



Ministry of
Energy and Mines



April 1, 2011

IMPORTANT NOTES FOR CONTRACTORS AND TRADES PEOPLE

This document will help you ensure that your customers' energy efficiency home improvements are eligible for LiveSmart BC incentives.

If you have any questions regarding the eligibility of an upgrade under the LiveSmart BC: Efficiency Incentive Program, please contact LiveSmart BC at efficiencyincentives@gov.bc.ca or call 1-866-430-8765 **before** purchasing or installing a system for a homeowner. Verification of product specifications should be made with manufactures and distributors, along with industry and government standards associations and websites.

CONTENTS

1. General Notes.....	pp 1 - 3
2. LiveSmart Champion Bonus.....	pg 4
3. Air Sealing and Mechanical Ventilation Incentives.....	pp 5
4. Insulation Incentives.....	pp 6 - 7
5. Windows, Doors and Skylight Incentives.....	pp 7 - 8
6. Space Heating Incentives.....	pp 9 - 14
7. Water Heating Incentives.....	pp 15
8. Distributed Power Generation.....	pg 16

GENERAL NOTES

- **Homeowner/Contractor Responsibility:** The homeowner will only receive incentives for energy efficiency upgrades under the LiveSmart program if all program requirements are met. Contractors and tradespeople must ensure the following for their customers:
 - Before any upgrades are started, a Certified Energy Advisor (CEA) working for a Service Organization that is licensed by Natural Resources Canada must conduct a pre-retrofit energy assessment on the home. To help a customer find a CEA, or to find an Advisor yourself, visit the LiveSmart BC website at:
www.livesmartbc.ca/rebates
 - Before beginning the upgrades, contractors must ensure that all improvements meet eligible LiveSmart and manufacturers' specifications. Also, contractors

are responsible for **providing homeowners with clear and detailed documentation on the upgrades as noted below:**

- Complete documentation must be provided to the homeowner, showing clearly that the upgrades meet the requirements of the LiveSmart BC: Efficiency Incentive Program according to the LiveSmart BC Home Improvement Incentive Brochure. The applicable version of the LiveSmart BC Incentive Brochure will always be the version that is posted at <http://www.livesmartbc.ca/rebates> as of the date of the post-retrofit energy assessment.
- **Program Incentives Documents:** The LiveSmart BC incentives brochure can be found at <http://www.livesmartbc.ca/rebates>. When referring to the brochure, please carefully read the “Important Notes” on the final page. The brochure and incentives, including some stand alone utility partner programs, may be changed and updated without notice. **Please refer to the online brochure regularly for the most current version of available incentives.**
- **Regions:** For the purposes of LiveSmart, British Columbia is divided into two regions: Interior and Northern and South Coastal. The South Coastal region is comprised of the following Regional Districts: Metro Vancouver, Fraser Valley, Sunshine Coast, Powell River, Comox Valley, Strathcona, Alberni-Clayquot, Nanaimo, Cowichan Valley and Capital Regional District and the District of Squamish Municipality. All other areas of BC fall under the Interior and Northern Region for LiveSmart BC incentives.

Please ensure that all upgrades meet the eligibility requirements for the homeowner’s LiveSmart region.

- **Questions:** If you have questions regarding the eligibility of an upgrade under the LiveSmart BC: Efficiency Incentive Program, please contact the LiveSmart BC office at efficiencyincentives@gov.bc.ca or call 1-866-430-8765 *before* purchasing or installing a system for a homeowner. Verification of product specifications should be made with manufacturers and distributors.
- **Program Utility Partners:** FortisBC Inc. (electricity), Fortis Energy Inc. (gas) and BC Hydro are all contributing partners to the LiveSmart BC: Efficiency Incentive Program. These utility partners help fund incentives in a coordinated manner and actively participate in engaging with the residential energy efficiency and heating industries.

The utility partners also offer a variety of unique energy efficiency programs that complement LiveSmart BC. Please contact the utility companies for more information on the programs and services they offer to contractors and your customers. Visit the following websites for more information:

- **BC Hydro:** www.bchydro.com/powersmart
- **Fortis Energy BC (Formerly Terasen Gas):** <http://www.fortisbc.com/NaturalGas/Homes/SavingEnergy/Pages/default.aspx>
- **FortisBC (Electricity):** www.fortisbc.com/powersense
- **Eligibility:** Please note that Terms and Conditions of the LiveSmart BC: Efficiency Incentive Program are subject to change without notice. **Terms and Conditions in place at the time of the post-retrofit assessment by the Energy Advisor are those that will be applied to the customer.** See www.livesmartbc.ca/rebates for

current terms and conditions. To confirm the eligibility of a customer, check with the customer's Certified Energy Advisor.

NOTE: LiveSmart incentive funding for new participants is available for homeowners who enter the program by having their pre-retrofit home energy assessment on or after April 1, 2011 and complete eligible upgrades and a post-retrofit energy assessment within 18 months of their initial assessment or by March 31, 2013, whichever comes first.

Homeowners who had pre-retrofit home energy assessments any time before April 1, 2011 but have never received an incentive payment from either the LiveSmart BC program or the federal ecoENERGY program can be eligible for incentives under the revised LiveSmart BC: Efficiency Incentive Program offering launched on April 1, 2011. However, homeowners must have a new baseline energy assessment after April 1, 2011. Only upgrades undertaken after this new assessment will be eligible for incentives and the new baseline assessment is not eligible for the LiveSmart assessment subsidy.

The above eligibility scenario also applies to participants who had both pre- and post-retrofit assessments for either LiveSmart or ecoENERGY before April 1, 2011, but whose upgrades did not meet eligible thresholds and so therefore did not receive any incentives from either the federal or the provincial program.

If a homeowner who previously participated and had a post-retrofit visit before April 1, 2011 sells their house and moves to a new home, that homeowner can enter the revised LiveSmart program that was launched April 1, 2011.

If a person buys a new home, and the previous owners of that home had participated in the LiveSmart program before April 1, 2011, that new owner can participate in the revised LiveSmart program by having a new baseline assessment performed on the home.

LIVESMART CHAMPION BONUSES

- **LiveSmart Champion Bonus**

The goal of the LiveSmart BC: Efficiency Incentive Program is to motivate participants to go further to increase the comprehensive energy efficiency of their home. The Champion Bonus incentive is designed for homes that have significant opportunities for improving their energy efficiency – often older homes built before 1950.

To be awarded the Champion Bonus the homeowner must undertake a Champion Level upgrade in at least five upgrade categories. Champion Level upgrades are identified by a green star. Upgrade categories are divided by thick green or blue bands.

- NOTE: Requirements to achieve Champion-level upgrades in Attic Insulation category:
 - o 100% insulation coverage of each attic component in a home (for example attic and cathedral ceiling) must be achieved upon completion of the retrofits
 - o one component can already be at 100% with no upgrade occurring, as long as the other component *is* retrofitted to a Champion-eligible level during the LiveSmart participation period
 - o 100% coverage must be to Champion-eligible level in each attic component
 - o Even if upgrades occur in each attic component to Champion-eligible level, only one of those upgrades can be counted toward the five required to receive the Champion bonus (one star for the category)
- NOTE: Requirements to achieve Champion-level upgrades in Basement and Other Insulation category
 - o Requirements are the same as for Attic Insulation: 100% coverage of each component (e.g. basement and crawlspace), all coverage must be Champion-eligible levels, only one component needs to be retrofitted during LiveSmart participation period, only one upgrade can be counted toward the Champion Bonus from this category

- **CHBA Built Green Renovation Platinum Bonus**

The Canadian Home Builder's Association has developed a renovation standard. If a LiveSmart customer achieves the highest Built Green Renovation rating, Platinum, they will receive an incentive from LiveSmart. The renovation must be undertaken by a CHBA-certified contractor. Information about the renovation standard can be found at www.builtgreencanada.ca

AIR SEALING AND MECHANICAL VENTILATION

- **Air Sealing Targets**

Note that air sealing targets have been raised from the previous version of the LiveSmart BC program. In order to achieve a LiveSmart incentive for air leakage, the homeowner must achieve the base target, established at the pre-retrofit energy assessment, plus an additional 5%. For example, if the homeowner's report states that the base target is 10%, the homeowner must reduce their air leakage by 15% in order to qualify for this incentive.

- **HRV Installations**

HRV must be HVI certified and ENERGY STAR rated. Make and model numbers must be included clearly on the invoice left by the contractor, a list of ENERGY STAR qualified HRVs can be found at:

<http://oee.nrcan.gc.ca/residential/personal/heating.cfm?attr=4>

- o NOTE: serious consequences may occur to occupant health and building integrity if the airflow in and out of the building is not balanced, refer to the Home Ventilating Institute Website: <http://www.hvi.org/> and the HRV manufacturer's installation guidelines.
- o If an HRV is connected to existing ductwork, the ductwork must be able to support the new airflow requirements.
- o A pressure or blower door test should be performed to ensure that mechanical ventilation will be effective in the home. A maximum number of Air Changes per Hour is required to be eligible for incentives – 3 ACH @ 50 Pa for Northern/Interior Region, 4.5 ACH @ 50 Pa for South Coastal Region. The customer can request that HRV contractors or Service Organizations conduct a blower door test during/after an HRV installation to check whether the home meets the ACH maximum, however ONLY a blower door test conducted by a certified energy advisor during the post-retrofit assessment will be used to determine final incentive eligibility.

- **Bathroom Fan Installations and Replacements**

Fans must be ENERGY STAR rated and must be ducted to the exterior of home, not to attic or other interior space. Make and model number must be included clearly on the invoice left by the contractor or the purchase invoice.

INSULATION

- **Attic Insulation**

100% of the attic must be insulated to the prescribed level upon completion to be eligible for the LiveSmart incentive.

Please note the following program change from the previous LiveSmart BC offering: an attic can now be partially insulated before the retrofits begin and receive a pro-rated LiveSmart incentive, as long as 100% coverage is achieved when the retrofit is completed.

For example, if 80% of an attic has R-50 insulation before the home enters the LiveSmart program, and the remaining 20% has R-12 insulation, that remaining 20% of attic space can have R-38 added to it and be eligible for 20% of the new LiveSmart incentive for that category of upgrade. In this example, the full incentive values are \$750 in the Northern/Interior region and \$600 in the South Coastal region, so if the home were located in Prince George, the homeowner would receive 20% of \$750, or \$150.

If a house has a combination of ceiling types (i.e. 40% cathedral and 60% attic) and the homeowner insulates 100% of the cathedral ceiling (40% of the total attic space) to the insulation level noted on the grant chart, they will receive 40% of the incentive listed for this upgrade. If less than 100% of the cathedral ceiling component is insulated, the homeowner will receive the appropriate pro-rated amount for that component.

NOTE: the percentages given in the example above are calculated by adding the total area of flat ceiling with the total area of sloped ceiling and dividing each component by this total to attain the percentage of each.

Incentives for attic upgrades are based on reaching the thresholds noted in the grant chart (e.g. a homeowner must achieve R-50 in order to qualify for an incentive for attic insulation). These levels are higher than current building code requirements but must be met in order for the homeowner to receive the incentive.

- **Exterior Wall Insulation**

These incentives are based on the percentage of the wall area insulated, and will not be pro-rated.

The percentage targets must be met or exceeded in order to receive the incentive noted. For example, if a homeowner insulates 84% of their wall, they are only eligible for the incentive for insulating 80%+ of the wall area, since the next step up is 100%.

The total percentage of walls includes all above grade walls on the main floor (i.e. first, second and third floor walls if applicable but not pony walls in the basement. Pony walls are recorded in the basement insulation category). If a homeowner insulates 100% of their main floor walls but does not insulate the second floor (which is the same size as the main floor in this example), they are only eligible for 50% of the rebate for wall insulation and would not meet the 60% LiveSmart threshold.

- **Basement Insulation and Other Insulation**

Note that the requirements for LiveSmart incentives are often higher than building code requirements. In order to be eligible for the incentive, a homeowner must install the amount of insulation set out in the incentive brochure, even if this amount is higher than what is required by the applicable building code.

If a house has two types of foundation, such as basement and crawlspace (i.e. 40% basement and 60% crawlspace) and the homeowner insulates 100% of the crawlspace to the insulation level noted on the grant chart, they will receive 60% of the incentive listed for this upgrade.

Please note the following program change from the previous LiveSmart BC offering: an Other Insulation component can now be partially insulated before the retrofits begin and receive a pro-rated LiveSmart incentive, as long as 100% coverage is achieved when the retrofit is completed.

- **Exposed Floors** refers to any floor that is above an unheated space, not including a crawlspace. Examples are indoor unheated garages with living space above them, bay windows which are only on one level and unheated front porches that have heated basements below them.

WINDOWS AND DOORS

- **Windows and Doors** must meet the following criteria and all criteria must be displayed clearly on invoices and other documentation provided to homeowners:
 1. Must be ENERGY STAR qualified for Canada (region V). Visit <http://oee.nrcan.gc.ca/residential/personal/windows-doors/buying.cfm> for complete ENERGY STAR specifications.
 2. **Invoices must list the number of ENERGY STAR windows and doors installed. It is highly preferable for verification purposes to leave the ENERGY STAR sticker on the window or door until the client has had their post-retrofit (E) assessment.**
 3. If windows are rated one or more zones higher than the region in which they are installed, the contractor must provide the homeowner with documentation indicating the zone for which the ENERGY STAR rating applies
 4. **Note:** Grants are only available for replacing existing windows, not installing new windows in new openings in the home.
 5. **Note:** To be eligible for the Champion bonus, 75% of all the windows in a home must be upgraded to ENERGY STAR one-zone up specifications. However, any percentage of windows can be changed to eligible for the regular windows incentive, which is paid per window upgraded.
- **Determining window grant eligibility**

To determine grant eligibility for window replacements (not storms), each rough opening (RO) is counted as one unit. A rough opening is defined as the structurally

stable wall opening created by the builders for a window unit (i.e., framing and glazing) to be installed into. For window inserts, the existing frames are left in place but the mullions, glazing and other trims are removed to allow for a new window unit to be fitted within the remaining space.

In most cases, window counts are easy, but occasionally, the energy advisor will have trouble determining the count for some window combinations especially where headers (wood and steel) are not evident or where vertical window separations appear to be acting as load-bearing supports. The list below shows the methods that the energy advisor will use to determine the number of rough openings.

1. Look for evidence of a substantial steel header/lintel above the window on the exterior as steel is the material of choice for spanning large single ROs.
2. For brick walled homes, look for solid masonry sills without any separations or joints along their length while also looking for a solid steel support under any brick above. An architectural arch in brick or stone walls will usually contain only one rough opening.
3. Round, diamond, triangular and other irregular shaped windows are considered as fitting within a single RO even when vertical or horizontal separators exist within the panes of glass.
4. Bay, bow and garden windows are considered the equivalent of one window (RO).
5. Glass patio doors are considered the equivalent of one window (RO).
6. Doors with doorlites are considered the equivalent of one window and one door. Windows within doors are considered part of the door and are not to be counted as a rough opening. Sidelites and transoms are not part of the door assembly, and must be counted individually.
7. Ask the homeowner what type of window replacement they are considering to determine the potential count. If a combination of windows is being replaced with a large picture window or bow window for example, the replacement would be determined as one RO.
8. In some cases where several windows are grouped together, there may be substantial vertical separations between the units (e.g., three windows separated with what looks like painted and trimmed 2" X 6"s). The energy advisor should model this as one unit in the initial house file. When the new unit(s) is/are installed, the advisor will determine whether the replacement is a single unit or three separate units and adjust the initial house file accordingly.

- **Storm Windows for Formally Recognized Heritage Homes**

Storm windows must meet the criteria outlined in the LiveSmart Storm Windows Factsheet, available at www.livesmartbc.ca/rebates. The incentives for storm windows are only available to formally recognized homes that are also LiveSmart eligible. A list of those properties and information on how to obtain formally recognized status is available at the LiveSmart website or from a CEA.

SPACE HEATING SYSTEMS

- **Incentive for TECA or HRAI-accredited Contractors or ASCT**

The following page lists the accreditations through either TECA (Thermal Environmental Comfort Association), HRAI (Heating Refrigeration and Air Conditioning Institute) or ASTTBC (Applied Science Technologists and Technicians of BC) that will provide homeowners with the \$100 LiveSmart incentive for specialized contractor accreditation.

To qualify a customer for the contractor accreditation incentive, the contractor must complete and sign the LiveSmart BC Contractor Accreditation form, provide the homeowner with a clear copy *and* email a copy of the form to efficiencyincentives@gov.bc.ca with the subject line “LSCA Form”. This form includes the TECA, HRAI or ASTTBC accreditation number and signature of the accredited company member that undertakes the necessary heat loss/gain, design, sizing and commissioning plan, along with the name and signature of the installer (if different). The TECA, HRAI or ASTTBC number indicates whether the card holder has current training when checked on the appropriate website (see below) in the appropriate category for the equipment installation.

An installer who works for a company whose owner has a current number, but who doesn't have a current number himself/herself, can perform eligible installations with the required form outlined above. The Certified Energy Advisor will verify that the accreditation is current by searching for the installer on the following TECA, HRAI or ASTTBC websites:

http://www.teca.ca/Q1st_contractors.php

http://www.hrai.ca/certification_canada.php

<http://www.asttbc.org/registration/technologists/>

To ensure quality installations, homeowners should also ask TECA, HRAI or ASTTBC-accredited contractors whether they utilize qualified installation technicians (e.g. Refrigeration Mechanic for air source heat pump installations), although installer technician credentials are *not* required for a homeowner to be eligible for the TECA/HRAI/ASTTBC incentive.

Note that contractors and installers *without* TECA, HRAI or ASTTBC accreditations can perform installations that will be eligible for LiveSmart *equipment* incentives, but not for the additional \$100 installation incentive. Also, the incentive is only available for installed equipment that meets LiveSmart performance threshold criteria. In other words, a TECA-certified installer that installs a 90%AFUE furnace **will not** qualify the homeowner for the \$100 installer incentive. Finally, please note that a contractor does not need to be a member of TECA or HRAI to qualify their customers for the LiveSmart contractor incentive – they only need to have current course accreditation.

(see next page for list of eligible accreditations)

1. Requirement for Air Source Heat Pump Installations Incentive:

- TECA Quality First Forced Air Guidelines Course.
- HRAI SkillTech Residential Heat Loss/Gain *and* Air System Design Courses (RHLG and RASD on wallet card)
- ASTT Registered Applied Science Technologist, Mechanical

2. Requirement for Natural Gas Furnace Installations Incentive:

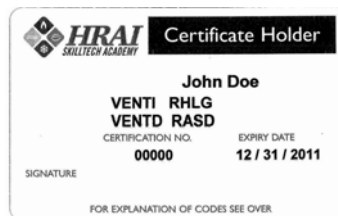
- TECA Quality First Forced Air Guidelines Course.
- HRAI SkillTech Residential Heat Loss/Gain *and* Air System Design Courses ((RHLG and RASD on wallet card)
- ASTT Registered Applied Science Technologist, Mechanical

3. For Boiler Installations Incentive:

- TECA Quality First Hydronics and Combo Course.
- HRAI SkillTech Residential Heat Loss/Gain *and* Radiant Hydronics Design Courses (RHLG and RRHD on wallet card)
- ASTT Registered Applied Science Technologist, Mechanical

4. For Heat Recovery Ventilator Installations Incentive:

- TECA Quality First Ventilation Course.
- HRAI SkillTech Mechanical Ventilation Installation (VENTI or VENTD on wallet card)
- ASTT Registered Applied Science Technologist, Mechanical



- **Payment of Incentive for Only One Space Heating Upgrade if Multiple Upgrades are Made**

Under the LiveSmart BC: Efficiency Incentive Program, homeowners receive only one incentive for space heating measures.

1. For example: if the homeowner installs an eligible ENERGY STAR qualified air source heat pump AND an eligible ENERGY STAR qualified oil or gas furnace, they will only receive the air source heat pump incentive. The homeowner will NOT receive incentives for both units.
 - However, in this example, if the new ENERGY STAR furnace contains a variable speed motor and is properly matched with the air source heat pump coils (see heat pump section below), the homeowner will receive the premium (higher) LiveSmart air source heat pump incentive.
2. Homes currently heated with electric baseboards are eligible for heat pump incentives if a new heat pump and furnace, or a ductless mini-split heat pump, are installed. The new heat pump/furnace combination or ductless mini-split heat pump must meet the program requirements and must become the primary space heating for the home.
 - **NOTE:** Pellet stoves and electronic thermostats are NOT subject to the single heating incentive restriction, and will receive incentives in addition to any furnace, boiler or heat pump incentive paid under LiveSmart.

- **Replacements**

Clients are only eligible for LiveSmart furnace incentives when a new furnace replaces an existing furnace. If a homeowner installed a qualifying furnace into a house that was previously baseboard heated, there would be no incentive available for the furnace.

To be eligible for LiveSmart incentives, the new equipment must have a higher efficiency than the original equipment.

- **ENERGY STAR Canada required**

In order to qualify for a provincial incentive, the unit that is installed must be ENERGY STAR qualified **for Canada**. The sole exception being inverter-driven ductless mini-split heat pumps, which are not required to meet ENERGY STAR specifications to be eligible for incentives (see incentive brochure).

If a unit is ENERGY STAR qualified for the United States, check the model numbers on the following website to see if it meets the criteria for Canada:

<http://oee.nrcan.gc.ca/residential/personal/heating.cfm?attr=4>

Eligible Air, Ground and Water Source Heat Pumps:

- **Ducted/Central Air Source Heat Pumps (both split systems *and* single package systems)**

These systems must meet ALL of the following criteria. Verification of all criteria must be displayed clearly on receipts, invoices and other documentation provided to homeowners:

1. ENERGY STAR qualified for Canada (region V). ENERGY STAR requires meeting ALL of the following requirements:

- Minimum SEER of 14.5
- Minimum EER of 12.0
- Minimum HSPF of 7.1

NOTE: The LiveSmart BC: Efficiency Incentive Program allows combinations of the ***inside coil, outside coil and the furnace/air handler*** to determine whether an ASHP system meets the Program's ENERGY STAR eligibility efficiency requirements. However, if the inside coil and outside coil without the furnace/air handler are rated ENERGY STAR, then those two components alone qualify for the basic LiveSmart air source heat pump incentive.

2. For *ALL* air source heat pump systems, contractors must collect and provide on their invoice:

- indoor coil (or air handler/fan coil with optional electric heating) make and model number;
- outdoor coil make and model number;
- furnace make and model number (if applicable);
- Capacity of the unit (in tonnes, KW or BTU/hr); and
- the corresponding ARI number for the system (also commonly known as the AHRI number, for the American Heating and Refrigeration Institute).

Check with ENERGY STAR Canada website to ensure air source heat pump makes and models along with furnaces are qualified:

<http://oee.nrcan.gc.ca/residential/business/manufacturers/search/heat-pumps-search.cfm?attr=4>

If installing an electric indoor air handler (fan coils), LiveSmart provides a list of eligible makes and models with variable speed motors (VSM) that, when properly matched with outdoor units, make the system eligible for the premium (higher) LiveSmart air source heat pump incentive. For lists of eligible indoor air handlers with VSM, contact any LiveSmart Service Organization or the LiveSmart program.

3. The coil in the outdoor air source heat pump (condensing) unit must be appropriately matched to and tested with the indoor coil (evaporating) unit to achieve the ENERGY STAR requirements. Please confirm that each installation situation (combination of outdoor and indoor coil) meets the requirements. *(continued on next page)*

- Check with equipment manufacturers and distributors to confirm the matched rating of outdoor and indoor coil. NRCAN has provided a searchable database of eligible split system, single package and ductless mini-split air source heat pump systems. This can be found at:

<http://oee.nrcan.gc.ca/residential/business/manufacturers/search/heat-pumps-search.cfm?attr=4>

- NOTE: Matching a new outdoor unit with an older inefficient air handler may reduce the minimum SEER rating of the heat pump to below ENERGY STAR requirements. Please check thoroughly the installed ratings in these situations.

• Ductless Mini-Split Systems

These systems must meet the ALL of the following criteria and all criteria must be displayed clearly on invoices and other documentation provided to homeowners:

1. The system must be ENERGY STAR qualified for Canada (region V) **or** the system must be inverter-based. For a list of some qualifying inverter-based makes and model numbers, contact LiveSmart staff or a LiveSmart Service Organization.
2. The system must have a minimum capacity of 12,000 Btu/hr.
3. A system with a single head must heat the main occupied area of the home, and is eligible for the basic LiveSmart air source heat pump incentive. Note that a “head” is an indoor coil.
4. A system with one or more additional heads is eligible for the premium LiveSmart air source heat pump incentive as long as the second head is on a different floor from the first head. The exception to this requirement is a home that has a single, above ground floor that is over 1500 square feet, in which case the second head may be installed on the same floor and be eligible for the premium LiveSmart air source heat pump incentive.

• FortisBC Air Source Heat Pump Incentives

FortisBC may offer heat pump incentives or loans for energy efficiency upgrades separate from LiveSmart BC. Contractors and customers must check directly with FortisBC for information on application to programs. However, if an air source heat pump incentive is provided to a homeowner by FortisBC *prior* to that customer's post-retrofit LiveSmart BC energy assessment, LiveSmart will subtract the amount of the FortisBC incentive from the LiveSmart BC air source heat pump incentive. This is due to the fact that FortisBC contributes directly to the LiveSmart air source heat pump incentive amount.

• Ground Source Heat Pumps

To be eligible for a LiveSmart incentive, these systems must be certified by a Canadian GeoExchange Coalition (CGC) professional to CAN/CSA standard C448. It is recommended that the customer, contractor and/or CEA contact the CGC early in the design process to ensure timely certification of the installed system. Visit www.geo-exchange.ca.

If a customer is considering pursuing the LiveSmart shared geo-exchange loop incentive, please have the customer and/or their CEA contact LiveSmart before the installation to ensure eligibility for the incentive.

- **Water Source Heat Pumps**

These systems are eligible for the same incentive as ground source heat pumps providing all components are CAN/CSA C448 compliant, and all reporting requirements are met at the time of the E assessment.

Eligible Natural Gas Furnaces

- **Natural Gas Furnaces – Fully Confirm AFUE rating of make and model to ensure your customer will receive LiveSmart incentives.**

Be sure to confirm the AFUE rating for each specific different model number of the furnaces you install. A single product line can have multiple sub-models, each with different AFUE ratings. Often the marketing materials for a line of furnace will claim “AFUE of up to 96.6%”, but many of the models do not actually have AFUE levels of 96.6%. (e.g. Carrier Infinity has six models, five of which are rated 94% AFUE and one of which is rated 96.6%). Check with the manufacturer and visit the ENERGY STAR website listed above to confirm AFUE ratings.

- **Natural Gas Furnaces –Fortis Energy Inc. (gas) program offerings outside of LiveSmart BC**

Fortis Energy Inc. may offer a variety of incentives for natural gas furnaces and other energy efficient appliances. Customers may be eligible for both LiveSmart incentives *and* utility company stand alone incentives. Contractors and customers must apply directly with Fortis Energy Inc. to access any non-LiveSmart incentives. For example, during 2011, Fortis Energy Inc. is offering the Switch ‘N’ Shrink Program, which provides incentives to customers to switch from oil heating systems to natural gas.

OTHER SPACE HEATING

- **Wood Pellet Stoves**

Installing a wood stove or pellet stove into an existing wood-burning fireplace is **NOT** eligible for an incentive under the LiveSmart program. The wood stove or pellet stove incentive is for replacing an existing wood stove or pellet stove with a newer, energy efficient model that meets the criteria laid out in the LiveSmart BC incentive brochure.

- **Programmable Thermostats**

The grant for programmable thermostats is only available to houses that are heated exclusively with electric baseboards.

WATER HEATING

- **Heat Pump Hot Water Heaters** (also known as 'hybrid' water heaters) must be installed in an unconditioned space or have ducting of the supply and exhaust air to the outdoors. Integrated models (also called 'drop-in') must be ENERGY STAR. Add-on heat pump water heaters must be 3rd party verified to have a minimum EF of 2.0. Heat pump hot water heaters are the only hot water heating system that can achieve the LiveSmart requirement of a COP of 1.5 or greater.

This technology is new to BC and is currently available from several manufacturers, including AirGenerate, A.O.Smith, GE, Rheem and Stiebel Eltron. Homeowner and contractor installation guidelines for our climate can be found at www.smartwaterheat.org and http://www.nwsmartwaterheat.org/images/pdf/nea_hwh_best%20practices_final-1.pdf

- **Solar Hot Water Systems**

1. Eligible systems must be either certified to CSAF379.09, or in the process of being certified. Systems are listed at:

http://canmetenergy-canmetenergie.nrcan-rncan.gc.ca/eng/renewables/solar_thermal/sdhw_directory.html

Table 1 lists all currently certified systems and table 2 lists systems that are in the process of being certified. These tables are for the whole system, not just the collectors, and they also show a performance rating of GJ / Year saved.

2. The system must be installed by a contracting company that has at least one CanSIA-certified installer on staff, trained to installation standard CSAF383.08. CanSIA certified installers are listed at:

<http://www.cansia.ca/solar-energy-101/cansia-certified-hot-water-system-installers>

On the invoice to the customer, installers must include:

- details of the system, make and model number
- name of the CanSIA certified person who installed and commissioned the system.

The Certified Energy Advisor will then check the invoice, and cross reference with the two websites above.

DISTRIBUTED POWER GENERATION

- Contractor shall provide the homeowner with invoices describing all major system components including power capacity; homeowner shall provide copies to the certified energy advisor at post-retrofit assessment.
- Homeowner must sign a net metering agreement with their utility provider and provide LiveSmart with a copy of the net metering agreement as well as system description including maximum capacity.