

Working with an Energy Advisor

Your roadmap to a High Performance Home



Prepared in partnership by:



WORKING WITH AN ENERGY ADVISOR (EA)

ROADMAP

New Construction

STEP 1: MODEL YOUR HOME

An EA models your home to show that it is compliant with the current metrics for your region and climate zone. Provide your permit plans including any mechanical systems, window and door packages, and building assemblies that will be used in the building of the home.

STEP 2: OPTIMIZATION

An EA views your home as a system as opposed to its individual parts and can compare and contrast how each upgrade will change the performance of your home. This information allows balancing options and designing to your context.

STEP 3: MID CONSTRUCTION VERIFICATION

A mid-construction air leakage test determines air tightness of a home while the air barrier is exposed. It highlights any issues while still easily accessed and corrected. Ideally, the air barrier is complete, and windows and doors installed, at time of testing. Subtrades can still be on site working either inside or outside of the home while the mid-construction air tightness test is conducted.

STEP 4: FINAL SITE INSPECTION

Completion of a final site inspection including a final air leakage test. All of the windows, doors and mechanical systems must be installed for verification.

STEP 5: REPORTING & REBATES

An EA provides final reporting and any required labeling in order to meet local requirements and apply for applicable rebates.

Retrofit Assessment

STEP 1: HOUSE EVALUATION/VERIFICATION

An EA will conduct a site visit. While there, they will perform an air leakage test and will require access to all rooms of your home.

An evaluation of an existing home considers:

- dimensions & measurements of the building envelope
- wall construction (ability to keep the heat in)
- foundation type & insulation (ability to keep the heat in)
- window construction (heat lost through glazing)
- ceiling & attic insulation (ability to keep the heat in)
- air leakage rate (how many times you are reheating your home's air each hour)
- atypical loads (large appliances that consume a lot of power)

STEP 2: UPGRADE RECOMMENDATIONS

Modelling allows an EA to identify areas for improvement based on highest impact and related to a client's wants and needs.

It can be hard to know which upgrade to begin first, especially when working within a budget. An EA can offer an invaluable renovation path that considers both the existing building and your upgrade goals. They may consider options that prioritize the most cost effective route, best value added for resale, maximizing available rebates, or a combination of these considerations.

STEP 3: REBATES

An EA can assist with paperwork required for rebates, closing the loop on upgrades. An additional site visit may be necessary.

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Modelling Information Requirements

PLANS MUST SHOW:

- Scale. Ideally the same scale on every page to avoid delay, extra expense, and errors.
- Window sizes and window operation.
- All vaults. Ideally with a cross section for each vault.
- All building assemblies with correct insulation values that you are planning to actually build. Permit offices reject plans that do not match EA reports. "2.5 inch ridged" is not sufficient information, you must note expected R-value from that insulation.
- Direction the home faces.

VENTILATION:

- Type of system, eg. HRV or forced air fan - if HRV, will it be used as the bathroom fan?
If unknown, EA can assign assumptions.

WINDOWS:

- Type of windows, eg. vinyl or wood frame casement, or sliders.
- U value and/or other performance ratings of the windows. Tip: window quotes typically show the performance data needed.
If unknown, EA can assign assumptions.

HEATING AND COOLING:

- System type, eg. heat pump, gas forced air, or boiler.
- Performance data for those systems. Tip: mechanical quotes typically show the performance data needed.
If unknown, EA can assign assumptions.

Air Leakage Testing

CONSTRUCTION PHASE:

- Air barrier fully complete.
- All windows and doors installed or openings temporarily sealed.
- Close all dampers.
- Seal all intentional openings: chimneys, vents and drains.
- 120V 15A power is available near the test location.
- Provide clean and clear access to the test location.
- All workers onsite are prepared to stay in or out of the building during the test (for at least 30 mins).
- Provide heat to the building if a thermal camera needs to be used for leak detection (at least 5 degrees warmer or colder than the outside temperature).

FINAL TESTING PHASE:

- Ensure all paint and finishes are dry at test locations and will not be damaged by blower install or leave residue on the blower equipment.
- Close all dampers.
- Shut down all gas-fired appliances.
- Shut off all ventilation.
- Fill all P traps with water.
- Provide clean and clear access to the test location.
- All workers onsite are prepared to stay in or out of the building during the test (for at least 30 mins).

During Final Test DO NOT seal any vents or use tapes or other sealants to block leaks.

TEST CHECKLIST