labor Market Information Division, California

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