CONDOMINIUM RESERVE FUND STUDIES - THE NEXT STEPS

SUMMARY

In the summer 2019 issue of the CCI News and Views we published an article "Condominium Reserve Fund Studies – Should There Be More?" where we introduced the concept of the Total Cost of Building Ownership (TCBO) (see side bar). In this article, we will take this a step further to Deep Retrofits and look at approaches to reduce your TCBO.

KEY POINTS FROM THE FIRST ARTICLE

We assume your desire as a condominium (condo) owner and/or a condo board director is to have a well-maintained building, whose value appreciates over time, while **minimizing the cost of ownership for both the condo corporation and the individual unit owner.**

Most condo owners and their boards now understand that the purpose of a reserve fund study (RFS) is to ensure there is an adequate pool of money to take care of repairing and replacing common building components over the entire life of the building. The important part of the RFS is that it should consider the entire life span of the building, not some arbitrary period such as 30 years.

The RFS examines the condition, remaining life and cost of each building component and assumes a "like for like" replacement at the end of life. The costs for all building components are added up to determine how much of your condo fees need to go into the reserve fund. The issue here is that you do not always want a "like for like" replacement. You should look for more durable, sustainable, energy efficiency, and lower life cycle cost components.

WHAT ARE YOUR GOALS?

We have already established two goals, which are to reduce your TCBO and maintain the value of your investment and your home. But there is another goal that will be imposed on us by society and possibly by law at some point. We need to dramatically reduce or stop burning fossil fuels to lower our greenhouse gas (GHG) emissions and help mitigate the risk of climate change. This is tall order and will require a much bigger effort, but we believe there is positive outcome for you as a condo owner beyond saving planet. So your third goal should be to reduce your energy consumption and GHG emissions.

THE TOTAL COST OF BUILDING OWNERSHIP APPROACH

The RFS already establishes the replacement costs for major building components due to aging. However, this is only one part of the TCBO. The TCBO also needs to consider the utilities, mortgage payments and interest, property tax, carbon tax, insurance cost, and repair costs for both the individual owner and common condo costs. The numbers could be separated, but both should be included. This creates the Base Case TCBO. We believe this will be revealing for many condo owners as they often only think about their condo fees. This spending for the Base Case is required regardless of any improvements, as the default is "like for like" replacements. If it is not spent in a timely manner, the building will deteriorate more rapidly and lose value.

The next step is called a Deep Retrofit and considers changes that could be made to reduce the TCBO and make the building more sustainable. A Deep Retrofit results in a building with major upgrades to reduce its energy consumption and GHG emissions, with a goal of achieving net zero energy consumption. However, the Deep Retrofits should go beyond just energy reduction and also include improved sustainability, by increasing the durability of materials and reducing maintenance costs. In other words, the building becomes a high performance building¹ with a low Total Cost of Building Ownership.

In the Deep Retrofit process, the whole building is evaluated as a sustainable system over its useful life, considering building component life cycles, maintenance costs, energy consumption, property tax, carbon tax, etc. The useful life of the building could easily be 60 years before major renewal is required and this period could be extended considerably by making the building more sustainable and durable. The other key point is that renewal work done as part of the Deep Retrofit must consider the entire building at one time as opposed to addressing upgrades in a piece meal fashion. If the upgrades are not done all at once opportunities for larger savings are often missed. For example, if the boiler or heating systems were at the end of their life, then it would be a good time to look at upgrading insulation levels so the heating system could be downsized.

Often when a building component is replaced, it can be upgraded to meet the Deep Retrofit goals. For example, if you are replacing 20year shingles on your roof, consider 30-year shingles or a metal roof instead. As well, it might be good to upgrade attic insulation too. In addition, if several components are near the end of their life, they can all be changed at the same time for greater effect. Continuing with example above, if the siding is at the end of its life along with the roof, then an entire building enclosure upgrade may be possible, which would allow for future downsizing of the heating and air conditioning systems.

THE TOTAL COST OF BUILDING OWNERSHIP (TCBO)

Imagine that you have jar on the kitchen counter and every time you have a bill that is related to owning your condo, you put the bill in the jar. When you eventually sell and move out of the condo, you add up what you have spent. Most people would be astounded at what this cost would be. So what is in the jar of bills? The bills would include your condo fees, which cover your common expenses for operating, repairs, and renewal of building components. As well, the bills also are from your individual cost of ownership, which includes mortgage interest, insurance, property taxes, potentially your own utility bills, plus the ongoing maintenance within your unit, along with replacement costs within your unit, such as for appliances, flooring, countertops, etc. Notice that the TCBO includes both the common element costs and your individual cost of ownership. Both of these are important since the owners provide 100% of the funds for the condo corporation.

The first step of the Deep Retrofit process starts with the data from the RFS. It identifies the major maintenance renewal spending that is required over time. The next step of the Deep Retrofit process is to complete a comprehensive energy audit² in enough detail to look at all building components and systems, to identify where energy consumption can be reduced. This audit includes the building enclosure, insulation levels, air tightness, heating, ventilation and air conditioning systems, etc., as you are looking for major reductions in energy consumption.

The energy audit results should then be analyzed in conjunction with the RFS to look for building components near the end of their useful life to identify opportunities for the Deep Retrofit. The RFS can then be reviewed to assess available levels of funding. If the reserve has insufficient funds to cover the Deep Retrofit, a financial institution can be approached for a loan. Your condo corporation would pay back the loan from your monthly condo fees. There are financial institutions that do this.

These energy audit and RFS results create options that are evaluated in terms of capital cost, maintenance cost, life expectancy, utility costs, property tax, carbon tax, etc. to create the TCBO. The TCBO for each option is then compared against the other options, compared against the Base Case and possibly against a completely new building. The lowest TCBO option is then your optimal investment.

This process requires the input from an experienced team including, the building owners, RFS auditors, energy auditors, energy



modellers, building scientists, architects, engineers, cost estimators, construction contractors, and TCBO auditors. The team should be chosen carefully from experienced professionals as most will not have done this level of retrofit before so choosing open minded people is critical. Many of the team members will be used to making decisions based on simple payback analysis, return on investment (ROI), or net present value (NPV), but often for only individual building components, while the Deep Retrofit process helps you make decisions based on the TCBO over the remaining useful life of the building.

This Deep Retrofit process must be started before any major decisions are made. The TCBO evaluation is a decision making tool. By shifting your analysis towards optimizing your investment, rather than just trying to reduce energy costs and "like for like" replacements, your goals of, minimizing TCBO, maintaining value, and reducing energy consumption and GHG emissions are more likely to be achieved.

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¹ A High Performance Building is defined as a building that can integrate and optimize all major building performance attributes, including energy efficiency, durability, life-cycle performance, and occupant productivity. The US National Institute of Building Sciences: https://www.nibs.org/page/hpbc

² American Society of Heating Refrigeration and Air-Conditioning Engineers, (ASHRAE), Level 2 Energy Survey and Analysis

