

**DOE Zero Energy Ready Home Program
Certification System**

for Homes and Apartments

Using an Energy Rating Index or Dwelling Unit Modeling Compliance Path

Effective Date: 1/1/2023



1.0 Introduction

The U.S. Department of Energy (DOE) **Zero Energy Ready Home (ZERH)** program relies upon third-party verification of homes and apartments to determine ZERH certification. A Home Certification Organization for ZERH certifications (HCO for ZERH) is defined as an independent organization that is recognized by DOE to implement a ZERH certification program that complies with the DOE ZERH Program Certification System, where single-family and multifamily homes are certified using the Energy Rating Index (ERI). These organizations are responsible for exercising authority over decisions related to the ZERH certification of homes and apartments according to the program requirements established by DOE, including decisions related to quality assurance processes and credentialing of individuals that verify homes and apartments to earn ZERH certification, hereafter referred to as “raters.”

The ZERH program requires ENERGY STAR Residential New Construction program certifications as a prerequisite within the different programs (i.e., single-family homes, multifamily). Therefore, a prerequisite for recognition as an HCO for ZERH is recognition by EPA as a Home Certification Organization (HCO). HCOs oversee ERI-based compliance paths for ENERGY STAR’s certification programs. Certification under the DOE ZERH program requires additional verifications and quality assurance processes, and therefore DOE has implemented the HCO for ZERH system as defined in these two documents:

1. This document, subsequently referred to as the **DOE ZERH Certification System**, establishes the specific eligibility criteria, policy requirements, and certification procedures required of a recognized HCO for ZERH.
2. **DOE Zero Energy Ready Home Program Certification Protocol (ZERH Certification Protocol)**. This companion document identifies the Standards and ZERH program requirements required to be met for a home or apartment to earn the ZERH certification when an ERI or dwelling unit modeling path is used.

Note: while most requirements in this document apply to all HCOs for ZERH, a subset of provisions are applicable only to California-serving HCOs for ZERH. These instances are noted in this document with the label ‘*For California.*’ Organizations may apply for recognition as an HCO for ZERH at the national level, in California only, or both nationally and in California.

An organization seeking to become an HCO for ZERH must submit to DOE an ‘Application for Recognition as an HCO for ZERH’ that demonstrates that it meets the program’s eligibility criteria and has the capability, competencies, and proper controls to implement a ZERH certification program in accordance

with the ZERH Certification System and the ZERH Certification Protocol. DOE will evaluate each Application for Recognition and do one of the following:

1. grant approval for an HCO for ZERH to operate a ZERH certification program, or
2. provide written feedback to the applicant noting where the application did not meet DOE requirements and the opportunity to discuss identified issues with DOE, or
3. terminate the application without further discussion, if DOE deems the applicant to be non-responsive.

Under the second scenario, applicants will be given 30 days to amend their application and resubmit for review. If the applicant does not resubmit within 30 days, the application will be terminated. Further, if DOE determines that the resubmitted application does not meet its requirements, the application will be terminated and DOE will not review subsequent amendments to the application for a period of six months.

DOE's recognition of an HCO for ZERH relates solely and specifically to the DOE Zero Energy Ready Home program for site-built single-family homes¹ and multifamily buildings that are certified using an Energy Rating Index (ERI) or, in California, a dwelling unit modeling approach. This recognition does not qualify an organization to implement or participate in other aspects of the DOE ZERH program such as ZERH certification of multifamily buildings that are using the prescriptive compliance approach. Further information for other types of ZERH Certification Organizations is posted on the program website here: <https://www.energy.gov/eere/buildings/doe-recognized-zerh-certification-organizations>.

Activities undertaken by HCOs for ZERH are not intended as services provided to the federal government. HCOs for ZERH are expected to be market-based and may not submit claims for compensation to DOE or any other federal agency for their activities related to fulfilling the required roles and responsibilities of recognized HCOs for ZERH. Recognized HCOs for ZERH may implement participation or certification fee structures, or seek funding from other sources, to support their ZERH certification program.

Organizations are encouraged to replicate their EPA HCO application and edit it for specificity to the ZERH program. DOE understands that there may be necessary redundancy, but notes that it is important to have applicant responses specific to the ZERH program. DOE will work with EPA and HCOs to streamline future versions of certification oversight systems.

¹ For the purposes of HCO for ZERH activities, "site-built single-family homes refers to any home partially or completely constructed at its final location, or a modular home installed at its final destination, but does not include Manufactured Homes.

2.0 Effective Date

The *ZERH Certification System* shall be effective on **1/1/2023**. DOE determinations regarding HCO recognition will be listed on the DOE website here: <https://www.energy.gov/eere/buildings/doe-recognized-zerh-certification-organizations>.

DOE may make future amendments, modifications, and revisions to this certification system. See Section 8 below for further details.

For California: The *ZERH Certification System* shall be effective for homes and apartments certified in California using Version 2 (and later) of the DOE ZERH Single Family California program requirements and Version 2 (and later) of the ZERH Multifamily California program requirements.

3.0 HCO for ZERH Eligibility Requirements

To be eligible for recognition by DOE as an HCO for ZERH, an organization is required to demonstrate the following:

3.1 The organization must already be an EPA-recognized Home Certification Organization (HCO) as listed on the EPA Home Certification Organization website². Any organization may apply for EPA recognition using the EPA's certification system, found [here](#)³. For EPA-recognized HCOs applying for DOE recognition as an HCO for ZERH, DOE will consider their application (in terms of geographic scope of operations) on the same basis that EPA recognizes the HCO (i.e., national including California, national except for California, or California only). EPA-recognized HCOs have demonstrated legal responsibility, independent governance, geographic scope of operations, and staffing and competency characteristics and capabilities sufficient to implement ENERGY STAR Certification System for Homes and Apartments using an Energy Rating Index or a Dwelling Unit Modelling Compliance Path. Therefore DOE, in coordination with EPA, uses EPA's recognition of an HCO as an eligibility requirement for DOE's consideration of an organization as a Home Certification Organization for Zero Energy Ready Home certifications (HCO for ZERH).

² https://www.energystar.gov/partner_resources/residential_new/working/other_participants/hco

³ https://www.energystar.gov/partner_resources/residential_new/working/other_participants/hco/become_hco#:~:text=An%20organization%20seeking%20to%20become,with%20the%20ENERGY%20STAR%20Certification

4.0 HCO for ZERH Policies

An HCO for ZERH is required to maintain documented formal policies as described below. *Note that these may be the same policies the organization uses as an EPA-recognized HCO with language edited to make it applicable to the ZERH program.*

4.1. Business Code of Ethics

The HCO for ZERH is required to maintain a business code of ethics for itself, its raters, and its designees (if used).

4.2. Impartiality and Objectivity

The HCO for ZERH is required to maintain conflict of interest (COI) policies to identify and mitigate risks to impartiality of the HCO for ZERH, its raters, and its designees. These policies must address COIs that pertain to both the individuals and organizations involved in the DOE Zero Energy Ready Home certification process. Where designees are used, the HCO for ZERH must maintain a specific conflict of interest policy for designees.

COI policies are required to include the disclosure of existing or potential conflicts of interest and steps to resolve the conflicts. In addition to any other conflicts identified, these policies must address, at a minimum, the following conflicts:

- Conflicts of interest between the HCO for ZERH and the builders it serves
- Conflicts of interest between individuals involved in the certification process and other entities involved in the design or construction of the home to be certified
- Conflicts of interest between raters, individuals performing quality assurance activities, and/or individuals making certification decisions

All COI policies are required to be reviewed on an ongoing basis and disclosures updated, as necessary. The HCO for ZERH is required to disclose any identified potential or existing conflicts of interest and mitigation steps to DOE on an annual basis. Section 5.7 below provides information about HCO for ZERH reporting requirements.

In addition, the HCO for ZERH's organizational chart and management system is required to reflect impartiality of decision making related to its DOE ZERH certification program and show a clear separation of roles between certification decisions from other business activities that may present a conflict of interest, if any. Certification decisions are required to be carried out by individuals that have not been involved in the process of evaluation (i.e., raters).

4.3. Non-Discrimination

The HCO for ZERH's policies, and the administration of its policies, are required to be non-discriminatory and may not unduly impede or inhibit access to its ZERH certification program, nor the ZERH Certification System or the ZERH Certification Protocol. Further, the HCO for ZERH is required to make its ZERH certification program accessible to all eligible ZERH builder and developer partners, and access may not be conditional upon the size of the ZERH builder or developer partner, nor conditional on membership in any association or group.

4.4. Publicly Available Information

The HCO for ZERH is required to provide publicly available information online that describes its ZERH certification program and its policies and procedures for granting and withdrawing ZERH certification.

5.0 Certification and Oversight Procedures

An HCO for ZERH is required to take all necessary steps to evaluate conformance with the DOE ZERH Program Certification Protocol, including the following measures:

5.1. Training, Credentialing and Listing of Raters

- In addition to providing raters with training required of EPA-recognized HCOs, HCOs for ZERH must provide training in the following areas:
 - At a minimum, the HCO for ZERH's raters performing ZERH certifications must complete the appropriate ZERH orientation training(s):
 - ZERH Program Orientation (currently under development by DOE)
 - ZERH Single Family V2 (currently under development by DOE)
 - ZERH Multifamily (currently under development by DOE)
 - ZERH Single Family for CA V2: to be developed.
 - ZERH Multifamily for CA V2: to be developed
 - *For California:* Training must provide raters the skills and knowledge to perform California HERS ratings, rather than ERI ratings.
- Credential individuals that have satisfied the training requirements specified above and ensure that only credentialed raters perform verification of homes and apartments to earn DOE ZERH certification.

- Maintain a public or private list of credentialed raters for its DOE ZERH certification program that is updated regularly.

5.2. Approved Rating Software Tools

DOE reserves the right to review rating software tools on an ongoing basis, as deemed necessary, and grant final approval for a tool's use in an HCO for ZERH's DOE ZERH certification program. DOE may require in the future that software will include functionality that assesses model inputs for validity and provides automated feedback to the HCO for ZERH. DOE anticipates that in the future an HCO for ZERH will be required to post and maintain a publicly accessible website that lists the software that is approved for use for ZERH certifications for specific timeframes.

Currently, an HCO for ZERH is required to:

- Ensure that rating software tools used in the HCO for ZERH's DOE ZERH certification program are approved through one of the following pathways:
 - DOE validation of proper functioning of software that is built using EnergyPlus and the NREL-developed ruleset for calculating ERIs.
 - Approval by the RESNET Accreditation Committee in accordance with the most current version of RESNET Publication 002.
 - *For California:* Rather than the above pathways, ensure that rating software tools used in the HCO for ZERH's DOE ZERH certification program for homes and apartments in California are approved by the California Energy Commission (CEC) in accordance with the applicable version of California's Building Energy Efficiency Standards.
- Ensure that current versions of rating software tools are used for DOE Zero Energy Ready Home certifications. A transition period no longer than six (6) months is allowed following new software version releases, as determined by a home or apartment's permit date.

5.3. Quality Control Protocols

The HCO for ZERH is required to implement comprehensive quality control systems and procedures that ensure that DOE ZERH certifications of homes and apartments are supported by on-site observation and testing including, at a minimum:

- Collection of energy simulation files for every certified home.
- Quality assurance file review of at least ten (10) percent of homes submitted by each individual rater; these can be the same ten (10) percent of homes reviewed for ENERGY STAR purposes.
- Quality assurance field evaluation, whereby quality assurance personnel independently verify DOE ZERH program requirements via a witness or after-the-fact test, of at least one (1) percent of homes submitted by each individual rater; these can be the same one (1) percent of homes tested for adherence to the ENERGY STAR HCO provisions.

- Selection of homes for file and field review that are as representative as possible of the ratings being completed, including across builders, communities, and home types (e.g., attached or detached).
- A set of repeatable standards for assessing whether discrepancies found during quality assurance file reviews and field inspections are within allowable thresholds, which include a maximum allowable ERI score variation of three percent (3%).
 - *For California:* Rather than being based on 3% variation, threshold standard must ensure that installed building components meet or exceed the energy performance of the design specifications (in alignment with the threshold structure in California’s Building Energy Efficiency Standards).
- In the event that discrepancies are discovered outside allowable thresholds, provisions for addressing the specific discrepancies of the certification(s) in question and, more generally, for identifying and addressing the root cause(s) to ensure the discrepancies do not reoccur.
- In the event of recurring discrepancies on an individual raters’ homes, provisions for increasing the rate of file review and field evaluation, as well as conditions for triggering disciplinary action by the HCO for ZERH.

DOE’s requirements for QA are provided above. Applicants should note that DOE will consider alternative approaches that are deemed by DOE to deliver an equivalent overall level of QA on ZERH Certifications. Quality Assurance Protocols that employ innovative quality control schemes, such as those relying on remote video QA, automated file flagging, and/or proposing alternative file and field review frequencies, may be submitted to DOE for consideration.

5.4. Sampling Protocol

An HCO for ZERH may choose to offer a sampling protocol for use in its DOE ZERH certification program. A sampling protocol may only be applied to the ZERH certification of dwelling units and sleeping units in buildings eligible under the ZERH-Multifamily program. Townhouses, single family homes, and duplexes are not eligible for sampling. When offered, the sampling protocol is required to, at a minimum:

- Require collection of energy simulation files for every certified unit based on a worst-case analysis;
- Require that apartments participating in sampling be within the same building, be the same construction type, and include the same envelope systems;
- Require successful inspection of at least the first seven (7) consecutive instances of a sampled measure before applying sampling to that measure;
- Ensure that verification occurs on a representative sample of apartments ready within a 30 calendar day period at a rate of no less than one-in-seven (or 15 percent);
- Corrective actions to address failures identified during sampling, including, at a minimum:

- Correction of any failed measures in the apartment where it was discovered,
- Additional evaluation of measures in minimum of two (2) additional apartments, and
- After multiple additional failures, requalification through evaluation of the measure in at least three (3) additional apartments and/or documentation of a root cause analysis.

5.5. Issuing the DOE Zero Energy Ready Home Certificate

The HCO for ZERH is required to maintain authority over all DOE ZERH certifications and responsibility for determining that certified homes and apartments conform with the DOE ZERH Certification Protocol. The HCO for ZERH is required to provide the DOE ZERH builder or developer partner with a DOE ZERH certificate (digital or hard copy) for each certified home or apartment. DOE will provide HCOs for ZERH with a certificate template indicating the minimum data requirements for the ZERH certificate, which will include identification of the issuing HCO for ZERH. DOE anticipates inclusion of a mandatory unique identifier for each ZERH certified dwelling unit following a standardized format determined by DOE and EPA. The unique certification identifier will be generated and recorded by the HCO/HCO for ZERH. DOE will coordinate with recognized HCOs for ZERH on the implementation of this new requirement.

5.6. Ethics Compliance and Homeowner Inquiry Resolution

The HCO for ZERH is required to maintain:

- An ethics complaint process covering the HCO for ZERH, its raters, and designees;
- Procedures for disciplining raters, including provisions for appeal and for informing DOE when disciplinary action is taken; and
- A resolution process for homeowner inquiries, including:
 - Providing a web page that allows homeowners to submit inquiries or concerns regarding the DOE ZERH certification of their home or apartment.
 - For eligible inquiries, performing Certification Reviews for the DOE ZERH Certification Protocol as defined by the DOE ZERH Rater Quality Assurance and Certification Review Checklist and rescinding the DOE ZERH certification in cases where the HCO for ZERH determines that a home fails the Certification Review.

Note that DOE reserves the right to terminate the DOE ZERH Partnership Agreement of raters that violate the terms of their partnership.

5.7. Recordkeeping, Reporting, and Disclosure

The HCO for ZERH is required to:

- Ensure the retention of certification documentation, including verification records, related to the DOE ZERH Certification Protocol for a minimum of three (3) years.

- Maintain a public or private database of DOE ZERH certified homes and apartments, including all data listed in Appendix A of this document.
 - *For California:* Rather than ERI metrics, the database must include Energy Efficiency Design Rating (Efficiency EDR) and/or Compliance Margin delta, as applicable.
- Provide a public interface to the database above that, at a minimum, accepts queries by physical address and reports the home or apartment’s current DOE ZERH certification status and date.
- DOE recommends (but does not require) that HCOs for ZERH share address-level ZERH certification data with parties that make certification information available to the real estate marketplace (e.g., Multiple Listing Services, real estate listing websites, and other data aggregators serving the underwriting, appraisal, and/or lending communities). DOE understands that HCOs for ZERH may need to limit data sharing in accordance with their internal data usage and sharing policies. Recommended data fields to share include:
 - ZERH Program Version
 - Date Certified
 - Home Type (e.g., Single Family, Multifamily)
 - Street Address
 - City/Locality
 - State
 - Zip Code
- Work with DOE to set up regular, automated database queries that allow DOE to export the information required in Appendix A.
- Provide DOE with aggregate/summary information about the energy-efficiency features used in homes and apartments certified through the HCO for ZERH’s DOE ZERH certification program, upon request. Examples might include median ERI score by state or average performance test scores for DOE ZERH certified homes in a given year.
- Conduct annual internal management review and provide DOE with annual report (or more frequently, upon request) regarding the HCO for ZERH’s administration of its DOE ZERH certification program, including quality assurance, dispute resolution activities, any identified conflict of interest, and conflict of interest mitigation.

5.8. Coordination with DOE

The HCO for ZERH is required to:

- Maintain open lines of communication with DOE to address questions and concerns promptly.
- Participate in meetings upon request by DOE.
- Work collaboratively with DOE to facilitate the comprehensive and coordinated investigation and response to:
 - Findings resulting from routine quality assurance activities;
 - Certification discrepancies, including those referred to the HCO for ZERH by DOE; and

- Certification Review Requests and other inquiries from homeowners.

6.0 Use of Designees

An HCO for ZERH is permitted to delegate many of the activities related to the implementation of its ZERH certification program to one or more external parties, referred to as designees. As examples, designees may serve as raters or perform quality assurance activities. Where an HCO for ZERH chooses to use designees, the HCO for ZERH is required to:

- Take responsibility for all activities of designees related to the implementation of its ZERH certification program.
- Have documented qualification criteria for designees.
- Maintain a public or private list of approved designees and their approved scope of activity.
- Ensure that designees follow all of the HCO for ZERH's policies and procedures, including those required in Sections 4.0 and 5.0.
- Have a quality assurance process by which to assess and monitor the activities completed by the designees on a regular basis.
- Implement corrective action for any designee breach of the HCO for ZERH's policies or procedures.

An HCO for ZERH may not use designees for the following activities:

- Establishing policies governing ZERH certification activities, including business code of ethics and conflict of interest policies, as outlined in Section 4.0.
- Exercising final authority over credentialing of raters to work with the HCO for ZERH's ZERH certification program, as outlined in Section 5.1.
- Exercising authority over certification decisions and issuance of the ZERH Certificate, as outlined in Section 5.5.
- Exercising final authority in resolving ethics complaints, presiding over appeals, and disciplining raters, as outlined in Section 5.6.
- Maintaining a database of homes and apartments that are certified as ZERH, as outlined in Section 5.7 and Appendix A.
- Coordinating with DOE, as outlined in Section 5.8.

DOE reserves the right to prohibit a designee's participation in ZERH certification activities with cause.

7.0 DOE Audits

DOE reserves the right to conduct audits of any and all HCO for ZERH activities related to the implementation of the ZERH Certification System and the ZERH Certification Protocol as needed to ensure the value and integrity of the ZERH program. It is DOE's intention to audit HCOs for ZERH one (1) year after initial recognition and every two (2) years thereafter, with additional audits as necessary based on performance issues that arise. DOE may revisit the audit protocols and schedules as the HCO for ZERH marketplace evolves. These audits may include, but are not limited to:

- Review of HCO for ZERH policies, procedures, documentation, and certification records.
- Phone interviews with HCO for ZERH personnel and/or designees.
- In-person meetings with HCO for ZERH personnel and/or designees at the HCO for ZERH's, the designee's, or DOE's offices, at DOE's discretion.
- Site visits (including re-evaluation, at DOE's discretion) at homes and apartments that have been certified by the HCO for ZERH through the ZERH Certification Protocol.

HCOs for ZERH are expected to fully cooperate with DOE audits, provide requested documentation, and make personnel available for interviews and meetings with DOE staff.

If DOE's audit identifies deficiencies, DOE will provide the HCO for ZERH with written notification and allow 30 days to resolve identified issues and provide DOE with a written response to DOE's findings. If the organization fails to submit a satisfactory response to DOE that addresses the deficiencies identified, DOE reserves the right to suspend or terminate the organization's recognition.

8.0 Amendments, Modifications, and Revisions

The following sections describe procedures to be followed in the event of amendments, modifications, and/or revisions initiated either by the HCO for ZERH or by DOE.

8.1 DOE-Initiated Changes

DOE reserves the right to amend, revise, or provide technical clarification regarding the ZERH Certification Protocol and ZERH Certification System as needed to ensure the value and integrity of the ZERH program.

HCOs for ZERH are required to implement changes according to the implementation timeline exhibit that DOE publishes with each update.

For changes to the ZERH Certification System, organizations previously recognized by DOE will generally be given 3 - 6 months to implement any policies or procedures needed to comply with new DOE requirements, unless otherwise specified by DOE based on consultation with HCOs for ZERH. If changes

affect an HCO for ZERH's Application for Recognition or an applicant's referenced documents, the HCO for ZERH is required to provide DOE with a redlined copy of any updates.

8.2 Revisions, Amendments, and Interpretations of Referenced Standards

HCOs for ZERH are required to implement revisions, amendments, and interpretations of standards referenced in the ZERH Certification Protocol within one (1) year of formal adoption by the standards developer and to publish an implementation timeline online. HCOs for ZERH may request that DOE allow for a longer implementation period when needed on a case-by-case basis. DOE will also accept any case-by-case exceptions to allow for a longer implementation period that an EPA-recognized HCO agrees to with EPA. If granted, the extended implementation timeline would be made available to all recognized HCOs for ZERH.

8.3 HCO for ZERH-Initiated Changes

The HCO for ZERH is required to notify DOE in writing about any proposed organizational, procedural, or policy changes, such as an addendum or interpretation to the HCO for ZERH's operation standards, that materially affect its compliance with the requirements outlined in the ZERH Certification System. If changes affect an HCO for ZERH's Application for Recognition or applicant's referenced documents, the HCO for ZERH is required to provide DOE with a redlined copy of any updates. Notification must be made at least 60 days prior to the implementation of such changes and with sufficient time to allow for DOE to evaluate the changes and determine if the HCO for ZERH will continue to meet all program requirements.

9.0 Suspension/Termination

DOE reserves the right to suspend or terminate its recognition of an HCO for ZERH that no longer meets the eligibility, policy, certification, or oversight procedure requirements of the ZERH Certification System and/or has demonstrated a pattern of actions that may negatively impact the integrity of, or consumer and industry confidence in, DOE's ZERH program. In such cases, DOE will provide the HCO for ZERH with written notification and allow 30 days to resolve identified issues and provide DOE with a written response summarizing the changes made. If the organization fails to submit a satisfactory response to DOE that addresses the deficiencies identified, DOE will suspend or terminate the organization's recognition.

Additionally, DOE will consider the suspension or termination by EPA of an EPA-recognized HCO as grounds for the same action by DOE, given that EPA recognition as an HCO is an eligibility requirement for an organization to be a DOE-recognized HCO for ZERH.

Should DOE suspend or terminate an HCO for ZERH, or if an HCO for ZERH determines that it will no longer implement a ZERH Certification System, the organization is required to cooperate with DOE to ensure an orderly closure of its activities and timely transfer of relevant documentation related to the certification of homes and apartments to the ZERH Certification Protocol. Organizations whose recognition as an HCO for ZERH is terminated may re-apply for recognition after a period of six months if they meet the eligibility requirements in Section 3.0.

Application for DOE Recognition as a Home Certification Organization for Zero Energy Ready Home Certifications (HCO for ZERH)

Completed applications should be submitted to DOE via email at ZERH@doe.gov.

DOE will confirm receipt of applications received within five business days and will use its best effort to make determinations on applications received within 90 business days. DOE may require an interview with the applicant to discuss this application, to be conducted either at DOE's offices or via conference call.

PART ONE: General Applicant Information

Organization Name: _____

Mailing Address: _____

Contact: _____

E-mail Address: _____

Primary Contact Telephone #: _____

Organization Web Site Address: _____

Proposed Geographic Scope (select one or both): __ National⁴ __ California⁵

Is the organization currently recognized as an HCO by the EPA?

- National _____
- California _____
- Both _____

When was the organization first recognized as an HCO by the EPA? _____

⁴ HCOs for ZERH operating at the national level may certify homes and apartments in all U.S. states except for California, using an Energy Rating Index (ERI)-based compliance path within the applicable ZERH Single-Family or Multifamily program requirements.

⁵ HCOs for ZERH operating in California may certify homes and apartments in California using a dwelling unit modeling approach within the ZERH Single-Family New Homes for CA or the Multifamily for CA program requirements.

PART TWO: Required Documentation

Attach to this application any policies, procedures, manuals, guidance documents, attestations, detailed narrative(s), and other documents necessary to demonstrate that your organization meets the eligibility requirements and has the capability, competencies, and proper controls to implement a ZERH certification program in accordance with the DOE ZERH Certification System for Homes and Apartments Using an Energy Rating Index or Dwelling Unit Modeling Compliance Path and the DOE Zero Energy Ready Home Program Certification Protocol. Complete the table below by filling in the “Applicant’s Reference Document(s)” column to indicate the submitted documentation that fulfills the ZERH requirement noted at left. To facilitate application review, please record the exact file name that is used in the attachment and highlight the applicable text within the document or note in the table its exact location.

Note that any section of this application that mirrors the EPA Home Certification Organization application may be completed by reusing materials submitted to the EPA for HCO recognition, as long as language is updated as necessary to make the response relevant to the ZERH program.

An organization with national HCO for ZERH recognition seeking to extend their certification program to California need only complete the sections indicated as “For California” unless other aspects of the organizations’ original application are also being updated. All other organizations must complete the entire table.

Organizations may re-purpose content previously submitted to EPA to gain recognition as an HCO. Such content should be revised to also address the ZERH certification process and all members involved.

Zero Energy Ready Home Requirements for a Certification Organization (HCO for ZERH)	Applicant's Reference Document(s)
3.0 HCO for ZERH Eligibility Requirements	
3.1 HCO Recognition	
Provide documentation that the organization is already recognized as an HCO under the EPA Energy Star program in the geographic regions where the organization is applying for certification as an HCO for ZERH.	
4.0 HCO for ZERH Policies	
4.1. Business Code of Ethics	
Provide HCO for ZERH's business code of ethics for the organization, its raters, and its designees. This may be the same code of ethics provided to EPA for certification as an HCO.	
4.2 Impartiality and Objectivity	
<p>Provide conflict of interest (COI) policies used to maintain impartiality of the HCO for ZERH, its raters, and its designees (if used). The COI policy must address COI that pertains to the individuals and organizations involved in verification and certification, include disclosure of existing or potential conflicts of interest and steps to resolve the conflict, and outline the frequency of review of the COI policies and when disclosures are updated.</p> <p>In addition to any other conflicts identified, these policies must address, at a minimum, the following conflicts:</p> <ul style="list-style-type: none"> • Conflicts between the HCO for ZERH and its builder clients; • Conflicts between individuals involved in the certification process and other entities involved in the design or construction of the home to be certified; • Conflicts between raters, individuals performing quality assurance activities, and/or individuals making certification decisions. <p>Provide the organizational chart and management system to demonstrate impartiality in decision making and the separation of</p>	

<p>roles between certification decisions and any business activities that may present a conflict of interest, if any. <i>Certification decisions are required to be carried out by individuals that have not been involved in the process of evaluation (i.e., raters).</i></p>	
<p>4.3. Non-Discrimination</p>	
<p>Provide policies and procedures and/or a detailed narrative indicating how the policies and administration of policies are non-discriminatory and do not unduly impede or inhibit access to the organization’s Zero Energy Ready Homes certification program, nor the ZERH Certification System or ZERH Certification Protocol.</p> <p>The policies and procedures and/or detailed narrative must also include how the organization makes its ZERH certification program accessible to all eligible ZERH builder or developer partners, and include evidence that access is not conditional on the size of the ZERH builder or developer partner, nor conditional on membership in any association or group.</p>	
<p>4.4 Publicly Available Information</p>	
<p>Provide the publicly available information covering the organization’s ZERH certification program and policies and procedures for granting and withdrawing certification and where it can be found online.</p>	
<p>5.0 Certification and Oversight Procedures</p>	
<p>5.1 Training, Credentialing, and Listing of Raters</p>	
<p>Provide policies and procedures or descriptions for the following:</p> <ul style="list-style-type: none"> • Development of training, examination, and continuing education programs for raters or recognition of existing training, examination and continuing education programs. <ul style="list-style-type: none"> ○ <i>For California:</i> Training must provide raters the skills and knowledge to perform California HERS ratings, rather than ERI ratings. • Training syllabus for training that will be delivered or recognized. • Credentialing process for individuals and process for ensuring that only credentialed individuals perform verification of homes and apartments. 	

<ul style="list-style-type: none"> Public or private list of credentialed raters that is updated regularly. 	
5.2 Approved Rating Software Tools	
<p>Provide a list of proposed rating software tools and login credentials for DOE testing use.</p> <p>Provide evidence that proposed rating software tools are approved through one of the following pathways:</p> <ul style="list-style-type: none"> DOE validation of proper functioning of software that is built using EnergyPlus and the NREL-developed ruleset for calculating ERIs. Approval by the RESNET Accreditation Committee in accordance with the most current version of RESNET Publication 002. <i>For California:</i> Rather than the above pathways, provide evidence that rating software tools used in the HCO for ZERH’s DOE ZERH certification program for homes and apartments in California are approved by the California Energy Commission (CEC) in accordance with the applicable version of California’s Building Energy Efficiency Standards. <p>Provide a description of the implementation process for when new software is released that specifically outlines transition periods no longer than six (6) months, as determined by a home or apartment’s permit date.</p>	
5.3 Quality Control Protocols	
<p>Provide policies and procedures and/or documentation describing the quality control systems and procedures in place to include, at a minimum:</p> <ul style="list-style-type: none"> Collection of energy simulation files for every certified home. Quality assurance file review of at least ten (10) percent of homes submitted by each individual rater. Quality assurance field evaluation, whereby quality assurance personnel independently verify DOE ZERH program requirements, via a witness or after-the-fact test, 	

<p>of at least one (1) percent of homes submitted by each individual rater.</p> <ul style="list-style-type: none"> • Selection of homes for file and field review are as representative as possible across builders and communities. • A set of repeatable standards for assessing whether discrepancies found during quality assurance file reviews and field inspections are within allowable thresholds, which include a maximum allowable ERI score variation of three percent (3%). <ul style="list-style-type: none"> ○ <i>For California:</i> Rather than being based on 3% variation, threshold standard must ensure that installed building components meet or exceed the energy performance of the design specifications (in alignment with the threshold structure in California’s Building Energy Efficiency Standards). • In the event that discrepancies are discovered outside allowable thresholds, provisions for addressing the specific discrepancies of the certification(s) in question and, more generally, for identifying and addressing the root cause(s) to ensure the discrepancies do not reoccur. • In the event of recurring discrepancies on an individual raters’ homes, provisions for increasing the rate of file review and field evaluation, as well as conditions for triggering disciplinary action by the HCO for ZERH. <p>If proposed, provide a detailed description of innovative quality control schemes, such as those relying on remote video QA, automated file flagging, and/or proposing alternative file and filed review frequencies.</p>	
<p>5.4 Sampling Protocol</p>	
<p>If a sampling protocol is proposed for dwelling and sleeping units in multifamily buildings, provide a description of the sampling protocol, to include, at a minimum:</p> <ul style="list-style-type: none"> • Stated requirement that energy simulation files based on a worst-case analysis be collected for every certified unit. 	

<ul style="list-style-type: none"> • Stated requirement that apartments participating in sampling be within the same building, be the same construction type, and include the same envelope systems. • Stated policy that requires successful inspection of at least the first seven (7) consecutive instances of a sampled measure before applying sampling to that measure. • Evidence that verification occurs on a representative sample of apartments ready within a 30 calendar day period at a rate of no less than one-in-seven (or 15 percent). • Procedures for addressing inspection failures identified during sampling, including additional inspections of non-inspected apartments, at a minimum: <ul style="list-style-type: none"> ○ Correction of any failed measures in the apartment where it was discovered. ○ Additional evaluation of measures in minimum of two (2) additional apartments. ○ After multiple additional failures, requalification through evaluation of measure in at least three (3) additional apartments and/or documentation of a root cause analysis. • Conditions for revoking eligibility to participate in sampling. • Evidence that any sampling protocol proposed upholds the site verification requirements imposed by 45L as updated by the Inflation Reduction Act of 2022. 	
<p>5.5. Issuing the DOE Zero Energy Ready Home Certificate</p>	
<p>Provide attestation that the HCO for ZERH maintains authority over all DOE ZERH certifications and takes responsibility for determining that certified homes and apartments conform with the DOE ZERH Certification Protocol and will provide the DOE ZERH builder or developer partner with the DOE ZERH certificate (digital or hard copy) for each certified home or apartment which includes the minimum DOE-required data requirements, including an identification of the issuing HCO for ZERH and the anticipated unique identifier for each ZERH certified dwelling unit.</p>	
<p>5.6. Ethics Compliance and Homeowner Inquiry Resolution</p>	

<p>Provide policies and procedures and/or a detailed narrative documenting the following:</p> <ul style="list-style-type: none"> • An ethics complaint process for the HCO for ZERH, its raters, and designees • Procedures for disciplining raters, including provisions for appeal and for informing DOE when disciplinary action is taken. • A resolution process for homeowner inquiries, including a web page that allows homeowners to submit inquiries or concerns regarding the DOE ZERH certification for their home or apartment. 	
<p>5.7 Recordkeeping, Reporting, and Disclosure</p>	
<p>Provide policies and procedures and/or detailed narrative to demonstrate the following:</p> <ul style="list-style-type: none"> • Certification documentation retention policy, indicating documentation is maintained minimum of (3) years. • Public or private database that includes the data listed in Appendix A. • <i>For California:</i> The database includes Energy Efficiency Design Rating (Efficiency EDR) and/or Compliance Margin delta, as applicable (rather than ERI metrics). • Public interface to the database above that, at a minimum, accepts queries by physical address and reports the home or apartment’s current DOE ZERH certification status and date. • Evidence that the HCO for ZERH has a system in place with the ability to share address-level ZERH certification data with parties that make certification information available to the real estate marketplace (e.g., Multiple Listing Services, real estate listing websites, and other data aggregators serving the underwriting, appraisal, and/or lending communities), if required by DOE. • Attestation that the HCO for ZERH will provide DOE with quarterly summary reports of the number of homes and apartments certified through the HCO for ZERH’s DOE ZERH certification program by geographic location, builder or developer partner name, and energy rating company name 	

<p>(if used). Alternatively, attestation that the HCO for ZERH will work with DOE to set up regular, automated database queries that allow DOE to export this information.</p> <ul style="list-style-type: none"> • Attestation that the HCO for ZERH will provide DOE with aggregate/summary information about the energy-efficiency features used in homes and apartments certified through the HCO for ZERH’s DOE ZERH certification program, upon request. • Attestation that the HCO for ZERH will conduct an annual internal management review and provide DOE with an annual (or more frequently, upon request) report regarding the HCO for ZERH’s administration of its DOE ZERH certification program, including quality assurance, dispute resolution activities, any identified conflict of interest and conflict of interest mitigation. 	
<p>5.8 Coordination with DOE</p>	
<p>Provide attestation that the HCO for ZERH will:</p> <ul style="list-style-type: none"> • Maintain open lines of communication with DOE to address questions and concerns promptly. • Participate in meetings upon request by DOE. • Work collaboratively with DOE to facilitate the comprehensive and coordinated investigation and response to: <ul style="list-style-type: none"> ○ Findings resulting from routine quality assurance activities; ○ Certification discrepancies, including those referred to the HCO for ZERH by DOE; and ○ Certification Review Requests and other inquiries from homeowners. 	
<p>6.0 Use of Designees</p>	
<p>Provide a detailed description of activities that the HCO for ZERH plans to delegate to designees.</p> <p>Where an HCO for ZERH chooses to use designees, provide an attestation that the HCO for ZERH takes responsibility for all activities of designees related to the implementation of its DOE</p>	

<p>ZERH certification program. In addition, provide policies and procedures and/or a detailed narrative to demonstrate the following:</p> <ul style="list-style-type: none"> • Documented qualification criteria for designees. • Maintenance of a public or private list of approved designees and their approved scope of activity. • Description of how the HCO for ZERH will ensure that designees follow all of the HCO for ZERH’s policies and procedures, including those required in Sections 4.0 and 5.0. • A quality assurance process by which to assess and monitor the activities completed by the designees on a regular basis. • Description of how the HCO for ZERH will implement corrective actions for any breaches of the HCO for ZERH’s policies or procedures. 	
<p>8.0 Amendments, Modifications, and Revisions</p>	
<p>Provide a narrative detailing the HCO for ZERH’s implementation of:</p> <ul style="list-style-type: none"> • DOE-initiated amendments, revisions or technical clarification regarding the DOE ZERH Certification Protocol such as new revisions of the Program Requirements. • Revisions, amendments, and interpretations of standards referenced in the DOE ZERH certification protocol within one (1) year of formal adoption by the standards developer and publishing of an implementation timeline online. <p>Provide attestation that, if needed, the HCO for ZERH will request DOE’s permission for an extended implementation timeline (beyond one year).</p>	

PART THREE: Declaration

As an officer of _____, I, the undersigned, represent here that I have the authority to serve as an authorized signatory and submit this Application for Recognition as a Zero Energy Ready Home Certification Organization to the U.S. Department of Energy. I understand that intentionally submitting false information to the U.S. government is a criminal violation of the False Statements Act, Title 18 U.S.C. section 1001.

The organization, _____, agrees to adhere to the provisions for Home Certification Organizations for Zero Energy Ready Home Certifications (HCOs for ZERH) outlined in the ZERH Certification System for Homes and Apartments Using an Energy Rating Index or Dwelling Unit Modeling Compliance Path, including granting DOE the right, at its discretion, to conduct periodic audits of any and all HCO for ZERH activities related to its ZERH certification program.

_____, also agrees to notify DOE in writing about any proposed organizational, procedural, or policy changes that materially affect its compliance with the requirements outlined in the ZERH Certification System at least 60 days prior to the implementation and, if applicable, provide and updated Application for Recognition.

_____, understands that DOE may amend, revise, or provide technical clarification regarding the ZERH Certification Protocol to be implemented according to the implementation timeline exhibit published with each update.

_____, understands that DOE may amend, revise, or provide technical clarification regarding the ZERH Certification System and that organizations that have been previously recognized by DOE will generally be given at least 180 days to implement any new policies or procedures needed to comply with DOE requirements, although DOE reserves the right to specify a shorter or longer timeline based on consultation with HCOs for ZERH.

In addition, _____, understands that if, after recognition, DOE determines that an HCO for ZERH no longer meets the eligibility, policy, certification and oversight

procedure requirements of the ZERH Certification System and/or has demonstrated a pattern of actions that may negatively impact consumer and industry confidence in, or the integrity of, DOE's ZERH program, DOE will provide the HCO for ZERH with written notification and allow 30 days to resolve identified issues and provide DOE with a written response summarizing the changes made. If the organization fails to submit a satisfactory response to DOE that addresses the deficiencies identified, DOE will suspend the organization's recognition.

Name: _____

Signature: _____

Title: _____

Organization: _____

Date: _____

Appendix A: Required DOE Zero Energy Ready Home Data Reporting

Program Certification Version

- Zero Energy Ready Home V1
- Zero Energy Ready Home California V1
- Zero Energy Ready Home Single Family Homes V2
- Zero Energy ready Homes Multifamily V2
- Zero Energy Ready Homes Manufactured Homes V1 (will not use ERI or dwelling unit modeling compliance)
- Zero Energy Ready Homes Manufactured Homes V2 (will not use ERI or dwelling unit modeling compliance)
- Zero Energy Ready Homes California V2
- Zero Energy Ready Homes California Multifamily V2

Energy Rating Index (ERI)

- Energy Rating Index Target
- Energy Rating Index Achieved without OPP
- Energy Rating Index Achieved with OPP (if applicable)
- Date of Rating
- Software Used and Version

Builder Identification

- ZERH Partner ID (note: found in public partner profile)
- Registered Builder Organization Name

Rater Identification

- Rater name
- Rater Organization Name

Dwelling Unit Unique Identifier

- Unique identifier for each ZERH certified dwelling unit, using standardized format as determined by DOE and EPA

Home Location

- Street Address
- Dwelling/Sleeping Unit #
- City
- State
- Zip Code
- 2021 IECC Climate Zone

Home Characteristics

- Home Type
 - Single Family Home
 - Townhouse
 - Duplex

- Multifamily Unit
- Manufactured Home
- Number of Bedrooms
- Square footage of conditioned space without basement
- Square footage of conditioned space with basement
- Date of approved rating

Energy Use and Savings (Savings related to Energy Rating Reference Home)

- Annual Electricity Use (assumed kWh)
- Annual Natural Gas Use (if applicable)
- Natural Gas Units (if applicable)
- Annual Fuel Oil Use (if applicable)
- Oil Units (if applicable)
- Annual Propane Use (if applicable)
- Propane Units (if applicable)
- Annual Energy Cost Total
- Price Electricity
- Price Natural Gas
- Price Fuel Oil
- Price Propane
- Annual Savings Electric
- Annual Savings Natural Gas (if applicable)
- Annual Savings Fuel Oil (if applicable)
- Annual Savings Propane (if applicable)
- CO2 Index
- Reduction CO2 (tons/year)
- Reduction SO2 (lbs./year)
- Reduction NOx (lbs./year)
- Peak Load
 - Proposed Home Peak Load
 - Energy Rating Reference Home Peak Load
 - Peak Savings compared to Energy Rating Reference Home
- Site Energy Use Intensity

Mandatory Requirements Met

- Mandatory ENERGY STAR Certification
- Mandatory Fenestration Requirements Met
- Mandatory Insulation Requirements Met
- Mandatory Duct Location Requirements Met
- Mandatory Appliance Requirements Met
- Mandatory Lighting Requirements Met
- Mandatory Fan Efficiency Requirements Met
- Mandatory Indoor airPLUS Certification
- Mandatory H/ERV Requirements if Applicable (CZ 6-8)
- Mandatory Renewable Ready Requirements Met
- Mandatory Electric Ready Requirements Met

- Mandatory Electric Vehicle Ready Requirements Met

Note: all Mandatory and optional items can be True/False, Yes/No, or similar binary format.