

The Hidden Energy Cost of Windows

Green Week 2026 – at the Park Tower 5415 N Sheridan Rd.

Presented by **Sebastian Borys** from **SIGNA SYSTEM Company**



The Big Idea

Up to 60% lo\$\$...



- “Most people think insulation is in the walls... yet the *weakest point* in your home is actually your windows.”
- “Up to 55–60% of heating and cooling energy loss comes from inefficient windows.”
- Earth Day isn’t just about big changes—it’s about **high-impact, practical upgrades**.

Can we be doing more?

Chicago Climate Reality

HEATING DEMAND UNITS:

~6,200 Heating Degree Days; ~900 Cooling Degree Days

But isn't it 365 days in a year?

“Degree days don’t count days—they measure how hard your heating or cooling system has to work over time. A very cold day counts more than a mild one, which is why the total adds up into the thousands of units over a year. It’s the difference between the base temperature 65°F and the average temperature that day, example: 65°F base - 40°F average = 25 HDD.

Chicago typically has about 180 to 220 “meaningful heating days” per year and about 30 to 80 “meaningful cooling days”

Since heating dominates energy usage in Chicago so we will focus more on those heating days in our examples.

How Heat Moves

The 3 ways heat moves: (**SIGNA** solves for all three!)

- **Conduction** (heat passing through glass)
- **Convection** (air movement near windows)
- **Radiation** (visible & non-visible light – sunlight/infrared radiation)
- **U-Value (Insulation Performance)**

U-value: a measure of how easily heat passes through a window

- higher U-value means heat escapes more quickly (poor insulation)
- lower U-value means the window holds heat inside (good insulation)

In Chicago, where it might be 70°F inside and 20°F outside, heat is constantly trying to move out of your living space, a typical single-pane window with a U-value around 1.0 allows that heat to escape faster, whereas a double-pane window with a U-value around 0.3–0.5 slows that process down and reduces heat loss by at least 50% which ultimately means better comfort and lower energy costs with less strain on HVAC systems.

Energy Savings

Upgrading from single-pane to double-pane insulating glass, combined with improved window sealing, can significantly enhance energy efficiency—often resulting in utility bill reductions of up to 60%.

These improvements reduce the workload on HVAC systems, allowing them to maintain comfortable indoor temperatures with less frequent operation.

These outcomes are based on field-tested results and direct feedback from homeowners.

Environmental Impact

Energy savings → emissions reduction (Reduced Operational Carbon)

- Less heating/cooling = less fossil fuel use
- Lower CO₂ emissions

“Improving windows is one of the most overlooked ways to reduce a building’s carbon footprint.”

One condo unit already saves energy → but an entire building multiplies that impact

In Condo buildings there is a **shared communal environmental responsibility**

Over 55 unit owners since the early 1990’s at the Park Tower have already taken this step not only for their own comfort in their units but for a communal benefit to all in the building.

Will you be the next?

Comfort & Benefits

What improves:

- Lower utility bills
- More stable indoor temperatures
- Eternal noise reduction
- Radiant heat & glare mitigation + UV protection (with optional films)
- Less strain on HVAC systems (longer lifespan – less assessments)

Value:

- Energy-efficient units are more attractive to future buyers
- Comfort = livability (***no mess: frost/ice melting – pooling water, less drafts, better sound insulation***)

Small Changes with Big Impact.

“SIGNA is a modern system designed specifically for high-rise cost effective window improvements and we solve these issues efficiently.”

- Retrofit solutions (no full tear-outs)
- Performance-focused design
- Longevity and durability

Note: I will also have a booth at the Park Tower Rummage Sale on 4/25/2026 so stop by with a friend or neighbor and lets talk more on this subject.



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with **SUSTAINABILITY**

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WINDOWS TO DOUBLE PANE
INSULATED WINDOWS.**

Questions & Answers

Let's allow for some of our remaining time to help answer some immediate questions you may have.

Feel free to:

- Ask any questions, please raise your hand to be called on
- Grab a brochure, business card, our flyer and a price sheet
- Request a follow-up **FREE** 1 on 1 Consultation Appointment

We appreciate your time today and thank you for your attention!

Happy Earth Day!



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