
Supporting Statement for United States Energy and Employment Report Data Collection

Part A: Justification

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Table of Contents

Part A: Justification.....	i
Introduction.....	2
A.1. Legal Justification.....	2
A.2. Needs and Uses of Data.....	3
A.3. Use of Technology.....	4
A.4. Efforts to Identify Duplication.....	4
A.5. Provisions for Reducing Burden on Small Businesses.....	4
A.6. Consequences of Less-Frequent Reporting.....	5
A.7. Compliance with 5 CFR 1320.5.....	6
A.8. Summary of Consultations Outside of the Agency.....	6
A.9. Payments or Gifts to Respondents.....	7
A.10. Provisions for Protection of Information.....	7
A.11. Justification for Sensitive Questions.....	8
A.12A. Estimate of Respondent Burden Hours.....	8
A.12B. Estimate of Annual Cost to Respondent for Burden Hours.....	9
A.13. Other Estimated Annual Cost to Respondents.....	9
A.14. Annual Cost to the Federal Government.....	9
A.15. Reasons for Changes in Burden.....	10
A.16. Collection, Tabulation, and Publication Plans.....	10
A.17. OMB Number and Expiration Date.....	11
A.18. Certification Statement.....	11

Introduction

Provide a brief introduction of the Information Collection Request. Include the purpose of this collection, note the publication of the 60-Day Federal Register Notice, and provide the list of forms within this collection.

The United States Energy and Employment report is an annual publication that quantifies the number of workers and demographics within technologies categorized under electricity generation, transmission, distribution, and storage, fuels, energy efficiency, and motor vehicles.

The report has been published by either the Department of Energy (DOE) or the National Association of State Energy Officials (NASEO) and the Energy Futures Initiative (EFI) annually since 2016. DOE published the original 2016 and 2017 reports, NASEO and EFI published the 2018, 2019, and 2020 reports, and the report returned to DOE in 2021. DOE is obligated to publish the report under the Fiscal Year (FY) 2020 Further Consolidated Appropriations Act (PL116-94).

Quantitative figures in the report require surveys of businesses, which are used in conjunction with data collected by the Departments of Labor and Commerce. The reinstatement of OMB # 1910-5179 under the Paperwork Reduction Act is necessary to publish this report.

A.1. Legal Justification

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. Too often, these impacts are inadequately understood and, in some sectors, incompletely measured.

Informed by the June 2013 President's "Climate Action Plan," the administration-wide Quadrennial Energy Report (QER) 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."

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 among different sources of energy and the different technologies employed. In particular, as mentioned in the U.S. Energy and Employment Report, 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.

This effort is a reinstatement of OMB 1910-5179, which was approved for three years beginning in 2016 and has since expired.

A.2. Needs and Uses of Data

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.

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.

The survey, which will be conducted both over the telephone and via the internet, collects the following information from energy employers:

- Area of energy technology (subcategories that fall within electric power generation; transmission, distribution, and storage; fuels, energy efficiency; and motor vehicles)
- Number of employees and what percentage of these workers' time is spent on energy (any of their time, more than half, or 100% of their time)
- Demographics of workforce: race, sex, and ethnicity
- Whether workers are unionized
- Number of workers who are veterans
- Occupations of workers
- Difficulty that the employer has hiring new workers
- Expectations about growth in the next year

A.3. Use of Technology

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.

BW Research Partnership programs the survey questionnaire internally using Qualtrics, an online survey platform. The programmed survey is sent via email or links to potential respondents using Qualtrics distribution. The survey program is also used as a Computer Assisted Telephone Interviewing (CATI) interface for phone interviewing. Once data collection is complete, survey data is downloaded in Excel and SPSS and loaded into statistical programs for analysis. The data is kept completely confidential and is only accessed by BW Research Partnership.

Approximately 90% of respondents are expected to respond via telephone and 10% via the online survey. See submissions for both the telephone and online surveys.

A.4. Efforts to Identify Duplication

Describe efforts to identify duplication.

The United States Energy and Employment Report uses relevant, publicly available data collected by other government agencies (Departments of Labor and Commerce) to the greatest extent possible. The proposed survey collects data that are neither publicly available nor collected by any other public or private agency, organization, or entity. No other source can be obtained, modified, or otherwise used for the purposes described in A.2 above.

A.5. Provisions for Reducing Burden on Small Businesses

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.

A.6. Consequences of Less-Frequent Reporting

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.^{1,2,3} 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 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 annual 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. Without the annual 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, annual 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.

¹ DOE Quadrennial Energy Review First Installment- <http://energy.gov/epsa/downloads/quadrennial-energy-review-first-installment> Section 8- Enhancing Employment and Workforce Training

² Robert Bacon and Masami Kojima, Issues in Estimating the Employment Generated by Energy

Sector Activities, The World Bank Sustainable Energy Department, 2011

³ U.S. Energy and Employment Report <http://www.energy.gov/downloads/us-energy-and-employment-report>

Without this annual 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 annual 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.

A.7. Compliance with 5 CFR 1320.5

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;**
- (e) in connection with a statistical survey, that is not designed to produce 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; or**
- (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 will be submitted to OMB for approval. Data will be collected annually and no exception to the OMB data collection process is being requested.

A.8. Summary of Consultations Outside of the Agency

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 60-day Federal Register Notice was published in the Federal Register on June 16th, 2021 (volume 86, number 114, page 32030). No comments were received after 60 days.

The 30-day Federal Register Notice was published in the Federal Register on October 26th, 2021 (volume 86, number 204, page 59158).

Survey methodology was developed in conjunction with:

- Ruth Samardick, Department of Labor, Bureau of Labor Statistics
- David Hiles, Department of Labor, Bureau of Labor Statistics
- Russell Tarver, Department of Energy, Energy Information Administration

Additionally, state energy offices in Massachusetts, Rhode Island, Connecticut, Vermont, Maine, New York, New Jersey, Maryland, Pennsylvania, California, Florida, and Minnesota were consulted.

A.9. Payments or Gifts to Respondents

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

BW Research recommends providing gift cards to a random sampling of 20 respondents at a total cost of \$2,000 (\$100 gift cards). In past data collection, random gift card drawings (up to \$500 per gift card) have increased participation over no incentives, or small incentives to each respondent (between \$5 and \$20 gift cards).

A.10. Provisions for Protection of Information

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

BW Research Partnership, and its research partners, are well-versed in CIPSEA requirements and also adhere to private (and in some ways more stringent) ethical safeguards to protect respondent confidentiality (CASRO ethical guide). All BW Research Staff have been certified through the Energy Information Administration's CIPSEA training and fully understand its implications for the current project. We treat respondent confidentiality very seriously, as compromising the basic agreement among survey researchers and subjects would injure the industry and our own business. Maintaining confidentiality is the cornerstone of our entire survey research practice.

CIPSEA protects respondent's confidentiality in two critical ways. First, it ensures that responses are only used for statistical analysis, providing a level of comfort for respondents that their answers will not be used for anything other than aggregate data analysis. All of the thousands of surveys that we have conducted in our 10 years of survey research business have been treated similarly; we have never

released identifying information without express permission to any party, often even withholding that information from our clients as needed, when formal CIPSEA procedures are not used (this is primarily done to protect against FOIA release).

In order to comply with this first requirement, our firm uses a unique identifier for all statistical analysis. So while we do have the means to tie responses used in the dataset with the respondent, the information is not co-located. As a result, our raw data files do not contain any respondent-identifying information. This ensures that even accidental release of respondent identifying information is nearly impossible (this is a level of protection beyond CIPSEA, which only covers intentional release).

Second, CIPSEA ensures that identifying information cannot be deduced. This is a more challenging process because there are many strategies that can be used to deduce a response. In an abundance of caution, we recommend suppressing data release if there are three or fewer establishments in the reporting frame.

A.11. Justification for Sensitive Questions

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.

DOE proposes asking employers if they have programs specific to LGBTQ+ populations to better understand workforce demographics as they relate to sexual orientation and gender identity. This question can only be accurately answered if workers self-identify to their employers. As with all survey responses, DOE will protect this information in accordance with the Confidential Information Protection and Statistical Efficiency Act.

A.12A. Estimate of Respondent Burden Hours

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.

Table A1. Estimated Respondent Hour Burden

Form Number/Title (and/or other Collection Instrument name)	Type of Respondents	Number of Respondents	Annual Number of Responses	Burden Hours Per Response	Annual Burden Hours	Annual Reporting Frequency
USEER Survey Qualifying (Energy companies that complete the survey)	Business (HR) representatives	10,000	10,000	45 minutes (.75 hours)	7,500	1
USEER Survey for Incidence (Companies that do not complete the survey)	Business (HR) representatives	25,000	25,000	1.1 minutes (.0183)	458	1

				hours)		
TOTAL		35,000	35,000		7,958	

The number and type of respondents are based on observations from previous U.S. Energy and Employment Report surveys, which have been conducted since 2015. Similarly, the time required to respond is also based on these observations.

Below is breakdown of the burden estimates calculated for this reinstatement:

- 25,000 responses are expected from companies that are not expected to qualify for the survey, indicate that they aren't energy companies or simply don't want to complete the survey. The average burden for filling out the survey based on prior non-federal data collection averages is 1.1 minutes for both phone interviews and online surveys. This equates to 458 hours of total burden across 25,000 respondents. Time is built in for answering the phone and listening to the request.
- 10,000 responses are expected from companies that qualify for and agree to take the survey. The average burden for both the telephone and web versions of the survey is estimated to be 45 minutes. This equates to 7,500 hours of total burden across 10,000 respondents.

A.12B. Estimate of Annual Cost to Respondent for Burden Hours

Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories. The cost of contracting out or paying outside parties for information collection activities should not be included here. Instead, this cost should be included under 'Annual Cost to Federal Government'.

Table A2. Estimated Respondent Cost Burden

Type of Respondents	Total Annual Burden Hours	Hourly Wage Rate	Total Respondent Costs
Business (HR) representatives	7,958	\$36.64	\$291,581
TOTAL	7,958		\$291,581

The estimate of burden hours is based on observed time to complete the survey, which has been conducted annually since 2015. The fully loaded cost estimate is solely private sector, as the government is not surveyed. Hourly wages are provided by the September, 2021 release of employer costs for employee compensation by the Bureau of Labor Statistics.⁴

A.13. Other Estimated Annual Cost to Respondents

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

⁴ Fully loaded wage estimates are private sector fully loaded average as of the second quarter, 2021. Source: Bureau of Labor Statistics Employer Costs for Employee Compensation ([National Compensation Survey \(NCS\) Home Page \(bls.gov\)](https://www.bls.gov/national-compensation-survey)).

There are no other estimated annual costs to respondents.

A.14. Annual Cost to the Federal Government

Provide estimates of annualized cost to the Federal government.

The cost to the federal government to conduct the survey, collect and analyze data, and oversee necessary contracts is \$1.3 million. This is based on costs incurred for previous surveys.

A.15. Reasons for Changes in Burden

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

	Requested	Program Change Due to Agency Discretion
Total Number of Responses	35,000	+35,000
Total Time Burden (Hr)	7,958	+7,958
Total Cost Burden	\$291,581	+291,581

There are some changes to the agency's estimate since the last time this survey was approved. Specifically, the number of responses has changed due to observations since 2015 in the number of full completions per response. In addition, the total cost burden was not entered during the initial submission, and DOE is correcting that omission here.

Because this collection had previously expired, there is no existing approved hourly burden, and all burdens are represented as changes due to agency discretion as a result of re-instating the collection.

A.16. Collection, Tabulation, and Publication Plans

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

Step 1. Clean, Deduplicate, and Verify Data

BW Research Partnership will check all data for accuracy and completeness prior to conducting any analysis. Although protocols are initiated to prevent data duplication, there is a chance that more than one response can be collected for a location. In this instance, responses are reviewed to determine the most accurate information. This is done by reviewing previous information gathered for a record in order to determine comparability. If needed, the respondents are re-contacted and asked to verify the information in question.

Step 2. Perform Statistical Analysis, Cross-Tabulation, and Geographic Detail

BW Research Partnership will provide DOE with a preliminary topline report of the results, which is a question-by-question memo summary of the survey. BW Research will also meet with DOE in-person or by phone to discuss the initial findings and discuss the direction for the written report.

The senior members of BW Research Partnership have had extensive, formal graduate-level training in advanced statistics and have been applying these techniques for over ten years for our clients. The Project Team will work with DOE at multiple stages in the process to ensure the project deliverables exceed expectations.

BW Research Partnership will work with DOE to ensure the optimal report layout, to be replicated and improved for each year of the study. The Project Team will also provide DOE with a list of employers surveyed who have agreed to provide their name and contact information to DOE, to the extent allowed by CIPSEA. Due to confidentiality issues and the ethical standards of survey research (CASRO) and CIPSEA, the Project Team does not release survey participant details without permission from respondents.

Step 3. Provide Data Tables, Charts, and Figures

BW Research Partnership will create and provide DOE with all pertinent data tables from the research. This includes all metrics by identified subgroups. The Project Team will also design and produce all charts and figures based on the previous data analysis and provide them to DOE.

Step 4. Provide Draft 1 of Report

BW Research Partnership will provide a first draft of the national report and state and county data tables, in form and substance similar to the 2021 USEER. This will be a report in Microsoft Word for ease of editing and will include charts produced in Excel. The report will include context and examples to illustrate findings effectively.

Step 5. Incorporate Feedback and Develop Draft 2 of Report

This step incorporates edits and requests from DOE staff in multiple iterations. It will be delivered in Word format.

Step 6. Finalize Report in Word

This step provides another round of copy-editing for DOE and its stakeholders. It will also allow for a final review for typographic errors and requests for additional charts, figures, tables, and other graphics.

Step 7. Design and Publish Final Report

BW Research Partnership will produce a report of publishable quality using graphic design in either Microsoft Publisher, Adobe Suite, or another professional design software package. DOE staff will have an opportunity to comment on and edit the design to ensure it meets the highest standards of quality.

A.17. OMB Number and Expiration Date

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

DOE will display the control number and expiration date for OMB approval of the collection.

A.18. Certification Statement

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

This collection contains no exception to the certification statement identified on OMB Form 83-I.