

St Peter's Furnace Replacement Project

The two electric furnaces that provide heat to the Church and to the Foyer and Library are at the end of their useful life and the contractor who services the furnaces has recommended replacement before the next heating season. As requested by the congregation members who attended the congregational meeting in January 2020, Council has looked at three options. The following is the result of this review.

Option 1: Replace the existing electric furnaces with new electric furnaces. Suppliers were reluctant to give us a firm quote as they do not recommend this approach. They estimate that the cost would be in the order of \$9,000. Energy costs are the highest with this option and as with the existing furnaces, new electric furnaces would take a long time to come up to temperature due to the lower exit temperature of the heating units.

Option 2: Replace the existing electric Furnaces with new electric furnaces powered in part by solar panels. The capital cost of the solar panel installation is quoted at \$81,000 and the electric furnaces would be in the order of \$9,000 plus we would need a structural review of the Church Hall roof with the costs of the review and any remedial work to strengthen the roof structure unknown at this time. The high capital cost of this option (\$90,000 +) make this option unattractive to St Peter's at this time.

Option 3: Replace the existing 2 electric furnaces with 2 natural gas fueled furnaces. The furnaces proposed for this option are 96% efficient Carrier furnaces with state of the art control systems and an improved filtering system compared to our existing furnaces. This option has the lowest fuel cost which is estimated to be 50% of the existing electric energy heating cost of our current furnaces. Natural gas furnaces have the fastest heat recovery time meaning less time to bring the heated areas up to the desired temperature which is an important consideration given the way the church building is used.

We evaluated 2 proposals from local suppliers for the supply of these furnaces. We also had site interviews with both suppliers to insure we were of the same understanding of the equipment being proposed and the installation. The cost includes the cost of removal and disposal of the existing furnaces and the addition of heating ducts to the Rectors and Secretaries offices to make these historically cold offices more acceptable work areas. Based on the evaluation of their proposals and presentations we are recommending Awl Tec as the vendor of the two gas furnaces at a cost of \$17,600 plus \$1500 in electrical revisions to install 2 only 120 Volt 20 Amp electrical circuits to replace the current 208 Volt power supply to the electric furnaces plus we have added a \$1500 contingency for a total cost of \$20,600.

Awl Tec have had the furnace service contract for semi-annual servicing of St Peter's heating equipment for some years now and have proven to be a very responsive and reliable contractor.

Summary

These 3 options were presented to Parish Council on June 18 and there was unanimous support for option 3, to replace the existing electric furnaces with two natural gas fueled furnaces, at a total cost of \$20,600 and to put these options to a Congregational vote as soon as practical.