A National & Regional **Green Jobs**

Many business and political leaders see an expansive "green economy" in the U.S. as fundamental to a sustainable and secure economic future.

While interest in understanding the green economy has been high in recent years, it has been problematic to define, isolate, and count. Currently, there is no national green database with standard industry and occupational classifications across states, regions, and metropolitan areas. The numerous green jobs and green economy studies done in recent years have somewhat different definitions and methodologies that have prevented suitable regional and state comparisons.

To address these data and definitional shortcomings, the Metropolitan Policy Program at The Brookings Institution in association with Battelle Technology Partnership Practice (Brookings/Battelle), developed a database at the establishment level for every county in the U.S. covering the years 2003 to 2010. This database has enabled Brookings/Battelle to produce a study—Sizing the Clean Economy, A National

Clean Economy Jobs by State: 2003 and 2010

Source: Brookings-Battelle Clean Economy Database.

	2003 Green Jobs	2010 Green Jobs	Average Annual Growth 2003 to 2010	Share of Total 2010 Jobs
Alabama	32,592	38,182	2.3%	1.9%
Alaska	8,439	16,682	10.2%	4.7%
Arizona	29,896	37,257	3.2%	1.5%
Arkansas	27,920	32,450	2.2%	2.6%
California	239,064	318,156	4.2%	2.1%
Colorado	34,787	51,036	5.6%	2.2%
Connecticut	22,541	29,751	4.0%	1.8%
Delaware	4,873	6,917	5.1%	1.6%
Dist of Columbia	20,302	22,462	1.5%	3.1%
Florida	74,669	102,967	4.7%	1.4%
Georgia	64,709	83,707	3.7%	2.1%
Hawaii	7,144	11,113	6.5%	1.7%
Idaho	12,992	17,543	4.4%	2.7%
Illinois	86,084	106,375	3.1%	1.8%
Indiana	48,352	53,684	1.5%	1.9%
Iowa	24,574	30,835	3.3%	2.0%
Kansas	22,179	27,199	3.0%	1.9%
Kentucky	32,011	36,963	2.1%	1.9%
Louisiana	28,468	28,673	0.1%	1.5%
Maine	9,298	12,212	4.0%	2.0%
Maryland	34,837	43,207	3.1%	1.7%
Massachusetts	50,598	63,523	3.3%	2.0%
Michigan	78,537	76,941	-0.3%	1.9%
Minnesota	41,752	58,232	4.9%	2.1%
Mississippi	17,730	20,905	2.4%	1.8%
Missouri	36,496	43,736	2.6%	1.6%
Montana	11,850	14,235	2.7%	3.1%
Nebraska	10,286	15,311	5.8%	1.5%
Nevada	11,167	16,578	5.8%	1.5%
Newh Hampshire	8,971	12,886	5.3%	2.0%
New Jersey	68,127	94,241	4.7%	2.4%
New Mexico	11,818	17,725	6.0%	2.1%
New York	124,848	185,038	5.8%	2.1%
North Carolina	52,780	78,881	5.9%	1.9%
North Dakota	4,537	7,146	6.7%	1.7%
Ohio	88,513	105,306	2.5%	2.0%
Oklahoma	13,903	19,297	4.8%	1.2%
Oregon	50,482	58,735	2.2%	3.4%
Pennsylvania	99,334	118,686	2.6%	2.1%
Rhode Island	9,017	9,563	0.8%	2.0%
South Carolina	46,659	50,424	1.1%	2.7%
South Dakota	5,459	6,659	2.9%	1.5%
Tennessee	58,456	76,031	3.8%	2.8%
Texas	115,194	144,081	3.2%	1.3%
Utah	14,312	18,261	3.5%	1.5%
Vermont	8,295	9,425	1.8%	3.0%
Virginia	48,423	66,772	4.7%	1.7%
Washington	69,106	83,676	2.8%	2.8%
West Virginia	10,587	12,659	2.6%	1.6%
Wisconsin	73,093	76,858	0.7%	2.7%
Wyoming	4,147	6,363	6.3%	2.1%
United States	2,110,208	2,675,545	3.4%	2.0%

Assessment

A timely analysis of green jobs for all states, the District of Columbia, and the 100 largest metropolitan areas.

and Regional Green Jobs Assessment. This study provides timely major industry and occupational green jobs analysis for all states, the District of Columbia, and for the 100 largest metropolitan areas in the U.S.

Recognizing that there has been to date, no consensus on a definition of the green economy, Brookings/Battelle aligned its study with well-established guidelines using "rules that are simple, internally consistent, transparent, and replicable." The basic green economy definition used in this study is:

"The clean economy is economic activity—measured in terms of establishments and the jobs associated with them—that produces goods and services with an environmental benefit or adds value to such products using skills or technologies that are uniquely applied to those products."

The last part of this definition concerns firms that add value to clean products—seeking to capture the green supply chain, that is, companies that provide materials or inputs to the final green products.

Following are some data and conclusions resulting from the analysis:

- The clean economy employs 2.7 million workers in the U.S. spread across a diverse group of industries, accounting for 2 percent of all jobs.
- The West has the largest share of clean economy jobs relative to its population.
- Recent clean economy job growth is concentrated within the largest metro areas.
- The clean economy is manufacturing and export intensive. Manufacturing accounts for about 26 percent of all clean jobs, while overall manufacturing comprises 9 percent of total U.S. employment.
- Industry clusters enhance metropolitan clean economy performance. Clustering involves the proximity of similar and related businesses.
- Green jobs provide better pay to low- and middle-skilled workers than does the economy as a whole.
- The study counted 14,312 green jobs in 2003 and 18,261 in 2010 for Utah. The Utah average annual green jobs growth rate over those seven years was 3.5 percent, just above the 3.4 percent growth rate nationally.

One theme of the Brookings/Battelle study concerns global competition in green technology. International competition is already quite keen as countries such as China, Germany, Japan, and the United Kingdom are engaging in a "race to clean" by making new and ongoing investments in the environmental goods sector a source of quality jobs, exports, and growth.

Likewise the green economy is seen as a potential source of future U.S. high-quality job growth. The analysis suggests that the emergence of clean jobs is relevant to the renewal of the national economic base, with some green segments as critical to future economic growth. Evidence also supports the notion that some national policy lapses have left domestic green demand weaker than it could be, financing harder to obtain, and the innovation pipeline less secure.

More information on the report:

Sizing the Clean Economy, A National and Regional Green Jobs Assessment is available at http://www.brookings.edu/metro/Clean_Economy.aspx.