



ENERGY STAR AND HOME ENERGY AUDITS

REAL was one of a handful of organizations in Canada to develop and test the blower-door assisted Home Energy Audit in the late 90s; we have delivered Home Energy Audits (Energuide, ecoEnergy) ever since.

REAL is now offering consulting services for builders of new housing in partnership with Hearthmakers Energy Cooperative based in Kingston.

EXPERIENCED AUDITOR

Our Certified Energy Advisor Alan Leonard has extensive construction experience over 25 years and has been working in the energy auditing and weatherization field for over 10 years.

OBC AND AUDITS

The recent Ontario Building Code changes are meant to increase the energy efficiency of new housing while giving builders many options to comply with the code. There are opportunities to go beyond code and to build even more efficient homes that are fully compliant with the new OBC standard. REAL can help you navigate through different options, branding your company as an exceptional builder of homes that cost less to operate and are more comfortable.

ENERGY STAR

The ENERGY STAR brand is a highly recognized symbol that home buyers trust when looking for an energy efficient home. ENERGY STAR qualified homes are on average 20 percent more efficient than a typical code built home and they fully comply with the new resource conservation requirements of the Ontario Building Code. An ENERGY STAR builder shows homebuyers that he is committed to building high quality, energy efficient homes that are more comfortable, cost less to operate and have less effect on the environment.

To receive the ENERGY STAR qualification there must be third party verification of the design and construction of the home. This means that a Natural Resources Canada Certified Energy Auditor must review the plans, make recommendations about any changes needed to comply with the standard and to verify onsite that the construction and air tightness of the completed building conforms to the ENERGY STAR standard.

There are two ways to fulfill the ENERGY STAR standard's requirements; the prescriptive and the performance method. In the **prescriptive method** the builder chooses options from builder option packages (BOPs) and creates a compliant design. There are minimum core requirements but the builder can pick and choose between different options that allow for some design flexibility that corresponds to their own construction techniques, material preferences and budget. This is similar to the prescriptive packages in SB-12 of Part 12 of the OBC. The 'as built' house still needs to be audited by a Certified Energy Auditor including blower door/air tightness testing to confirm that the house meets the ENERGY STAR standard.

The **performance method** allows more design flexibility and gives the builder/designer more options in the choice of characteristics for the house. There are still core requirements but issues like too much window area can be tweaked in concert with other aspects of the building to create a compliant design. The builder and advisor can easily try out

changes to the plans to find those that are most cost effective and/or easily accomplished while still reaching the standard. The plans and HVAC specifications are reviewed by the auditor and the house is modeled in Natural Resources Canada's Hot 2000 performance simulation software. As long as the core requirements are met and the house gets an Energuide rating of 83 or more the house will receive ENERGY STAR qualification that fulfills and exceeds the building code requirements. Again the 'as built' house must be assessed and tested to confirm that it meets the ENERGY STAR standard.

ENERGUIDE 80 – PART 12

For builders that do not want to build to the ENERGY STAR standard there are other methods to meet the requirements of Part 12 of the OBC without using the prescriptive packages of SB-12. Because the intent of the code is to build houses that should reach a rating of Energuide 80 a house can be modeled using Hot 2000 software and as long as it reaches at least ERS 80 after final testing and assessment it will be considered up to code. This can allow a builder with a house that doesn't fit into the SB-12 prescriptive path packages to still meet code requirements or even rate better than ERS 80. A builder can experiment with different construction methods, materials and designs and make changes as needed to get an ERS 80 rating.

Another method of code compliance is to use the performance path of SB-12. This is where a proposed plan is compared by a Certified Energy Advisor to an identical house built to one of the prescriptive packages using Hot 2000 modeling software. If the proposed house uses less energy than the same design built to the prescriptive package then it is accepted as compliant with SB-12 requirements. No onsite assessment or testing needs to be done by the Certified Energy Advisor.

TRAIN AIR SEALERS, QUALITY ASSURANCE

If you think you might be interested in becoming an ENERGY STAR builder we can assess planned designs with you and advise you on different options to reach the ENERGY STAR standard or to use the other pathways to energy code compliance. When you are starting to build to the ENERGY STAR standard, we can do pre-drywall blower door testing so that you can be sure your house achieves the ENERGY STAR qualification. This can be an excellent way to train air sealing crews and to do quality assurance. We will work with you to help you build excellent houses in the most cost effective way.

RIDEAU ENVIRONMENTAL ACTION LEAGUE (REAL)

REALACTION.CA

REAL DEAL REUSE STORE AND ENVIRONMENT CENTRE

85 WILLIAM ST. WEST, SMITHS FALLS

(OPPOSITE THE RAILWAY MUSEUM)

SUSAN BRANDUM, MANAGER

SBRANDUM@COGECO.CA

613-267-2257

ALAN LEONARD, CEA

ALANL@LINCSAT.COM

613-864-3099