

Yukon Electric Thermal Storage Demonstration Project

ETS Unit Types

This demonstration project will be offering participants a few options when it comes to the choice of Electric Thermal Storage (ETS) system for their home. Selection of each system will be done based on the heating needs of the home and the preferences of the participant.

The three primary types of electric thermal storage (ETS) units that will be installed through this project are listed below by the type of heating system they typically replace. Details on each are provided thereafter. These units may be used in a variety of combinations, with ECOMBIs and Steffes 2100 Series expected to be the most common combination.

- Baseboard Replacement: **ECOMBI ETS units**
- Oil Monitor / Space Heater Replacement: **Steffes 2100 Series units**
- Forced-Air Furnace Replacement: **Steffes 4100 Series units**
- Hydronic Furnace Replacement: **Steffes 5100 Series units**
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For participants whose homes are not equipped with forced air ducting or hydronic piping, there are two options.

ECOMBI

ECOMBI electric thermal storage units are manufactured in Spain and distributed in North America by Coldbrook Electric Supply. These ETS units can replace typical electric baseboard heaters. They are wall mounted, stick out from the wall 18cm, stand 75cm tall, and are 55cm long. They contain no moving parts and heat your home by thermal convection.

- Product brochure:
<http://www.ecombi-northamerica.com/download/ecombi-brochure-2016.pdf>
- Website: <http://www.ecombi-northamerica.com/index.html>
- Technical sheet:
<http://www.ecombi-northamerica.com/download/ecombi-technical-sheet-canada-0416-50.pdf>
- User guide/manual:
<http://www.ecombi-northamerica.com/download/ecombi-installation-manual-and-user-guide.pdf>

Steffes – 2100 Series

Steffes ETS units are manufactured in and distributed from the Steffes Corporation factory in North Dakota, USA. The 2100 Series space heating units are 63.3cm tall, 30.5cm deep, and range from

76.2cm to 146.3cm long, and 282lbs to 692lbs. For folks planning to replace Toyo stoves or other space heaters, Steffes space heaters could be a good fit.

- Product brochure:
<http://www.steffes.com/wp-content/uploads/Resources/Downloads/Steffes-Room-Unit.pdf>
- Website: <http://www.steffes.com/electric-thermal-storage/room-units/>
- Technical sheet:
<http://www.steffes.com/wp-content/uploads/2016/09/2100SeriesTech-Data-Sheet-Rev-3.pdf>

Integration with Heat Pumps

The two types of in-room ETS units described above can also be used in tandem with ductless air-source heat pumps (ASHPs), referred to as "mini-splits". In such installations, the ETS unit only operates when it is too cold outside for the air-source heat pump to keep up. The Steffes 2100 Series is particularly well suited for this combined installation. Plus, an additional rebate may be available for ETS + ASHP installations! Contact us to learn more.

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Project participants whose homes are currently heated with forced air furnaces are currently offered the option of replacing their forced air furnaces with a Steffes ETS unit.

Steffes – 4100 Series

Steffes forced air ETS units come from the same factory as their smaller space heating counterparts but are a lot bigger and heavier. Fully installed the 4100 series stands at approximately 2m wide, 1m deep and ranges from 1.1m to 1.7m high, it also weighs between 2267lbs and 3991lbs – depending on model. These units are significantly bigger than a traditional fossil fuel or electric powered forced air furnace; that’s because of all the bricks used for heat storage.

- Product brochure:
<http://www.steffes.com/wp-content/uploads/Resources/Downloads/Steffes-Forced-Air-Furnace.pdf>
- Website: <http://www.steffes.com/electric-thermal-storage/forced-air-furnaces/>
- Technical sheet:
<http://www.steffes.com/wp-content/uploads/2016/09/4100Series-Tech-Data-Sheet-Rev-3.pdf>

Steffes – 4100 Series w/ Heat Pump

The most efficient and cost-effective home heating option potentially supported by our project is to incorporate a heat-pump with your ETS furnace. Wondering what a heat-pump is? Natural Resources Canada has a great explanation (below). Steffes offers an air-source heat-pump integrated ETS forced air furnace. This configuration would be between a 4100 series Steffes furnace, which is described above, and their custom heat pump. To learn more, check out their webpage (below) and click "With Heat Pump".

- Natural Resources Canada (explanation):
<https://www.nrcan.gc.ca/energy-efficiency/energy-star-canada/about/energy-star-announcements/publications/heating-and-cooling-heat-pump/6817>
- Steffes Website (click “With Heat Pump”):
<http://www.steffes.com/electric-thermal-storage/forced-air-furnaces/>

An additional rebate may be available for combined ETS and air-source heat pump installations - contact us to learn more!

For project participants heating their homes with hydronic furnaces we also have ETS replacement options.

Steffes – 5100 Series

Steffes manufactures and distributes the 5100 series, a line of hydronic ETS furnaces which operate by running a distribution fluid of choice (usually water or a glycol mix) through the ETS furnace’s bricks and out through the radiant heat distribution system in your home. They are approximately 76.2cm wide, 1.2m deep and range from 1.2m to 1.75 high with a weight range of 2218lbs to 3894lbs – depending on model.

- Product brochure:
<http://www.steffes.com/wp-content/uploads/Resources/Downloads/Steffes-Hydronic-Furnace.pdf>
- Website: <http://www.steffes.com/electric-thermal-storage/hydronic-furnaces/>
- Technical sheet:
http://www.steffes.com/wp-content/uploads/2016/09/5100Series_TechDataSheets.pdf

Steffes – 5100 Series w/ Heat Pump

We are also offering the Steffes 5100 series with an air-source heat pump integration option. Natural Resources Canada has a great explanation [here](#), for those wondering what a heat pump is. The addition of an air-source heat pump can help to reduce home heating costs in the shoulder seasons of the year, and on warmer winter days. To learn more about how the Steffes 5100 series works with an integrated heat pump, click link below and select "With Heat Pump".

- Steffes Website (click “With Heat Pump”):
<http://www.steffes.com/electric-thermal-storage/hydronic-furnaces/>

An additional rebate may be available for combined ETS and air-source heat pump installations - contact us to learn more!