

May 21, 2018
Address Current Needs in Heating Cooling and Energy Use
Rod Krueger



The Theme for this Capital Campaign is "Sharing Our Faith - Securing Our Future. It can also be stated that by Securing Our Future, We are able to Share Our Faith.

We have been talking our heating needs for a long time. Our three boilers are about 15 years old. It is not a matter of if they will fail, but when they fail. We are very close to their usual length of use. We have also talked about the need to put aside funds in our budget so that when the boilers failed we would have the ability to pay for them.



About a year ago, we became acquainted with Bob Pfeiffer. Bob has an extensive background in energy use and efficiency. He has worked with "We Are Hope and the Wisconsin Home Energy Assistance program of Door County. He has also worked at the state level. Bob has been gracious in going over our church, looking for ways in which we lose heat, and opportunities where we could be more efficient. He went through every room. In the Fellowship Hall, he took down a ceiling tile and discovered that the insulation batting was falling down. This allowed for a lot of heat to escape through the roof. The insulation that was used was R-11. Bob along with Mark Holey and his sons have tacked the batting back up. This is a temporary fix at best. Our more permanent solution is:



● Tack the insulation back up
● Install Sheet Rock to hold it up
● Blow in cellulose insulation on top of it.

This would seal up the area we are losing heat through the roof. It would also increase the

Insulation R factor from R-11 to R-50. This would provide a significant reduction in energy use. Replacing the current 3 boilers as pictured with “High Efficiency” Boilers would:

- Use 2 boilers instead of 3
- Have an efficiency of 95%
- Provide a payback time of 6 years
- Have a side-arm which would connect to a stainless steel indirect hot water heater

Heat & Air Conditioner

- Being **Cool** is Healthy
- Moves Heat In & Out
- Energy Efficient



Being “**Cool**” is Healthy. About 2 summers ago we had a couple of Sundays that were very warm. The sanctuary was also hot, and on two different occasions an elderly member of our congregation had to be taken out of the Sanctuary and sent by ambulance to the emergency room.

The elderly have less tolerance for excessive heat. Preventing excessive heat in our church is a health requirement.

When this church was built 48 years ago, 2 spots on the outside wall in the sanctuary were designed for placement of air conditioning. Our plan is to put in air conditioning in both the Sanctuary and the Fellowship Hall. This would be supplied from 2 Heat Pumps. Heat Pumps transfer heat. In the summer time, they would transfer heat from inside the church to the outside. In the fall and winter, they would transfer heat from the outside (even though it is cold out) to the inside.

These three steps (efficient boilers, insulation fix in the Fellowship Hall, and Air conditioning can be thought of as fixes which need to be done. I believe that they instead are **Opportunities**. They do the following:

- Boilers pay for themselves in 6 years or less
- Increased R value in insulation saves energy, less stress on the boilers
- Heat Pumps - Keep us cool and healthy
- Heat Pumps - actually provide an efficient way to support the main heating unit and again puts less stress on the boilers



There is one extra opportunity and that is to install a Hearing Loop in the Fellowship Hall. We put in the Hear Loop in the Sanctuary about 5 years ago. We had a bid for both the Sanctuary and the Fellowship Hall, and chose to do only the Sanctuary then.

The Hearing Loop has played a vital role in our church. People who had hearing loss could once again participate in our worship service. Our Fellowship Hall is a very high use area and is used by our members and the community throughout the week. It is important to provide that ability in the Fellowship Hall. If we coordinate the installation of the Hearing Loop to when the ceiling tiles are down during the insulation fix, we will save on labor cost from the company installing the Hearing Loop. We will be able to install the loop for the same quote given to us 5 1/2 years ago.

Addressing Heating, Air Conditioning, and Energy Use becomes an integral part of Securing Our Future to allow us to Share Our Faith.