

Chapter 4: A Practical Application for Consideration

If I were to prioritize my chores based on urgency or importance, I would most likely put heating and shelter at the top of the list. Although the chance of furnace failure is remote when you've been maintaining the equipment on a regular basis, the possibility remains and will keep me, and my paranoid conscience, awake at night. My home is of 1912 vintage, a craftsman style bungalow, mostly original in appearance both inside and out. It receives a paint job every 6 years on average, a task which consumes most of the summer unless some serious replacement work requires more time.

The electrical and mechanical systems have been replaced, the result of a flood some 27 years ago from the time of this writing in 2024. Water filled the basement but remained away from the main floor of the house, essentially sparing it from the wrecking ball. The basement was scraped clean of everything, including the water heater, furnace, electrical panel... You get the picture. After two years of steady work, the basement was refinished as living space with a new darkroom, bathroom, and other improvements including a new concrete floor and buried plumbing. Being 43 at the time, my work experience to date was limited to millwrighting (a type of mechanic) but had never undertaken a complete home renovation project like this.

There's more to tell regarding this adventure, but in keeping on topic, I must return to the issue of heating. The new furnace I installed in 1997 is now 27 years old and has performed perfectly and reliably other than on one occasion. When renovating the house, I incorporated a gasoline-powered generator in the works, which would power the home during an outage. I learned this lesson during the flood, when we were out of power for almost 30 days. During the one occasion referred to above, a power outage caused by an ice storm during heating season initiated the use of the generator, and power to the furnace and other necessities was restored. The generator was modern for its time but did not provide the precise 60 cycle current needed by electronic devices, such as the ignition board in the furnace. It was good-bye ignition board, hello getting cold.

I ordered a new ignition board which arrived in a few days, and in the meantime was able to keep the house warm using the electric stove and a small gas fireplace in the newly remodeled basement. This was made possible by the moderate outside temperatures of November, but if it occurred in January, a much different outcome would have been possible. Of all the components of the furnace, the ignition board is least repairable, and today a replacement is the most difficult to locate. I do have a spare.

When I first purchased the furnace, it was at a time when I was learning much about residential wiring, gas piping, and basic sheet metal work. The internet was in its infancy, but I searched for and found volumes of information on the installation and maintenance of utilities and forming duct work. Once I understood the basic concepts and gained confidence by doing the work, I ventured out on the limb farther, and replaced all the wiring, plumbing, and gas piping within the house. During the power outage and subsequent failure of the furnace, I learned even more about circuit boards and their vulnerability to reduced voltage and current.

Those lessons remain with me today, and during heating season I listen to the furnace start, hearing the draft induction fan spin up, hearing the contacts close after a specified amount of time for the draft inducer to vacate any residual gas from the heat exchanger, and finally hear the gas valve click open. Soon, a whoosh is heard as the gas ignites and begins to warm the heat exchanger, and after a few seconds a temperature sensor tells the circulation fan that it may spread the cheery warmth throughout the house. Learning and understanding furnace operation gave me the confidence I still retain, but I also know that 27 years on a furnace is pushing my luck. Its replacement resides at the shop, waiting to be installed this spring before I begin scraping and painting the house.

The lessons learned from the flood, and from the knowledge I gained in restoring the house, became the foundation for continued learning and understanding. It whetted my appetite to take on even greater challenges, but what stands out in my memory is the creation of confidence. Not the kind of confidence gained from knowledge, or the overconfidence fueled by arrogance, but instead a sense of resiliency that perseveres during crisis. It can kill me, but it can't eat me.

All of this leads to the idea of self-sufficiency and self-reliance, and what might be the greatest motivator to take on the tasks. Saving money of course is important, knowing I can most likely weather a difficult circumstance is another consideration. But something unexpected grew out of this lifelong experiment in learning that has changed me from a person who rushes through my undertakings to someone that considers each assignment a voyage in discovery – a discovery of the meaning within our labors, assessing what we feel and cherish, to winnow away the fruitless efforts which were undertaken by a venal and pedestrian desire and discard them along with the other useless claptrap that clings to us like mussels fouling a ships hull.

Turning inward I show my hand. The furnace project timeline is approaching a start, and I begin to gather the instruments and bits of sheet music needed for the replacement. I roll and turn the installation in my mind, rejecting one minor step and replacing it with another that better suits the orchestration. Preparing all the necessary components in advance, visualizing how I will remove the old faithful furnace with the dignity it has earned, and how I will bring the new furnace into its place, making sure that it not only functions, but also bears the signs of craftsmanship it must wear for all its twenty some years of faithful service as well. When completed, the equipment room is cleaned and any scratches repaired, the step where the audience is ushered out and the stage prepared for the next performance: heating season arrives, and the new furnace operates flawlessly. But I will awaken if something sounds out of place...