

What we do!

The Interfaith Coalition on Energy (ICE) works with about 7,000 congregations within a 50-mile radius of Philadelphia's City Hall. ICE helps them reduce their energy use and cost through this newsletter, workshops, publications and on-site energy surveys. See our website www.interfaithenergy.com for more information.

ICE

About our Mailing List

After we send out a newsletter, some of you mail or email us that your address has changed. Just before sending our next newsletter, we then enter changes and deletions into our mailing list database. Simple, except we have to purchase a new mailing list each fall. Over one year, some congregations shut down, up to 800 out of 7,000 last year. We don't hear from most of them. So, to save paper, we purchase the mailing lists right about now, in the fall. We apologize if you get our newsletter by mistake. If you have suggestions about how to improve our mailings, let us know.

ICE

Energy Analysis and Building Types

Congregations own many types of buildings. Parsonages and manses are single family homes. Rectories and convents are similar multifamily residential buildings. Congregations also own non-residential buildings – worship spaces, halls, schools, mobile classrooms and gymnasiums. No matter what type of building, we almost always gather the same types of information.

We gather and analyze electricity, fuel and water consumption, and calculate the conditioned floor area, counting heated basements. We record tons of cooling and Btus of fuel input per square foot and compare Btu per square foot ratings to averages from similar buildings in similar climates. We also describe zoning, types of controls and lighting. We note how the energy systems are maintained. We often record temperatures, electricity used by 110-volt appliances and water flow rates. This article, however, distinguishes between two types of buildings.

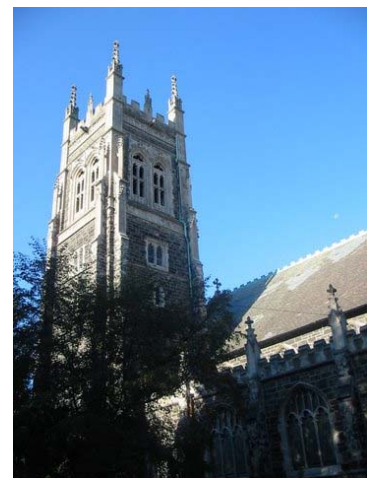
Continuously-used buildings

Homes, apartments, townhouses, hospitals, multi-family high rise, 24/7 stores are continually heated, and sometimes continually air conditioned. This type of building dominates the population of buildings. Outside weather has great influence on the energy used for heating and cooling. The efficiency of boilers, furnaces, lights and air conditioners is important because these systems may be operated many hours per year. Since the outside weather is an important factor, insulation and air tightness of the building envelope are important.

Intermittently-used buildings

A small number of buildings are intermittently heated or air conditioned buildings. Examples are buildings used for public assembly, gymnasiums and schools. Intermittently used buildings tend to be bigger and more complex. Their energy systems are also larger. Because the buildings are typically not heated overnight, the use of heating fuel has less of a direct relationship with outside weather. The control cycles tend to be weekly rather than daily. Since the buildings are not continuously used, energy efficiency is less influential on energy use; control of end uses (turning things off) is more important.

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Implications

Energy decisions in residential buildings may involve two adults, with children generally going along with their decisions. Larger buildings have more people. Decisions become more political. Operator attitudes, and biases, such as those involving how low to set temperatures during unoccupied periods, are very important. Larger buildings have staff; homes have families.

Homes may not have much ventilation and may be purposely tight. In large, public buildings ventilation rates (with codes with newer buildings) can be a significant factor in energy use. While homes have one type of electric and water meter, larger buildings have many choices of electric meter types and many sizes of water meters. Larger buildings have choices between more varied utility rates. We look at sales and excise taxes. Electric rates in homes involve kilowatthours. Larger buildings usually also are billed according to their power requirement, measured in kilowatts of demand. The choice of electric rate can be significant in larger buildings. There are electric heat rates and off-peak rates.

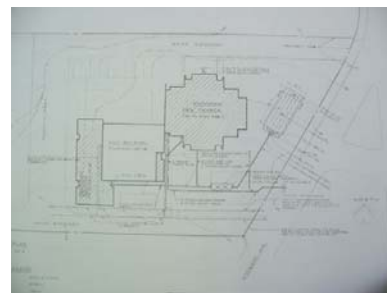
Our major point is that you cannot apply energy-saving principles identically to these two different building types. If you read an ad that replacing windows makes sense, or insulating walls will save huge amounts of energy, the ad probably applies to residential buildings. Decisions about how to reduce electric and fuel use in intermittently-used buildings requires a approach that takes into account their fewer hours use.

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Our Suggestions for Your Websites

As energy prices increase, global warming becomes more apparent and congregations face tighter budgets, we receive more inquiries about the cost of an energy survey. One of the first things we do is to find your congregation's website in order to provide the lowest costs, highest quality proposal to your congregation. Rarely do we find all the helpful information we want. So here is our website wish list:

- An overall layout of the buildings, a footprint with labels (and if you are wonderful, dimensions)
- A history describing each building and when it was built or remodeled
- Many, many photos (small-sized for easy download), of your buildings. You are great with people pictures, but we would like building pictures (and if you are wonderful, photos of boilers and air conditioning units)
- Name and email address of the person who runs your facility



Perhaps other visitors to your websites might appreciate the same information. OK, they might not want a shot of the boiler.

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Questions for Retiring Custodians, Janitors and Maintenance Supervisors



Religious buildings are complicated – big boilers, commercial air conditioning systems, stained glass, pipe organs, slate roofs, masonry and artwork. Inside religious buildings are terrazzo, tile, wood, concrete, and sometimes rubber floors. Add to that the ability of a custodian to deal with various agendas, myths, committee politics, tight budgets, and the mission of the congregation, and we then know it takes a special person to maintain our buildings.

And, then they retire. What can your congregation do to smooth the transition from an experience maintenance person to someone just starting out? We suggest voice recordings, and now digital video recordings, of the retiring person. Here are some questions to ask.

If you know of others, please share them so we can add to this list?

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Paperwork:

Where are your records for maintenance? Can we have them?
Have you kept a list of repairs to parts of the buildings? Can we have them?
Are there records showing when each major addition, repair, and replacement happened?
Have you kept warranties and guarantees for equipment purchases? Where are they?

About the physical plant:

Where are the underground pipes and wires located? Do you have a map of them?
Do we have grease traps? How do you maintain them?
Where are the heating zones in our building?
Where are the main electric, gas and water meters located?
Where are the main water and natural gas valves in case of an emergency?
Do the local police, fire, and emergency responders know where to turn off electric, gas, etc?
How do the fire and security systems work?
Where are our fire extinguishers? Are they in good working order?
Are there any blueprints and specifications we don't know about?
Are extra copies of building plans and important documents kept off site in a secure place?
Can we work with you to label unlabeled electric circuit breakers, pipes, ducts and electric conduit? Are there panel directories mounted inside electrical panel covers showing what each circuit breaker controls?
Is the Certificate of Occupancy framed and mounted?

Anticipating future problems:

What repairs or replacements do you foresee for roofs, boilers, air conditioning systems, painted surfaces, and structural repairs?

Allies:

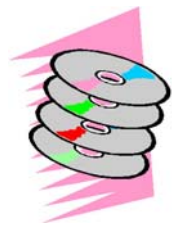
Who are vendors we can currently trust? Lighting, maintenance supplies, etc.
Who are contractors we can currently trust? Heating, roofing, masonry, plumbing, etc.
What relationship do we have with the local fire department? Fire marshal? Police?
Are the names and phone numbers of contacts at utilities, maintenance, and service firms readily available?

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Electronics Creep into Worship

According to the May/June 2007 issue of Your Church magazine, 43% of sermons are accompanied with visual aids. 91% of the preachers feel it enhances the sermon, and the same percentage use PowerPoint. 41% create the presentation themselves. This costs an average of \$428 per year.

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Information about Aqua's Customer Communications

Aqua Pennsylvania is the water supplier for most of the Philadelphia suburbs. They are contacting their non-residential customers by letter, and informing them that they must install backflow prevention devices on their water supplies within 90 days. They also note they have a subsidiary that will do it in competition with contractors. While their requirement discriminates by not including residential customers, it is probably not worth fighting.

What is often worth doing is reducing the water meter size at the same time as the backflow prevention device is being installed. Water meters are oversized, usually by one or two sizes, so reducing the size almost always is worthwhile. For example, going from a 6" meter to a 4" meter saves \$4,068.00 per year in water meter charges alone, and going to a 3" meter saves \$5,544.00 per year, all without any change in water consumption. In the past, the water meter charges were very low, so there was little harm in having oversized meters.

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Our Best Holiday Wishes to You, and Please, Deck the Halls with LEDs

Newsweek says, “this year, Americans will send nearly 2 billion holiday cards, use more than 38,000 miles of ribbon, and leave millions of Christmas trees on the curb. *Newsweek* references Zem Joaquin, eco-editor of *House & Garden*. Some of her advice:

Lights. Buy strings of LED lights, which look the same as conventional incandescent bulbs but last longer and use 80 to 90 percent less energy. LED lights, like the 300-light garland for \$8.99 at www.homedepot.com are also safer since they barely warm up. And invest in timers that automatically shut off your lights and cost as little as \$9.99.

Cards. This year consider going paper-free. Direct friends to your family blog or create a free multiphoto card or an online slideshow on photobucket.com. You can add holiday music, snowflakes and bits of text, and then e-mail friends and family a link.”

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THE INTERFAITH COALITION ON ENERGY



There are a number of reasons to give money to us:

- You may have extra money lying around, and you don't know what to do with it.
- Perhaps you want to support an energy conservation organization that solely represents the interests of people of faith.
- Maybe you like ICE; maybe one of our articles or a phone conversation saved your congregation money.
- Your contribution is tax-deductible.

Whatever your reasons, please send ICE a check so that we may continue to serve.

ICE, 7217 Oak Avenue, Melrose Park, PA 19027

Thanks. ICE