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To:
National Institute of Building Science

Re: HIGH PERFROMANCE BUILDING DATA COLLECTION INITIATIVE
Written Testimony

YRG sustainability provides technical and strategic sustainability consulting services to support a high level of performance, value, and quality in the built environment and within businesses and organizations. To identify energy efficiency goals for new and existing building projects, and lend credibility to the process, we refer wherever possible to third party industry standards and energy use data. The Commercial Buildings Energy Consumption Survey (CBECS) is a critical research database of industry accepted energy use for various building types. It is universally used as a benchmark for national energy use.

This written testimony is submitted to iterate our interest in supporting continued collection and management of building energy use data to guide design and operations industry.

1. *Given your areas of interest and expertise, what building related data is most critical?*

We use CBECS data to guide the design and retrofitting of building systems. In working with building owners and designers, referencing CBECS data enables our industry to answer the following questions:

1. How much energy should my building be using compared to its peer group?
2. What is the estimated operational breakdown of building energy usage and therefore greatest area of opportunity for retrofits?
3. How does energy usage vary in different parts of the country, or between building types?
4. Should I invest in energy management projects in my existing building?
5. How is my building performing over time?

ENERGY STAR Target Finder and Portfolio Manager are critical tools in supporting the questions above. In addition, The LEED green building rating system, updated every three years, awards projects leading the industry with sustainability strategies. CBECS is the underlying database used by the ENERGY STAR program, which in turn is the basis of Energy performance credits and prerequisites. An outdated and dormant database hurts the rating system and undermines the intent of LEED.

2. *Recommendations on how the Institute and the building community may proceed in identifying, collecting, funding, compiling and disseminating the desired building related data.*

Complete suspension of the CBECS program would be detrimental to the industry. However, this decisive moment provides an opportunity to restructure data collection to meet our current green building market.

We recommend leveraging existing data collection efforts conducted at the utility and state level, such as by NYSERDA in NY State, who creates and administers efficiency and renewable programs for the state. These organizations often conduct significant building energy use surveys in their regions that would likely be useful for data collection efforts on the national level. In addition, requiring recipients of incentives through these programs to also provide the data required by the future CBECS database would ease data collection and provide a verification method for the utility or incentive programs.

Recommendations for renewed data collection:

- **Partnerships:** Our recommendation is to develop a new building -related data survey system by the greater building community that builds off of the protocols established by CBECS. This new strategy would couple the identification and collection of data with existing utility and municipal energy incentive programs.
- **Referenced Code:** Moreover, the collection would be expanded to include additional data of code project was built to for more accurate comparison of consumption data with buildings designed by similar codes or comparison across codes to evaluate their efficacy is bringing about desired outcomes.
- **Design vs Performance energy use:** More and more new buildings being designed refer to benchmark data for goal setting. These targets are verified by energy analyses developed during design stage. Due to discrepancies in operations and real life issues, the actual energy performance data may or not be of the same magnitude as designed energy usage. For ongoing new building design exercises, it is very important to understand the discrepancies between designed and actual performance data. If available, it would be helpful to request design target energy use to present as a comparison or deviation from actual performance data.
- **Additional Building information:** Finally, expanding the database to deliberately target gap areas in the data set will increase the value for those project types not currently represented, such college labs, libraries, classroom buildings, and buildings within given climate zones.

Conclusion: Benchmark energy use data is the most effective and credible way for buildings to measure and compare their energy performance. It is fundamental in undertaking effective energy efficiency initiatives at the building and portfolio level, both for new and existing buildings , and helps drive design, construction and operation industries towards energy efficiency. There is untold value in the CBECS data and the associated EnergyStar tools in the pursuit of high performance buildings and overall energy efficiency, and we strongly recommend maintaining and enhancing this program.