

*Does anyone else have continuing education disconnects?*

One such disconnect was in a course I recently completed on energy conservation. The “professor”, with a straight face, said that we could achieve great energy savings by requiring our building occupants to dress inside our buildings the same way they dressed outside the buildings! Well, completely true, but also completely useless!

One proven way to lower energy costs is to modify occupant behavior. Let them know that thermostat settings should be appropriate for the time and use of the building. Night setbacks and turning off the lights and equipment are very beneficial. Our smart devices can do that automatically for us, at least to a certain extent. I like the use of light switches with motion detectors and timers in areas that are used intermittently like restrooms and storage areas. Also the building technology is rapidly changing. For instance, you can now buy LED light bulbs and smart thermostats at local hardware stores, just to mention some easy ones. Harder ones include such items as daylighting, solar energy, sunscreens, light tubes, HVAC equipment and control systems as well as many others.

Data shows that properly insulating the exterior envelope of a new building can reduce the energy cost up to 30% on new buildings. And no, batt insulation is not the whole answer. On existing buildings, savings can be achieved through window replacements, adding insulation where possible, sealing of joints to prevent moisture and air infiltration, reroofing with appropriate insulation, as well as other techniques. One technique we use to identify energy “leakage” is an infrared camera. It will accurately show where heat is leaking from joints and where walls and roofs are not properly insulated. We can also use it to investigate roof conditions and find roof leaks as well as to define areas of wet, damaged material that need to be replaced. It should be noted that wet insulation is no longer insulation.

A detailed analysis of the options available to an individual client and his unique needs in a building is critical in successfully designing a building. This analysis should include first costs as well as life cycle costs in order to get a true picture of the affect that design decisions will have on the costs an owner will incur during the construction and life of the building.

- Michael T. Newman, Architect