

Michaels Engineering Energy Brief

HAD YOUR FLU SHOT YET?

SUGGESTIONS...

Do you have certain Energy Efficiency topics you'd like to know more about? Send an email with your suggestion to the author listed below and your topic might become a future Energy Brief!

DID YOU KNOW...

...Replacing the worst windows imaginable, single pane and "loose fitting" as defined by ASHRAE, with double pane insulated "tight fitting" windows, may scrape up 5% energy savings - at a very high capital cost.

...Building operation deficiencies can cost owners an extra 20-30% annually.

MEET THE AUTHOR



Jeff Ihnen is the Energy Division Manager at Michaels Engineering. For more information on this topic or additional energy concerns, please contact Jeff at:

(608) 785-1900 or
JLI@MichaelsEngineering.com

➔ ENERGY EFFICIENCY DOESN'T END WITH BOILERS AND WINDOWS

Over the years, I have asked dozens of facility managers some version of the question "Have you implemented any energy-saving projects in recent years?" Many times the answer goes something like "We just replaced our boilers and windows. We're all set with energy efficiency." Whoa!

Replacing the worst windows imaginable, single pane and "loose fitting" as defined by ASHRAE, with double pane insulated "tight fitting" windows, may scrape up 5% energy savings - at a very high capital cost. Typically, boilers are replaced with similar boilers of the same capacity. Old boilers are not wasteful if maintained properly. See Energy Brief #1: Boiler Misconceptions.

➔ INVISIBLE VIRUSES

What about the invisible? The invisible can make your operating budget suffer like an invisible influenza virus can make you suffer. The invisible includes equipment behind close doors, above ceiling tiles, or burned on a computer hard drive. The table below provides some examples.

Where/What	Example Problem	Potential Cause	Effect
Behind Closed Doors	Air handler fan running faster than it should	Outdated control sequence or failed pressure sensor	Excessive air flow with higher static pressure: flow x pressure = power (you get the picture)
Above Ceiling Tiles	Failed variable air volume box actuator	Age?	More air flow, more heating energy, and probably comfort problems; wasting gas and electricity
Computer Hard Drive	Wasteful control sequences: possibly too much outside air or constant supply temperature	Programmer sets outdoor air flow using a CO ₂ control set point that is too low, and does things the way they have always been done	Excessive heating and cooling energy, and simultaneous heating and cooling

Any one of these items can waste as much as the new windows are saving. Combined, deficiencies like these can cost owners an extra 20-30% annually. Feeling the chill and aches coming on? Unlike influenza that strikes only 5-20% of Americans in a given year, there probably isn't a building standing that doesn't have many similar wastes.

➔ CONCLUSION

These are the kinds of wastes that typically persist indefinitely unless a thorough investigation via retrocommissioning is conducted. Relatively speaking, the cost for such an investigation and analysis is almost always less than one year's wasted energy expenditures.

Get your flu shot.