

SUPPORTING STATEMENT FOR FORMS EIA-871A-J
COMMERCIAL BUILDINGS ENERGY CONSUMPTION SURVEY
OMB NO: 1905-0145

INTRODUCTION

The Energy Information Administration (EIA) of the U.S. Department of Energy (DOE) is requesting reinstatement for a three-year approval of the Commercial Buildings Energy Consumption Survey (CBECS), Forms EIA-871A through J. These forms will be used to collect data on energy consumption and expenditures and energy-related building characteristics for the commercial sector of the U.S. economy during calendar year 2007. This supporting statement covers the following forms:

871A	Building Questionnaire
871B	Authorization Form
871C	Natural Gas Usage
871D	District Heating Usage
871E	Electricity Usage
871F	Fuel Oil Usage
871G	Worksheet 1: Characteristics, Energy Sources and Equipment
871H	Worksheet 2: Energy Amounts Used and Dollars Spent
871I	Mall Building Questionnaire
871 J	Mall Establishment Questionnaire

The CBECS is a national multistage probability sample survey of commercial buildings and the energy suppliers to these buildings. The sampling unit is the building. The data are collected during a voluntary computer-assisted personal interview with buildings' owners, managers or tenants. Since 1995, the CBECS has been conducted on a quadrennial basis; the 2007 CBECS will be the ninth iteration.

The overall objective of the CBECS is to collect basic statistical information on the consumption of and expenditures for energy in commercial buildings, and the energy-related characteristics of the buildings. The CBECS is the only source of national-level data on commercial buildings characteristics and their energy consumption and expenditures.¹ The data are made available to the public in electronic tables and reports at www.eia.doe.gov/emeu/cbecs. Public use files that have been masked to protect the identity of individual respondents are also available electronically.

The information collection proposed in this supporting statement has been reviewed in light of applicable information quality guidelines. It has been determined that the information will be collected, maintained and used in a manner consistent with the OMB, DOE, and EIA information quality guidelines.

Changes for the 2007 CBECS

¹ ? EIA also conducts energy consumption surveys in the residential and manufacturing sectors.

The proposed forms for the 2007 CBECS reflect a few changes from the 2003 CBECS. These changes include:

- In the 2003 CBECS, Form EIA-871I was the “College/University/Hospital Energy Summary Form.” On that form, EIA attempted to collect information on the total energy inputs and outputs to the central plants on college, university, and hospital campuses. Respondents were also asked for the total number of buildings and the total floorspace of all buildings served by the central plant. Upon review, EIA realized that the data collected on these forms was often not of very high quality. EIA decided that for the small amount of useable data acquired on these forms, it was not worth the burden on the respondents, so this form has been eliminated for the 2007 CBECS.
- Two new forms, EIA-871I and J, have been added to facilitate higher quality and less burdensome data collection in strip shopping centers. Review of past CBECS data has indicated that because of the diversity of the different establishments within a strip mall, it is very unlikely that one single respondent will have the array of knowledge necessary to answer all the CBECS questions about an entire strip mall. Therefore, EIA has decided to use a combination of two interview types – a mall building interview (Form EIA-871I) and a mall establishment interview (Form EIA-871J) – to collect data for strip shopping centers. These forms are essentially subsets of Form EIA-871A, each containing different sets of questions from the main CBECS building questionnaire. The mall manager or leasing agent for a strip mall will be administered Form EIA-871I, which will collect general information on the mall building structure. Establishments within the mall will be subsampled (the number selected to vary by the size of the strip mall building) and respondents from each of those businesses will be administered Form EIA-871J, which contains questions pertaining specifically to the establishment (as opposed to the whole mall), such as operating characteristics, equipment used, and energy consumption. EIA will combine these interviews to arrive at data that characterizes strip mall buildings as a whole.

Enclosed malls will be administered the regular Buildings Questionnaire (with one or two additional questions that are specific to malls). Enclosed malls tend to contain more homogenous establishment types than do strip malls and also usually have a mall manager who is easily located and can provide the requested information about the entire building.

- The Water Office within the U.S. Environmental Protection Agency (EPA) is funding the inclusion of questions related to water use. There is a growing demand for water in the commercial sector of the economy, but very little data about how water is actually used in this sector. The EPA estimates that water and wastewater utilities will need billions of dollars for infrastructure construction, upgrades, and replacement during the next 20 years to meet the increasing demand for water. Getting better information on how water is used by commercial buildings is the first

step toward understanding commercial water use and the energy impact of that use.

One water question will simply ask respondents if they have heard of the EPA's WaterSense program. EPA will use this to assess a baseline awareness of their program. Three questions asking about the presence of water-related equipment in the building and one question asking if the sewer flow is metered will only be asked of certain building types, which, in the 2003 CBECS, represented only 65 percent of the sampled buildings. The other water questions will be collected in a module of the survey similar to the energy consumption modules. These questions will collect information on the amount of water consumed in 2007, whether it was metered or estimated, and how much it cost; how much water was used outside; and how much water was used for cooling towers (only applicable if there is central chiller in the building, which was only 13 percent of sampled buildings in 2003). The questions from this module will be provided to the respondent ahead of time on a worksheet (Form EIA-871H) to allow them time to consult their records.

- The DOE Office of Energy Efficiency and Renewable Energy (EERE) is funding the inclusion of some questions requested by Pacific Northwest National Laboratory (PNNL) and the National Renewable Energy Laboratory (NREL). Both of these laboratories rely heavily on CBECS data for their studies that aim to improve the energy efficiency of buildings. Their research is becoming even more relevant, as global warming and energy efficiency have once again become serious issues that are in the forefront of public consciousness.

The questions added for EERE seek to gain better understanding of the energy demand within buildings by collecting more detail about the structure of the building. For buildings with office space (22 percent of the sample in 2003 had significant office space), one question will ask if that space is configured as an open plan (cubicles), and if so, about how much (with ranges provided) and whether the open space is mainly within the core of the building or around the perimeter. Other questions ask: how much of the building façade is lighted (with ranges provided); if there is a parking area associated with the building that is lighted with fixtures powered through the buildings electrical service and, if so, the vehicle capacity of that parking area and whether or not the electricity consumed by these lights is included in the consumption that they provide; whether the roof is flat, shallowly pitched, or steeply pitched; how many floors are below ground; and whether there is an attic.

- In 2003, no energy suppliers for fuel oil, district steam, and district hot water were contacted, that is, there was no supplier survey for these energy sources. In 2007, we will reinstate the supplier survey for these energy sources (Forms EIA-871D and F), but only under certain circumstances, as described in the next two paragraphs.

Fuel oil suppliers will only be contacted in the case that fuel oil is used for main space heating, and the building respondent is not able to provide acceptable consumption data. In 2003, this would have been 165 cases. Fuel oil is often used

solely for backup electricity generation (486 cases in 2003), and therefore just a small amount is used per year. In these cases, it is not worth burdening the fuel oil supplier, even if the building respondent is unable to provide the data.

District steam and hot water suppliers will only be contacted if there is not a central plant on the building's campus or complex; in the 2003 CBECS, there were only 72 buildings that met those criteria. Very few central plants are able to provide data on the actual amount of steam or hot water provided to individual buildings, so it is not worth burdening them with requests for the data. Only district steam or hot water suppliers such as municipal providers will be contacted.

- Based on experience with the 2003 CBECS and consultation with data users, refining and reformatting of the Building Questionnaire (Form EIA-871A) have occurred. For the 2007 CBECS questionnaire, wording changes were made, clarifying definitions were added, and response categories were refined. Edits were added to the survey instrument to help preclude call-backs to respondents. Most of the question modifications are minor and will not result in any additional burden to the respondents. The three questionnaire sections in which substantive changes were made were ownership and occupancy, heating and cooling equipment, and computer equipment.

Building ownership and occupancy is a topic for which EIA often receives data inquiries. Energy conservation, equipment maintenance and purchasing, and energy use behavior are all closely related to who occupies the building. In order to more accurately characterize ownership and occupancy, questions were added to collect information on who is responsible for the operation and maintenance of the energy systems and who has direct input on decisions regarding purchases of energy-related equipment.

The heating and cooling equipment sections were improved by adding some follow-up questions to the equipment types in order to verify that the equipment is being reported into the appropriate category. A question on the distribution system was also added in response to both an internal need for the data and upon hearing multiple requests for this information from CBECS data users.

The energy used by computers and other information technology equipment continues to become more significant in commercial buildings. To help clarify the information already being collected on computer equipment being used in buildings, questions were added about whether multiple monitors are used and about the number of laptop computers.

A. JUSTIFICATION

A- 1. Legal Authority

The authorization for collecting the data on Forms EIA-871A-I is set forth in the Federal Energy Administration (FEA) Act of 1974, as amended (Pub. L. No. 93-275, 15 U.S.C. 761 et seq). Section 13(b) of the FEA Act, 15 U.S.C. 772(b), states as follows:

All persons owning or operating facilities or business premises who are engaged in any phase of energy supply or major energy consumption shall make available to the [Secretary] such information and periodic reports, records, documents, and other data, relating to the purposes of this Act, including full identification of all data and projections as to source, time, and methodology of development, as the [Secretary] may prescribe by regulation or order as necessary or appropriate for the proper exercise of functions under this Act.

The data that the survey will yield by means of Forms EIA-871A-I will assist the Secretary in carrying out the functions and duties described in section 5(b) of the FEA Act, 15 U.S.C.764(b), which states that the Administrator of the FEA (now the [Secretary] of DOE) shall:

- (2) assess the adequacy of energy resources to meet demands in the immediate and longer range future for all sectors of the economy and the general public; ...
- (9) collect, evaluate, assemble, and analyze energy information on reserves, production, demand, and related economic data.

As the authority for invoking 5(b) above, section 5(a) of the FEA Act, 15 U.S.C. 764(a), states:

Subject to the provisions and procedures set forth in this Act, the [Secretary] shall be responsible for such actions as are taken to assure that adequate provision is made to meet the energy needs of the Nation. To that end, he shall make such plans and direct and conduct such programs related to the production, conservation, use, control, distribution, rationing, and allocation of all forms of energy as are appropriate in connection with only those authorities or functions:

- (1) specifically transferred to or vested in him by or pursuant to this Act; ...
- (3) otherwise specifically vested in the [Secretary] by the Congress.

Authority for invoking Section 5(a) of the FEA Act, is provided in turn by Section 52 (15 U.S.C. 790a) of the FEA Act which states:

“(a) It shall be the duty of the (Director) to establish a National Energy Information System (hereinafter referred to in this Act as the “System”) ... [that] shall contain such information as is required to provide a description of and facilitate analysis of energy supply and consumption within and affecting the United States on the basis of such geographic areas and economic sectors as may be appropriate...

(b) At a minimum, the System shall contain such energy information as is necessary to carry out the Administration's statistical and forecasting activities, and shall include,... such energy information as is required to define and permit analysis of...

(2) the consumption of mineral fuels, nonmineral energy resources, and electricity by such classes, sectors, and regions as may be appropriate for the purposes of this Act..."

A-2. Needs for and Uses of the Data

The EIA has a series of surveys in place that address the demand for energy in the United States and the effect of that demand on the nation's social and economic needs. These systems are the: Residential Energy Consumption Survey (Forms EIA-457A-H); Manufacturing Energy Consumption Survey (Forms EIA-846A-C); and Commercial Buildings Energy Consumption Survey (Forms EIA-871A-J). The three surveys span end-use sectors that account for over 60 percent of the energy consumed in the United States. Not included in these surveys are the agriculture, mining, construction, and transportation sectors.

The CBECS, conducted on a quadrennial basis, fulfills multiple needs in DOE. The CBECS data constitute the only national data available on energy consumption in commercial buildings that are both comprehensive in nature and statistically reliable. As such, the CBECS data series constitute the only data series that allow policy makers and program implementers in both the public and private sectors to keep track of national trends in energy consumption for the commercial sector and commercial buildings. The CBECS is also an integral part of the overall EIA effort to collect and publish energy end-use consumption data.

Many of the uses of CBECS are long-term, ongoing projects. To better understand the needs of the CBECS customers, EIA has, over the survey cycles, sought input from them. For the 2007 CBECS, in order to ensure that crucial data used by the CBECS users were not eliminated, CBECS data users were contacted to gain their input on essential core questions.

The CBECS data provide essential inputs to the following:

- **National Energy Modeling System (NEMS)—Office of Integrated Analysis and Forecasting (OIAF), EIA:** The NEMS, EIA's modeling system meets a broad spectrum of Departmental needs. It is used frequently to assess policy questions posed by the White House and the Congress. CBECS data are tailored to meet the needs of this model and are used to characterize the U.S. commercial sector in the NEMS. The commercial module of the NEMS provides the energy forecasts for the commercial sector that appear in a congressionally mandated publication reporting forecast data. These data are reported in EIA's *Annual Energy Outlook*.
- **Benchmark for Energy Star Buildings—Environmental Protection Agency (EPA):** CBECS data are used to create benchmarking models by EPA that allow building owners or managers to assess and then rank their buildings energy efficiency

in order to apply for the Energy Star label. The models relate building energy consumption to statistically relevant drivers of energy consumption. Using the CBECS data, the EPA has developed an innovative energy management tool called Portfolio Manager that helps building owners, managers and operators evaluate energy use and document performance. It answers the important question, “How does my building compare with energy performance of other similar buildings?” To date, benchmarking models for office buildings, K-12 schools, hotel/motels, supermarket/grocery stores, hospitals, medical offices, residence halls/dormitories, and warehouses are available.

- **Building Energy Simulation Studies—*Pacific Northwest National Laboratory (PNNL)***: The output of the various building energy simulation studies undertaken by PNNL attempt to characterize the national and regional **energy savings potential** of specific building technologies, the **impact of changes in national energy codes and standards**, and the **impact of various DOE program initiatives**. These energy simulations require accurate data to help establish a baseline building construction as input. PNNL relies on CBECS for a defensible and broad understanding of the nature and characteristics of buildings and their energy using equipment and systems by building size, age, geographic location and climate zone.
- **Policy Formulation and Analysis—*Department of Energy (DOE)***: The Office of Policy (PO), and EERE are the two main DOE offices (outside of EIA) that extensively use the CBECS data in a variety of analytical studies. These studies have used CBECS data: to arrive at national estimates of energy savings for various policy options within DOE such as the Federal Lighting Initiative; to assess the amount of energy used by heating and cooling equipment when setting efficiency standards; and to assess the potential for fuel switching and cogeneration.
- **Input for DOE’s CORE DATA BOOK—*EERE***: The CORE Databook provides a consistent and readily accessible set of core commercial and residential building data that are used by a wide range of energy analysts and building managers in their analysis of energy use in the commercial and residential sectors. CBECS data are used as input for the commercial buildings chapters.
- **Appliance Standards—*Lawrence Berkeley National Laboratory (LBNL)/EERE***: CBECS data are used by LBNL for analyzing impacts from possible energy efficiency standards for commercial unitary air conditioners. LBNL relies on CBECS for information about the building types using the air conditioning equipment, the percent of floorspace cooled by the equipment and the electricity load factors in the CBECS buildings.
- **Standardization and Codes for New Building Design—*The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)***: CBECS data have been used by ASHRAE as input to developing standards and codes for buildings. CBECS data are a core part of the ASHRAE Handbook Applications, Chapter 34 on Energy Management.

- **Prototype for Canadian Commercial Buildings Energy Use Survey—*Natural Resources Canada*:** CBECS was used as the model for the 2000 Commercial Institutional Building Energy Use Survey (CIBEUS) conducted by the Natural Resources Canada and the Statistics Canada. The CBECS design and methodology were used to develop the CIBEUS. Both building characteristics and energy consumption data were collected in a sample of Canadian commercial buildings.
- **Market Research—*Energy Consultants*:** Energy consultants use the CBECS data as benchmarks for the penetration of energy-related equipment, new technologies and conservation features. CBECS data have been used in an analysis of delivering energy and energy services in the retail sector and to office buildings.
- **National Input-Output Accounts—*Bureau of Economic Analysis (BEA)*:** BEA uses the new construction data that are collected in the CBECS to estimate the structures component of gross private fixed investment.

A-3. Use of Automated, Electronic, Mechanical or Other Forms of Information Technology

The Building Questionnaire (Form EIA-871A) will be administered using a computer assisted personal interview (CAPI) survey instrument, which allows for more rapid data collection and extensive use of skip patterns that requires respondents to answer only questions that are pertinent to their specific situations. This, in turn, provides an abbreviated interview for many respondents and lessens the need for extensive follow-up.

In the 2003 CBECS, respondents were asked to provide copies of their electricity and natural gas bills to the interviewers. For the 2007 CBECS, interviewers will be equipped with portable scanners to electronically capture images of the bills instead. This will relieve respondents from the burden of copying the bills themselves. The use of scanners was recommended by the 2007 CBECS contractor based on their success using the scanners in the 2005 Residential Energy Consumption Survey (RECS).

A-4.

Efforts to Identify Duplication and the Inadequacies of Similar Data

EIA has carefully examined several Federal government surveys to ascertain to what extent, if any, they overlap the Forms EIA-871A-J. No other survey system collects data on the characteristics of commercial buildings and their energy consumption. In fact, this is why the CBECS was used by the Census Bureau to collect information on construction improvements and maintenance repairs expenditures. These searches did identify several energy-supplier surveys that provide data on the commercial sector. The identified supplier surveys are:

- Form EIA-6A—Coal Distribution Report (Annual);
- Form EIA-176—Annual Report of Natural and Supplemental Gas Supply and Disposition;
- Form EIA-782A—Refiners’/Gas Operators’ Monthly Petroleum Product Sales Report;
- Form EIA-782B—Resellers’/Retailers’ Monthly Petroleum Product Sales Report;
- Form EIA-821—Annual Fuel Oil and Kerosene Sales Report;
- Form EIA-826—Monthly Electric Utility Sales and Revenue Report with State Distributions;
- Form EIA-857—Monthly Report of Natural Gas Purchases and Deliveries to Consumers; and
- Form EIA-861—Annual Electric Utility Report

The inadequacies of these data as a substitute for the energy supplier data collected on Forms EIA-871C-F are discussed below. Checking EIA’s Data Resources Directory revealed no other unnecessary duplication. EIA also requested comments from the public on possible duplication with other surveys and received no feedback.

None of the supplier surveys are suitable as a substitute for the data that will be collected on Forms EIA-871C-F. These supplier surveys collect data on the total energy supplied to the commercial sector. The reporting unit for the CBECS is the commercial building. The CBECS focuses on the relationship between the building characteristics and the amount of energy consumed in the building as reported by the building owners, managers or tenants of the sampled buildings. In the cases where these consumption data are unavailable at the building level, CBECS then links individual building characteristic data obtained during the in-person interview phase of the CBECS with the buildings’ actual energy consumption and expenditure data gathered from its energy suppliers.

From the CBECS information, it is possible to produce national and regional energy consumption and expenditures data and to profile the commercial buildings population in terms of their energy-related consumption characteristics. These analyses would not be possible using only the total energy supplied that is collected by the energy supplier surveys mentioned above because the data are not available at the commercial building level and thus cannot provide information on deliveries or purchases at the building level. Therefore, there would be no direct link to the building characteristic data collected on Form EIA-871A.

A-5. Reduction of the Burden on Small Businesses and Other Small Entities

The EIA has designed the CBECS so that small businesses are not unduly burdened. All buildings of 1,000 square feet and smaller will not be surveyed in the 2007 CBECS. Additionally, building owners, managers and tenants will receive worksheets (Forms EIA-871G and H) prior to the interview to assist them during the interview.

Because the CBECS is administered using a computer-assisted interview, it is possible to program complicated skip patterns into the instrument that would not be practical on a paper

form. Smaller buildings tend to have less equipment and as a result will be asked far fewer questions than a large building with lots of activity and equipment.

Finally, in addition to not requesting consumption of district chilled water or bottled gas, EIA does not request energy consumption or expenditure data for wood or coal. The buildings that use these energy sources or their suppliers tend to be small businesses that often do not keep records of consumption and expenditures for long periods of time, or do not keep them in a readily accessible form.

A-6. Results of Collecting Data Less Frequently

As mentioned in Section A-2, “Needs for and Uses of the Data” CBECS is conducted on a quadrennial basis. This schedule complements the other energy end-use data collections that EIA is conducting.

If the CBECS were to be conducted less frequently than on a quadrennial basis, serious breaks in the continuity of the series could develop that would directly impact on the ability to forecast energy use in the commercial buildings sector. The use of quadrennial cycle is based on the belief that long-term shifts in energy markets are best examined by energy demand. Major shifts in energy demand in the commercial sector are tied to the number of commercial buildings and the energy-related characteristics of existing buildings. It requires a medium- to long-term planning process to construct new buildings, enlarge existing buildings or make the capital-intensive changes that would significantly affect the energy consumption of a building. A four-year cycle of data collection is effective for monitoring such changes.

A-7. Special Circumstances

There are no special circumstances that would require the 2007 CBECS to be conducted in a manner inconsistent with the guidelines in 5 CFR 1320.5.

A-8. Summary of Consultations Outside the Agency

EIA initially sought input from a variety of data users in early August, 2006 through an e-mail CBECS user study. A letter inviting input on various aspects of the CBECS questionnaire and survey process was sent to individuals representing various organizations, including other DOE offices and laboratories, State energy offices, other government agencies, universities, and private companies who have contacted EIA about CBECS data in the past. All of the comments received in response to this letter were considered, and some improvements were made to the questionnaire as a result. The e-mail message also publicized a special CBECS User Needs session that was held at the end of August at the 2006 Summer Study on Energy Efficiency in Buildings conference, sponsored by the American Council for an Energy-Efficient Economy (ACEEE). Two CBECS team members led that session which was attended by building and energy researchers.

EIA received three comments in response to an October 25, 2006 Federal Register notice (Volume 71, Number 206, pages 62428-62429):

- **Mr. Bernard A. Gelb, Congressional Research Service:** Responded that he is strongly in favor of the reinstatement of the collection of data on energy consumption in commercial buildings. As an energy economist working for the Congress, he is called upon to perform analyses in the context of existing and proposed legislation and the absence of CBECS data would severely limit the ability to perform such analyses.
- **Mr. Dennis Fixler, Chief Statistician, Bureau of Economic Analysis:** Suggested that CBECS building activity categories be made consistent with the U.S. Census Bureau's Survey of the Value of Construction Put-In-Place (VPIP). The 17 VPIP categories are very general – such as “Residential buildings,” “Commercial,” “Office,” “Health care,” “Power,” and “Manufacturing” – and EIA responded, explaining that the proposed categories are either already a CBECS category, included in a different EIA end-use survey, or out of scope for the end-use surveys.
- **Mr. Richard Heinisch, ASHRAE 90.1 Lighting Subcommittee Member:** Suggested that CBECS use the same set of building type categories as the ASHRAE 90.1 and IECC energy codes. A list of 32 building types was provided to EIA. Most of the suggested categories are already included in the CBECS, and EIA responded to Mr. Heinisch, explaining how to map his suggested categories to the CBECS data.

A-9. Remuneration

Currently, there are no plans to provide any payment or gift to respondents.

A-10. Provisions for Confidentiality of Information

The confidentiality of individual respondents is protected under the Confidential Information Protection and Statistical Efficiency Act of 2002 (P.L. 107-347). In addition, any employee of the survey contractor who is involved with CBECS must undergo CIPSEA training and sign a pledge not to release the information. The specific provisions for handling data and other related survey materials in a manner that will provide the confidentiality protection required by CIPSEA is set forth in a contract between EIA and the survey contractor.

A-11. Justification for Sensitive Questions

No sensitive questions are asked on Forms EIA-871A-J.

A-12. Reporting Burden Estimates

The annual respondent burden for the 2007 CBECS is estimated at 2,544 hours. (The survey is conducted quadrennially, however, the burden estimates are annualized over the requested 3-year approval period.) The following table provides a detailed breakout of this figure.

	Building Questionnaire Forms (EIA-871A, G, and H)	Mall Building Questionnaire Forms (EIA-871I and G)	Mall Establishment Questionnaire Forms (EIA-871J, G, and H)	Energy Supplier Forms (EIA- 871C-F)	Total for All Forms
Response Time. .	60 min. (40 min. + 20 min.)	30 min. (20 min. + 10 min.)	40 min. (20 min. + 20 min.)	30 min.	
Number of Forms.....	5,275	350	875	3,200	
Reporting Burden-Hours:					
Survey.....	5,275	175	583	1,600	7,633
Annual.....	1,758	58	194	533	2,544
(Prorated over 3-year approval period)					

The approximate average time for each Building Questionnaire (EIA-871A), 40 minutes, is based on the 2003 CBECS, for which the average completion time was 31 minutes; additional questions on the 2007 CBECS Building Questionnaire may add a few more minutes to the interview. The approximate average time for each Mall Establishment Questionnaire (EIA-871I), 20 minutes, is based on the 2003 CBECS, for which the average time for an establishment interview was 20 minutes. The Mall Building Questionnaire (EIA-871J) is similar in length to the Establishment Questionnaire, has therefore been estimated to have the same completion time. The average time to complete the worksheets (Forms EIA-871G and H) is estimated at 20 minutes, or 10 minutes per form.

A-13. Total Annual Cost Burden to Respondents

There are no additional capital and start-up costs components, or operations and maintenance and purchase of services component for this data collection.

It is estimated that the total cost to respondents will be \$450,364, for an average annual cost of \$150,121. (See table below for detailed calculations.) An average per hour cost of \$59.00 is used because that is the average loaded (salary plus benefits) hourly cost for an EIA employee. EIA assumes that the survey respondent workforce completing surveys for EIA is comparable with the EIA workforce.

	Building Questionnaire Forms (EIA-871A,G, and H)	Mall Building Questionnaire Forms (EIA-871I and G)	Mall Establishment Questionnaire Forms (EIA-871G, H, and J)	Energy Supplier Forms (EIA-871C- F)
Hourly Rate.....	\$59.00	\$59.00	\$59.00	\$59.00
Response Time. .	60 min.	30 min.	40 min.	30 min.
Cost per Form...	\$59.00	\$29.50	\$39.33	\$29.50
Number of Forms.....	5,275	350	875	3,200
Respondent Costs				
Survey.....	\$311,225	\$10,325	\$34,414	\$94,400
Annual.....	\$103,742	\$3,442	\$11,471	\$31,467

A-14. Annualized Costs to the Federal Government

The CBECS is a quadrennial survey and is funded over four fiscal years.

The cost to the government of the 2007 CBECS is estimated at \$9.6 million. Based on a four-year cycle, the annualized cost to the Government is approximately \$2.4 million.

Of the \$9.6 million, \$7 million is in the form of data collection contracts for both the Buildings Survey and the Supplier Survey. These contracts are for: (1) preparing the sample; (2) administering a pre-test; (3) training the interviewers; (4) collecting the data; (5) processing the data, including variance estimation; and (6) documenting the survey procedures.

The remaining costs are for EIA staff time, estimated at 20 FTE's per survey cycle (i.e., for 4 years), at an average cost of \$130,000 per FTE, yielding staff costs of \$650,000 per year. Staff costs include (1) interfacing with data users; (2) specifying the survey design; (3) programming and testing the questionnaires; (4) directing and monitoring the survey contractor on the sample design, data collection and nonresponse follow-up procedures; (5) editing the data; (6) developing the nonresponse adjustments (imputations); (7) analyzing the data; (8) preparing the data reports for dissemination; and (9) preparing public use data for release on the internet.

A-15. Reasons for Changes in Burden

Since this is a reinstatement, the overall total change in hours is the total annual burden hours proposed. Therefore, an increase due to agency discretion (program change) is 2,544 hours.

Since the 2003 CBECS (2,666 hours), there has been a 122 hour decrease in the annual burden hours. Although the total number of forms is equal to the 2003 CBECS, a portion of these (the Mall Building and Mall Establishment Questionnaires) are abbreviated questionnaires. This new distribution of forms is designed to add accuracy and efficiency to the collection of data in strip shopping centers, a building type that has presented a challenge to CBECS over the years.

The total number of Building Questionnaire Forms (EIA-871A) for 2007 decreased from the 2003 CBECS by 1,025 (1,025 hours). The new Mall Building and Mall Establishment Forms (EIA-871I and J) add 1,225 interviews, but since they are shorter, they add only 758 total survey burden hours (see table in A-12 for details). The energy supplier forms (Forms EIA-871C-F) were decreased by 200 forms (100 hours). So, the added 758 hours minus 1,025 hours minus 100 hours equals minus 367 hours, which, prorated over the 3 year approval period, equals a 122 decrease in the annual burden hours.

A-16. Schedule for Collecting and Publishing Data

The results of the CBECS will be published by the EIA in electronic form on the EIA website at www.eia.doe.gov/emeu/cbecs. All data will be published in aggregated form only and will be prepared by EIA in accordance to EIA publication standards. Detailed tables will contain energy consumption and expenditures for electricity, natural gas, fuel oil and district heat by numerous energy-related building characteristics. Public use data that have been masked to maintain the building’s confidentiality will also be available on the EIA web site.

The estimated time schedule for data collection and related publication activities is shown here.

Conduct Building Interviews.....	February, 2008 through September, 2008
Collect Energy Supplier Data.....	June, 2008 through October, 2008
Preliminary Summary Data Available on the Internet.....	February, 2009
Building Characteristics Tables on the Internet.....	June, 2009
Consumption and Expenditures Tables on the Internet....	December, 2009

A-17. Approval to Not Display Expiration Date

The expiration date will be displayed on the form.

A-18. Certification Statement

There will be no exceptions to the Certification for Paperwork Reduction Act Submissions of OMB Form 83-I.