

CONSIDERING PURCHASING A HEAT PUMP WEBINAR –APRIL 20TH, 2021

Township of Langley, follow up questions.

Can you explain rebates available to builders on multi family projects - like townhomes?

For the construction of new homes, builder can access the CleanBC New Construction Program when installing a heat pump as the primary heating source of the home. I have included those link below as well as details on the Township of Langley-specific program.

- The [CleanBC Better Homes New Construction Program](#) offers rebates of up to \$15,000 for the construction of high-performance, electric homes. The building permit must have been issued on **April 1, 2020** or later. You can choose between the Heat Pump pathway or the Energy Step Code pathway.
 - Carefully review the [program requirements](#) and [terms and conditions](#) of the program. [Pre-registration](#) for the program is required.
 - Energy Step Code pathway – receive up to \$10,000 when building a home to BC Energy Step Code 3 or higher. Check the summary page for all requirements.
 - Heat Pump pathway – receive a rebate of up to \$4,000 for installing an electric air-source heat pump or heat pump water heater in your home. Check the summary page for all requirements.
 - **Additional Rebates:**
 - **Energy Advisor Support Rebate** – receive an additional \$1,000 per individually modelled home or unit (\$800 to the builder, \$200 to the Energy Advisor)
 - **All-Electric Bonus** – receive an additional \$4,000 for building a home with no fossil fuel connection
 - The construction project must be completed within 12 months of the date of your pre-approval confirmation. The program application including all supporting documentation must be submitted within 6 months of your heat pump invoice date (Heat Pump pathway) or As-Built BC Energy Compliance Report (Energy Step Code pathway).
- The [Near Zero Emissions Building Program](#) is offering incentives starting at approximately \$15,000 for designing and constructing a single family home or Part 9 multi-unit residential building to Step Code level 4, 5 or Passive House. ***The funding for this offer is limited and available on a first come, first serve basis.***
- Through the [Township of Langley's Green Building Rebate Program](#), you can receive up to \$1,500 for constructing an energy efficient home within the Township of Langley.
 - The program is open to builders, developers and homeowners who are constructing a new home in the Township of Langley.
 - The home must be a single family home, row home unit, townhouse unit, or duplex.
 - 1. Work with an energy consultant (energy advisor, certified passive house designer, or registered professional) to design your home to meet the required performance targets.
 - 2. Submit a Building Permit Application. All new single family homes must now include an energy modelling report to comply with the BC Energy Step Code.
 - 3. Obtain a Green Building Rebate Program referral form.

How far from the inside system does the outside pump have to be located? Does it have to be directly outside or can it be located in a more convenient spot (i.e. around back of house)?

Location of the outdoor system will depend on a variety of factors from available space in your yard, location of indoor units, proximity to neighbours, selecting an area that does not have restricted air flow. To determine the best location of the outdoor unit, we always recommend asking your contractor for their suggestions and expertise. A few best practices include:

- Keep outdoor units away from fences, walls, and other surfaces to allow unimpeded air flow around the unit (i.e. to avoid the creation of a microclimate that negatively impacts heat pump performance and efficiency)
- Place the heat pump in an area that minimizes any sound impacts. See the Heat Pumps and Noise: A Neighbourly Installation Guide, produced by the City of Vancouver: <https://vancouver.ca/files/cov/heat-pump-noise-guide.pdf>
- Also see the Township of Langley [Bulletin for Siting of Heat Pumps and Air Conditioning Equipment in a Residential Zone](#)

Is the rebate still available if you have a gas backup?

This rebate is called a Dual-Fuel Central Heat Pump Rebate and is available for homeowners who currently have a natural gas or propane furnace in their homes and would like to upgrade. Homes primarily heated by electricity prior to upgrade cannot access this rebate.

- [Dual-Fuel Central Heat Pump Rebate](#) – \$3,000 + [municipal top-ups](#) (where available) + up to \$500 with the [Heat Pump Group Purchase Rebate](#)
 - **Tier 2 Central heat pump** – the heat pump must have a SEER rating of 16 or higher, an HSPF of 9.3 or higher, and an AHRI certified reference number. Heat pumps must be listed on the [Qualifying Heat Pump List](#).
 - The thermostat, outdoor temperature switch-over control or equipment control board must be set to the following temperatures for the life of the system:
 - Vancouver Island and Lower Mainland: <50CThe heat pump must be sized to ensure that it has the capacity to meet the heat demand at or below the temperature set points above. A heat load calculation is required, see [What are the load calculation requirements for heat pumps?](#)

If a home uses natural gas ducts for the basement and main floor, but the top floor is using electric base boards for the heating, what do you recommend? Can you use the central heat pump plus the ductless for the top floor? Seems very costly?!

There are a variety of options for your home. The natural gas furnace would be considered your primary heating source, you could consider upgrading to a central heat pump and leave the remaining electric baseboards upstairs as supplemental heat for the top floor. Alternatively, you could have a separate mini-split heat pump installed on the top floor. We recommend asking a few different contractors for quotes on what systems and layout they would suggest for your home! It is important to note, however, that only one primary space heating rebate can be accessed – if you install two heat pumps, only one will receive a rebate.

Heat pumps are a great option to provide cooling throughout the home! Reminder: in order to access heat pump rebates, the heat pump must be the primary heating system of the home. Heat pumps installed for the purpose of air conditioning only are not eligible for rebates. I recommend contacting

the free CleanBC Energy Coach Service (1-844-881-9790 or email ask@betterhomesbc.ca) for more information on your specific renovation plans.

Hi, I'm wondering if, at some point, there could be a comparison / pros & cons of using a heat pump vs an ERV or an HRV? Thank you.

Heat pumps, ERV and HRVs provide different functions in the home. Heat Pumps provide space heating and cooling whereas ERVs and HRVs play a primary role in the ventilation and air quality of the home. When heat pumps are installed there is still an important need for effective ventilation systems in the home.

On the CleanBC website, there are a number of FAQs that describe HRV systems as well as some of the considerations when installing that type of system in your home. I have included a few of those FAQs below.

- [What are heat recovery ventilators?](#)
- [Can I use my existing furnace ductwork for an HRV/ERV?](#)
- [How do I ensure that I get the right HRV for my home?](#)
- [What is the difference between an energy recovery ventilator \(ERV\) and heat recovery ventilator \(HRC\)? Which should I install?](#)

How do I know if my heating and/or cooling system is properly sized for my home?

To ensure optimal energy performance and comfort for your home, it's important to install appropriately sized equipment that will heat and/or cool your home sufficiently. Keep in mind that newly retrofitted homes may have smaller heating and cooling needs than they did prior to upgrades and renovations, particularly if you are making changes to your building envelope such as draftproofing and upgrading insulation and/or windows.

There are a few primary ways to determine if your heating system is properly sized for you home.

1. You can connect with a [Program Qualified Energy Advisor](#) and ask for an energy evaluation on your home. Before scheduling with the energy advisor ask them if they feel comfortable advising you on this question.
2. If you are in the market for a new heating system be sure to ask your heating system contractor completes a detailed heat load calculation and provides you with a system that is sized appropriately for your home.

Here are some signs to indicate that your heating and/or cooling system may not properly sized for your home:

- **Interior Temperatures Not Maintained:** If you find that some spaces in your home are not comfortably heated or cooled, your existing system might be too small to support your home's heating or cooling demands. If you find that comfortable temperatures are difficult to maintain, you should also check your home's air ducting or hydronic piping system to ensure that that the distribution system is balanced and that your ducts or pipes are insulated, sealed and properly connected.

- **Heating or Cooling System Short Cycles:** If your heating or cooling system turns on and off frequently, it may be too large for your home. Although some people may think that bigger is better, an oversized heating or cooling system will be less energy efficient and may reduce the overall comfort of your home. The frequent on/off short cycles can also put more stress on the system's components and shorten its lifespan.

What is the House as a System concept?

Although separate from each other – your insulation, heating and cooling system, windows, doors, ventilation, and exterior walls, foundation and siding make your house operate as a [multi-component system](#), where all the components are interactive. Because your house operates as a multi-component system – sometimes energy retrofits to one component of your home can affect other components of your home in unintended ways.

Before starting to improve the efficiency of your home with one retrofit, it is a good idea to get advice to ensure that your investment in home energy improvements meets your expectations and that you will not be causing new issues while resolving old ones. Planning your retrofits within a house-as-a-system approach will also allow you to create a long-term home energy improvement plan and will provide guidance on the recommended order in which to complete energy retrofits.

For more information, check out our detailed FAQ here: <https://betterhomesbc.ca/products/what-is-the-house-as-a-system-concept/>

Rebates for ground to air HP?

There currently are no rebates for geothermal or ground to air heat pumps through the CleanBC program.

What about if houses are heated by in-floor radiant hot water heat system?

When upgrading a natural gas, oil or propane boiler or combination system, you might want to consider an air-to-water heat pump or combination heat pump. These systems can replace your existing heating system using the same in-floor or radiant heat delivery. There are rebates for air-to-water systems and combination system, shown below.

- [Combination Space and Water Heat Pump](#) – up to \$4,300 + [municipal top-ups](#) (where available) + up to \$500 with the [Heat Pump Group Purchase Rebate](#)
 - This rebate is offered for fuel-switching from oil, propane or natural gas heating to a combination space and hot water heat pump. The system must be on the [Air-to-Water and Combination Heat Pump Qualifying Product List](#).
 - **Please note**, you must remove or decommission your oil/gas furnace/boiler and provide proof (see page 18+19 of the [Program Requirements](#)).
- [Hydronic Heat Pump](#) – \$3,000 + [municipal top-ups](#) (where available) + up to \$500 with the [Heat Pump Group Purchase Rebate](#)
 - This rebate is offered for fuel-switching from oil, propane, or natural gas to an air-to-water hydronic heat pump. The system must on the [Air-to-Water and Combination Heat Pump Qualifying Product List](#).
 - **Please note**, you must remove or decommission your oil/gas furnace and provide proof (see page 18+19 of the [Program Requirements](#)).

Another great option to replace a boiler or in-floor system is a [mini-split or multi-split heat pump](#) system. Because mini-splits don't require any ductwork, they can be installed easily and can provide not only heating in the winter, but cooling in the summer.

How do we find a contractor who actually wants to install a heat pump?

To get started with your renovation plans, we recommend starting with contacting some of the Heat Pump [Program Registered Contractors](#) listed on www.betterhomesbc.ca to receive detailed quotes. Look for contractors who specialize in selling heat pumps or who actively promote heat pumps on their website. Heat Pump and Insulation Program Registered Contractors have completed additional training so that they can provide the best service possible. Working with a Program Registered Contractor means you are working with someone that is trained in industry best practices and is knowledgeable about the rebates available for your upgrades.

When hiring an installer for your energy efficiency upgrades and renovations, it's a good practice to look for an installer's certifications and credentials. For further information please visit [Do I need to work with a Program Registered Contractor?](#)

- You are not required to work with a Program Registered Contractor to access Heat Pump rebates from the CleanBC Better Homes and Home Renovation Rebate Programs.