CLEAN ENERGY WORKS FOR US: 2013 Third Quarter Clean Energy/ Clean Transportation Jobs Report

From commercial-scale solar developments to energy-efficient recycling projects, clean energy and clean transportation continues to create jobs and drive economic growth. By tracking job announcements from companies, elected officials, the media, and elsewhere, Environmental Entrepreneur's (E2's) jobs reports show how and where clean energy works in the United States. For more details, including state-by-state breakdowns and more clean energy jobs stories, visit www.cleanenergyworksforus.org.

More than 80 clean energy and clean transportation projects announced in the third quarter of this year are poised to create almost 15,000 new jobs across the country, according to the latest tally from Environmental Entrepreneurs (E2). More than 30 states had major clean energy and clean transportation job announcements in the quarter.

Renewable power generation led the way in the quarter. More than 6,700 renewable power generation jobs were announced, which included jobs producing renewable energy from sources like solar, wind, biomass, and geothermal. About 3,300 jobs were announced in the manufacturing sector, with advanced vehicle manufacturing and wind manufacturing the lead industries.

While this quarter's total jobs numbers were higher than the third quarter last year, some of the difference may be attributed to E2 tracking recycling announcements for the first time. Fourteen projects potentially creating 1,300 jobs were tracked in this sector. The largest announcement came from Encore Recycling in California, which expects to create 500 jobs at a facility that can process 100 million pounds of plastic per year, much of it sourced from agricultural companies like Dole and Driscoll.

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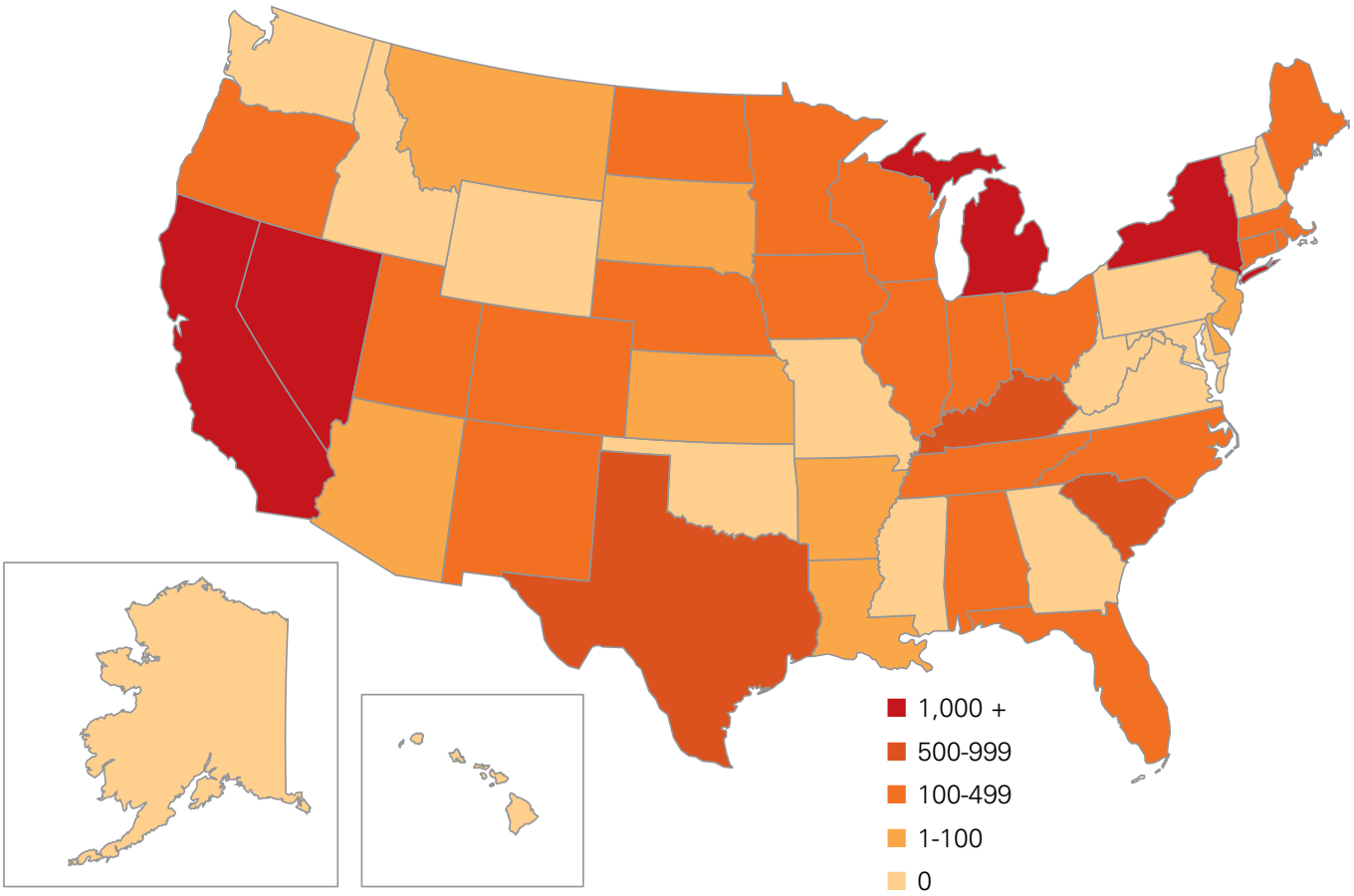
Recycling jobs are included in E2's job announcement tallies because reusing materials is often more energy efficient than creating new products from raw material. Furthermore, acquiring raw materials is often harmful to the environment through processes like mining, drilling and cutting down forests.[1]

Clean energy job growth in the quarter may have been hindered by ongoing policy uncertainty at the federal level, which is forcing some companies to reconsider expansion plans. For example, the decline in the wind industry's overall job figures can likely be attributed to ongoing policy uncertainty surrounding the wind energy Production Tax Credit (PTC). E2 saw job announcement gains begin to decline in the wind generation sector after two consecutive quarters of growth based on jobs announced data.

Some policy clarity is coming from state governments, however, which is helping renewable energy companies find financing to develop new projects. This was reflected in third-quarter numbers from the top-tier states. Of the top 5 states, only Texas does not have a statewide renewables procurement standard on the books. The top 5 states were: California (2,467 jobs announced), Nevada (2,081), New York (1,807), Michigan (1,100), and Texas (774).

CLEAN ENERGY JOBS ANNOUNCED BY STATE IN THIRD QUARTER OF 2013



RANK[i]	STATE	PROJECTS TALLIED[ii]	CLEAN ENERGY JOBS ANNOUNCED IN Q3 2013 FROM:[iii]			
			PROJECTS ANNOUNCED	PROJECTS UNDER CONSTRUCTION	PROJECTS IN OPERATION	TOTAL
1	CA	13	2,070	397	-	2,467
2	NV	5	1,769	-	312	2,081
3	NY	6	1,707	-	100	1,807
4	MI	2	-	1,100	-	1,100
5	TX	4	-	162	612	774
6	KY	2	662	-	-	662
7	SC	3	318	100	200	618
8	FL	2	-	515	-	515
9	TN	1	406	-	-	406
10	NM	2	400	-	-	400

i States have been ranked by the total number of jobs announced in media reports and company press releases over the past 3 months.
ii Project announcments spanning multiple states were each counted as one separate project per state. If job count details were not broken down by state in the announcements, the total number of jobs were divided evenly among each state.
iii "In Operation" denotes that an energy project has gone live or a manufacturing facility is on line; "In Progress" is for any project in construction or any program that has been initiated; and "Announced" captures those projects in earlier stages of development.

NEVADA MAKES SOLAR GAINS

Backed by Gov. Brian Sandoval (R) and a bipartisan coalition of lawmakers, Nevada now has a strengthened state-level renewable energy standard of 25 percent renewables by 2025.[2] This includes matching at least 2.5 percent of statewide energy needs with solar energy by 2025, contributing to the fact that all five Nevada clean energy projects tracked by E2 in the third quarter were in the solar industry. Nevada's five projects were spread across three different Congressional districts. The largest commercial project announced in Nevada was MGM Resorts International's rooftop array at the Mandalay Bay Convention Center in Las Vegas. This 6.2-MW project—which will cover 20 acres and provide the building with 20 percent of its energy needs—is expected to create 1,000 jobs. North of the city, on the Moapa River Indian Reservation, Moapa Energy announced it will construct a 350-MW solar farm, potentially creating 400 jobs. The Moapa Band of Paiutes has set aside 2,000 acres for the project. Once completed, it's expected to power 100,000 homes.

INDEPENDENCE SOLAR

Cherry Hill, N.J., and Boston, Mass.
Creating construction jobs on commercial rooftops in Northeast, Mid-Atlantic

Founded in 2007, Independence Solar is a turnkey commercial solar developer based in Massachusetts, with projects throughout the Northeast and the Mid-Atlantic. So far, the company has managed the construction of $70 million in solar projects, including a 300-killowatt solar array on the rooftop of a Connecticut-based safety equipment manufacturer. The project consisted of more than 1,200 solar panels. Combined, these panels provide all the commercial building's electricity needs.

All the system's major components were sourced from U.S. factories—the solar panels from Oregon, the racking system from Wisconsin and the inverter from Massachusetts. The array was one of the first solar projects in Connecticut to be completed under the state's Zero Emissions Renewable Energy Credit program, or ZREC. With Independence Solar's help, the safety equipment manufacturer took advantage of available state clean energy incentives and secured a 15-year contract with local utility Connecticut Light & Power.

The project required about 30 local workers contracted from Pat Munger Construction Co., which has a growing renewable energy division. James Schwartz, vice president at Independence Solar and an E2 member, said that as the solar industry grows, more workers will be needed to manufacture and install panels. "As a solar developer, we need workers who have the skills to bring this technology to scale nationally," Schwartz said.

SOUTHEAST SHOWS STRENGTH

Kentucky, South Carolina, Florida, and Tennessee each cracked the top 10 in the third quarter with a combined tally of around 2,200 jobs announced—roughly 15 percent of all the clean energy and clean transportation jobs tracked by E2 in the third quarter.

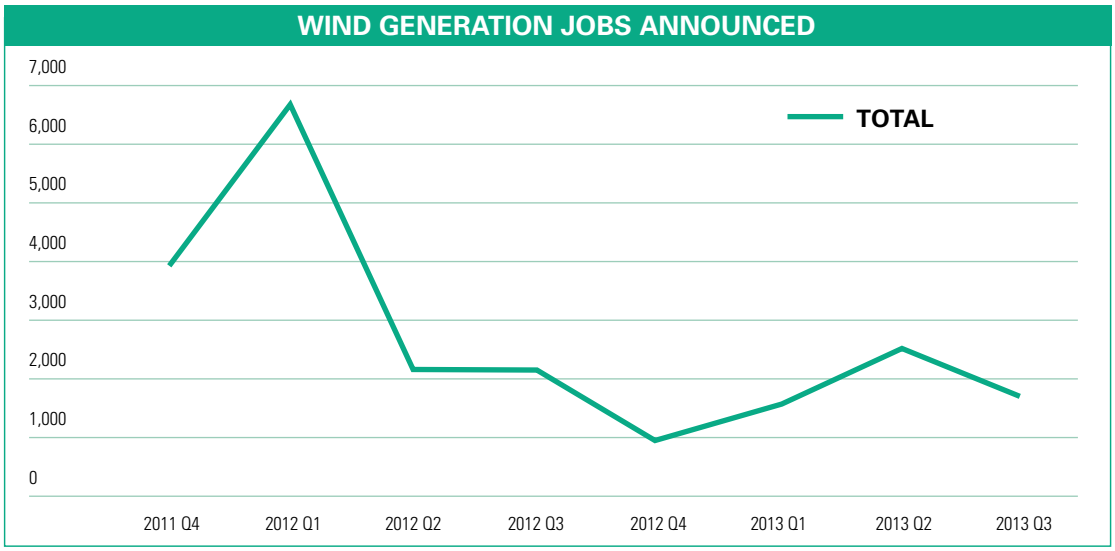
About 700 of the jobs tracked in these states were announced in the recycling industry, including 200 jobs in Graniteville, S.C., where Recleim will convert a former textile mill that spun yarn into a recycling center to process old home appliances and electronics. Other major projects in the Southeast include the city of Louisville's $27 million retrofit of public buildings, which is expected to create 500 jobs, and North Carolina-based Strata Solar's 160,000-panel solar farm in Selmer, Tenn., which could create as many as 406 jobs. Alabama, meanwhile, announced its first-ever wind farm in the third quarter, an 8-turbine project in Cherokee County that could create 123 jobs.

SECTOR	CLEAN ENERGY JOBS ANNOUNCED IN THIRD QUARTER OF 2013 FROM:			
	PROJECTS ANNOUNCED	PROJECTS UNDER CONSTRUCTION	PROJECTS IN OPERATION	TOTAL
Power Generation	4,714	890	1,084	6,688
Solar Power	2,975	371	832	4,178
Wind Power	1,559	-	232	1,791
Biogas/Biomass	-	476	20	496
Geothermal Power	180	43	-	223
Manufacturing	2,584	710	0	3,294
Advanced Vehicles[i]	200	250	-	450
Solar	200	-	-	200
Wind	100	210	-	310
Energy Storage	242	-	-	242
Energy Efficiency	80	150	-	230
Other[ii]	1,762	100	-	1,862
Building Efficiency	600	1,000	-	1,600
Recycling	678	160	430	1,268
Public Transportation	-	-	-	-
Biofuels	1,200	34	240	1,474
Electric Vehicles	-	-	-	-
Smart Grid/ Transmission[iii]	-	455	-	455
Other[iv]	230	-	-	230

i "Manufacturing - Advanced Vehicles" includes electric and hybrid vehicle manufacturing and vehicle fuel efficiency manufacturing projects.
ii "Manufacturing - Other" includes public transportation and smart grid manufacturing projects.
iii "Smart Grid/Transmission" includes smart grid, fuel cell and storage deployment as well as transmission connecting to clean, renewable energy sources.
iv "Other" includes public investment programs for clean energy procurement, manufacturing and job training and placement.

WIND LAGS SOLAR AGAIN

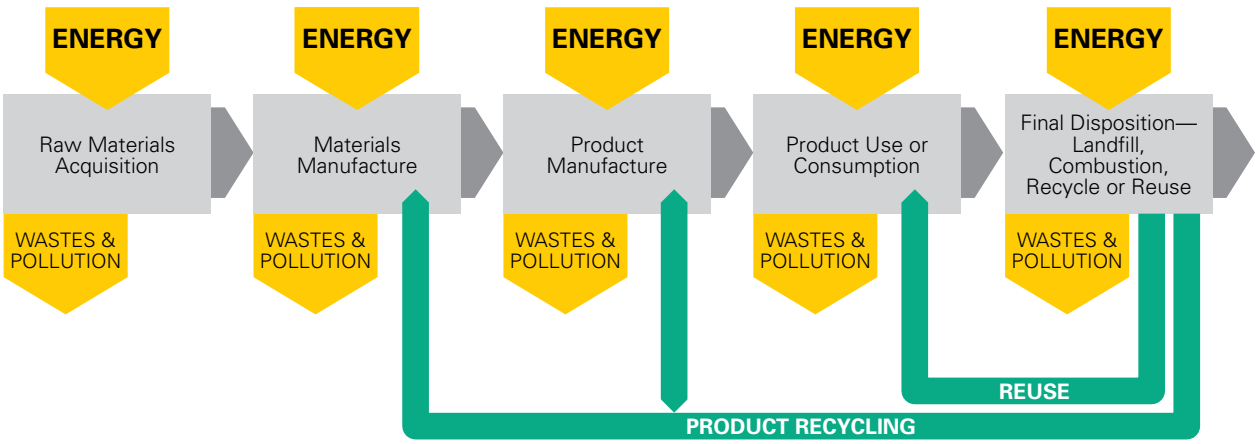
Unlike the solar industry's stable, long-term Investment Tax Credit (ITC) policy, the wind industry has been held back by the short-term Production Tax Credit (PTC) environment it's operated in since last year. Relatively slow growth was evident again in the third quarter, when announced wind industry jobs (about 2,000) were less than half the number of jobs announced in the solar industry (about 4,400). This has been trending throughout 2013, with about 6,300 total wind job announcements so far this year—considerably less than the solar industry's 19,200 jobs. However, E2 tracked some notable third-quarter wind projects. For example, in Windom, Minn., Geronimo Energy is entering a long-term power-purchase agreement with Xcel Energy that could potentially create 212 jobs. The 125-turbine Odell Wind Farm is expected to power 60,000 homes and provide $840,000 in annual tax revenue for the region.



RECYCLING MAKES THE ECONOMY MORE ENERGY EFFICIENT

Product reuse and material recycling "closes the loop" on the flow of materials within our economy, reducing the amount of energy required to source materials and material waste that winds up in landfills. (See Figure 1 below.) For example, JN Fibers announced in late September it will open a 600,000-square-foot, $45 million facility in Richburg, S.C., to collect and recycle plastic bottles into polyester fibers. These fibers will then be used in furniture and in fabrics used in vehicles.[3] A 2011 study from the Natural Resources Defense Council called *More Jobs, Less Pollution* provides evidence that an enhanced national recycling and composting strategy can significantly and sustainably increase job growth and reduce costly impacts from climate change and other public health problems.[4]

FIGURE 1: ACCOUNTING FOR THE GENERAL FLOW OF MATERIALS AND ENERGY INPUTS FROM PRODUCT LIFE-CYCLE ASSESSMENT MODELING



Source: "More Jobs, Less Pollution: Growing the Recycling Economy in the U.S.," NRDC et al., 2011, http://www.nrdc.org/business/guides/recyclingreport.asp.

GINKGO RESIDENTIAL

Charlotte, N.C.

Energy-efficient retrofits make good business sense for N.C. real estate company

Ginkgo Residential is a Charlotte, N.C.-based real estate company that provides high-quality workforce rental housing that's energy efficient and environmentally sensitive. CEO Philip Payne founded Ginkgo in 2010, and the company now employs 130 workers, some of whom recently helped complete an efficiency retrofit at the Yorktown Club.

Located in Durham, N.C., the Yorktown Club, a 236-unit apartment building, was purchased by Ginkgo in Dec. 2010. Prior to Ginkgo's involvement, the 40-year-old building was dilapidated. There was mold, rot on the porches, apartment-wide water damage, and peeling linoleum floors. After Ginkgo's purchase, its employees went to work replacing roofs, installing low-emissivity windows, adding landscaping, creating a community garden, upgrading to Energy Star-rated appliances, installing Energy Star-rated heating, ventilation, and air conditioning, and repairing any damage to the buildings.

As of July 2013, approximately 90 percent of the refurbished units were rented out, many by former occupants, who range from older, low-income residents to Duke students. While rent has slightly increased, the energy bills are half what they used to be, offsetting a portion of the higher rent and helping to keep rentals affordable. Ginkgo turns a sizable profit through its rentals, demonstrating the financial feasibility of delivering economic, environmental, and social benefits through real estate projects.

CLEAN ENERGY A BIPARTISAN ISSUE

Clean energy job announcements originated in congressional districts represented by both parties. Rep. Eliot Engel (D-N.Y.) was the member of the House with the most jobs announced in his district—1,500 jobs from a $1.8 billion project to build new rail cars for the Metro North and Long Island railroads, which serve workers who commute from the suburbs into New York City. On the other side of the aisle and on the other side of the country, two solar projects were announced in Rep. Joseph Heck's (R-Nev.) district. Combined, projects in Rep. Heck's district, which is located south of Las Vegas, could create more than 580 jobs.

REPRESENTATIVE	STATE	DISTRICT	PROJECTS TALLIED[i]	CLEAN ENERGY JOBS ANNOUNCED IN Q3 2013 FROM:			
				PROJECTS ANNOUNCED	PROJECTS IN OPERATION	PROJECTS UNDER CONSTRUCTION	TOTAL
Rep. Elliot Engel (D-16)	NY	16	1	1,500			1,500
Rep. Juan Vargas (D-51)	CA	51	2	1,200	300		1,500
Rep. Dina Titus (D-1)	NV	1	1	1,000			1,000
Rep. Joseph Heck (R-3)	NV	3	2	269		312	581
Rep. Lloyd Doggett (D-35)	TX	35	2		140	400	540
Rep. Steven Horsford (D-4)	NV	4	2	500			500
Rep. John Yarmuth (D-3)	KY	3	1	500			500

i If geographic details of projects were not provided in the announcements, they were excluded in this job count table.

THE HILL GROUP

Chicago, Illinois

Seventy-five-year-old business grows into energy efficiency company with 1,000 employees

Illinois's Energy Efficiency Portfolio Standard (EEPS), enacted in 2007, has motivated businesses to seek rational energy solutions. One of them is The Hill Group.

Founded as a refrigeration maintenance company in 1936, The Hill Group has grown into a large energy efficiency company. The Chicago-based consulting and engineering firm offers an array of services to help contractors and commercial building owners implement cost-saving efficiency measures. Employing a comprehensive energy solutions process, the company's engineers use state-of-the-art benchmarking analysis, thermal imaging, and other modeling techniques to evaluate energy performance for existing buildings.

Hill engineers then consult with their clients to determine and carry out efficiency retrofits. For new structures, The Hill Group collaborates with architects and contractors to help them make cost-effective choices in design and construction.

Hill employs more than 1,000 engineers, project managers, trades people, and administrators, making it the largest trade contractor in Illinois. The staff, which includes 17 LEED-accredited professionals, works on energy efficiency project design, analysis, fabrication, installation, and even operations.

"There are very few projects, if any, that don't have a consideration of energy efficiency," says Teri Lewand, energy solutions business development manager for The Hill Group.

CONCLUSION

The roughly 15,000 clean energy and clean transportation jobs E2 tracked in the third quarter represents a sizable increase over numbers from the corresponding quarter last year. While some of this can likely be attributed to E2 tracking recycling announcements for the first time, there were strong gains in power generation and solar. There were also an unusually high number of announcements originating from Southeastern states—a region that has not traditionally posted high numbers.

For job growth to continue, federal policy must stabilize and individual states must aggressively implement renewable portfolio standards.

Endnotes

1 More Jobs, Less Pollution: Growing the Recycling Economy in the U.S.," NRDC et al., 2011, http://www.nrdc.org/business/guides/recyclingreport.asp.

2 "Renewable Portfolio Standard," Public Utilities Commission of Nevada, accessed October 25, 2013, http://puc.nv.gov/Renewable_Energy/Portfolio_Standard/.

3 Ken Elkins, "JN Fibers to bring 318 jobs to Richburg at recycling plant," *Charlotte Business Journal*, September 25, 2013, http://www.bizjournals.com/charlotte/blog/outside_the_loop/2013/09/jn-fibers-to-bring-318-jobs-to.html.

4 "More Jobs, Less Pollution: Growing the Recycling Economy in the U.S.," NRDC et al., 2011, http://www.nrdc.org/business/guides/recyclingreport.asp.

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