

High Efficiency Furnace installation

The expected life of the mid-efficiency furnaces installed in Cardinal Glen houses is between 15 and 20 years. If you have not already changed over your furnace, this requirement will likely become necessary over the next year or two.

The Adelaide style of house is not automatically conducive to a high efficiency furnace installation. I opted for a high efficiency furnace for environmental and cost savings reasons but then found myself facing several challenges.

The first problem is that these furnaces must vent horizontally whereas the existing mid-efficiency units in Adelaide houses vent vertically through the chimney, often in concert with the gas water heater vent pipe.

Although the floor (ceiling) joists run the right way for installing horizontal venting and air intake pipes, there is a large steel beam at the end of the run which cannot be breached for structural integrity reasons.

Nor can the installer drop the pipes below the beam at the end and then vent externally since the requirement is to have a slight upwards tilt to the venting pipe throughout its run.

The only solution compatible with a high-efficiency furnace is to run the pipes below the basement ceiling at the edge of the wall and to install a bulkhead to conceal the pipes.

I did this and I welcome inspection of the results by any members of the group thinking about a high efficiency furnace installation. I am pleased with the results and I would have done this again as opposed to settling for a mid-efficiency furnace as many homeowners have opted to do.

Other installation issues relate to water removal and the possible requirement to reduce the chimney liner to ensure proper venting of the hot water heater without carbon monoxide build up.

Water removal is best accomplished by the purchase of an add-on water pump connected directly to the drain near the sink in the furnace room. I will be pleased to show any interested residents this installation.

There are mixed opinions about the requirement to reduce the diameter of the existing chimney liner. My installer and experts at Direct Energy described this as an optional feature since the chimney in question is between two heated walls and is a relatively short vertical run. My house inspector for the Energy retrofit program disagrees and states that the liner should be replaced.

I have opted to install a carbon monoxide detector in the basement at a low level and to await developments over this winter to determine what course I will choose to follow.

There are also dozens of contractors out there with dozens of furnace types. Although I am not an expert in this field, I chose carefully after considerable research and I would be pleased to advise residents about my selection process as and if requested.

