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# **Supporting Statement for Programs for Improving Energy Efficiency in Buildings**

## **Part B: Collections of Information Employing Statistical Methods**

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**OMB No. 1910-5184**

*DOE HQ F 413.4, Zero Energy Ready Home Program*

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April 2024



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This specific collection is used to track the number of homes participating in the DOE Zero Energy Ready Home program. These homes participate by using and validating DOE-researched innovative building techniques and technologies to build homes that meet specific prescriptive and performance requirements. They are third party inspected and verified to meet the voluntary program requirements of the DOE Zero Energy Ready Home program. Respondents do not send any information directly to DOE. Rather, DOE uses existing industry inspection and rating processes and data managed by the industry-run Home Certification Organizations (HCOs). Ratings and inspections performed by verifiers are conducted in the housing industry for numerous purposes, including a home energy rating or an Energy Rating Index (ERI) calculation, which is used by builders across the country to measure the energy performance of their homes and for code compliance. In addition to this, the energy rating process is used by other federal programs such as EPA's Energy Star Certified New Homes program and Indoor airPLUS program. The DOE Zero Energy Ready Home program requires the same inspections as these other efforts to meet a specific performance threshold.

In addition, the program requires an inspection on hot water delivery efficiency as well as an inspection on solar ready features, heat pump ready features, heat pump water heater ready features, and electric vehicle ready features that may, or may not be performed as part of a basic energy rating inspection. Rather than collecting reports directly from program participants, DOE collects data from HCOs, which provide access to their database for all homes that receive an energy rating. Certification data is downloaded monthly or quarterly from the HCOs via a custom query established within their database. No effort is required by participants in the transfer of the data. The time burden estimate for this collection is entirely an estimate of the additional time needed to perform the additional inspections beyond a basic rating, Energy Star Certified New Homes verification, and Indoor airPLUS verification. Most information in the collection is automatically entered into the HCO Database as it is entered and/or generated by software during the energy rating process. HCOs use their own reporting processes, some of which may include manually entered data in addition to automatically entered data.

## B.1. Respondent Universe

**Describe (including a numerical estimate) the potential respondent universe and any sampling or other respondent selection methods to be used.**

There are currently 4 HCOs involved in the collection of Zero Energy Ready Home certification data. The response universe for this request includes all homes that are built and certified to the DOE Zero Energy Ready Home program requirements. Any home built using the innovative building techniques and technologies required by the DOE Zero Energy Ready Home program must be certified using a 3<sup>rd</sup> party verifier. Because participation in this program is voluntary, there is no way to know the exact universe of participants except through the reporting in this collection. Based on current program participation growth rates under the previous information collection request, we estimate that this universe will include approximately 5000 homes per year during the period covered by this information collection request. These homes could be located in any US State or Territory and could be built by for-profit builders, not-for-profit builders, or local housing authorities.

## B.2. Statistical Methods

**Describe the procedures for the collection of information.**

Because of the voluntary nature of participation, the only way to know how many builders and homes are participating in the program is to track the reporting of each home in the participant universe to HCOs. The Purpose of the information collection is to determine the universe of program participation. Because we only know the universe size through this information collection, collecting only a sample of homes would not help us understand the total participation. There exists no other data source that could help determine the universe of participants. The National Association of Home Builders estimates that there were 1.553 million housing starts in 2022.<sup>1</sup> Assuming the program achieved the estimate of 5000 homes annually, it would only represent 0.3% of the market. In order to accurately count those 5000 homes, our universe of participants would need to be much higher and the collection burden much heavier were we to try to determine participation numbers through a sampled approach. In fact, the program is so small relative to all homes that a random sample may not identify any DOE Zero Energy Ready Homes.

### **B.3. Maximizing Response Rates**

**Describe methods to maximize response rates and to deal with issues of non-response.**

Response rates are maximized by collecting the aggregate information directly from HCO databases rather than from individual respondents. The certification process cannot be completed without the energy rating data being sent to HCOs. The Certificate is generated using the energy rating software. In this way, any home that is certified as a DOE Zero Energy Ready Home will get reported automatically.

### **B.4. Test Procedures and Form Consultations**

**Describe any tests of procedures or methods to be undertaken.**

All tests used in the certification process are already developed by other industry organizations. In many cases, they used published consensus standards. For example, the energy rating process itself is now an ANSI standard. Likewise, tests for building envelope air leakage and duct leakage both use ASTM or RESNET consensus test standards. The hot water delivery test required by DOE Zero Energy Ready Home was developed by the EPA WaterSense program. We create no new tests for this information collection.

### **B.5. Statistical Consultations**

**Provide the name and telephone number of individuals consulted on statistical aspects of the design and the name of the agency unit, contractor(s), grantee(s) or other person(s) who will actually collect and/or analyze the information for the agency.**

There were no external individuals consulted on statistical aspects of this information collection. All data analysis and reporting will be conducted by DOE staff.

Questions on this information collection should be directed to the collection manager, Chris Early.

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<sup>1</sup><https://www.nahb.org/-/media/NAHB/news-and-economics/docs/housing-economics/starts-and-permits/housing-starts.pdf>