

# Job Trends Report

OCTOBER 2010



## GREEN JOBS and THE ECONOMY – AN UPDATE

As indicated by the data presented in the Trend Tracker at right, the Great Recession, pronounced over since June 2009<sup>1</sup>, brought with it significant turmoil in terms of job losses and continuing unemployment. As part of a solution, significant energy has been put into understanding, promoting and growing green jobs in both the region and across the nation. These jobs carry with them a promise of positive impacts on both the environment and economy while creating opportunities for all through clear pathways to living-wage careers.

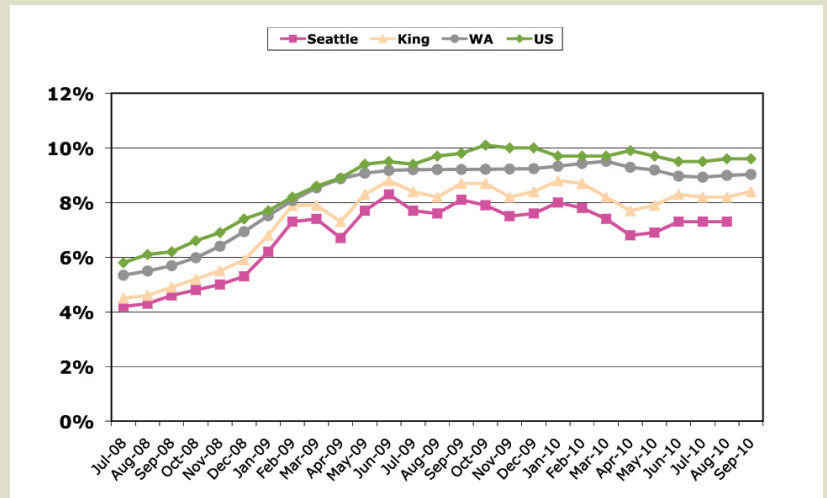
SJI's July 2008 Job Trends Report on Green Jobs provided an overview of the specific green jobs slated for growth and the opportunities for training and education that were locally available for individuals to secure these jobs.

The present work revisits and updates this earlier information, presenting what we know about green jobs today – what they are, where they are, and where they will be – and provides further detail on the investments that have been made to grow opportunities for training, education and employment.

### TREND TRACKER: What's Happening?

#### Unemployment Rate – July 2008 to September 2010

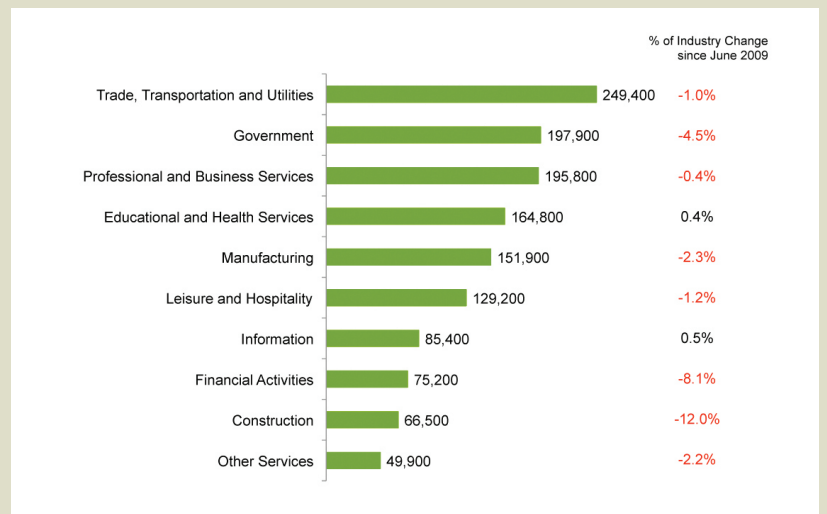
Unemployment rates remain high nationally and locally. Though better than the national average, Seattle and King County continue to flatline into the second half of 2010.



Source: Washington State Employment Security Department; Bureau of Labor Statistics – Seattle Estimates are not seasonally adjusted.

#### September 2010 – Employment by Industry – Seattle MSA

Since the marked end of the recession – June 2009 – Seattle area employment has continued to fall, with only small gains in a few noted industries.



Source: Washington State Employment Security Department – estimates are seasonally adjusted. Not shown: Mining and Logging.

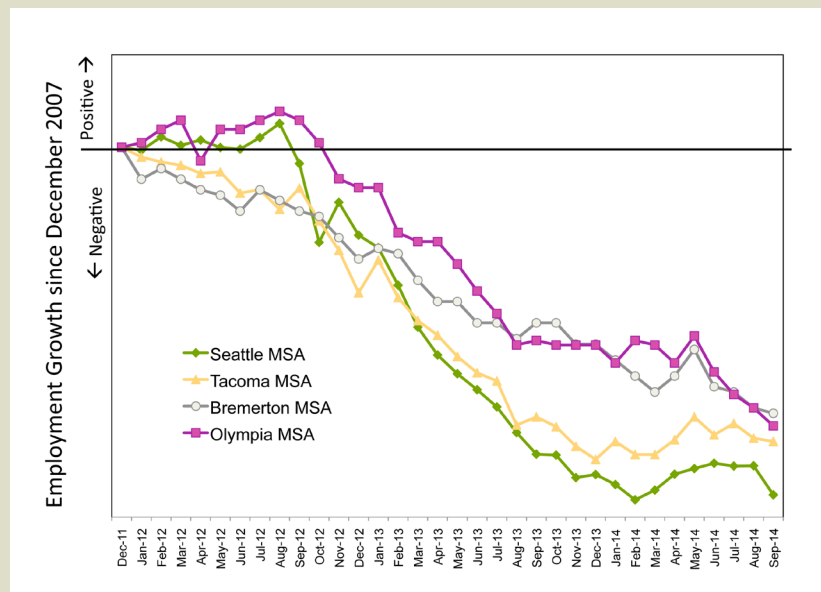
1 National Bureau of Economic Research (NBER) - <http://www.nber.org/cycles/sept2010.html>



## TREND TRACKER: What's Happening? *cont'd*

### Employment Growth Since December 2007

Since the start of the Great Recession in December 2007, employment has plummeted for the entire region. Signs of recovery are slow.



Source: Washington State Employment Security Department, author calculations.

Washington State has taken a leadership role in pursuing policies to build a regional economy characterized by environmentally friendly and economically prosperous occupation and industry growth for the state. As part of these efforts, state-led labor market research has been completed to clarify state-level definitions for “green economy” and “green jobs”.

Broadly defined, “the *green economy* is rooted in the development and use of products and services that promote environmental protection and clean energy.” It is composed of industries and businesses engaged in four core areas:

- Increasing energy efficiency;
- Producing renewable energy;
- Preventing and reducing environmental pollution;
- Providing mitigation or cleanup of environmental pollution.<sup>2</sup>

SJI’s own research on green jobs<sup>3</sup> further categorizes

the occupations associated with this growing green economy into 8 industry subsectors:

- Green Building
- Energy Efficiency
- Renewable Energy
- Recycling & Waste Management
- SmartGrid/Smart Energy
- Biofuels/Biomass
- Alternative Transportation
- Sustainable Agriculture

These subsectors employ a variety of occupations, many of which satisfy Washington State’s definition of a green job: “jobs that promote environmental protection and clean energy.”<sup>4</sup> Further, more stringent definitions of

*continued next page*

2 “A Growing Green Economy: Opportunities of Tomorrow” April 2009. SJI.

3 March 2010 “2009 Washington State Green Economy Jobs” Washington State Employment Security Department 2009 Green Jobs Report

4 Ibid.

green jobs identify not only those occupations in areas that are good for the environment, but that also pay family-supporting wages and provide good benefits and healthy working conditions.

Research has verified the idea that, while many of the jobs in this growing green economy will be new occupations, most are existing jobs, with a handful requiring some level of **reskilling** to adjust to new demands.

“Almost 56 percent of employers reported that the skills of employees in green jobs are identical to those of employees who do not work in green jobs. More than 32 percent reported that the skills of employees in green jobs are mostly the same as employees who do not work in green jobs. Only a small percent of employers indicated that the skills of workers in green jobs were either mostly different (7.5 percent) or entirely different (4.1 percent) from employees who did not hold green jobs.”<sup>5</sup>

While these are jobs that are not significantly different from the ones we know from our “grey” economy days, it is important to note that the majority of these occupations are **middle-skill jobs**, requiring some training beyond high school but not necessary a 4-year degree.<sup>6</sup> Middle-skill jobs in some green economy subsectors like Energy Efficiency represent roughly two-thirds of current employment,<sup>7</sup> and are expected to make up the majority of green jobs of the future.

Across the board, the bar is being raised in terms of education and training required to meet the needs of the post-Great Recession economy, both green and otherwise. According to new research from the Georgetown University Center on Education and the Workforce,<sup>8</sup> 67% of job openings by the year 2018 will require at least some form of post-secondary education. More and more, middle-skill jobs will support economic growth and recovery, with 42% of Washington’s jobs being middle-skill by 2017.<sup>9</sup>

5 Ibid.  
 6 Green Jobs Fact Sheet 2009. February 2009. National Skills Coalition.  
 7 Green Jobs are Middle-Skill Jobs. March 2008. National Skills Coalition.  
 8 “Help Wanted: Projection of Jobs and Education Requirements through 2018.” 2010. Center on Education and Workforce, Georgetown University.  
 9 Washington’s Forgotten Middle-Skill jobs: 2009 Update. National Skills Coalition – Skills2Compete Campaign.  
 10 March 2010 “2009 Washington State Green Economy Jobs” Washington State Employment Security Department 2009 Green Jobs Report

## GREEN JOBS: The Numbers

In addition to defining the occupations that are slated to emerge or require reskilling to meet the needs of the growing green economy, research has aimed to count the number of these jobs currently supporting various green industry subsector growth at state and regional levels.

For Seattle-King County, green jobs currently account for just 2.7% of total covered employment – almost 33,000 jobs.<sup>10</sup> As the table below shows, these jobs are primarily found in areas related to energy efficiency, with 2 out of 5 jobs in energy efficiency being found in the Seattle-King County Workforce Development area.

Seattle King-County Workforce Development Area Green Positions by Industry Sector	
INDUSTRY SECTOR	#
Increasing Energy Efficiency	15,500
Producing Renewable Energy	972
Preventing and Reducing Pollution	13,484
Providing Mitigation or Cleanup of Environmental Pollution	3,091

Source: March 2010 “2009 Washington State Green Economy Jobs” Washington State Employment Security Department 2009 Green Jobs Report

As mentioned above, the mix of occupations both being created or being updated with enhanced skills spans a variety of education and training requirements. The table at the end of this document examines openings across a variety of occupations identified by Washington State Employment Security Department as demand occupations.

Jobs created and demanded by the growing green economy are represented across a variety of industry subsectors, and range in both expected wages and educational requirements. Specifically, while a large number of openings exist in occupations requiring only short-to-moderate amounts of on-the-job training and experience, not surprisingly some of the highest paying occupations slated for growth in the green economy are those that require at least some education beyond high school.

Broadly, this paints a picture of a tapestry of occupations needed to sustain green industry growth as part of a sustainable economic development strategy.

# GREEN JOB TRAINING: Funding in Puget Sound

A variety of investments and entities have entered the arena to prepare Puget Sound for green jobs and provide the skills required to meet demand for this new economy. As part of the American Recovery and Reinvestment Act of 2009, the Workforce Development Council of Seattle-King County, the Northwest Energy Efficiency Council, and the Workforce Training and Education Coordinating Board were successful in receiving a variety of funds slated to specifically aid in these efforts.

## THE GREENLIGHT PROJECT

The GreenLight Project, funded through an award to the Workforce Development Council of Seattle-King County under the U.S. Department of Labor's *Pathways Out of Poverty* grant program, directs more than **\$3.6M** to two of Seattle & King County's poorest communities to connect individuals in these communities to training, certification, and employment in three industries going green: construction and weatherization, deconstruction and salvage, and manufacturing.

Services are provided through a partnership of community-based organizations (case management and wrap-around services), local training providers including South Seattle Community College and Seattle Vocational Institute, labor, and government agencies. The GreenLight Project aims to serve **450 individuals**.

To be eligible for the GreenLight Project, a jobseeker must be:

1. 18 or older with low or no income
2. A resident of specific South Seattle neighborhoods (based on address) and one or more of the following:
  - *Unemployed*
  - *High-school dropout*
  - *Ex-offender*
  - *Veteran, or*
  - *In need of updated training related to energy efficiency/renewable energy industries*
3. Legal to work in the U.S.
4. Registered with Selective Service (for men born in 1960 or later) or have entered the U.S. after age 26
5. Priority will be given to veterans and eligible spouses

## SEED

The Sound Energy Efficiency Development (SEED) project, funded through an award to the Northwest Energy Efficiency Council under the U.S. Department of Labor's *Energy Training Partnership* grant program, brings in more than **\$3.8M** to the greater Puget Sound region to provide training and employment opportunities for individuals pursuing positions in residential and commercial energy assessment and energy efficiency subsectors.

Training classes for upwards of **700 participants** will take place in King, Snohomish Pierce, Kitsap, and Clallum counties in a wide range of occupation areas, including construction pre-apprenticeship, construction, construction management, sustainable building advising, lighting assessment, building performance and maintenance, energy accounting, and energy auditing. The training network consists of a community and technical college in each county as well as private training providers.

## THE COMBUILD PROJECT

The ComBuild Project, funded through an award to the Workforce Training and Education Coordinating Board under the U.S. Department of Labor's State Energy Sector Partnership grant program, is allocated to the Workforce Development Councils in King, Snohomish, and Spokane counties, bringing **\$2.6M** to King County. The grant will provide training to more than **200 participants** in energy assessment and efficiency for commercial buildings.

In addition over 2,000 senior apprentices and journey workers in the building and construction trades across 14 Western Washington counties will receive training in greener practices and products. Other grant partners include South Seattle Community College, Renton Technical College, the Northwest Energy Efficiency Council, and Build It Smart.

The Workforce Development Council of Seattle-King County has taken the lead in coordinating the efforts

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## GREEN JOB TRAINING: Funding in Puget Sound *cont'd*

around federal dollars supporting training for green jobs in the region.

In addition to the DOL green jobs training grants, the WDC has formed and is hosting the Green Workforce Leadership Council, chaired by local industry leader McKinstry's Executive Vice President, David Allen, which is exploring job demand and vetting new opportunities across five green sectors: green building, energy production and distribution, transportation, manufacturing, and environmental protection and remediation. The council has sponsored several green initiatives benefiting businesses and job seekers including the development of a green career website.

The WDC also sponsored the development of a program for trades pre-apprentices called "Sustainability in the Building and Construction Trades" which is taught locally and has now been adopted as part of the core curriculum by the national Building and Construction Trades Department, AFL-CIO.

In all cases, community-based organizations, training institutions, workforce agencies, and industry employers are coordinating their efforts to clarify expectations for demand in the growing green economy, ensuring that individuals are receiving the training they need and that is required for individual success and regional economic growth.

## WORKFORCE REALITIES

Green jobs have the potential to play a significant role in leading economic development and growth in the wake of the Great Recession. This, however, has to be placed in context of current labor market realities: hiring across the board is slow to resume, and the number of jobs still fall far below levels present before the Recession began.<sup>11</sup>

At the same time, we are experiencing escalating rates of poverty<sup>12</sup> and the erosion of work supports, including benefits such as healthcare coverage. For many older workers who have maintained employment during these difficult economic times, retirement is less likely of an immediate option, complicating the supply/demand picture.

Meanwhile, the unemployed represent a more diverse group of ready-skilled individuals across industry sectors. For those with few applicable skills for employment in growing green industry sectors, entry-level opportunities are scarce. Further training and education, as well as applicable work experience, is desired by employers, many of whom are still cautious to hire in these areas without clear understanding of where industry growth is headed.

For the low-income, low-skill job seeker, it is becoming more and more essential to acquire some level of postsecondary education and training to be successful and self-sufficient. As employers ramp up hiring, they increasingly indicate a need for a workforce that is equipped with the skills afforded through additional education and training to meet demand, productivity, and progress. For the growing green economy, this is increasingly true, with many of the occupations slated for growth requiring skills beyond a high school education.

<sup>11</sup> Center for American Progress. Economic Snapshot for August 2010.

<sup>12</sup> US Census Report: In 2009, 43.6 Million People Lived In Poverty. September 16, 2010. New York Times.

## **LOCAL FOCUS: Weatherization in Seattle**

More than any other industry subsector supporting the growth of a green energy economy, Energy Efficiency measures have often been held up as the most immediate and effective way to lower energy demand, costs, and make positive strides for environmental conservation. As part of this effort, weatherization is often marked as an opportunity to increase the efficiency within buildings, saving occupants money on energy bills while reducing energy use.

Many types of jobs at many different kinds of companies can be considered “weatherization” jobs. Generally weatherization jobs are defined as those that increase the energy efficiency of a home by protecting it from extreme temperatures, wind, rain, or other elements. Job titles may include, but are not limited to, insulation installer, crawlspace engineer, weatherization technician/ crewperson, envelope/shell specialist, and door/window installer.

Significant initiatives and investments have been made at national, state and local levels to support and grow programs that provide low-income home weatherization, including significant boosts to the Weatherization Assistance Program through ARRA, as well as the creation of the Recovery through Retrofit program, which aims to coordinate programs for more effective funding and implementation of strategies to build the market and its associated workforce needs.

The Seattle area has already been hard at work coordinating training, education, and employment opportunities for low-income residents in green fields. The Northwest Energy Efficiency Opportunities Project (NEW-OP), funded by SkillUp Washington through a grant from Living Cities and supplemented with funding from the Workforce Development Council of Seattle-

King County, has been at work since early 2009 to respond appropriately to growing employer need in both commercial and residential energy efficiency arenas.

As part of this project, SJI coordinated intermediary efforts for the NEW-OP Residential Energy Efficiency Sub-Committee. The work of this committee brought together labor, community colleges, city government, community-based organizations, employers, and trade associations to talk about an array of workforce issues including career pathways, training standards and perceived demand within home performance and weatherization.

Working in partnership with Pioneer Human Services, Seattle Conservation Corps, Seattle Vocational Institute, and Got Green, SJI linked employers with qualified candidates for available weatherization work both directly and through training at South Seattle Community College. In total, 25 individuals, the majority being low-income and facing multiple barriers, were placed in entry-level jobs in this growing green field.

A second sub-committee was formed under NEW-OP to address workforce needs in the commercial energy efficiency sector. The commercial committee, managed by the WDC and chaired by the Director of the Northwest Energy Efficiency Council, Stan Price, brought together a broad partnership of utilities, energy services companies, and labor. Their work together produced several key deliverables: a new curriculum for training commercial energy auditors, a study of the supply chain for commercial building retrofits, and a publication called “Careers in Commercial Energy Efficiency.”

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## LOCAL FOCUS: Weatherization in Seattle *cont'd*

As part of the work, SJI and its partners were able to identify particular challenges for individuals interested in pursuing employment in the weatherization field:

- **Work Environment:** Weatherization work is physically demanding and requires spending long hours in an uncomfortable environment – leading to high turnover rates among new employees.
- **Training:** Weatherization technicians are expected to work extremely fast in difficult working conditions. While a solid foundation of hard and soft skills are provided during the training, strong differences exist between the experimental lab and actual work in the field.
- **Attitude and Predisposition:** Valuable success skills for employment, interpersonal skills and positive attitudes are qualities valued by any employer.
- **Hours / Pay:** Weatherization work can be sporadic and seasonal, meaning regular work hours are not guaranteed.

At the same time, challenges exist for weatherization employers as they wrestle with current economic difficulties and unknown future demand. While employers continue to struggle with being able to find the workforce required to meet their growing needs in these fields, they are hindered by the expected versus actual demand the market places on their firms to do the work.

While both private and public interest and funding have supported the growth and alignment of training strategies to answer the call for a greener workforce, it's still unclear what the future holds in terms of actual market demand for work in these areas to keep these individuals and these companies employed.

The hard hit of the Great Recession, combined with the expected slow turnaround, means an already largely skilled workforce on the bench available to fill employment needs for growing green businesses. This presents a challenging environment for both workforce and economic development.

Despite these challenges, employers are enthusiastic to support efforts to make sure the growing green economy is one that provides opportunities for all. While employment prospects may still be slow employers suggest alternative scenarios to provide individuals opportunities for advancement and employability skills, including internships and more broad-based skills training.

**Special Thanks** to **Laurie Black**,  
**Director of Sector Initiatives, Workforce  
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State Employment Security Department  
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## Seattle and Washington State In-Demand Green Occupations, 2010 openings, and associated median wages by Educational Requirements

CODE	OCCUPATION	SEATTLE ANNUAL OPENINGS (2008-2010)	SEATTLE MEDIAN HOURLY EARNINGS (2010)	WA STATE ANNUAL OPENINGS (2008-2010)	WA STATE MEDIAN HOURLY EARNINGS (2010)	SPECIFIC GREEN OCCUPATIONS IN GREEN ECONOMY SECTORS (O*NET)
<b>Work experience in a related field</b>						
11-9199.00	Managers, all other	227	\$24.89	1,184	\$20.12	New & Emerging Occupations include Regulatory Affairs Managers (11-9199.01) and Compliance Managers (11-9199.02) in the Governmental and Regulatory Administration Sector, Supply Chain Managers (11-9199.04) and Logistics Managers (11-9199.06) in Manufacturing, Research, Design, and Consulting Services, and Transportation Sectors; Wind Energy Operations Managers (11-9199.09) and Wind Energy Project Managers (11-9199.10) in the Renewable Energy Generation Sector; and Brownfield Redevelopment Specialists and Site Managers (11-9199.11) in the Environment Protection Sector.
49-1011.00	First-Line Supervisors/Managers of Mechanics, Installers and Repairers	35	\$33.31	251	\$31.18	Manufacturing Sector
<b>Degree plus work experience</b>						
11-1021.00	General and Operations Managers	155	\$56.76	731	\$47.83	Sectors include Agriculture and Forestry and Energy Efficiency
11-1011.00	Chief Executives	133	\$32.23	733	\$24.26	New & Emerging Occupations include Chief Sustainability Officers (11-1011.03) in the Governmental and Regulatory Administration Sector
11-2021.00	Marketing Managers	35	\$54.08	134	\$45.95	Research, Design and Consulting Services
11-9121.00	Natural Sciences Managers	12	\$57.83	68	\$51.46	New & Emerging Occupations include Water Resource Specialists (11-9121.02) in the Environmental Protection Sector
<b>Master's Degree</b>						
19-2041.00	Environmental Scientists and Specialists, including Health	31	\$30.06	134	\$30.24	New & Emerging Occupations Include Climate Change Analysts (19-2041.01), Environmental Restoration Planners (19-2041.02), and Industrial Ecologists (19-2041.03) in the Environment Protection Sector
19-3099.00	Social scientists and related workers, all other	15	\$31.69	63	\$31.53	New & Emerging Occupations include Transportation Planners (19-3099.01) in the Governmental and Regulatory Administration, Research, Design, and Consulting Services, and Transportation Sectors
19-2042.00	Geoscientists, Except Hydrologists and Geographers	10	\$31.87	40	\$31.25	Sectors include Environment Protection and Research, Design, and Consulting Services
<b>Bachelor's Degree</b>						
13-1199.00	Business operation specialists, all other	165	\$32.37	678	\$30.65	New & Emerging Occupations include Energy Auditors (13-1199.01) in the Energy Efficiency; Governmental and Regulatory Administration Sectors; also Sustainability Specialists (13-1199.05) in the Government and Regulatory Administration Sector
41-3031.00	Securities, commodities, and financial services sales agents	133	\$24.76	510	\$20.92	
15-1032.00	Computer Software Engineers, Systems Software	70	\$47.44	205	\$43.95	Research, Design, and Consulting Services Sector
27-3031.00	Public Relations Specialists	59	\$26.96	190	\$25.05	Sectors include Environment Protection and Research, Design, and Consulting Services
17-2051.00	Civil Engineers	53	\$36.25	292	\$34.78	Sectors include Green Construction, Renewable Energy Generation, and Research, Design, and Consulting Services. New & Emerging Occupations include Transportation Engineers (17-2051.01) in the Research, Design, and Consulting Services; Transportation Sectors; Also Water/Wastewater Engineers (17-2051.02) in the Environment Protection Sector
13-2052.00	Personal Financial Advisors	50	\$16.61	253	\$15.40	New & Emerging Occupations include Securities and Commodities Traders (41-3031.03) in the Energy Trading and Research, Design, and Consulting Services Sectors
13-2051.00	Financial Analysts	37	\$25.47	149	\$22.76	Energy Efficiency; Governmental and Regulatory Administration; Green Construction; Research, Design, and Consulting Services

**Seattle and Washington State In-Demand Green Occupations, 2010 openings, and associated median wages by Educational Requirements *continued***

CODE	OCCUPATION	SEATTLE ANNUAL OPENINGS (2008-2010)	SEATTLE MEDIAN HOURLY EARNINGS (2010)	WA STATE ANNUAL OPENINGS (2008-2010)	WA STATE MEDIAN HOURLY EARNINGS (2010)	SPECIFIC GREEN OCCUPATIONS IN GREEN ECONOMY SECTORS (O*NET)
<b>Bachelor's Degree <i>continued</i></b>						
13-1073.00	Training and Development Specialists	31	\$32.51	124	\$28.55	Energy Efficiency; Green Construction; Research, Design, and Consulting Services
17-1011.00	Architects, Except Landscape and Naval	30	\$32.36	74	\$30.15	Green Construction; Research, Design, and Consulting Services
27-1021.00	Commercial and Industrial Designers	30	\$21.40	86	\$18.33	Manufacturing; Research, Design, and Consulting Services
17-2072.00	Electronics Engineers, Except Computer	21	\$44.86	112	\$42.93	Research, Design, and Consulting Services and Transportation Sectors
17-2112.00	Industrial Engineers	16	\$39.08	150	\$38.62	Research, Design, and Consulting Services Sector
17-2081.00	Environmental Engineers	7	\$39.48	36	\$39.50	Environment Protection; Governmental and Regulatory Administration
25-9021.00	Farm and Home Management Advisors	4	\$16.97	16	\$19.53	Environment Protection
<b>Associate's Degree</b>						
15-1099.00	Computer specialists, all other	59	\$39.48	233	\$35.87	New & Emerging Occupations include Geospatial Information Scientists and Technologists (15-1099.06) and Geographic Information Systems Technicians (15-1099.07), both in the Research, Design and Consulting Services Sector
19-4099.00	Life, physical, and social science technicians, all other	17	\$19.70	82	\$20.78	New & Emerging Occupations include Precision Agriculture Technicians (19-4099.02) in the Agriculture and Forestry; Research, Design, and Consulting Services Sectors; also Remote Sensing Technicians (19-4099.03) in the Research, Design, and Consulting Services
17-3023.00	Electrical and electronic engineering technicians	7	\$27.01	68	\$27.46	Need for Enhanced Skills for Electronics Engineering Technicians (17-3023.01) and Electrical Engineering Technicians (17-3023.03) in the Manufacturing Sector
19-4091.00	Environmental Science and Protection Technicians, Including Health	6	\$20.19	37	\$19.40	Environment Protection
17-3025.00	Environmental Engineering Technicians	2	\$27.08	8	\$23.83	Environment Protection
<b>Postsecondary vocational award</b>						
49-3023.00	Automotive service technicians and mechanics	33	\$22.17	316	\$20.13	Specifically, Automotive Specialty Technicians (49-3023.02) in the Transportation Sector
<b>Long-term on-the-job training</b>						
51-4041.00	Machinists	8	\$22.72	81	\$21.70	Manufacturing; Renewable Energy Generation
51-8021.00	Stationary Engineers and Boiler Operators	2	\$27.05	21	\$26.15	Energy Efficiency
<b>Moderate-term on-the-job training</b>						
43-4051.00	Customer Service Representatives	249	\$17.04	1,182	\$15.35	Research, Design, and Consulting Services
41-3099.00	Sales representatives, services, all other	107	\$25.88	429	\$21.21	New & Emerging Occupations include Energy Brokers (41-3099.01) in the Energy Trading Sector
41-4011.00	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	76	\$35.99	374	\$32.48	Manufacturing; Research, Design, and Consulting Services New & Emerging Occupations include Solar Sales Representatives & Assessors (41-4011.07) in the Renewable Energy Generation Sector
53-3032.00	Truck Drivers, Heavy and Tractor-Trailer	73	\$21.54	705	\$19.39	Transportation
49-9042.00	Maintenance and Repair Workers, General	73	\$19.38	436	\$18.21	Energy Efficiency; Environment Protection; Green Construction; Manufacturing; Renewable Energy Generation

**Seattle and Washington State In-Demand Green Occupations, 2010 openings, and associated median wages by Educational Requirements *continued***

CODE	OCCUPATION	SEATTLE ANNUAL OPENINGS (2008-2010)	SEATTLE MEDIAN HOURLY EARNINGS (2010)	WA STATE ANNUAL OPENINGS (2008-2010)	WA STATE MEDIAN HOURLY EARNINGS (2010)	SPECIFIC GREEN OCCUPATIONS IN GREEN ECONOMY SECTORS (O*NET)
<b>Moderate-term on-the-job training <i>continued</i></b>						
51-2092.00	Team Assemblers	57	\$15.30	333	\$14.30	Manufacturing
51-9199.00	Production workers, all other	27	\$14.05	120	\$13.02	New & Emerging Occupations include Recycling and Reclamation Workers (51-9199.01) in the Recycling & Waste Reduction Sector
43-5011.00	Cargo and freight agents	26	\$22.14	61	\$22.74	New & Emerging Occupations include Freight Forwarders (43-5011.01) in the Transportation Sector
47-4041.00	Hazardous Materials Removal Workers	12	\$20.44	91	\$22.66	Environment Protection; Green Construction; Recycling and Waste Reduction
47-4099.00	Construction and related workers, all other	8	\$20.84	41	\$20.15	New & Emerging Occupations include Solar Photovoltaic Installers (47-4099.01) and Solar Thermal Installers and Technicians (47-4099.02) in the Renewable Energy Generation Sector, and Weatherization Installers and Technicians (47-4099.03) in the Energy Efficiency Sector
51-9023.00	Mixing and Blending Machine Setters, Operators, and Tenders	6	\$16.86	37	\$16.05	Manufacturing
<b>Short-term on-the-job training</b>						
53-7062.00	Laborers and Freight, Stock, and Material Movers, Hand	300	\$12.73	1,580	\$11.90	Green Construction; Manufacturing
53-7051.00	Industrial Truck and Tractor Operators	57	\$18.91	462	\$16.47	Green Construction; Transportation
43-5061.00	Production, Planning, and Expediting Clerks	29	\$21.61	171	\$21.16	Manufacturing
53-7081.00	Refuse and Recyclable Material Collectors	13	\$24.24	113	\$21.76	Recycling and Waste Reduction
51-2022.00	Electrical and Electronic Equipment Assemblers	12	\$13.71	88	\$13.56	Manufacturing

Sources: EMSI Complete Employment Data 2nd Quarter 2010; O\*NET Green Economy Sector Occupation List.

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