

# Storm Warn

**E**ven in these “good times” it is important for glazing contractors to focus their efforts on those markets and products which will provide the best Return-on-Investment (ROI) for their scarce resources of time and money. Intense competition and reduced profit margins, particularly in new construction, have been an albatross around the neck of the glazing industry for a number of years.

My company is an installing window contractor, as well as a custom storm window manufacturer, and I was addressing the above issue at a recent all-employee company meeting. My focus was on “That’s where the money is,” the famous response by Willie Sutton, when asked why he robbed banks? I believe glazing contractors should adopt Sutton’s philosophy, but apply it to single-glazed buildings, which are the “banks” of today.

There is an alternative to replacement windows, which provide almost all the benefits of new windows, at 20 to 40 percent of the cost. Secondary glazing, or storm windows, can provide the answer to budget and/or operating cost problems for owners and architects.

Few window contractors and even fewer architects and owners are aware of what is available in the way of storm windows and how they can be used to address specific renovation needs for a building. Simply stated: interior or exterior storm windows are available for every conceivable type and style of prime window on any building.

The storm window market available to window contractors is truly unlimited. This market includes:

- Any building with electric heat and single glazing;
- Office buildings built up through 1976;
- Industrial buildings;
- Hospitals and other health care facilities;
- Colleges and other schools;
- Museums of all types;
- Adaptive re-use projects;
- Old buildings sheathed

## Discover the Primary Benefits of Secondary Glazing

by David L. Martin

*in curtainwall;*

- Apartments;
- Projects with historic constraints;
- Government buildings; and
- Churches and synagogues.

By making these markets aware of the benefits and availability of storm windows, a contractor can focus on work that is more proprietary, with fewer competitors to contend with, and significant follow-on work. This is a product that pays for itself, and an Energy Payback Analysis can be provided.

Owners and architects should be made aware of the major benefits of storm windows:

- *Energy Savings: provide about 50 percent reduction in the heating and cooling energy losses through the window area.*
- *Sound: dramatic reduction in outside noise level.*
- *Comfort: eliminate drafts and uneven heating or cooling.*
- *Condensation: eliminated or reduced dramatically.*
- *Protection: against entry, vandalism and weather.*
- *Ultraviolet: up to 99 percent reduction of damaging rays.*
- *Maintenance: extends life of paint and windows.*
- *Adaptability: available for any shape and any color, for very large openings.*

The installation of commercial-grade storm window systems requires structural integrity, durability, field experience, longer warranties, and custom designs, all of which are items not normally associated with standard residential-grade products. Often, a sample installation is what resolves questions and clinches the job.



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Glazing contractors have a unique opportunity to make use of their familiarity with the various glazing materials used in custom-designed storm windows. These include:

- *Low-E glass for energy savings;*
- *Tinted glass or mini-blinds for light control;*
- *UV protection using laminated glass or special acrylic;*
- *Tempered glass for protection or code requirements;*
- *Polycarbonate or acrylic for protection or reduced weight;*
- *Films for shading or UV control; and*
- *Laminated glass for security, U, weather and sound reduction.*

In developing a storm window proposal, it is important to take a "value engineering" approach which seeks the best balance of the following factors:

- **Function.** *The storm windows must meet the operational needs of the end customer, comfort, sound, ventilation, security, sun control, etc.*
- **Energy Savings.** *This may not be the prime concern, but it always pays for the storm windows.*
- **Maintenance/Service.** *Easy cleaning and low service cost are the secrets to long-term satisfaction.*
- **Aesthetics.** *It may be a major or minor factor, but it is always important.*
- **Cost.** *Not always the deciding factor, thus the key is to "optimize" the cost.*



Custom-designed storm windows are available for very large openings, as seen here at Covington Station in Covington, KY.



Above: The Hillcrest II in Cincinnati, OH, which utilizes electric heat, had an energy savings payback of 1.9 years with installation of interior magnetic storm windows. Below: The Halle Building in Cleveland, OH, utilizes an interior magnetic storm window with 3/16-inch glass.

Keeping these factors in mind, open your eyes to the use of storm windows as you talk to architects and owners about window problems, budget problems or historic constraints on a project. Then, keep your eyes open, as you drive around your city and see the vast opportunities for storm windows. After all, Willie Sutton knew a bank when he saw one. **USG**

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## *Alternative Considerations*

### **Storm Windows vs. Replacement Windows**

- Advantages
- Lower cost
  - Meet specific needs of building
  - Availability and flexibility
  - Simple installation
  - Color availability
  - Tax credit (20%) opportunity
  - Retain historic prime windows & glass
- Disadvantages
- Convenience
  - Aesthetics

### **Interior Storm Window Installation**

- Advantages
- Lower cost than exterior units
  - Sight lines “may” be reduced
  - Better option for UV protection
  - Better option for Low-E glass
  - Easier to clean
  - More flexibility for large openings
  - Best for building over (8) stories
- Disadvantages
- Ventilation more difficult
  - Tenants may leave open –energy loss
  - Installation space may be limited
  - High moisture level can cause condensation
  - Loss of window stool space
  - Screens can be a problem

### **Exterior Storm Window Installation**

- Advantages
- Prime window protection
  - Security
  - Installation may be simpler
  - Availability of screens
- Disadvantages
- Some loss of window detail
  - Reflection of glass
  - Usually limited to (8) story buildings
  - Higher cost than interior units
  - Cleaning more difficult

### **Storm Window Types**

- Interior
- Magnetic panels with aluminum or vinyl frames
  - Lift-out designs
  - Sliding or rolling panels
  - Fixed/Removable units
  - Vertically-operating panels
- Exterior
- Fixed/Removable units
  - Vertically-operating panels
  - Traditional wood storm panels