Heat/energy recovery ventilators (HRVs) and (ERVs)—ENERGY STAR technical specifications

Version 2.4

This technical specification determines how residential heat-recovery ventilators and energy-recovery ventilators sold in Canada are certified for the ENERGY STAR program in Canada.

This specification is issued by Natural Resources Canada (NRCan). The ENERGY STAR name and symbol are trademarks registered in Canada by the United States Environmental Protection Agency and are administered and promoted by NRCan.

A product model must meet this specification and all criteria included herein in order to be labelled and promoted as ENERGY STAR certified in Canada by its brand owner or authorized agent. Only brand owners who are ENERGY STAR Canada Participants in good standing have permission from NRCan to use the ENERGY STAR name and symbol, as outlined in their Participant Administrative Arrangement.

Any organization found to label product models without obtaining the necessary certification and permission from NRCan will be required to immediately remove the label from these product models and all associated materials. Other corrective actions may be instituted as deemed necessary by NRCan, including but not limited to suspending ENERGY STAR certification for new models and revoking an organization's status as an ENERGY STAR Canada Participant.

1. Definitions

A. **Heat-recovery ventilator (HRV)**
A factory-built packaged unit that has fans or blowers, has a maximum tested airflow of not more than 142 L/s (300 ft3/min) at 0°C and transfers heat between two isolated airstreams.

B. **Energy-recovery ventilator (ERV)**
A factory-built packaged unit that has fans or blowers, has a maximum tested airflow of not more than 142 L/s (300 ft3/min) at 0°C and transfers heat and moisture between two isolated airstreams.

C. **H/ERV**
A product that is either an HRV or an ERV as defined in 1A or 1B.

D. **Sensible recovery efficiency (SRE)**
The net effectiveness adjusted per clause 6.6 of The Canadian Standards Association

(CAN/CSA) C439–24 equation 6 to take into account fan energy, leakage, exhaust air transfer, mass and flow imbalance, frost control, and certain other external and internal energy gains and losses.

E. **Total recovery efficiency (TRE)**
The net total (sensible plus latent, also called enthalpy) effectiveness adjusted per clause 6.7 of CSA C439–24 equation 7 to take into account fan energy, leakage, exhaust air transfer, mass and flow imbalance and certain other external and internal gains and losses.

F. **Net supply Airflow**
The gross airflow during an energy performance test reduced by the measured amount of leakage (identified in C439–24 as exhaust air transfer ratio [EATR]). Net supply airflow is the actual amount of outside air supplied by the unit, reported in the *Energy Efficiency Report* and published in the Searchable product list for H/ERVs, for each energy performance test.

G. Energy efficiency report
ENERGY STAR certification can only be confirmed by NRCan once a completed energy efficiency report and associated lab reports are received from either the certification body or the brand owner. The H/ERV energy efficiency reporting form can be accessed from the Energy efficiency reports and EnerGuide Labels file exchange. Further questions about energy efficiency reports can be directed to NRCan (energystar@nrcan-rncan.gc.ca).

H. **Searchable product lists**
Published and maintained by NRCan, searchable lists of energy-using product models available to consumers in Canada, including regulated and ENERGY STAR certified models.

I. **Test airflow**
The net supply airflow, in cubic feet per minute (CFM) (Litres per second (L/s)), for an energy performance test for which a certified performance rating with outdoor air temperatures of 13°F (-25°C), 32°F (0°C), is provided in the *Energy Efficiency Report* and published in the NRCan Searchable product list for H/ERVs.

J. **Power consumption in watts (W)**
The average power consumed during a specific energy performance test. Power consumption shall be rounded to and reported at the nearest watt.

K. **Fan efficacy (CFM/W) ((L/s)/W)**
The test airflow during a heating mode energy performance test with 32°F (0°C) supply air temperature divided by the power consumption for the same test. Fan Efficacy in CFM/W shall be rounded to and reported at the nearest one decimal place (tenth). Fan Efficacy in L/s/W shall be rounded to and reported at the nearest two decimal places.

L. **Standby Power (W)**
The power consumption determined when the H/ERV is not in use, measured in accordance with CSA C439–24. CSA C439–24 references IEC 62301. Standby power shall be rounded to and reported at the nearest one decimal place (tenth).

M. **CAN/CSA C439–24**
CSA's *Laboratory methods of test for rating the performance of heat/energy-recovery ventilators*.

N. **Brand owner's limited warranty**
A brand owner's limited warranty is an assurance by the ENERGY STAR Participant that purchased system equipment and components are warranted for a certain required period of time. The ENERGY STAR Participant is to comply with the warranty requirements as standard for all ENERGY STAR certified models. ENERGY STAR can request the Participant to submit warranty documentation at any time. The exact terms of the limited warranty, given the minimum requirements, shall be determined by the Participant.

O. **Canada-only disclaimer label**
The disclaimer label is a label that shall include the ENERGY STAR mark. The label shall be available for download from the ENERGY STAR Canada website (see Section 6, E).

P. Base model
The model initially certified from which certification for other models may be derived. (See also Derived model.)

Q. Derived model
A model whose certification is derived from a base model. Differences between a derived model and its associated base model are limited to those that do not adversely affect product performance. Acceptable differences in characteristics include, but are not necessarily limited to: colour, finish, and nameplate.

R. Model number
A unique alphanumeric designation assigned to each product by a brand owner.

S. Product family
A base model and all associated derived models.

2. Certifying product models: scope

A product model must meet the definition of a residential H/ERV as defined in *Section 1A or 1B* as specified herein, and comply with the testing and minimum performance requirements provided in this specification to be eligible for ENERGY STAR certification under this specification.

H/ERVs with electric resistance heaters are not eligible for ENERGY STAR certification.

Under this specification, product models must be available for sale in Canada. Product models certified under this specification are eligible for ENERGY STAR certification **only** in Canada. As such, models must be labelled as ENERGY STAR certified only in Canada (for more information on labelling requirements, see section 6, E).

The brand owner shall be subject to the certification procedures outlined in NRCan's Annex B – Heat-Recovery Ventilator and Energy-Recovery Ventilator (H/ERV) Certification and Disqualification Procedures for ENERGY STAR Canada.

No other procedures are considered valid for the purposes of ENERGY STAR certification unless approved in writing and communicated to program Participants by NRCan.

3. ENERGY STAR certification criteria for H/ERV product models

ENERGY STAR certified H/ERVs must meet all the requirements listed in this specification.

A. Certification criteria

Only the product models described in Section 2 that meet the criteria outlined in Table 1, or are in the same product family as a base model that meets the criteria outlined in Table 1 below, are eligible for ENERGY STAR certification.

B. Test requirements

Table 1. SRE and Fan Efficacy Minimum Requirements

Climate Zone	Zone Definition	Minimum SRE at 32°F (0°C)	Minimum SRE at -13°F (-25°C)	Minimum Fan Efficacy with 32°F (0°C) supply Temperature
Heating	Canada	75%	60%	0.90 L/s/W (1.9 cfm/W)

1. All product base models must be tested and meet SRE requirements at 32°F (0°C) and -13°F (-25°C);
2. All product base models must meet fan efficacy requirements in a test that also meets SRE requirements at 32°F (0°C);
3. All net supply airflows in tests used to meet SRE and fan efficacy requirements must be within 10% of each other;
4. ENERGY STAR certification is confirmed by NRCan based on the actual energy performance results as presented in the lab report submitted to NRCan.
5. Actual energy performance results will be added to the NRCan energy efficiency ratings databases, including the Searchable product list.

4. Quality assurance requirements

To assure quality, the following requirement must be met for an ENERGY STAR certified H/ERV:

Warranty: Participant shall provide a minimum one-year warranty.

5. Inclusion of installation instructions

Detailed written instructions, including picture/diagram-type installation instructions, shall be included with each ENERGY STAR certified H/ERV.

The installation instructions shall provide generic best practices for ensuring effective and efficient installation. The instructions shall indicate the following:

A. Proper sealing instructions for openings to the exterior of the thermal envelope of the building that includes caulk or other similar material to inhibit air leakage.
B. Recommended ductwork installation that will minimize static pressure losses and promote adequate airflow.
C. Proper installation of vibration deadening materials such as short pieces of flexible duct.
D. Proper installation of thermal insulation and connecting ducts to minimize heat loss and gain.

6. Consumer Information

Brand owners must include the following information on the product model, in product model literature, and on the brand owner's website:

A. "To ensure quiet operation of the ENERGY STAR certified H/ERV, each product model must be installed using sound attenuation techniques appropriate for the installation."
B. "The way your heat/energy-recovery ventilator is installed can make a significant difference to the electrical energy you use. To minimize the electricity use of the heat/energy-recovery ventilator, a stand-alone fully ducted installation is recommended. If you choose a simplified installation that operates your furnace air handler for room-to-room ventilation, an electrically efficient furnace that has an electronically commutated (EC) variable speed blower motor will minimize your electrical energy consumption and operating cost."
C. "Installation of a user-accessible control with your product model will improve comfort and may significantly reduce the product model's energy use."
D. The brand owner must provide clear and consistent labelling of ENERGY STAR certified H/ERVs. The ENERGY STAR mark must be clearly displayed on the top/front of the product model, on product model packaging, in product model literature (i.e., user manuals, spec sheets, etc.), and on the brand owner's website where information about ENERGY STAR certified models is displayed.
E. An ENERGY STAR disclaimer label, which includes the following statement, must be placed on the product model packaging of ENERGY STAR certified H/ERVs:

"This product earned the ENERGY STAR® by meeting strict energy efficiency guidelines set by Natural Resources Canada and the US EPA. This product meets ENERGY STAR requirements only when used in Canada."

The placement of this statement must be adjacent to the ENERGY STAR mark and any text describing the ENERGY STAR program and/or certified product models.

The disclaimer label will be available for Participants to download from the ENERGY STAR

website with other ENERGY STAR marks. It shall be at least 3" x 2" in size and may be vertical or horizontal. The Participant may enlarge it for larger product model packaging surfaces if so desired.

The disclaimer label must be clearly displayed on the same side as the ENERGY STAR mark on the product model and product model packaging, in the installation/instruction manual, and on the Participant's website where information about ENERGY STAR certified models is displayed.

7. Product model testing and certification

Brand owners are required to ensure tests are performed according to the requirements included in this specification and submit eligible product model information to NRCan for approval. Each eligible product model must be tested in accordance with CAN/CSA C439-24 by a Standards Council of Canada (SCC) accredited laboratory and test results must be certified by an SCC accredited Certification Body (CB). For more details, see Section 9 of Specification, Requirements of Organizations Certifying Products for ENERGY STAR Certification.

Energy efficiency reports submitted to NRCan must always be accompanied by full copies of the laboratory test report. Furthermore, certified H/ERV products may be subject to NRCan's post-market verification testing program to ensure products associated with the ENERGY STAR label continue to comply with program requirements.

Brand owners are not permitted to represent results that have been determined from tests performed at a particular rated airflow or outdoor supply temperature as being applicable to tests that might have been performed at a different rated airflow or outdoor supply temperature.

The lab report must be verified by NRCan before a model can be posted on NRCan's Searchable product list.

8. Verification Testing

The brand owner shall be subject to the verification testing procedures outlined in NRCan's Annex B – Heat-Recovery Ventilator and Energy-Recovery Ventilator (H/ERV) Certification and Disqualification Procedures for ENERGY STAR Canada. No other procedures are considered valid for the purposes of ENERGY STAR certification unless approved in writing and communicated to program Participants by NRCan.

The certification body will provide the results of verification testing of all models to NRCan within twenty (20) business days of receipt of the lab report test results from the third-party laboratory that performed the test.

9. Requirements of Organizations Certifying Products for ENERGY STAR Certification

This specification does not grant any organization the right to certify the performance of an H/ERV product model for ENERGY STAR certification unless that organization is accredited by SCC as a certification body for that product category under ISO/IEC 17065. As the SCC grants

accreditation to certification bodies, it adds their names and scopes of accreditation to the SCC's Directory of Accredited Certification Bodies. The SCC will consider the following elements when reviewing a certification body for inclusion on this list:

A. **Laboratory Requirements**
   For laboratory accreditation and requirements, see Annex A – Heat-Recovery Ventilator and Energy-Recovery Ventilator (H/ERV) Roles and Responsibilities for ENERGY STAR Canada.
B. **Verification procedure requirements**
   The SCC accredited certification organization shall follow the procedures outlined in Annex B – Heat-Recovery Ventilator and Energy-Recovery Ventilator (H/ERV) Certification and Disqualification Procedures for ENERGY STAR Canada, as published on NRCan's website, for all verification processes, including product procurement and resolution of failures. No other procedures will be considered valid for the purposes of ENERGY STAR certification, unless approved in writing and communicated to program Participants by NRCan.
C. **Certification of base-derived or similar products**
   The certification body shall not certify a product model based on the lab report test results of another product model unless the differences between the two product models are limited to those that do not impact/alter product model performance. Examples of acceptable differences are colour, finish, and nameplate.
D. **Membership requirements**
   The certification body shall not require that a party seeking ENERGY STAR certification hold membership or pay for ENERGY STAR certification beyond initial certification and ongoing verification.
E. **Product model listings**
   ENERGY STAR certified product model listings shall be limited to NRCan's Searchable product list. No fee shall be charged to ENERGY STAR program participants to send certification information to NRCan, including a submission to add or remove certified product models, from NRCan's Searchable product list.
F. **Reporting verification testing results to NRCan**. For product models that fail verification testing, the certification body shall notify the failure to NRCan within five (5) business days of receipt of the lab report test results from the third-party laboratory that performed the test. Furthermore, the certification body shall submit the complete verification testing results to NRCan within twenty (20) business days of receiving the lab report. For detailed verification testing reporting requirements, see Annex B – Heat-Recovery Ventilator and Energy-Recovery Ventilator (H/ERV) Certification and Disqualification Procedures for ENERGY STAR Canada, as published on NRCan's website. No other procedures will be considered valid for the purposes of ENERGY STAR certification unless approved in writing and communicated to program Participants by NRCan.

10. Effective Date

The date from which product models must meet the requirements specified under Version 2.4 of the H/ERV specification will be defined as the effective date of the agreement.

1. **Certifying and Marking product models under the Version 2.4 specification**
   The effective date of Version 2.4 ENERGY STAR Technical Specification for H/ERVs is **January 1, 2026**. All new product models certified after this date must meet Version 2.4 requirements to be eligible for ENERGY STAR certification.

Annexes

Annex A to the ENERGY STAR Technical Specification for Residential Heat-Recovery Ventilators and Energy-Recovery Ventilators (H/ERVs), sold in Canada, Version 2.4 — Roles and Responsibilities for ENERGY STAR Canada

Annex B to the ENERGY STAR Technical Specification for Residential Heat-Recovery Ventilators and Energy-Recovery Ventilators (H/ERVs), sold in Canada, Version 2.4 — Certification and Disqualification Procedures for ENERGY STAR Canada

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Annex A—Roles and responsibilities for ENERGY STAR® Canada Heat-recovery ventilator and Energy-recovery ventilator (H/ERV)

Participants of Natural Resources Canada's (NRCan's) ENERGY STAR Canada certified H/ERV program shall adhere to the roles and responsibilities outlined herein. Failure to adhere to this document may result in NRCan suspending the process for qualifying new products or taking steps to terminate a brand owner's Participant Administrative Arrangement.

This document is effective as of **January 1, 2026** and supersedes all previous versions, as amended from time to time.

Laboratories

Laboratory accreditation: In order to be eligible to test H/ERV products for ENERGY STAR certification in Canada, a test laboratory must either:

- have the required ENERGY STAR testing method, CAN/CSA C439, within their lab 17025 scope of accreditation or;
- demonstrate compliance with the appropriate requirements of ISO/IEC 17025, including CAN/CSA C439, to an SCC accredited certification body. Laboratories must be specifically qualified to carry out tests to determine whether H/ERVs meet key product criteria as outlined in this document.

Laboratories have the following responsibilities:

- Testing products according to the required test methods in the relevant ENERGY STAR specification.

- Cooperating with ongoing audits by Accreditation bodies (AB), Certification bodies (CB), and NRCan.
- Maintaining accreditation and keeping track of new and revised specifications and test methods.
- Participating in inter-laboratory comparison testing or proficiency testing, when required.

Certification bodies (CBs)

The CB verifies a model's lab report, certifies models that meet ENERGY STAR criteria, and provides NRCan with an energy efficiency report on the models tested. For initial testing, a CB must verify that all ENERGY STAR models are tested by a laboratory that is accredited to, or meets the requirements of ISO/IEC 17025. A CB's capacity to verify a laboratory's compliance with ISO/IEC 17025 must be included in the CB's scope of accreditation from the SCC. Verification testing must be performed by a third-party laboratory accredited to ISO/IEC 17025.

CBs must provide NRCan with a clear and definitive energy efficiency report that states whether a model meets or does not meet the ENERGY STAR Technical Specification for Residential Heat-Recovery Ventilators and Energy-Recovery Ventilators (H/ERVs), sold in Canada in effect at the time of the testing and certification. The energy efficiency report shall be used to submit all model submissions and model updates. The name and model number submitted to NRCan's Searchable product list must be identical to the name and model number referenced by the brand owner on the model and any corresponding product literature.

For labelling requirements, see the technical specification.

CBs are required to send all necessary certified product information to NRCan for inclusion in the Searchable product list. NRCan is the **only** organization with the authority to list ENERGY STAR certified H/ERV product models.

The CB must ensure that the brand owner or brand owner's representatives are not present at any time during testing, with the exception of initial certification testing and test setup witnessing for verification testing. No alterations, including repairs, may be made to the test model once the lab has received the model. When a CB becomes aware of changes to a model that may negatively affect performance after the model has been certified, such as changes identified during verification testing or as reported to the CB by the brand owner, the CB must notify NRCan within ten (10) business days. Any post-certification changes that affect performance are considered substantial and will require testing of the model as a new device under the ENERGY STAR Canada
certification program, at NRCan's discretion.

A laboratory test report for a product model may be used for certification or verification of any model within the same product family. CBs are responsible for retaining information identifying all certifications associated with a test report and are required to provide this information to NRCan when requested.

NRCan will accept energy efficiency reports from one party only, either the CB or the brand owner. In the case whereby the CB is the submitter, the CB must have a signed Letter of Authorization from a brand owner to submit on their behalf. The energy efficiency report and the Letter of Authorization can be found on the Energy efficiency reports and EnerGuide Labels file

exchange.

CBs must also uphold the following responsibilities:

- Determine the number of product models required verification testing based on the number of certified H/ERV base models. CBs shall follow verification procedures outlined in *Annex B - Heat-Recovery Ventilator and Energy-Recovery Ventilator (H/ERV) Certification and Disqualification Procedures for ENERGY STAR® Canada*.
- Select products for verification testing, which include up to 50% of nominated products from NRCan with the remainder selected randomly.
- Notify NRCan within five (5) business days if brand owners are unresponsive to or do not cooperate with verification testing related requests.
- For models that fail verification testing, notify NRCan of the failure within five (5) business days and provide NRCan with all associated lab reports and detailed test data for the model within twenty (20) business days of receipt of the lab report test results from the laboratory that performed the test. Also, notify the brand owner and the base model manufacturer of the verification test failure.
- Verification reports must be submitted by CBs twice per year (January and July), or as determined by NRCan.
- Verification reports must provide a summary of models tested during the determined period, and include: the model name, number, and top-level test results, and information about where the units were obtained and tested. If units were not obtained off-the-shelf and/or tested in a third-party laboratory, the CB shall provide an explanation. The summary shall also include a list of models selected for testing that were not tested, along with the reason.
- Provide a transparent fee structure for all certification services.

Brand owners

Brand owners must maintain updated contact information with the CB associated with each ENERGY STAR certified product model. Brand owners are responsible for complying with verification testing and associated program obligations even if another party facilitated the initial certification. On an ongoing basis, brand owners will notify CBs regarding the availability of certified product models so they are represented accurately on the Searchable product list. Models that are no longer available will be removed from the product list and will not be subject to verification testing.

NRCan will accept energy efficiency reports from one party only, either the CB or the brand owner. In the case whereby the brand owner is the submitter, the brand owner must submit a copy of the certification/verification certificate demonstrating an accredited CB has verified the energy performance of the reported models to the test standard in effect, CSA C439-18. The energy efficiency reports form can be found on the Energy efficiency reports and EnerGuide Labels file exchange under EER - Heating, Cooling and Ventilation, Ventilators - Heat Energy Recovery.

Brand owners must respond in a timely manner to CB or NRCan requests for information regarding product model availability and product models selected for verification testing. CBs are required to notify NRCan within five (5) business days if brand owners are unresponsive to

or do not cooperate with verification testing related requests.

Brand owners will provide documentation to the CB if a model that was tested in the previous year has been selected for verification testing and therefore should not be retested in the current year. In such cases, the CB will select an alternate model for verification testing.

Brand owners must understand the CB's fee structure for ENERGY STAR testing. CBs are required to provide a transparent fee structure for all certification services.

Brand owners may contact NRCan directly at energystar@nrcan-rncan.gc.ca with any questions or concerns.

Annex B — Certification and disqualification procedures for ENERGY STAR® Canada Heat-recovery ventilator and Energy-recovery ventilator (H/ERV)

Participants of Natural Resources Canada's (NRCan's) ENERGY STAR Canada certified H/ERV program shall adhere to the certification and disqualification procedures outlined herein. Failure to adhere to these procedures may result in NRCan suspending the process for qualifying new products or taking steps to terminate a brand owner's Participant Administrative Arrangement.

This document is effective as of **January 1, 2026** and supersedes all previous versions, as amended from time to time.

NRCan reserves the right to final determination as to whether a product meets ENERGY STAR certification requirements.

ENERGY STAR certification

All H/ERV models in Canada are subject to Canada's Energy Efficiency Regulations and must meet federal energy efficiency standards before becoming ENERGY STAR certified.

NRCan requires that all ENERGY STAR certified H/ERVs be tested by a laboratory, that lab reports and their results be reviewed and certified by an SCC accredited certification body (CB), and that ENERGY STAR certification be confirmed by NRCan before a model can display the ENERGY STAR mark. This is the **only** way H/ERVs can be ENERGY STAR certified in Canada. Testing and certification must be done prior to using the ENERGY STAR name and/or mark in connection with a product or marketing materials related to the product.

Any organization found to label products as ENERGY STAR without obtaining the necessary certifications will be required to immediately remove the ENERGY STAR label from these products and all associated materials. Other corrective actions, such as suspending certification for new models or terminating an organization's ENERGY STAR Participant Administrative

Arrangement, may be taken as deemed necessary by NRCan.

Model numbers

A model number for a product that has been disqualified or deemed ineligible for ENERGY STAR certification cannot be re-used or referenced for a different product for any future certification, regardless of product redesign. Adding a hyphen or a space to an existing model number does not constitute sufficient change to indicate a new model. Brand owners may add additional letters or numbers to distinguish new models from old models.

Verification testing

ENERGY STAR certified products are subject to post-market verification testing administered by SCC accredited CBs (See Annex A – Roles and Responsibilities for ENERGY STAR Canada)

Product models that fail verification testing, as determined by NRCan, will be disqualified from using the ENERGY STAR label.

- Beginning one year after the date of the laboratory test report used for product certification, all ENERGY STAR certified products are subject to post-market verification testing administered by CBs (exceptions may apply, as warranted by CBs or NRCan). Verification testing must be conducted at a third- party laboratory that fulfills the requirements set out in the Laboratories section of Annex A – Heat-Recovery Ventilator and Energy-Recovery Ventilator (H/ERV) Roles and Responsibilities for ENERGY STAR Canada. Brand owners must be responsive to CB requests for information and payment for this testing.
- A minimum of 10% of certified H/ERV base models will be subject to verification testing. A CB makes its selections from the list of models it has certified; an individual brand owner's testing rate may be higher or lower than the program's minimum testing rate in a given year.
- The CB must obtain the testing models from the open market – that is, from an authorized wholesaler or from a retailer. The model may not be altered in any way, including repairs, once purchased. All product models are eligible for verification testing, but no more than one model from a product family will be subject to verification testing in the same year. The verification determination shall apply to each model number in the same product family as the tested model.
- The brand owner has the right to inspect the model selected for testing (either virtually or physically) and confirm that it has not been damaged in transit prior to verification testing. Immediately following inspection, if a model is deemed by the brand owner to be damaged in transit and therefore unfit for testing, the brand owner may request that another model taken from the marketplace be tested instead. A brand owner or laboratory personnel may not make any repairs to the testing unit, regardless of whether or not the unit is damaged. Brand owners, ENERGY STAR Canada program participants or their representatives may not be present for verification testing under any circumstances.
- Maintaining accurate product model availability information with a CB may reduce a brand owner's testing burden and make model selection and procurement easier. If a

selected model is not available at the time of procurement, the CB will replace it with another selection from that brand owner, if possible. The CB may not inform the brand owner as to which models will be tested or where they will purchased as part of its efforts to ensure its ability to procure a model.

- If a model passes verification testing and retains its ENERGY STAR certification, but the model's energy performance is different from the time of original certification, the CB must notify NRCan and update all relevant data identified under the Certification Body section of Annex A - Heat-Recovery Ventilator and Energy-Recovery Ventilator (H/ERV) Roles and Responsibilities for ENERGY STAR Canada. The brand owner will not be required to change the model's product literature or any listing information, including SKUs, unless otherwise requested by NRCan.
- Brand owners can dispute the results of a test failure before a product is disqualified from the program (see Opportunities for Appeal below).

Types of product disqualifications

Testing failures

A testing failure occurs when a product model fails to meet the requirements of the ENERGY STAR Technical Specification for Residential H/ERVs as a result of verification testing as confirmed by a CB.

NRCan may determine that a product model with a testing failure does not warrant disqualification for various reasons, including CB administrative error, lab administrative error, laboratory tolerances as permitted by CSA C439, brand owner administrative error, or a de *minimis* performance deviation. In such cases, NRCan may decide that no further action is required.

Disqualification procedures

When NRCan believes a product may warrant disqualification, NRCan will notify the brand owner and base model owner at the e-mail addresses provided and provide thirty (30) days' notice for brand owner to complete and submit a *Product Control Measures* form provided by NRCan. The response may include the submission of additional relevant information to NRCan. NRCan will provide the necessary time to resolve questions of potential non-compliance when a brand owner acts in good faith, as deemed necessary by NRCan. NRCan will review submitted information from the brand owner and determine if any additional product model testing and/or analysis is necessary.

NRCan will make a final determination of product model status and inform the brand owner of the results.

Disqualified products will be removed from NRCan's Searchable product list and added to NRCan's Disqualified heat/energy recovery ventilators web page.

Product control measures

Disqualification of a product model shall result in the disqualification of each product model number in the same product family. Brand owners are provided with a standard format for submitting product control measures for disqualified product model numbers and provided thirty (30) days from the time of notification to submit them.

In all instances, when a product model number has been disqualified, the brand owner is required, at a minimum, to:

- Immediately cease shipment of the disqualified model numbers displaying the ENERGY STAR label*;
- Immediately cease labelling the disqualified models as ENERGY STAR;
- Remove ENERGY STAR references from the disqualified model number's marketing materials, spec sheets and websites; and
- Cover or remove ENERGY STAR labels on any disqualified model numbers within the brand owner's control.

*"label" refers to all certification marks and name marks

Additional measures may be required in certain cases. The following factors are considered in determining such requirements:

- Consumer investment;
- Last date of product manufacture;
- Last date of shipment;
- Quantity of models produced;
- Estimated sell-through period of product type;
- Scope and depth of product distribution; and
- Preventative measures adopted.

Product control measures are based on and apply to the model number of the disqualified product. Where a product model has been modified after its initial certification but not recertified with a new model number, control measures apply to all models with that model number, irrespective of product modifications that may have occurred during the period in which it was a certified product.

Under no circumstances may a new ENERGY STAR product be recertified using the model number of a previously disqualified product.

Failure to submit thorough and timely product control measures may affect the brand owner's Participant Administrative Arrangement status with NRCan.

Opportunities for appeal

When NRCan notifies a brand owner that a product will be disqualified, the brand owner may notify NRCan of its decision to appeal within ten (10) business days. NRCan will consider new information at that time or conduct a more detailed examination of testing, where warranted.

Examples of acceptable appeals might be a model failure unjustly caused by lab error or if the model is proven to have arrived damaged.

Searchable product list updates

When a determination to disqualify is made, NRCan will withdraw its ENERGY STAR certification for the model(s) in question. Once the product model has been removed from the Searchable product list, the model will be listed on the Disqualified heat/energy recovery ventilators web page. This webpage provides consumers and utilities with information regarding models that no longer meet ENERGY STAR certification criteria.
