



HIGH-PERFORMANCE BUILDING CONGRESSIONAL CAUCUS COALITION

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TO: SENATE ENERGY & WATER APPROPRIATIONS SUBCOMMITTEE STAFF
FROM: HIGH-PERFORMANCE BUILDING CONGRESSIONAL CAUCUS COALITION
SUBJECT: IMPORTANCE OF CBECS, RECS, AND MECS: BACKGROUND AND SPECIFIC REQUESTS
DATE: JULY 25, 2011

The High-Performance Building Congressional Caucus Coalition

Representing over 300,000 engineers, architects, manufacturers, code officials, and other building industry professionals, the High-Performance Building Congressional Caucus Coalition (HPBCCC) is a private sector coalition of over 160 organizations and corporations providing guidance and support to the High-Performance Buildings Caucus of the U.S. Congress. The HPBCCC helps heighten policymaker awareness of the major impact that buildings have on our health, safety, economy, and environment. Through Congressional briefings and informational events, the HPBCCC helps bring the technical expertise of the building industry to bear on some of our nation's most challenging issues.

Data is essential to informed decision-making, and the HPBCCC supports providing appropriations to collect data and allow work to resume on the Commercial Buildings Energy Consumption Survey, Residential Energy Consumption Survey, and Manufacturing Energy Consumption Survey.

Specific Requests: Senate EIA Appropriations and Report Language

To remedy the harmful House report language (described below) and provide clear Congressional support for the energy consumption surveys, the HPBCCC requests the following appropriations level for the U.S. Energy Information Administration (EIA) and report language for the Senate Energy & Water Development Appropriations Subcommittee.

Requested EIA Appropriations Level for FY 2012:

\$112 million.

Requested Report Language for the Senate Energy & Water Development Appropriations Subcommittee:

“The Commercial Buildings Energy Consumption Survey (CBECS) is a unique and essential tool that helps the federal government, building industry, and market understand building energy use and set long-term goals and priorities. With the increases in funding over fiscal year 2011, the Department shall allocate funding necessary to complete work on the 2011 edition of CBECS, and support data collection for the Residential Energy Consumption Survey, and the Manufacturing Energy Consumption Survey.”



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Background: What is the CBECS? What is the Current Status of the Survey?

CBECS stands for the “Commercial Buildings Energy Consumption Survey”. CBECS is a nationally representative survey of commercial building energy consumption and expenditures, and their energy-related characteristics in the United States.

The Survey has been conducted about once every four years. “Commercial buildings” in the CBECS context includes all buildings in which at least half of the floor space is used for a purpose that is not residential, industrial, or agricultural; thus it includes building types that might not traditionally be considered “commercial”, such as schools, correctional institutions, and buildings used for religious worship¹.

The most recent CBECS data available are from the 2003 edition of the Survey. The 2007 data are flawed and unusable due to data collection errors that have since been corrected for the 2011 edition of the Survey. Work on the 2011 CBECS has been halted due to appropriations reductions in fiscal year 2011 to EIA, which oversees the Survey.

Why CBECS Data Are Important for the U.S. Economy, Jobs, Energy Efficiency, and Environmental Conservation

As outlined below, buildings have a major impact on the U.S. economy, and CBECS data form the basis for understanding patterns of energy use, informing the decisions of the industry and key policymakers and government programs. For instance, in 2007, U.S. residential and commercial building renovation was valued at \$451 billion, and new construction was valued at \$755 billion². In addition, buildings account for 40 percent of U.S. energy consumption, 73 percent of electricity consumption, 38 percent of coal, and 33 percent of natural gas consumption³.

CBECS data are used by many federal and private sector programs in their efforts to promote building efficiency, including: The ENERGY STAR Buildings program; Leadership in Energy and Environmental Design (LEED) for Existing Buildings; Green Globes®; ASHRAE’s Building Energy Quotient (bEQ) building energy labeling program; and many others, which are all founded on performance comparisons with CBECS information. CBECS data are also used by federal agencies and national laboratories to help identify and prioritize opportunities to increase building efficiency.

¹ U.S. Energy Information Administration. Commercial Buildings Energy Consumption Survey.
<http://www.eia.gov/emeu/cbecs/>.

² U.S. Building Technologies Program. “Buildings Energy Data Book”.
<http://buildingsdatabook.eren.doe.gov/TableView.aspx?table=1.3.1>.

³ U.S. Building Technologies Program. “Buildings Energy Data Book”.
<http://buildingsdatabook.eren.doe.gov/ChapterIntro1.aspx#tables>.



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If support is not provided, work on the 2011 CBECS data will not likely resume, and the government and industry will be forced to rely on data that is nearly a decade old. The past decade has seen consequential efforts to help the market improve energy performance, including updated building codes and building standards. Without CBECS, it will be much harder to judge the cost-effectiveness of these programs and efforts, a matter of huge import for the industry and building owners. Additionally, without an updated comprehensive picture of energy consumption in the U.S. it would be harder to identify opportunities to increase efficiency, such as building retrofits.

Retrofitting buildings to increase efficiency helps drive the manufacturing industry, which supplies more efficient building equipment and technologies. Greater building efficiency also helps reduce waste and conserve natural resources.

A 2009 McKinsey & Company study stated that energy efficiency retrofits could generate between 500,000 and 750,000 direct, indirect, and induced jobs through 2020⁴.

Support for CBECS in Congress

EIA would receive an increase of \$9.9 million for fiscal year 2012, compared to FY 2011 in the House Energy and Water Development appropriations bill (H.R. 2354). The Committee report accompanying this legislation included harmful language that would have prioritized other EIA activities above CBECS, and the other energy consumption surveys. The specific report language reads as follows:

“With the increases in funding over FY 2011, the Department [of Energy] is directed to fund all data collection, releases, and reports on oil, natural gas, electricity, renewables, and coal; all previously funded international energy statistics; and all ongoing energy analysis efforts, **before allocating funding to the energy consumption surveys.**” (Harmful text **bolded**)

The prioritization of other EIA surveys over the energy consumption surveys in the report was not meant to convey a complete lack of support. This was made clear by two successive colloquies that the Chair and Ranking Democrat of the House Energy & Water Development Appropriations Subcommittee (Representatives Frelinghuysen and Visclosky, respectively) engaged in with the Republican and Democratic Co-Chairs of the High-Performance Buildings Congressional Caucus (Representatives Biggert and Carnahan, respectively). These colloquies were made on the House floor on Wednesday, July 13. Below are notable excerpts from the colloquies:

Representative Frelinghuysen: “the Consumer Building Energy Consumption Survey is an important resource for the building sector. The bill provides an increase of \$10 million for the Energy Information Administration; and if funding is available, I expect that an update of the consumer building survey would be funded.”

⁴ Granade, H.C., et al. (2009). “Unlocking Energy Efficiency in the U.S. Economy”. McKinsey & Company. http://www.mckinsey.com/en/Client_Service/Electric_Power_and_Natural_Gas/Latest_thinking/Unlocking_energy_efficiency_in_the_US_economy.aspx.



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Representative Biggert: “Substantial investments in the commercial building sector have been made since the last CBECS was published in 2003. The updated data is not only valuable to building owners looking to make improvements, but also necessary to inform the Annual Energy Outlook that we, in Congress, rely on. Finally, I would like to point out that the building renovation sector relies overwhelmingly on American-made goods for its work. In fact, over 90 percent of the manufacturing of furnaces, insulation and ductwork is here in the United States. So by making this data available to commercial buildings through CBECS, we are directly supporting American jobs.”

Background: What is the RECS? What is the Significance of the Survey?

RECS stands for the “Residential Energy Consumption Survey”. Similar to CBECS, RECS is a nationally representative sample of housing units. Specially trained interviewers collect energy characteristics on the housing unit, usage patterns, and household demographics. This information is combined with data from energy suppliers to these homes to estimate energy costs and usage for heating, cooling, appliances and other end uses — information critical to meeting future energy demand and improving efficiency and building design.

First conducted in 1978, the thirteenth RECS was conducted in 2009. The 2009 survey collected data from 12,083 households in housing units statistically selected to represent the 113.6 million housing units that are occupied as a primary residence. Data from the 2009 RECS are tabulated for the four Census regions, the nine Census divisions, and 16 States. These 16 States vary in their geography, climate, and population size.

RECS data are integral ingredients for some of EIA's more comprehensive data products and reports, such as EIA's *Annual Energy Outlook* and *Annual Energy Review*. These products allow for broader comparisons across sectors, as well as projections of future consumption trends⁵.

Background: What is the MECS? What is the Significance of the Survey?

MECS stands for the “Manufacturing Energy Consumption Survey”. Similar to the CBECS, MECS is a nationally representative survey of manufacturing energy consumption and expenditures, and their energy-related characteristics in the United States. The survey captures energy consumption data across 21 industrial subsectors and 50 industry groups and its data is critical to better understand how U.S. manufacturers use energy.

MECS data have important direct impacts on U.S. industry and U.S. economy. The survey data are used by many federal and private sector programs in their efforts to promote industrial energy efficiency, including: The U.S. Environmental Protection Agency's (EPA) ENERGY STAR for Industry program; the U.S. Department of Energy's (DOE) *Save Energy Now*, Industrial Assessment

⁵ U.S. Energy Information Administration. “About the RECS”.
<http://www.eia.gov/consumption/residential/about.cfm>.



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Centers and Superior Energy Performance programs, the National Institute of Standards and Technology's (NIST) Manufacturing Energy Partnerships and the New York State Energy Research and Development Authority's (NYSERDA) industrial program. Many state energy offices, utility associations, universities and trade associations also depend on MECS data. In addition, manufacturers and industrial end-users develop baselines of their own energy use and they depend heavily on MECS data to understand how their energy use impacts overall U.S. energy consumption. Lastly, federal agencies and national laboratories depend on MECS data, which provides planning-relevant information useful for strategic planning to identify and to prioritize opportunities to deploy energy efficient technologies and programs to the industrial sector. MECS data also helps to inform the development of R&D priorities, programs, and other resources to promote energy efficiency and competitiveness throughout manufacturing.

If support is not provided, work on the 2010 MECS data will likely not resume, and the government and industry will be forced to rely on data that is six years old. The industrial sector has changed since then and as a result, this data no longer accurately reflects industrial energy use or the ways that industry improves its energy performance. This would make it much more difficult to identify opportunities to increase industrial efficiency, such as knowing which sectors to focus on.

Improving industrial energy efficiency helps create and retain jobs, both in manufacturing and in the energy services industry, which is becoming more critical to helping industrial end-users save energy and money.

Members of the High-Performance Building Congressional Caucus Coalition

American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)
Air Barrier Association of America (ABAA)
Air Conditioning, Heating and Refrigeration Institute (AHRI)
Alliance to Save Energy (ASE)
American Chemistry Council (ACC)
American Concrete Institute (ACI)
American Council of Engineering Companies (ACEC)
American Council of Engineering Companies (ACEC)
American Forest & Paper Association (AF&PA)
American Gas Association (AGA)
American Iron and Steel Institute (AISI)
American National Standards Institute (ANSI)
American Physical Society (APS)
American Plastics Council/American Chemistry Council (APC/ACC)
American Public Works Association (APWA)
American Society for Healthcare Engineering of the American Hospital Association (ASHE)
American Society of Civil Engineers (ASCE)
American Society of Interior Designers (ASID)
American Society of Landscape Architects (ASLA)



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American Society of Mechanical Engineers (ASME)
American Society of Plumbing Engineers (ASPE)
American Supply Association (ASA)
APPA (Serving Educational Facilities Professionals)
Architectural Testing
Architecture 2030 (Arch2030)
Armstrong Filtration
Asphalt Roofing Manufacturers Association (ARMA)
Associated Builders and Contractors (ABC)
Association for Facilities Engineering (AFE)
Association of Collegiate Schools of Architecture (ACSA)
Association of Public and Land-Grant Universities (APLU)
Association of State Energy Research & Technology Transfer Institutions (ASERTTI)
BASF Corporation (BASF)
Bracewell & Guiliani
Build LACCD/Beezley Management
Builders Hardware Manufacturers Association (BHMA)
Building Codes Assistance Project (BCAP)
Building Owners & Managers Association International (BOMA)
C3 Carbon
Canadian Standards Association, International (CSA)
Carpet and Rug Institute (CRI)
Cellulose Insulation Manufacturers Association (CIMA)
Center for Environmental Innovation in Roofing (CEIR)
CMX Engineering
Composite Lumber Manufacturers Association (CLIMA)
Construction Specifications Institute (CSI)
Copper Development Association (CDA)
DC Strategies
Design-Build Institute of America (DBIA)
Dryvit Systems Inc.
Dupont
Dutko Worldwide
Ecobuild America LLC
Edison Electric Institute (EEI)
EFFTEC Efficiency Technologies Inc.
Electric Power Research Institute (EPRI)
EMCOR Energy Services
Energy Future Coalition (EFC)
EnOcean Alliance (EnOcean)
Environmental & Energy Study Institute (EESI)
Environmental Defense Fund (EDF)
Exterior Insulation & Finish Systems (EIMA)
Extruded Polystyrene Foam Association (XPSA)
Federal Facilities Council (FFC)



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Federal Performance Contracting Coalition (FPCC)
Federation of American Scientists (FAS)
Frigo Design
GAIA Group LLC
Gas Technology Institute (GTI)
Glass Association of North America (GANA)
Golin Harris
Green Builder, LLC, Green Builder Media LLC
Green Building Pro
Green Standard Green Building in Canada
GREENGUARD Environmental Institute
GreenLink Alliance (GLA)
GreenLink Conservation Alliance
Heating, Air-conditioning & Refrigeration Distributors International (HARDI)
Honeywell
Illuminating Engineering Society (IES)
Indoor Air Quality Association, Inc. (IAQA)
InfoComm International
Ingersoll Rand
Institute for Market Transformation (IMT)
International (ASTM)
International Association of Lighting Designers (IALD)
International Code Council (ICC)
International Council of Shopping Centers (ICSC)
International Facility Management Association (IFMA)
International Institute of Ammonia Refrigeration (IIR)
International Interior Design Association (IIDA)
Johnson Controls Inc.
LMK Partners (LMK)
LonMark International
Malachite LLC
Manufactured Housing Institute (MHI)
Masonry Veneer Manufacturers Association (MVMA)
McQuay International
Mechanical Contractors Association of America (MCAA)
National Academy of Environmental Design (NAED)
National Air Duct Cleaners Association (NADCA)
National Air Filtration Association (NAFA)
National American Insulation Manufacturers Association (NAIMA)
National Association of Electrical Distributors
National Association of Home Builders (NAHB)
National Association of Industrial and Office Properties (NAIOP)
National Association of the Remodeling Industry (NARI)
National Association Realtors (NAR)
National Building Museum (NBM)



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National Electrical Mfrs Association (NEMA)
National Environmental Balancing Bureau (NEBB)
National Fenestration Rating Council (NFRC)
National Fire Protection Association (NFPA)
National Glass Association (NGA)
National Institute of Building Sciences (NIBS)
National Insulation Association (NIA)
National Ready Mix Concrete Association (NRMCA)
National Roofing Contractors Association (NRCA)
National Rural Electric Cooperative Association (NRECA)
National Society of Professional Engineers (NSPE)
National Trust for Historic Preservation (NTHP)
Natural Resources Defense Council (NRDC)
North American Technician Excellence (NATE)
Organization of American States (OAS)
Owens Corning
PACE-Capstone
Pahl Architecture
Passive House Institute (PHIUS)
Performance Building Institute (PBI)
Philips Electronics North America Corporation
Plumbing Manufacturers Institute (PMI)
Plumbing-Heating-Cooling Contractors –National Association (PHCC)
Polyisocyanurate Insulation Manufacturers Association (PIMA)
Portland Cement Association (PCA)
PPG Industries Inc. (PPG)
Practice, Education and Research for Sustainable Infrastructure (PERSI)
Practice, Education and Research for Sustainable Infrastructure (PERSI)
Praxis Green
Research Frontiers Inc. (RFI)
Rinnai America Corp.
Roof Coatings Manufacturers Association (RCMA)
Roof Express LLC
ROXUL (The Better Insulation)
SAGE Electrochromics Inc.
Serious Materials Serious Materials Inc.
Sheet Metal and Air Conditioning Contractors' National Association (SMACNA)
Single Ply Roofing Industry (SPRI)
Solar Energy Industries Association (SEIA)
Southern Illinois University Carbondale
Spray Polyurethane Foam Alliance (SPFA)
Sto Corp.
Sustainable Buildings Industry Council (SBIC)
TCA Textured Coatings of America, Inc. (TCA)



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The American Council for an Energy-Efficient Economy (ACEEE)
The American Institute of Architects (AIA)
The Associated General Contractors of America (AGC)
The Association of Energy Engineers (AEE)
The Brick Industry Association (BIA)
The Cohen Group
The Green Building Initiative (GBI)
The Green Mechanical Council (GMC)
The Harris Firm
The International Association of Plumbing and Mechanical Officials (IAPMO)
The Radiant Panel Association
The Real Estate Roundtable (RER)
The Society of American Military Engineers (SAME)
The Stella Group, Ltd.
The Vinyl Institute
Tile Roofing Institute (TRI)
U.S. Fuel Cell Council (USFCC)
U.S. Green Building Council (USGBC)
United Technologies Corporation (UTC)
VIA Forward
Water Quality Association (WQA)
WDMA Window & Door Manufacturers Association (WDMA)
Whitlock Dalrymple Poston & Associates, P.C., Consulting Engineers
Wiss, Janney, Elstner Associates Inc.
World Resources Institute (WRI)