

Technical Note

Data in the GGS quarterly updates are preliminary and experimental. These data are not part of an official data series and will not be available from online BLS data tools.

GGS employment level and rate estimates are published by state, ownership, and industry. Data for GGS are collected and compiled by the Bureau of Labor Statistics from a sample of business and government establishments with workers covered by state and federal unemployment insurance (UI) legislation.

Collection

BLS publishes annual GGS estimates based on an annual survey of establishments sampled from the Quarterly Census of Employment and Wages (QCEW). Quarterly estimates use GGS annual data and updated QCEW employment. GGS annual data collection methods include mail, computer-assisted telephone interviewing, web, and fax.

Coverage

The GGS survey is sampled from 333 North American Industrial Classification System (NAICS) industries identified as potential producers or providers of green goods and services. The GGS survey covers all private establishments such as factories, offices, and stores, as well as federal, state, and local government entities in the 50 states and the District of Columbia.

Concepts

Green goods and services. Green goods and services are defined as goods and services produced by an establishment that benefit the environment or conserve natural resources. Green goods and services fall into one or more of the following five groups: (1) production of energy from renewable sources; (2) energy efficiency; (3) pollution reduction and removal, greenhouse gas reduction, and recycling and reuse; (4) natural resources conservation; and (5) environmental compliance, education and training, and public awareness.

Industry classification. The industry classifications used in quarterly estimates are in accordance with the 2007 version of the North American Industry Classification System (NAICS). Only the 333 industries identified by BLS as producing green goods and providing green services are included in the scope of the GGS survey and quarterly updates. In order to ensure the highest possible quality of data, the Quarterly Census of Employment and Wages (QCEW) program verifies with employers and update, if necessary, the NAICS code, location, and ownership classification of all establishments on a 3-year cycle. Changes in establishment characteristics resulting from the verification process are annually introduced into the GGS sampling frame.

Green Goods and Services jobs. GGS jobs are those associated with producing green goods or providing green services. Some businesses produce multiple products and services where one or more may be included in the BLS definition. For these cases, BLS determined from prior research that businesses often have difficulty providing employment associated with the production of green goods and services, while revenue for the green goods or services are more readily available and less burdensome for the respondent to provide. The percentage of revenue related to green goods and services is used to estimate GGS jobs, which are defined as employment related to the production of green goods and services at the establishment level. Sampled establishments that do not generate revenue will be asked to report the share of their employment involved with the production of green goods and services. For example, employment related to research and development, nonprofit organizations, government agencies, and new businesses.

Employment. Employment includes persons on the payroll who worked or received pay for the pay period that includes the twelfth day of the month. Full-time, part-time, permanent, short-term, seasonal, salaried, and hourly employees are included, as are employees on paid vacations or

other paid leave. Proprietors or partners of unincorporated businesses, unpaid family workers, or persons on leave without pay or on strike for the entire pay period, are not counted as employed. Employees of temporary help agencies, employee leasing companies, outside contractors, and consultants are counted by their employer of record, not by the establishment where they are working. The monthly employment figure provided by respondents will be compared to employment data BLS has on file as part of the QCEW program, which compose BLS' business register, in order to verify that data are being collected for the correct establishment.

Estimation methodology

Estimation. The quarterly GGS estimates use the green share of revenue or employment collected for the 2010 annual survey and apply those shares at the establishment level to an updated 12-month average employment, using the most current QCEW data available. Estimates at higher levels of aggregation may show a change in both GGS employment and GGS share due to shifts in industry employment.

A Horvitz-Thompson estimator is used to estimate GGS employment. GGS percentage estimates are relative to the QCEW employment of all industries contained within a particular estimation cell's NAICS code, not just the industries included in the GGS scope.

Reliability. These data are preliminary and have been designated as experimental in order to allow for further BLS research on the quarterly updates. These experimental series are not adjusted for seasonality.

GGS estimates are subject to both sampling and nonsampling error. Sampling error arises from selecting a sample of establishments rather than the entire business population. To measure this error,

GGS uses a balanced repeated replication technique to calculate standard errors.

At the typical 90 percent level of confidence used in BLS analyses, there is approximately a 90 percent chance that the GGS sample-based estimate of total GGS employment will not differ from the true population total by more than 1.645 standard errors. Thus, GGS calculates the width of its 90 percent confidence interval for total GGS employment as 1.645 multiplied by the standard error. The confidence interval width of the total GGS employment estimate is approximately 59,000.

There is about a 90 percent chance that the true population total of GGS employment falls within 59,000 of the GGS estimate. For percentage estimates, there is about a 90 percent chance that the GGS estimate is within 0.05 percent.

Nonsampling error arises from various sources, such as establishments failing to respond or misreporting data, data processing errors and sample coverage. Since GGS only samples establishments in 333 industries predetermined to potentially have GGS employment, any green goods and services produced or provided in other industries is not captured. GGS is also subject to errors in the sampling frame, in which some establishments' industry codes may be misclassified.

Other information

Information in this release will be made available to sensory impaired individuals upon request. Voice phone: (202) 691-5200; Federal Relay Service: (800) 877-833