Summary of Comments, EPA Responses, and Resulting Policy Changes on the Proposed ENERGY STAR Certification System Quality Assurance and Quality Control Enhancements

The EPA has posted a compilation of all comments received during the first and second comment periods on the proposed ENERGY STAR Certification System quality assurance and quality control (QAQC) enhancements on its website.

The first comment period was open from December 11, 2023, to February 9, 2024. The second comment period on three additional topics regarding this proposal was open from April 15, 2024, to May 10, 2024. This document contains a summary of the comments received in both comment periods, along with the EPA's responses and resulting policy changes, if any.

Where similar comments were received from multiple respondents, the EPA consolidated these ideas into a single summary bullet. However, the EPA has attempted to retain all unique comments received, including those submitted by a single respondent.

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ID	Comment Summary	The EPA's Response
First Comment Period		
General		
	Eight commenters expressed positive opinions about the general direction of the proposed QAQC enhancements, and one commenter expressed general doubt about the value of the enhancements.	The EPA appreciates stakeholders' time and consideration in sharing feedback on its proposal and commenters' overall positive support for these QAQC enhancements. The EPA will move forward with the overall direction of the proposed enhancements, with specific refinements noted below.
	One commenter noted a desire for new requirements to stay in alignment with reference national standards, HCO standards, and other federal programs.	The EPA agrees with this sentiment and will continue to closely coordinate with HCOs, standards committees, and other federal program partners. As part of this stakeholder comment process, the EPA sought and received feedback from these parties, which it incorporated into the final requirements.
	Multiple commenters suggested that the implementation of the new elements should be phased in over time.	As indicated in its initial proposal, the EPA agrees and will work with HCOs to set appropriate implementation timelines for each new element, recognizing that some elements require more time and effort to implement than others. The HCOs will notify participants in their certification programs (e.g., Raters and designees) about implementation timelines for new policies and protocols through normal channels when those changes are ready.
	One commenter suggested that EPA staff should oversee the implementation of these policies by HCOs.	The EPA plans to work closely and collaboratively with HCOs as they phase in these new elements, from planning to policy development, resubmission of updated HCO applications, and, ultimately, implementation.
	Multiple commenters raised concerns about the cost and effort that will be required to implement these measures.	While the EPA has no role in setting prices or rating industry cost structures, it appreciates these concerns and agrees that implementing these new requirements will require increased effort from multiple parties. While recognizing that higher costs are a likely outcome, the EPA believes that each of these QAQC enhancements is in the interest of the program, its partners, and the public. Therefore, the EPA is moving forward with the new requirements at this stage. However, ideas for more cost-effective methods that meet the intent of Certification System requirements are always welcome, and should such methods be identified in the future, the Certification System includes a provision for "alternative quality control" schemes to be submitted for consideration.
	One commenter expressed concerns about the increased data and photo collection posing legal vulnerabilities for builders and recommended creating data custody protocols to minimize risk.	The EPA agrees that digital program documentation ('checklist') data and photos collected exclusively for the purposes of an ENERGY STAR certification program should be subject to data use and custody policies encompassing the following elements: • Applicable data and photos shall be shared on a need-to-know basis (e.g., between a Rater, an HCO, an HCO's designee such as a Provider/Quality

		Assurance Designee, if applicable, and the EPA) for the exclusive purpose of activities required by the ENERGY STAR Certification System (e.g., quality control review, certification review requests, and ethic complaint investigations). • Applicable photos must be destroyed by the HCO, its designees, and any other intermediate custodians (e.g., photo collection software or approved rating software) following the minimum retention period unless an investigatory hold is placed on a record by the HCO, its designee (as applicable), or the EPA. • Exceptions to these rules, such as extending the retention period or sharing checklist data/photos with other parties (e.g., homeowners, researchers, non-EPA program administrators, commercial data brokers, or multiple listing services), are only allowed with the express permission of both the Energy Rating Company that captured the photos and the builder/developer of the home at which the photos were captured; or at the direction of the EPA. This data and photo custody policy will include two caveats: • These custody policies apply only to the ENERGY STAR-specific checklist data and photos and do not cover generic items under the ANSI standards, such as test results and photos of minimum-rated features. HCOs are free to define their own data custody policies with respect to these items. • To avoid disrupting existing recordkeeping practices, which involve a long history of collecting ENERGY STAR checklists, checklist data (as opposed to photos) need not be destroyed and may be optionally retained following the minimum three-year retention period. Note that the restrictions against sharing checklist data with other parties remain in effect. The EPA will incorporate these guidelines into the ENERGY STAR Certification System and request that each HCO submit a responsive data custody policy for approval.
	Multiple commenters suggested that the EPA allow other solutions, such as companion applications, to potentially perform certain new software functions that the original proposal assigned to the Approved Software Rating Tools. One commenter raised a related concern that the increased requirements assigned specifically to Approved Software Rating Tools may be unachievable for some existing software vendors, potentially resulting in a smaller and less competitive software market. In contrast, two commenters noted their preference for most functions occurring in the Approved Software Rating Tools, or at least that there should be strong integrations between	The EPA recognizes that there are multiple ways to deliver the new requirements (i.e., photo uploads, checklist input, random QA assignments, and certificate printing). Potential solutions for certain functions include the Approved Rating Software, new companion mobile or web apps, and/or an HCO web portal. The EPA does not wish to unnecessarily restrict options, hinder innovation, or exclude viable solutions. At the same time, the EPA agrees that forcing Raters to use multiple software interfaces to complete a single home certification could result in an administrative burden and lead to data errors if systems are insufficiently integrated. The EPA will balance these concerns with the following updates: • Distinct software functions will be reorganized into their own sections, and HCOs will have the flexibility to define which interface makes the most sense to host each function in their system.

	systems to keep the Raters' workflow as streamlined as possible.	• Specific requirements for minimum system integration will be added. For example, to the extent that multiple interfaces are used for data input, there must be a method to associate data with a common set of records (e.g., syncing a common address list between systems). • The EPA will reserve the right to review an HCO's overall proposed software workflow and reject schemes that are likely to create unnecessary confusion or undue administrative burden.
	One commenter noted several quality management needs related to the ENERGY STAR Multifamily New Construction program, including consistent organization of multi-unit and common space data and the specialized knowledge required to perform quality control reviews on MFNC projects.	The EPA generally agrees and will address this in the following manner: • Late this year, as part of MFNC Revision 05, the EPA intends to propose that all projects, in all compliance paths, complete the "Multifamily Workbook" to standardize data reporting. The EPA will gather additional feedback on this topic in the coming months as part of the Revision development. • In response to the feedback on QC reviewer qualifications, the EPA proposed a differentiated MFNC quality control reviewer credential during a second comment period. Feedback and responses on the updated proposal are addressed below.
	One commenter requested more transparency in disciplinary action that has occurred by Raters and Energy Rating Companies.	As a general matter, the EPA supports transparency and disclosure but notes that this is balanced with an equally strong commitment to due process for its participants. While coordinating implementation and re-reviewing HCO applications, the EPA will take this opportunity to encourage HCOs to make full use of their current disciplinary action disclosure policies, as appropriate, within the limits of due process.
	One commenter encouraged the development of an alternative verification policy for cases where drywall is mistakenly installed prior to a Rater's pre-drywall inspection.	The EPA is currently working with program stakeholders to investigate alternative technologies and protocols but has not yet determined whether technically feasible options exist to verify all program requirements in a missed pre-drywall inspection scenario with an equivalent degree of certainty.
	One commenter suggested that specialized verification protocols be adopted for the modular housing sector.	The EPA sunset its modular-specific ENERGY STAR program in 2019 due to lack of use but is aware of increasing marketplace interest since that time and is participating in industry efforts to explore inspection protocols tailored to modular plant pre-drywall inspections.
	One commenter encouraged the EPA to continue developing improvements to the data system connection between the HCO's databases and the EPA's Homes Online Submission Tool (HOST) reporting system.	The EPA intends to continue to improve its HOST API (application programming interface) and notes that elements of this proposal, such as the mandatory validation of builder's and energy rating company's ENERGY STAR organization IDs, will support more consistent data transfer in the future.
	One commenter requested that H-QUITOs have read-only access to HCO databases to allow for better oversight of their HVAC members.	The EPA appreciates the intent of this concept but notes that allowing this type of wholesale data access would be inconsistent with the data custody principles outlined above.

	Two commenters suggested that the EPA enhance its training program for ENERGY STAR builder partners.	The EPA agrees with the importance of builder education and notes that it currently requires builders to view a mandatory orientation video when signing an ENERGY STAR Partnership Agreement. In addition, the EPA has developed educational content, including technical bulletins and "Builder and Developer Fact Sheets," that is available to partners on the ENERGY STAR website and distributed directly to partners (including builders) via an email mailing list. Nevertheless, the EPA appreciates the perennial challenge of getting this type of content into the hands of the builder site supervisors and trades who need it most. In the short term, the EPA will focus on revising existing educational content for relevance, creating new materials such as technical bulletins, and improving the organization and accessibility of information on the ENERGY STAR website.
	One commenter suggested developing resources to support proper HVAC installation as a more effective alternative than certain of the proposed QAQC enhancements. Relatedly, the commenter recommended requiring HVAC designers to have mandatory training on floor plan dimensioning.	The EPA will continue to invest in resources to support the proper installation of HVAC equipment, especially around the ANSI 310 HVAC Grading standard. The EPA expects to engage stakeholders further about the program's requirements for HVAC verification during its upcoming Revision development process. With respect to HVAC designer training on calculating floor areas, the EPA appreciates the recommendation and will discuss opportunities with industry and federal partners to deliver educational resources in a venue most appropriate for the target audience.
Centralized Collection of ENERGY STAR Checklist Data in the HCO Database		
1	Commenters were generally supportive of the EPA developing a standardized data schema and stylesheets for ENERGY STAR program documentation. Opinions varied on whether the use of the EPA-developed formats should be mandatory. Five commenters supported the mandatory use of the future EPA formats for standardization and interoperability. Two commenters recommended allowing HCOs or software to use schemas of their own creation, such as those that have already been developed.	The EPA will develop a standardized set of data schemas, stylesheets, and business rules for ENERGY STAR program documentation and will strongly recommend that software systems integrate this schema directly to promote standardization, interoperability, and efficient annual updates. However, in consideration of the concerns noted by some commenters, the EPA will leave this as a strong recommendation but will allow software systems to use their own data schema implementation so long as the data collected matches EPA's first-party schema.
	Four commenters supported an HCO approval process for data collection software, with two emphasizing that it should accommodate proprietary ('in-house') solutions developed by Energy Rating Companies.	The EPA will require that HCOs operate an approval process to ensure that all ENERGY STAR program documentation data collection software accurately reflects the checklists and fully implements the mandatory' business rules' (automated validations, footnote help dialogues, etc.). Each HCO will have the flexibility to decide on its approach to making data collection software available. Valid options include recognizing third-party data collection software, recognizing proprietary 'in-house' solutions, requiring the use of a vertically integrated HCO platform, or some combination thereof.

	One commenter requested that an expected schema update be scheduled.	The EPA intends to update the schema, stylesheets, and business rules annually as part of the annual program requirements Revision. Note that Revisions are released towards the end of each year, with mandatory use beginning on January 1 (in other words, generally 12-14 months later).
	Two commenters noted a pragmatic need to support batch upload for ENERGY STAR Multifamily New Construction certifications.	The EPA agrees and, as reflected in the original proposal, will allow documentation to be batch-submitted for multifamily projects so long as an association is recorded between each piece of documentation and the dwelling units or building areas to which it applies. Relatedly, note that the EPA also proposed, and will implement, a requirement that an association is recorded between a building and the units within it, rather than the current situation where each dwelling unit is treated as completely independent.
	One commenter recommended aligning documentation requirements between HCOs, ENERGY STAR, and DOE's Zero Energy Ready Homes program.	The EPA agrees and will continue to coordinate with HCOs and other federal programs to align documentation requirements wherever possible.
	One commenter suggested that HVAC design reports could be input using an XML format.	To the EPA's understanding, popular HVAC design software in the marketplace does not currently support XML design report output, nor is there a standardized format. The EPA generally supports the idea of defining such a format and will consider future opportunities to support that goal. At the initial implementation phase, the EPA will focus its efforts on setting up schemas for the 'Rater' checklists, with the understanding that HVAC checklists will continue to be collected in PDF format for the time being.
Centralized Collection of Rater Photos in HCO Database		
	Commenters were generally supportive of the concept of collecting photos of ENERGY STAR-required measures in a centralized HCO database.	The EPA will move forward with the photo collection requirement, with the refinements noted below based on stakeholder feedback.
	One commenter expressed concern that a 3-year photo retention period would be an administrative burden on HCOs and increase builders' legal liability. Instead, the commenter recommended a custody period of 6 to 12 months. To align with a shorter retention period, this commenter also recommended reducing the homeowner Certification Review eligibility window from two years to one.	The EPA originally proposed a photo retention period of three years. The EPA appreciates the concerns around data storage and legal liability and agrees that the photo retention period should conclude as soon as the utility of the photos expires. There are at least three uses for the photos: • Routine quality control review. • HCO annual reviews of energy rating companies. • Homeowner Certification Review requests, which are eligible up to two years after the completion of the home. The EPA considered the request to shorten the eligibility window for Certification Review, which is a process to address homeowner concerns when there is evidence that a home is not in compliance with one or more applicable ENERGY STAR program requirements.

		As the EPA frequently explains to homeowners, the first and best option before pursuing a Certification Review is to address concerns directly with the builder. For this reason, it is important to avoid pressuring homeowners into a Certification Review prematurely before the typical one-year warranty process concludes. In practice, the two-year period has proven to be effective in this regard, without allowing so much time to pass that it becomes difficult to distinguish discrepancies that are due to homeowner modifications or natural aging of construction materials. For these reasons, the EPA concludes that a two-year Certification Review eligibility window remains appropriate. The EPA believes it is within all parties' interest to have the original photos available during a Certification Review (for example, to document compliant measures at the time of inspection). However, because there is no identified use for the photos in the third year, the EPA will reduce the finalized photo retention period to two years. Note that the minimum retention period for the digital checklist data will remain at three years for alignment with recordkeeping requirements in the reference national standards and continuity with the program's historical recordkeeping expectations.
	One commenter recommended limiting the photos to a small number of priority items to address potential slow cellular upload speeds.	The EPA intends to require 10-15 photos of measures from the National Rater Field Checklist. To address upload bandwidth and data storage concerns, the EPA will allow the downsizing of photos to a minimum legible resolution.
	Several commenters addressed options to record an inspection's location, time, and verifier identity: • Multiple commenters supported capturing Rater' selfies' that include the front elevation and address of the home (if available). One commenter noted that a preexisting reference photo would be needed to confirm a Rater's identity during the quality control review. • One commenter suggested a geotag and timestamp be captured instead of a Rater' selfie.' • Another commenter suggested avoiding a requirement for geotagging to allow the use of point-and-shoot cameras.	The intent of this element is to establish the provenance of each required inspection (i.e., that it occurred at the rated home on the appointed date by the credentialed verifier). Based on stakeholder feedback, the originally proposed Rater' selfie' appears to be the most straightforward method available, and because a front elevation does not always relay enough information to identify a particular home, it also makes sense for this photo to be geotagged. Therefore, for each inspection, the EPA will require verifiers to capture a photo of themselves in front of the rated dwelling, and that photo must be timestamped and geotagged. The EPA will also require HCOs (or their designees, such as Providers) to collect a reference ID photo of each verifier during the credentialing process to provide a comparison point during quality control review. To address the valid desire to use point-and-shoot cameras, the EPA will only require geotagging for this one Rater 'selfie' photo. All other photos (e.g., of checklist measures) may be captured using a non-GPS-capable device if preferred.
	With regard to ENERGY STAR checklist items, one commenter specifically recommended that the static pressure test result be photographed.	The EPA generally expects to include performance tests like the static pressure in the list of 10-15 required photos, which it will be finalizing and announcing with the release of Revision 14 (SFNH) / Revision 05 (MFNC) at the end of 2024.
	Commenters recommended that the following photos related to ANSI-301 minimum-rated features be required: • The building's front, back, right, and left elevations	The EPA generally agrees that these types of ANSI 301 (or related reference standards) minimum-rated features should be substantiated by photos and believes the most appropriate source for this list is the ANSI 301 standard itself for the sake of industry consistency and continual maintenance. The standard's Normative Appendix B Inspection

	• Building assemblies • All heating, cooling, and service hot water equipment • Ventilation system • Infiltration test result or automated test report • Duct leakage test result(s) • Ventilation system test result(s) • Appliances (refrigerator, dishwasher, washer, dryer) • Testing equipment model number	Procedures for Minimum Rated Features currently calls for a subset of these photos, with the list in ANSI 301-2022 being more comprehensive than previously. The EPA will incorporate the ANSI 301 Appendix B photo list by reference and encourages the standards development committees to continue to refine and, if appropriate, expand that list.
	With regard to the Multifamily New Construction (MFNC) program: • One commenter suggested that the existing MFNC Photo Documentation Guidance is adequate. • Another commenter noted that it would be difficult to associate every photo with each respective dwelling unit in a multifamily building.	The photo requirements for MFNC will be substantially similar to the existing MFNC Photo Documentation Guidance, with some modifications where noted (e.g., the addition of a Rater' selfie'). The allowance to upload one representative photo per multifamily *building* will be maintained for most measures. However, consistent with ANSI 301 Appendix B, a small number of photos will be required for each inspected dwelling unit at pre-drywall (e.g., of a representative wall section) and final (e.g., the blower door, duct blaster, and ventilation flow rate test results).
	One commenter suggested allowing builder photos for intermediate stages, such as roof insulation.	In general, the EPA expects to specify photos only for checklist items that would be Rater-verifiable and will keep this in mind when selecting the final list. For photos of ANSI-301 minimum-rated features, the EPA supports pragmatic allowances for builder photos of certain measures (e.g., flat roof insulation, slab insulation, and/or continuous wall insulation). Some of those allowances already exist within ANSI-301, and to the extent that additional refinements are recommended, the EPA will defer to the normal ANSI standards amendment process.
	One commenter suggested that the final list of required photos be released as part of Revision 14 (SFNH) / Revision 05 (MFNC) so that they can be required by HCOs in 2025.	The EPA will include the final photo list with the release of Revision 14 (SFNH) / Revision 05 (MFNC) at the end of 2024. Subject to input from HCOs, the EPA generally anticipates that Raters might begin collecting key program photos beginning in 2025, with the full list of photos and central data collection systems potentially following later. The EPA will be collaborating with HCOs to define implementation deadlines, and HCOs will be welcome to accelerate measures ahead of schedule, as desired. Participants should refer to normal HCO communication channels for notifications about changes and implementation timelines.
	Commenters generally recommended providing some leeway when photos are missing, with increasing consequences for a pattern of repeated failures. One commenter recommended that there be no exceptions and that a Rater be required to return to a home and/or perform infrared inspections, if necessary. Another	The EPA will defer to HCOs to craft detailed policies for handling missing photos, subject to EPA review, with the intent of accommodating rare accidental events like a corrupted memory card while guarding against intentional abuse. As suggested, these policies should be designed with escalating consequences for repeated occurrences, which could involve some or all of the suggested alternatives (e.g., returning to the home, collecting a photo from a builder, and/or signing an attestation).

	commenter suggested requiring an attestation that all requirements were met.	The EPA will require HCOs to monitor the rate of missing photos over time and readjust policies as necessary, with a benchmark goal of 1% or fewer missing photos.
	One commenter suggested that photos should be required to be collected directly by the Rater.	EPA agrees and intends for photos to be collected by Raters during their field inspections as a record of what they personally witnessed on-site. This intent is clarified in the final Certification System requirements. As noted above, the EPA does anticipate a need for a 'missed photo policy' as an exception to the routine photo collection standards and would allow photos to originate from a builder in this context. It will be the HCOs responsibility to draft and submit a missed photo policy for approval, which shall include adequate safeguards against abuse.
	One commenter recommended that collecting an HVAC contractor's refrigerant photo, which is a verification path within the referenced ANSI 310 HVAC grading standard, should not be included in the ENERGY STAR mandatory requirements.	As noted above, the EPA will defer to the reference standards to define which photos need to be captured for minimum-rated features, and the ANSI 310-related refrigerant charge photo falls in this category. The EPA is aware that similar comments have been submitted to the ANSI 310 standards committee, which is the proper venue to consider this matter.
Formalized List of Automated Validations in Approved Rating Software and Databases		
	Commenters were generally supportive of creating a list of program requirement validations to standardize implementation at multiple stages of the data workflow.	The EPA will move forward with the formalized validations list, with suggested refinements from stakeholders noted below.
	One commenter operating in California recommended that the validations be integrated into the HCO database rather than the approved rating tool.	The EPA agrees that under California's unique system, where modeling is performed by third parties at the beginning of the process, and the Rater uses the HCO IT system as their main interface, it makes more sense to integrate validations exclusively in the HCO system. The final Certification System requirements have been adjusted to specify this policy as a California-specific exception. For national HCOs, the EPA anticipates specifying that most validations be incorporated in both approved software rating tools and in the HCO database to both provide immediate feedback to the Rater in their main interface (the approved rating software) and giving HCOs the final responsibility for double-checking before certification. There may be some limited exceptions to this rule for items that are only feasible at the HCO database level, which the EPA will address on a case-by-case basis. These implementation details will be defined in the coming months with input from HCOs and the software developer community.
	One commenter recommended using a builder ID number rather than a company name text string to match the builder company to the applicable ENERGY STAR partnership account.	The EPA agrees that the unique My Energy Star Account (MESA) "Organization ID" (or O_ID) is the proper identification key to associate the builder company, the Rater energy rating company, and, if applicable, the Provider energy rating company in a home's rating file. This will allow validation against ENERGY STAR's partner list and facilitate automatic matching in the EPA's Homes Online Submission Tool (HOST). The O_ID can be found in

		each partner's MESA account and is also searchable at http://www.energystar.gov/ResPartnerDirectory. The EPA will clarify that the minimum requirement for approved software rating tools is to include an input field for the O_ID. It will be recommended, but not required, that software rating tools provide a search interface for the ENERGY STAR builder list based on the EPA's 'partner list' API. The EPA will also specify that, at minimum, the O_ID must be validated at the HCO database level before a home certification is finalized.
	One commenter suggested that data requirements be published publicly for the sake of transparency.	The EPA intends to post data specifications and software/database business rules publicly.
	One commenter suggested that validations should be reflected in software as warnings and that there should be an override function.	The EPA will define a detailed list of specifications in the coming months, with input from software developer stakeholders. While the EPA may define some informative warnings, it generally anticipates that validations will take the form of a 'hard' error but applied only to items that are objective and determinative. However, the EPA agrees that a pathway should be available for unanticipated cases where an override is warranted. The EPA will specify that approved rating tools and the HCO databases must include a validation override request function and, further, that these requests must be approved directly by the HCO prior to a home earning certification.
Printing ENERGY STAR Certificates and Labels Exclusively in Approved Rating Software		
	Two commenters recommended allowing the ENERGY STAR certificate to be delivered directly by the HCO rather than the approved rating software.	The EPA agrees with this sentiment and has included a footnote in the original redline outlining a general alternative for certain functions to occur at the HCO level if preferred. The EPA will reorganize the certificate printing section to more explicitly indicate that it can either be performed directly by the HCO or in approved rating tools.
	Overall, commenters were supportive of exploring the elimination or replacement of the ENERGY STAR label (also known as the "sticker"). Specifically: • Thirteen commenters supported eliminating the label in its current form, supporting either eliminating the label, replacing it with a QR-code or web-based alternative, or replacing it with some other unspecified alternative. • One commenter expressed value in the label.	The EPA is not making a final determination on the label at this time but appreciates stakeholders' feedback as it continues to explore alternatives. In the meantime, the EPA will adjust program documentation and Partnership Agreements to specify that the label is optional, effective immediately.
Performing Quality Control of Installed Features During File Review Step		
	Commenters raised multiple general concerns about potential delays to certification timelines and, overall, were skeptical that quality control File Review could be	The EPA appreciates the market's need for prompt certification and has included a modified proposal for a two-stage review that is designed to minimize delays while still providing assurance on the most critical program elements prior to certification. In that revised proposal, the EPA noted that it is confident a reasonable accommodation regarding the Green MBS registration deadline can be identified and is already

	accomplished prior to certification within expected industry turnaround times: • Six commenters felt it was not possible. • Three commenters felt it was possible. • One commenter felt it was possible but with significant cost. Commenters specifically referred to the Fannie Mae' Green MBS' policy that all homes be registered in the HCO database shortly after the home sale closing, builder practice to include the ENERGY STAR certificate at the time of sale, and other time pressures. Regarding achievable timelines, commenters variously suggested that it may take a reviewer ten days, 15 days, or up to 60 days to complete the full file review.	coordinating with Fannie Mae on this topic. Additional feedback and responses on the updated proposal are addressed below.
	One commenter requested that builders have the opportunity to resolve any administrative issues discovered during the quality control review.	The EPA agrees with this sentiment and believes the best way to handle corrections is by requiring quality control to occur prior to certification so that any issues are fixed before an ENERGY STAR certificate is issued. This creates a clear, consistent enforcement mechanism in the form of the certificate and aligns incentives towards making corrections promptly. Alternatively, to the extent that a builder does not wish to or is not able to make corrections (for example, based on a homeowner's preference), the result is automatic: the home will simply not be certified. The EPA understands that, historically, Raters have not always notified builders when homes are flagged during quality control review and go un-certified. While it is a builder's responsibility to track their receipt of the ENERGY STAR certificate on a home-by-home basis, the EPA agrees that Raters can and should proactively communicate issues to their builder clients and will use its platforms (webinars, training, etc.) to reinforce this expectation with Raters. The EPA also sees additional opportunities to build automated feedback into the system. For example, it is aware of emerging functionality for builder data access in some HCO systems. One could also imagine automated reports being sent when homes are submitted as ENERGY STAR but not certified within an expected timeframe. The EPA believes that HCOs are best positioned to collaborate with builders on these solutions.
	One commenter recommended allowing the minimum percentage of file review to be calculated using probability statistics instead of a fixed percentage.	The EPA appreciates the suggestion. In practice, the statistical calculations that the EPA has reviewed have generally called for a significantly higher percentage of homes to be reviewed than the current fixed rates, which would require a significant additional cost. At this point, the EPA believes that industry investment in the other elements outlined in these proposals (data collection systems, HCO direct review, etc.) will provide more value than performing a higher rate of reviews under the current protocols. Therefore, at this time, the EPA is not changing the historical rates of QC review.

		However, as always, HCOs are welcome to exceed the minimum requirements defined in the ENERGY STAR Certification System. For example, if desired, an HCO may calculate its review rates based primarily on a statistical calculation and treat the minimum fixed rates as a backstop.
	One commenter noted their support of computerized randomization of home selection for quality control review.	The EPA is including this requirement in the final policy, although it will reorganize this section to indicate that it can either be accomplished directly by the HCO database system or the approved software rating tools, depending on what makes the most sense for each HCO's system. The EPA believes that random selection will preempt the need for the historical practice of calculating file QC rates based on which Rater(s) participated in the field inspections. This is because a 10% random selection from an HCO's total pool of homes will, on average, capture 10% of the subset of homes contributed by a given Rater. Therefore, the final requirement will be for HCO systems to apply the 10% selection rate randomly on a rolling basis across all homes submitted to an HCO.
Adding "Skills and Knowledge" Check as Purpose of Field Evaluations		
	Four commenters expressed generally positive opinions about this measure, one was neutral, and one expressed a negative opinion.	The EPA will move forward with adjusting the stated purpose and frequency of the field evaluations as proposed, with the refinements suggested by stakeholders noted below.
	With respect to the frequency of field evaluations: • One commenter expressed concern that this would lower the standards for Raters performing more than 200 ratings per year. • One commenter recommended requiring only one field evaluation per Rater per year unless issues are found. • One commenter suggested basing frequency on performance, with better performers requiring less field evaluation and worse performers requiring more. Similarly, another commenter recommended calculating a 1% rate at the company level, with a backstop of a minimum of one field evaluation per Rater. • One commenter suggested aligning with new California state standards by adopting the concept of an "Exemplary Rater" who would only be subject to one of each type of review every three years instead of every year.	The EPA appreciates stakeholders' feedback on these issues: • The EPA acknowledges that the updated minimum frequencies will require fewer field evaluations than under the previous standard but believes this is an appropriate level given the newly stated purpose of validating each Rater's skills and knowledge. • The EPA believes it is appropriate as a general benchmark to validate once per year that Raters have the requisite skills and knowledge to properly perform ENERGY STAR inspections. Because the scope of the inspection is split between the pre-drywall and final phases, one of each will be required for a total of two annual field evaluations. • The EPA generally supports the idea of prioritizing quality assurance resources towards those Raters with lower performance but, in this case, believes the fixed rate of one pre-drywall and one final field evaluation is already set at the lowest justifiable rate for each Rater, even high performing ones (this is the minimum number of field evaluations that would cover the full scope of inspection). • As explained above, the EPA believes the proposed field evaluation is already set at the lowest justifiable rate for each Rater, even high-performing ones. Moreover, the EPA notes that any qualification criteria would be based on ENERGY STAR performance, which means that even if adopted, some Raters might be considered "Exemplary" from the standpoint of code inspections but not for ENERGY STAR,

		leading to confusion. Finally, in this regard, the EPA believes it is appropriate to hold California Raters to the same standard as their 'National' counterparts. For these reasons, the EPA will implement its original proposal for Raters to receive one pre-drywall and one final field evaluation each year, with an exception for one annual field review for low-volume Raters.
	Three commenters addressed the interplay between Raters and Rating Field Inspectors (or RFIs), which are recognized by RESNET as an equivalent designation: • One commenter expressed an opinion that field evaluation is not a valuable activity for RFIs. • Another commenter expressed the view that, in their experience, RFIs may be less knowledgeable and require a more thorough review. • One commenter recommended clarifying that the field evaluation should occur on the inspector (whether Rater or RFI), as opposed to the Rater of record, who may or may not have played a role inspecting a home on-site.	While the EPA recognizes HCO's discretion to recognize both Rater and *equivalent designations*, such as RFIs, it does expect that both are held to the same standards for the activities in their scope. Specifically, for on-site inspections and testing, the EPA expects both Raters and RFIs to be held to the same standard. While it is acceptable to accommodate different learning styles (for example, field training and graded field testing versus classroom learning), all candidates must ultimately be held to an *equivalent* standard. The EPA will take the opportunity to re-review compliance with this existing requirement when HCO applications are resubmitted during this initiative's implementation phase. Because the "Skills and Knowledge" field evaluations involve inspection and testing activities that are within the scope of both RFIs and Raters, there should be no difference in how the two are treated with respect to this requirement. The EPA agrees, then, that the individuals performing the inspections and testing should receive the field evaluation, whether or not they are listed as the 'Rater of record.' The EPA is aware that all current HCOs have tracking systems to identify each Rater/RFI involved in each certification. The EPA will explicitly add this tracking requirement to the Certification System and clarify that the 'low volume exception' (whereby only one field evaluation is required annually, rather than two) is triggered for Raters/RFIs involved in inspections on fewer than 100 certified homes per year, whether or not they performed one or multiple stages of inspection.
	One commenter recommended implementing a re-qualification process for Raters who have not participated in an ENERGY STAR certification for twelve consecutive months or who fail to complete their annual ENERGY STAR continuing education requirement.	The EPA agrees that a re-qualification process should be implemented. In the coming year, the EPA intends to work with HCOs to ensure continuing education systems specifically address ENERGY STAR topics, which will involve the EPA producing annual training content starting in 2025 (anticipated). At this stage, the EPA will clarify in the Certification System that completing the ENERGY STAR-specific continuing education requirements is a prerequisite for maintaining an active ENERGY STAR Rater credential and add a re-qualification requirement for cases where that does not occur. The specifics of exactly what training, test, or evaluation is required for re-qualification will be determined in the future.
	One commenter requested that "blind QA" be allowed to satisfy the field evaluation requirements and, further, that it be credited at a higher proportion (for example, by allowing one "blind QA" in place of two "witness" field evaluations).	The EPA understands the term "blind QA" (also known as an "after the fact" test) to refer to a process where a quality control reviewer retests a home without the original Rater present, possibly without the Rater even being aware. In contrast, the EPA understands the term "shadow audit" (also known as a "witness" test) to refer to a process where the Rater performs an inspection in the presence of the quality control reviewer.

	Another commenter recommended the reverse, stating that a "shadow audit" should be allowed.	The EPA believes that both indirect and direct types of evaluation can assess a Rater's skills and knowledge, consistent with the intent of this requirement. In fact, the ENERGY STAR Certification System already allows both types of review under the monikers "witness" and "after the fact test" and will continue to do so. The EPA will add a footnote to clarify the terminology. Because no specific data or evidence was provided about the relative effectiveness of one type of review over the other, both types of review will continue to be treated as one-for-one equivalents.
	One commenter noted that it could be difficult to schedule a pre-drywall field evaluation for a Rater who works on a small volume of ENERGY STAR homes.	The EPA agrees that the short availability window of the pre-drywall phase could make it challenging to schedule a time for the QC reviewer to perform a pre-drywall field evaluation on a Rater who does not work on ENERGY STAR homes daily. For this reason, the EPA will clarify that pre-drywall field evaluations are allowed to occur on homes that are not pursuing ENERGY STAR certification, so long as the Rater is able to knowledgeably identify any missing program requirements that would be expected if the home *were* pursuing ENERGY STAR.
Layering On HCO Direct (Non-Delegated) Quality Control Review		
	Commenters expressed a range of opinions on the appropriate rate for HCO direct quality control review: • One commenter supported the originally proposed rate of 0.5%. • One commenter supported a lower rate of 0.25%. • Three commenters recommended higher rates of up to 5%.	In response to this feedback, the EPA opened a second comment period on an alternative proposal to introduce this activity at a lower rate but ramp up to 1% over a five-year period. Feedback and responses on the updated proposal are addressed below.
	One commenter suggested that rather than a per-rating activity, an HCO should perform a periodic company-level review on a set interval, such as every 3-5 years.	The EPA is generally supportive of this concept and is aware that multiple HCOs perform this type of activity on at least a subset of its participants. However, because at least one HCO does not currently have a relationship with Rater companies (only Rater individuals), the EPA determined that addressing this requirement in a fair and consistent manner would require undue effort and disruption compared to the value gained. Therefore, the EPA is prioritizing the other elements in its proposal at this time but remains interested in exploring company-level reviews in the future.
	One commenter expressed general opposition to the direct HCO review, noting that it was a new hurdle without obvious benefit given the relatively low rate of review.	The EPA believes this new activity will be valuable not only because of the additional review rates but also because of who is doing the reviewing: the HCOs. This is intended to improve consistency and objectivity across the HCO's participant base and help to address conflict-of-interest concerns in combined Rater/Provider models by ensuring that all certifications are theoretically subject to third-party review (by way of the HCO's direct review). Compared to other options, such as banning the combined Rater/Provider model,

		the EPA believes that direct HCO review can address the noted risks without causing unnecessary industry disruption.
	One commenter requested that the EPA establish expected timelines for the HCO direct review to be accomplished.	In response to this feedback, the EPA opened a second comment period, where it requested more information on anticipated timelines. Feedback and responses on this issue are addressed below.
Requiring Builders to Facilitate HCO Site Visits		
	Several commenters raised concerns that seemed to misinterpret the EPA's intent for HCO site visits, including: • Two commenters raised scheduling concerns, particularly around pre-drywall inspections. • One commenter raised concerns about homeowner disruption. • One commenter raised concerns about potential delays to certification.	The intent of HCO visits is to be a rare investigatory tool in response to an acute and specific compliance concern rather than as a routine quality control activity. Therefore, HCO visits will not impact routine certification timing. In those rare cases where this contingency is invoked, the EPA anticipates playing a convening role between the builder and HCO to schedule a site visit within the development or metro area in question. It is generally anticipated that visits can occur at representative homes in a region that are at an appropriate stage of construction rather than any specific home. This should generally allow for avoiding already-occupied homes and facilitate locating a home ready for pre-drywall inspection, if necessary.
	One commenter recommended virtual inspections as an alternative to (or in addition to) HCO personnel making site visits in person.	The EPA agrees that virtual inspections might offer benefits in some cases. However, the intent is to allow HCOs direct access to building sites without intermediation by the Rater or Provider, so it is not immediately clear who the appropriate party would be to hold the camera on site. Nevertheless, to keep this option open, the EPA will ensure the final policy language allows for this possibility.
	Two commenters noted that an HCO may need liability insurance before its staff were to visit a building site.	The EPA understands that builders may have requirements, including liability insurance minimums, and can anticipate additional requirements, such as waivers. For the time being, the EPA will address these on a case-by-case basis and will consider specifying standardized requirements in the future once more experience with this activity is developed.
Second Comment Period		
Requiring Quality Control Review to be Completed on the Most Critical Program Elements Prior to Printing Documentation of ENERGY STAR Certification		

	Three commenters expressed general support for this measure, noting that, as energy rating companies, they have already largely implemented the proposed measures as a best practice. This mirrors comments from two other organizations during the first comment period. In some cases, commenters noted that they performed this review on more than the minimum required 10% of ratings.	The EPA appreciates learning about partners' real-world experience performing streamlined quality control reviews prior to registering ratings. The EPA will move forward with this element, with the refinements noted below. The EPA notes that partners are always welcome to exceed the minimum requirements. In this case, the EPA supports HCOs and/or Energy Rating Companies that voluntarily implement a higher rate of Phase 1 review as a best practice.
	Several commenters expressed general concerns about potential delays in the distribution of documentation for the ENERGY STAR certification, with one commenter noting a specific concern regarding affordable housing developments.	The EPA appreciates these concerns and acknowledges that it may take additional time before the ENERGY STAR certificate is available for the subset of dwelling units selected for QC file review and/or direct HCO review. The EPA also acknowledges these delays will be more common in multifamily projects due to the likelihood of at least one dwelling unit in a building being selected for review. Nevertheless, the EPA believes that completing the Phase 1 quality control review before distributing the ENERGY STAR certificate is an appropriate and necessary requirement to safeguard program integrity. The EPA understands that this is likely to require partners to adjust their historical practices. In addition, the EPA is also aware of partners' specific concerns regarding certification delays related to the §45L tax credit and is in the process of developing several policy adjustments to address this issue, which will be available in the coming months.
	One commenter expressed concern that requiring quality control review to occur prior to certificate distribution may overload quality control reviewers, overwhelm communication channels, and impact business relationships. The commenter suggested a certification recall process could accomplish similar goals.	The EPA appreciates these concerns but believes that completing the Phase 1 quality control review before distributing the ENERGY STAR certificate is an appropriate and necessary requirement to safeguard program integrity. The EPA has been unable to identify a certification recall (or 'clawback') scheme likely to be as effective as simply controlling the distribution of the certificate in the first place. Among other hurdles, the EPA is unable to identify a credible method to notify all parties who may be relying on a certification, including a homeowner, a homebuyer of a resold home, other federal programs and agencies, utility program sponsors, local code officials, and funders.
	One commenter noted that workflow changes and new tracking functions will be required to support the new policy of delaying the printing of the ENERGY STAR certificate until the completion of the quality control file review.	The EPA agrees and envisions that a new workflow will be necessary to support the requirements for the 10% quality control review, including machine-randomization of home selection, though the workflow may vary somewhat depending on whether and how quality control is delegated in each HCO's system. In general, the EPA anticipates the following functionality will be needed to support the new process: • A rating file submission function that occurs prior to file QC selection. • A machine-randomization function that automatically selects homes for the 10% file QC (and 1% direct HCO file review, as applicable) review without human intervention.

		• A 'holding bin' for rating files that have Phase 1 QC file review assigned but not yet completed. • Tracking of Phase 1 review completion prior to printing of the certificate, as well as eventual completion of the Phase 2 review that is allowed to occur later. The final policy has been adjusted to clarify the need for these four software functions, with flexibility for each HCO to propose how each function will be performed in their system (e.g., approved rating software tools, the HCO database system, and/or potential new companion software.)
	One commenter suggested an additional requirement that in cases where a Phase 1 review finds flaws, a Phase 2 review is automatically triggered.	The EPA agrees that the discovery of an error in a Phase 1 review brings the broader rating into question. Therefore, the EPA agrees that it is appropriate for a rating with a Phase 1 failure to undergo a full Phase 2 review prior to the distribution of the ENERGY STAR certificate. The EPA has added this requirement to the final policy.
	One commenter raised concerns about the risk presented by the potential for the HCO's direct Phase 2 review to occur following certification.	The EPA appreciates these concerns, and while it believes the new requirement for mandatory Phase 1 review before certification will result in an overall lower risk than the status quo, it acknowledges that the introduction of direct HCO file review may increase risk in specific scenarios. Specifically, quality control reviewer designees currently have the option, as a best practice, to perform 100% of the required file review prior to distributing the ENERGY STAR certificate to the builder/developer. With the introduction of the HCO direct file review, this will no longer be in the designee's full control, and it is possible that the HCO's Phase 2 file review will occur after certificate distribution. The EPA notes that while the final policy allows the HCO's direct Phase 2 review to trail Phase 1, it does not require it. As an example, the HCO may decide to perform all its Phase 1 and Phase 2 reviews at the same time (prior to certification). As another example, the HCO may decide to offer an expedited review option. The EPA has added an informative footnote to clarify the opportunity for these types of solutions and will highlight this feedback to HCOs during the implementation phase.
	One commenter noted their experience with delays in obtaining HVAC design documentation depending on the engagement level of builders and subcontractors.	The EPA appreciates that obtaining HVAC design documentation relies on active participation from all parties and that this can be an issue today in some markets and with some partners. However, because documentation collection is a pre-submission activity, the EPA believes that implementing the QAQC enhancements will not increase or decrease delays directly associated with these builder engagement concerns.
	One commenter requested confirmation that 'Rater' checklists will be required prior to submission for quality control review (similar to the Rater photos).	The EPA does intend for checklists to be completed and photos to be recorded prior to a dwelling unit's quality control review. While this is already the case today and is specified in the 'Documentation Collection' portion of the applicable 'Quality Control & Certification Review' checklist, the EPA has reinforced this intent in the final Certification System policy.

	Commenters estimated a typical turnaround time for a QC review to perform a Phase 1 review in the 3-7 business day range (and, subjectively, between "very quick" and "lengthy," depending on the circumstances). Commenters estimated the level of effort per review to be between 5 and 30 minutes.	The EPA appreciates this feedback, which will be helpful as it communicates anticipated timing guidance with partners moving forward.
Revising the Minimum Rate of HCO Direct File Review and Establishing a Ramp-Up Schedule		
	Commenters expressed a range of views on the appropriate rate of direct HCO review, as well as the ramp-up schedule: • One commenter supported the proposed rate and schedule as a fair compromise. • Three commenters believed that higher rates of review and/or a shorter ramp-up schedule were achievable and appropriate.	The EPA appreciates stakeholders' feedback, and it is understandable that opinions vary given uncertainties around a new activity and differences in perspectives. At this stage, the EPA believes the proposed 1% direct HCO review rate and 5-year ramp-up schedule are appropriate to support the orderly introduction of this new activity and will move ahead accordingly. Once implemented, the EPA will monitor the effectiveness of this activity over time and consider future adjustments as appropriate.
	One commenter suggested that HCO direct QC review would be most valuable on files that had already been reviewed by a quality control reviewer designee (e.g., a QAD).	The EPA generally agrees that the main purpose of this requirement, which is to monitor and ensure consistency across HCOs, is best served by having the HCO review the same subset of files that the designee already reviewed. However, the EPA also believes there is value in having the HCO review a specific portion of "raw" files to get a sense of errors happening in the field that may persist in some of the 90% of homes not selected for file QC in the first place. To balance these considerations, the EPA's original proposal called for 50-75% of direct HCO file reviews to be selected from the pool of home ratings that already underwent QC review by the designee, which means 25-50% of reviews would occur on "raw" (unreviewed) ratings. This element is included in the proposed final policy.
	One commenter recommended capping the rate of direct HCO file review at 0.5% of dwelling units for multifamily projects, arguing that the proposed 1% rate would disproportionately affect larger multifamily developments and disadvantage the ERI path versus the ASHRAE path.	The EPA appreciates the comment but believes it is appropriate to assign quality control at an equal per-dwelling-unit rate for both single-family homes and multifamily buildings. It is true that, for larger multifamily buildings, at least one dwelling unit is likely to be selected for QC review, and the EPA believes this is appropriate given the larger number of certified units (and thus residents and energy savings) involved. If anything, there may be efficiencies when multiple dwelling units are selected from the same building in that reviewers will only need to assess common spaces and central system measures once. Taken as a whole, the EPA has designed the ERI path (implemented by HCOs) and ASHRAE path (implemented by MROs) to result in equivalent confidence, though it notes that each path uses different methods, which, taken in isolation, should not be expected to demonstrate one-for-one parity. However, with respect to this particular element, the EPA notes that it is the ASHRAE path that has and will continue to set the stricter standard by requiring 100% file review on all buildings, regardless of size.

	One commenter suggested that an HCO organization-level review of energy rating companies would be a more effective measure to achieve the same intent as a direct HCO file review.	The EPA is aware that some HCOs currently implement periodic organizational-level reviews of energy rating companies as a best practice, which the EPA views as complementary to the direct HCO file review that will provide more immediate insight into day-to-day activity. The EPA will continue to monitor the industry's experience with organizational-level reviews and consider adding this requirement in the future.
Creating Differentiated Credentials to Perform Quality Control Reviews for the SFNH and MFNC Programs		
	Multiple commenters expressed general support for this element.	The EPA appreciates this feedback and will move forward with requiring differentiated credentials to perform quality control for the SFNH and MFNC programs.
	One commenter expressed concerns about marketplace adherence to current rules regarding SFNH/MFNC credentialing (that the SFNH credential is required as a prerequisite to the MFNC credential) and suggested a risk for similar issues with the new quality control reviewer credentials.	The EPA appreciates this feedback and is aware of other instances of anecdotal concerns with the current implementation of credentialing. Regarding the new quality control reviewer credential, the EPA will clarify in the final policy that it expects HCOs to directly and centrally track and oversee the credentialing of quality control reviewers, which reflects the more direct responsibility it expects HCOs to take over designees (the category to which quality control reviewers belong). The EPA believes this will appropriately address the need for proper control and oversight of the new credentials. Regarding Rater credentialing, the EPA is not prepared to prohibit designees from overseeing the tracking of training and credentialing without further outreach but agrees that it is appropriate for HCOs to maintain a central Rater credential list, with headshots, to allow Rater's identity to be validated based on the new "Rater selfie" photo. The EPA has adjusted the final policy accordingly.
	One commenter suggested that training content for the new quality control reviewer credentials should strictly adhere to EPA-developed content and also suggested room for improvement based on prior EPA-developed materials.	While training content and delivery details have yet to be finalized (and may be adjusted over time), the EPA intends to take an active role in content development while also welcoming HCOs to add their perspective to the training and address HCO-specific issues. To reflect the direct responsibility that it expects HCOs to take over designees, the EPA will clarify that it expects content that is specific to quality control review (as opposed to, for example, prerequisite Rater training) to be delivered to those reviewers directly by the HCO.
	One commenter recommended continuing education requirements for quality control reviewers, as well as regular "roundtable" discussions to facilitate information sharing.	The EPA notes that, at a high level, its proposal calls for a continuing education program for quality control reviewers, which mirrors existing requirements for Raters. This general continuing education language, which is included in the final policy, provides scope for future enhancements such as those suggested. Historically, continuing education programs have long existed but have not necessarily been focused on ENERGY STAR specifically. The EPA agrees that both Raters and quality control reviewers would benefit from regular training focused on program-specific technical topics and is actively exploring implementation options for such a resource. The EPA also appreciates the suggestion for a roundtable format specifically for the quality

		control reviewer credential and will consider it further as it discusses the implementation of this element with HCOs.
	One commenter suggested that credentials should be published on a central repository, such as the EPA's ENERGY STAR website.	While the EPA appreciates the benefits of creating a central repository, there are technical challenges in keeping a central repository accurate and comprehensive, as well as communicating differences between different HCO systems (for example, some HCOs perform quality control reviews in-house, while others rely on external designees). At this point, the EPA will continue to point to HCO's public listings as the best source of this information.
	One commenter recommended simplifications to the MFNC program, noting that the documentation and verification protocols are more involved than in SFNH.	The EPA appreciates this comment and, separate from this initiative, will continue to consider opportunities to simplify and streamline MFNC program requirements while still addressing the central systems and common spaces that may be present in multifamily buildings.