

**U.S. Department of Energy  
Supporting Statement  
Energy and Jobs Survey  
OMB Control Number 1910-New**

This supporting statement provides additional information regarding the Department of Energy (DOE) request for processing of the proposed information collection, Energy and Jobs Survey. The numbered questions correspond to the order shown on the Office of Management and Budget (OMB) Form 83-I, “Instructions for Completing OMB Form 83-I.”

**A. Justification**

- 1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the information collection.**

A major objective of the Department of Energy’s Jobs Strategy Council is to identify and quantify the effect that the rapidly changing nature of energy production, distribution, and consumption throughout the U.S. economy is having on job creation and economic competitiveness<sup>1</sup>. Too often, these impacts are inadequately understood and, in some sectors, incompletely measured.

Informed by the June 2013 President’s “Climate Action Plan,”<sup>2</sup> the administration-wide Quadrennial Energy (QER)<sup>3</sup> enables the federal government to translate policy goals into a set of analytically based, integrated actions over a four-year planning horizon. Among the recommendations in the QER (Attachment 1) was Recommendation 8.6 entitled, Reforming Existing Energy Jobs Data Collection Systems. Specifically, Recommendation 8.6 states that “DOE should establish an interagency working group – including the Department of Labor and Commerce – to reform existing data collection systems and provide consistent and complete definitions and quantification of energy jobs across all sectors of the economy.”<sup>4</sup>

The proposed data collection will survey employers and analyze employment data in the following sectors: electric power generation, electric power transmission, distribution, and storage; energy efficiency, including heating, cooling and building envelope; fuels; and motor vehicles production. The purpose is to quantify that employment, and classify its distribution

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<sup>1</sup> DOE Jobs Strategy Council- <http://www.energy.gov/articles/energy-department-creates-jobs-strategy-council-focus-job-growth-energy-economy>

<sup>2</sup> Climate Action Plan- <https://www.whitehouse.gov/share/climate-action-plan>

<sup>3</sup> Presidential Memorandum Establishing a Quadrennial Energy Review- <https://www.whitehouse.gov/the-press-office/2014/01/09/presidential-memorandum-establishing-quadrennial-energy-review>

<sup>4</sup> DOE Quadrennial Energy Review First Installment- <http://energy.gov/epsa/downloads/quadrennial-energy-review-first-installment>

among different sources of energy and the different technologies employed. In particular, as mentioned in U.S. Energy and Employment Report,<sup>5</sup> in recent years, the manner in which society consumes energy has also created a new category of energy jobs—an energy efficiency job. As there is no commonly accepted definition of an energy efficiency job, the Department chose to define energy efficiency employment for the purposes of the study as the production or installation of energy efficiency products certified by the Environmental Protection Agency’s Energy Star program or installed pursuant to the Energy Star program guidelines. Thus, the USEER energy efficiency employment figures include only work with efficient technologies or building design and retrofits. The report does not capture employment related to energy efficient manufacturing processes or employees associated with combined heat and power (CHP) or waste heat to power (WHP), which is data that this collection will aim to capture with respect to energy consumption.

Collected data will allow energy-related employment to be assigned by primary value chain activity, including: research and development; manufacturing; sales and distribution; installation, repair and maintenance; and professional services. It will also provide insight on workforce demographics and employers’ ability to recruit qualified workers.

**2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection**

In order to solve the inadequacy of current energy jobs data, DOE has commissioned this data collection to prepare an annual US Energy and Employment Report to develop consistent criteria for analyzing employment in the energy industry which will better inform economic development planning as well as workforce development needs. For example, community colleges and Workforce Investment Boards will have timely and accurate data regarding trends, growth and decline in energy sectors which will allow for more adequate planning and coordination to maximize the benefits of energy sector opportunities.

The data collected will be used by industry, training organizations, community colleges, job seekers, federal agencies and other stakeholders, to better inform the workforce development system by highlighting changes in the industry that are driving demand for workers. This type of activity for energy and energy related industries is directly aligned with the broad administrative priority around job-driven training articulated in the Administration’s Job Driven training initiative and associated Presidential Memorandum on interagency priorities around jobs, skills and training.<sup>6</sup>

The data collected will also inform energy economic development planning activities at the local, state and regional levels by providing a more detailed assessment of energy jobs, as well as the changing energy landscape and how such changes influence labor markets.

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<sup>5</sup> U.S. Energy and Employment Report <http://www.energy.gov/downloads/us-energy-and-employment-report>

<sup>6</sup> Presidential Memorandum Job Driven Training-  
<https://www.whitehouse.gov/the-press-office/2014/01/30/presidential-memorandum-job-driven-training-workers>

**3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.**

The survey is programmed in Qualtrics survey software, which can be utilized via email (respondent specific link) or with a general link and identifier (mail, etc.). Respondents will receive a letter (and email, if an address is available) encouraging electronic submission of data. Telephone respondents will have the option of receiving an email with a link rather than completing by telephone. A copy of the survey instrument reflecting the questions respondents will be asked is included as supplementary documents.

**4. Describe efforts to identify duplication.**

No other collections ask the specific types of questions or filter employment data by technology, subtechnology, or value chain type. Further, these economic data or other proxies do not yet exist or are not currently collected to allow for modification, analysis, or extrapolation.

The Bureau of Labor Statistics (BLS) collects data on establishments and jobs. Establishments are classified according to type of economic activity, or process of production, by the North American Industry Classification System (NAICS)<sup>7</sup>, and jobs are classified into occupations categories using the Standard Occupational Classification (SOC) system<sup>8</sup>. BLS data in many cases adequately attributes employment in more traditional sectors of the energy sectors of the energy sector, such as fossil fuel exploration, extraction, storage and transportation. However, the distribution of employment among different technologies within these sectors such as nontraditional extraction of oil and gas, electric generation by specific fuel type (i.e., coal, gas, wind, etc.), and research and development of energy related technologies, cannot be determined.

Moreover, newer energy sources, such as solar, wind, and hydropower, and the technologies they employ, are largely included in NAICS and SOC codes for other industries and cannot be separated into their respective production processes or occupations. In 2010, the BLS was tasked by the Congress with reporting and tracking “Green Jobs”. In order to accomplish this task, BLS initiated two new data collections – the Green Goods and Services and the Green Technologies and Practices data collections<sup>9</sup>. However, those collections were discontinued due to sequestration<sup>10</sup>.

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<sup>7</sup> NAICS, or North American Industrial Classification System, is the official way to categorize industries in the United

States, Canada, and Mexico. <http://www.census.gov/eos/www/naics/>

<sup>8</sup> Standard Occupational Classification 2010 <http://www.bls.gov/ggs/>

<sup>9</sup> BLS Green Goods and Services Survey <http://www.bls.gov/ggs/>

<sup>10</sup> BLS 2013 Sequestration Information [http://www.bls.gov/bls/sequester\\_info.htm](http://www.bls.gov/bls/sequester_info.htm)

It is important to note that this data collection is additive, rather than duplicative, of the current BLS data collections. Rather than creating new, exclusive categories of employment, the proposed data collection would ascertain specific activities and technologies within the BLS structure, so allocation of employment by activity and technology uses existing BLS data as a baseline. In this way, the proposed data collection reduces the burden on businesses because it relies on existing baseline employment totals by NAICS code that are already collected and released by BLS, therefore allowing statistical estimation procedures to be used (requiring fewer total responses) rather than replicating a census of businesses.

**5. If the collection of information impacts small businesses or other small entities, describe any methods used to minimize burden.**

Small businesses are important respondents, and it is critical to ensure that their needs and impact on the US energy economy are captured in the collection. In addition to electronic submission availability, the phone bank uses flexible hours and allows callbacks to be scheduled 24 hours per day. In addition, respondents are not required to keep any data, only to report on their current needs and workforce, minimizing burden.

**6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.**

The Department of Energy has as one of its core missions to ensure America's security and economic prosperity. Through innovation, technology transfer, commercialization and deployment activities, the Department of Energy has made significant contributions to economic growth in the United States. Supported in part by investment in innovation, DOE spends more than \$10 billion in research and development each year, conducted primarily at universities and Federal laboratories. DOE's role as a creator of direct and indirect jobs is more pronounced as the energy sector continues to transform and the Nation embraces clean energy. The transformation is driven in large part by the changing nature of energy production, distribution and consumption throughout the United States which is having a dramatic impact on both job creation and economic competitiveness.

However, the inadequacy of current energy jobs data has been widely noted.<sup>11, 12, 13</sup> The fundamental problem is that energy generation, distribution and consumption have become embedded in so many different sectors of the economy and in so many ways that jobs that are primarily energy focused are attributed to the sector where they are housed. As a result, energy jobs are classified with traditional job skills' identifiers but should have a discrete identity and a separate job classification standard. For example, under our current job classification system, a

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<sup>11</sup> DOE Quadrennial Energy Review First Installment- <http://energy.gov/epsa/downloads/quadrennial-energy-review-first-installment> Section 8- Enhancing Employment and Workforce Training

<sup>12</sup> Robert Bacon and Masami Kojima, Issues in Estimating the Employment Generated by Energy Sector Activities, The World Bank Sustainable Energy Department, 2011

<sup>13</sup> U.S. Energy and Employment Report <http://www.energy.gov/downloads/us-energy-and-employment-report>

welder remains a welder regardless of whether he/she is welding an oil pipeline, a water main, a LEED-certified office building, a piece of construction equipment, or an electric vehicle. Thus, the leading role that energy is playing in revitalizing the American economy since the Great Recession is poorly measured and poorly understood. -

If the collection is not conducted, federal agencies will not have accurate data on labor market trends in key energy sectors during a time of rapid technological change. Already in 2016 natural gas is anticipated to displace coal as the major fuel source for electric power generation, while renewable energy has emerged as the largest single source of new generation. Without the data collection, both federal and state policy makers will not be able to plan for new workforce skills' demands or prepare for retraining displaced workers.

Since changes in energy technologies are affecting different regions of the country in different ways, state and regional data is also necessary for both economic and workforce development purposes. Hiring difficulty data is essential to provide guidance to the community college and workforce development systems to prepare course offerings and curricula that are aligned with changing energy technology and employer needs.

Demographic profiles of the energy workforce are necessary to inform policy makers on identifying barriers to entry for energy-related employment in underserved or disadvantaged communities and developing response programs.

Without this data collection no accurate data will exist at either the federal or state level on employment in energy efficiency technologies, one of the fastest and largest growing, employment sectors in the country. Planning the workforce needs for energy efficiency is a key challenge for both energy and climate policy in the U.S.

Finally, the collection of this data is essential to the energy jobs work agreed to by the G-7/EU Ministerial which contemplates standardization and comparison of energy-related jobs data between these nations.

7. **Explain any special circumstances that require the collection to be conducted in a manner inconsistent with OMB guidelines. (a) requiring respondents to report information to the agency more often than quarterly; (b) requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it; (c) requiring respondents to submit more than an original and two copies of any document; (d) requiring respondents to retain records, other than health, medical government contract, grant-in-aid, or tax records, for more than three years; q(e) in connection with a statistical survey, that is not designed to product valid and reliable results that can be generalized to the universe of study; (f) requiring the use of statistical data classification that has not been reviewed and approved by OMB; (g) that includes a pledge of confidentiality that is not supported by authority established in stature of regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; (h) requiring respondents to submit proprietary trade secrets, or other confidential information unless the agency can**

**demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.**

This data will be collected in a manner consistent with OMB guidelines and the collection instrument has been submitted to OMB for approval. Data will be collected annually and no exception to the OMB data collection process is being requested.

8. **If applicable, provide a copy and identify the date and page number of publication in the Federal Register of the agency's notice, required by 5CFR 320.8(d), soliciting comments on the information collection prior to submission to OMB. Summarize public comments received in response to that notice and describe actions taken in response to the comments. Specifically address comments received on cost and hour burden. Describe efforts to consult with persons outside DOE to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or report.**

The Department published a 60-day Federal Register Notice and Request for Comments concerning this collection in the Federal Register on January 26, 2016, volume 81, number 16, and page number 4269. The notice described the collection and invited interested parties to submit comments or recommendations regarding the collection. Comments were received and responses were provided to commenters. The comments and responses are included as supplementary documents.

9. **Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.**

No payment, gift or remuneration will be provided to respondents.

10. **Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.**

Data collected will be protected under the Confidential Information Protection and Statistical Efficiency Act (CIPSEA) of 2002, which allows and requires the U.S. Department of Energy and its agents to protect identifiable data from disclosure or release to unauthorized parties for non-statistical purposes. Therefore, as an integral part of the task, the Department of Energy shall maintain confidentiality of the data at all times and provide CIPSEA training and certification for all DOE staff.

The Department of Energy in collecting data is expected to conduct all activities in a manner consistent with Federal and agency data confidentiality provisions and will ensure safeguards and appropriate measures to protect data confidentiality are implemented at each stage of the data collection and processing life cycle.

**11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private. This justification should include the reasons why DOE considers the questions necessary, the specific uses to be made of the information, the explanation to be given to persons from whom the information is requested, and any steps to be taken to obtain their consent.**

A focus of the Energy Jobs Strategy Council is to create a more inclusive energy workforce and take steps to overcome barriers faced by disadvantaged individuals in accessing opportunities in energy industries. The survey instrument seeks to gather demographic information including gender, race and ethnicity, veteran’s status and union membership.

After the data on race and ethnicity are collected, any DOE reporting of this information will include the number of respondents in each racial category who are Hispanic and Latino. In addition, when the data is reported in aggregate form, DOE will present the number of respondents who selected only one category, separately for each of the five racial categories. DOE will provide the detailed distributions, including all possible combinations, of multiple responses to the race question. If the collected data on multiple responses are collapsed when reported, at a minimum the total number of respondents reporting “more than one race” shall be made available.

The reasons for exploring these areas is to better understand the demographics of the workforce supporting energy industries compared to the overall national workforce. Collected data will also inform strategies around identifying barriers that have prevented individuals, including individuals from historically disadvantaged and tribal communities, from participating in current and future energy industry jobs and to develop potential strategies to eliminate or minimize these barriers.

**12. Provide estimates of the hour burden of the collection of information. The statement should indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. Unless directed to do so, DOE should not conduct special surveys to obtain information on which to base hour burden estimates. Consultation with a sample fewer than 10 potential respondents is desirable.**

Total number of unduplicated respondents: 30,000  
Reports filed per person: 1  
Total annual responses: 30,000  
Total annual burden hours: 3,210

Average Burden            Per Collection: 6.42 minutes  
   Per Applicants: 6.42 minutes

Burden calculation is based on 19 previous similar surveys conducted for states or the private sector with substantially similar instruments and sampling plans.

Here are the assumptions made regarding the 6.42 minute per response burden for this information collection.

- 20,000 responses are expected from companies that are not expected to qualify for the survey or otherwise will be screened out due to not working on any energy technologies surveyed. The average burden for filling out the survey based on prior non-federal data collection averages is 1.23 minutes for both phone interviews and online surveys. This equates to 10 hours of total burden across 20,000 respondents.
- 10,000 responses are expected from companies that qualify for and agree to take the survey. Of these companies, 88 percent (8,800) are expected to be from businesses with under 100 employees with an average response of 15 minutes per response, which equates to 2,200 hours. Twelve percent of these companies (1,200) are in 100+ employee company size and are expected to have an average response time of 30 minutes for total burden of 600 hours.

Therefore, the calculation is Short Completions (410h) + Long SME Completion (2,200h) + Long LE Completion (600) = 3,210 hours for 30,000 respondents.

**13. Provide an estimate for the total annual cost burden to respondents or recordkeepers resulting from the collection of information.**

We estimate that it should take approximately 6.42 minutes on average for each respondent to complete the survey. We assume that the survey will be completed by human resources managers with a per mean wage of \$69.56 per hour; chief executives with a per mean wage of \$99.56 per hour or front line managers with an average per mean wage of \$32.46 per hour for an average mean wage for the three occupations of \$67.19 per hour.

The formula for determining burden is:

$$\text{Average wage } (\$67.19) * \text{Total Hours } (3210) = \$215,690.60$$

To calculate cost per respondent, total cost (\$215,690.60)/total respondents (30,000) + \$7.19 per respondent.

**14. Provide estimates of annualized cost to the Federal government.**

A procurement of this type was not previously done by the Department. As a result, cost estimate was based on cost to prepare the 2015 USEER and supplemental information pulled from other efforts, including the Energy Information Agency.



A public procurement will be issued to solicit bids to perform the services required for this data collection. Actual costs will be based on budget justification from bidders and budget evaluation factors.

Direct subcontractor costs are expected to be between \$1.2 million. This estimate herein is based on a similar private sector-led survey effort of energy businesses with a similar scope and breadth. This includes programming the survey for web and phone, developing the database of respondents, conducting data collection and analysis, and preparing the report. Subcontractor costs will be finalized during the procurement process, and the proposed budget will be a factor in the evaluation of responses to the funding opportunity announcement (FOA).

<b>Direct Labor</b>	
Tasks to be Performed	Hours
Project Management	5,000
Database Development	1,000
Building Architecture	10
Data Cleaning	30
Data analysis, including BLS Data	240
Regional Analysis	60
State Analysis	100
Report Writing	60
Charts and Graph Development	40
<b>Total Hours</b>	<b>6,540</b>

Labor Categories	Hours	Rate	Amount
Principal	1,400	\$236	\$330,400
Project Manager	2,000	\$197	\$394,000
Research Analyst	1,740	\$116	\$201,840
Junior Analyst	1,400	\$88	\$123,200
<b>Total Hours</b>	<b>6,540</b>		<b>\$1,049,440</b>

Activity	Cost
Direct Labor	\$1,049,440
Related Travel	\$9,626
<b>Total Cost of Direct Labor, Plus Travel</b>	<b>\$1,059,066</b>

In addition to contractor costs, the Department of Energy expects negligible internal personnel costs.

**15. Explain the reasons for any program changes or adjustments reported in Items 13 (or 14) of OMB Form 83-I.**

This is a new collection, therefore, there are no program changes or adjustments to report.

**16. For collections whose results will be published, outline the plans for tabulation and publication.**

Collected data will be published on the Department of Energy website. Information will be aggregated when presented so that no individual company data will be revealed. The goal is to maintain confidentiality of information received from respondents.

Information will be reported by industry, national level, state level and by NAICS code level. However, consistent with Bureau of Labor Statistics guidelines data will be suppressed if it could be substantially attributed to a single employer. For example, in cases where there are fewer than three respondents in a geographic region that information is reported in national figures but suppressed otherwise and a secondary analysis, on a case by case basis, is applied to determine if data can be revealed without breaching confidentiality.

**17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons why display would be inappropriate.**

We have no objection to displaying the date for OMB approval.

**18. Explain each exception to the certification statement identified in Item 19 of OMB Form 83-I.**

We are not requesting an exception to the certification statement.