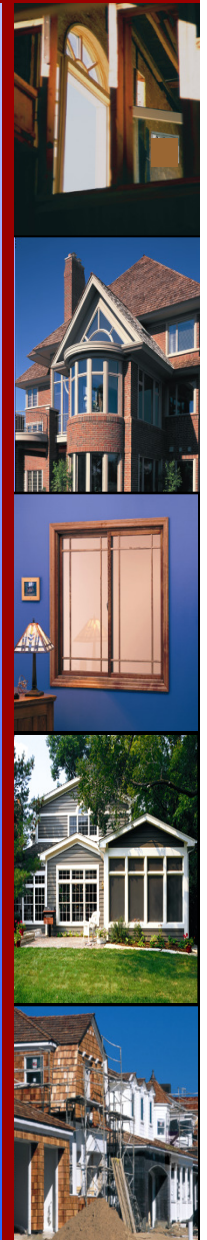


Energy Savings Opportunities - Residential Windows

Window & Door Manufacturers Association

Identifying Savings Opportunities in Residential Windows

**Consortium for Energy Efficiency
Industry Partners Meeting
September 15-17, 2010
Chicago, Illinois**



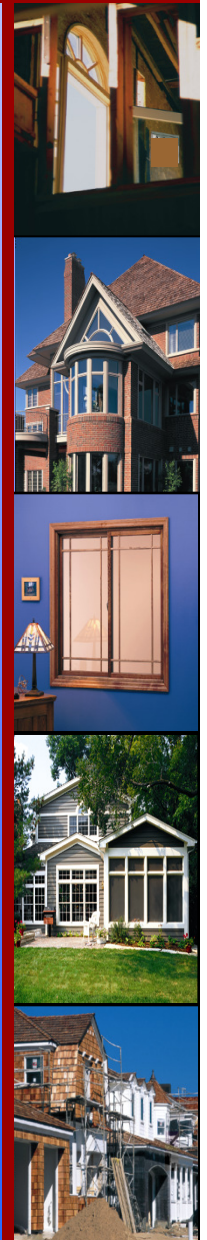
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Who we are

- ◆ **Washington, D.C. based trade association**
- ◆ **History dating back to 1927**
- ◆ **Represent leading producers of windows, doors & skylights, and suppliers – interior and exterior -- domestic & export markets**
- ◆ **Member window products: primarily residential/residential type used in commercial construction; non-metal framed; growing commercial**



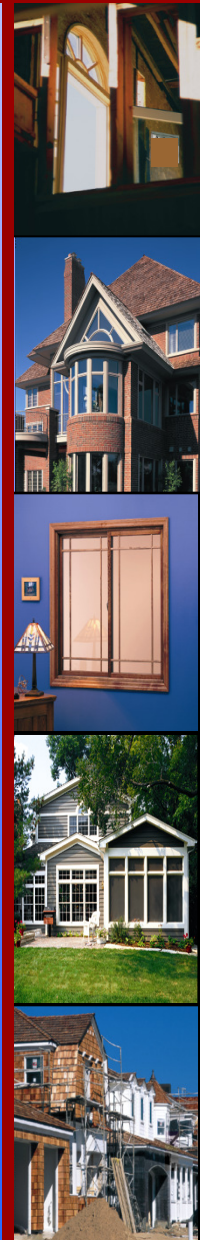
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WDMA Focus Areas

- ◆ **Advocacy**
- ◆ **WDMA standards & technical publications**
- ◆ **Certification programs – Hallmark Program**
- ◆ **Industry/economic data**



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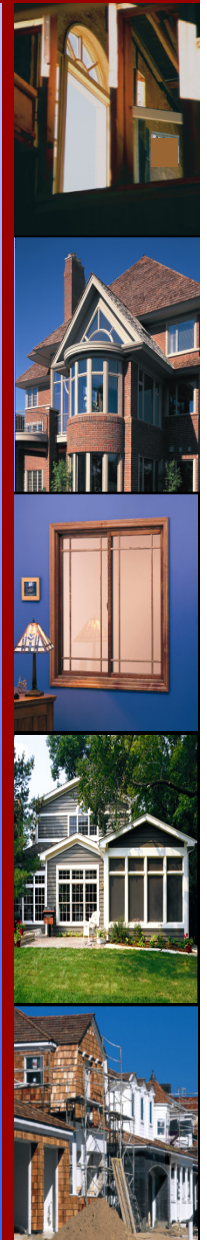
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WDMA Focus Areas - Advocacy

- ◆ **Federal legislative – Energy conservation, green building, tax & trade, housing, workforce/ workplace, & others**

- ◆ **Regulatory**
 - **Federal – DOE, EPA, HUD, OSHA**
 - **State (codes) – FL, CA**
 - **Model codes & standards development – ICC, ASTM, ASHRAE, NFPA, etc.**



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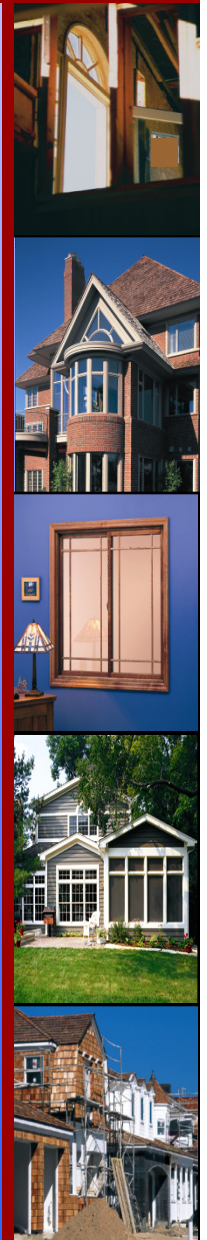
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WDMA Focus Areas – Advocacy (con't)

- ◆ **Other areas**

- **National Fenestration Rating Council**
- **ENERGY STAR**
- **Window safety**



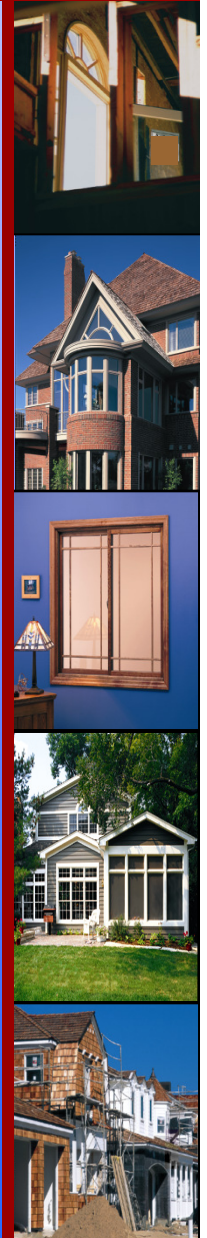
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WDMA Focus Areas - WDMA Standards & Technical Publications

- ◆ **North American Fenestration Standard (NAFS)**
- ◆ **Industry Standards (IS series) & Test Methods (TM series)**
- ◆ **Technical bulletins**



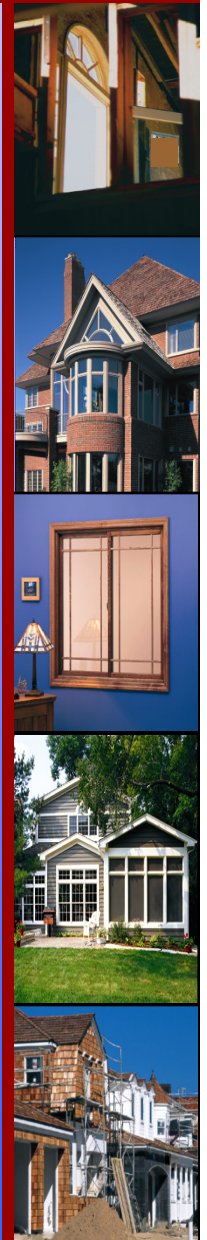
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WDMA Focus Areas - WDMA Hallmark Certification Programs

- ◆ **Third party certification of product performance**
- ◆ **Operated in accordance with ANSI & ISO requirements and guidelines**
- ◆ **Areas of certification – broad**
- ◆ **Recognized mark of excellence**



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WDMA Focus Areas - WDMA Industry & Economic Data Reports

- ◆ Detailed data – best available
- ◆ Covers overall market
- ◆ Focus reports
- ◆ Detailed reports available from WDMA



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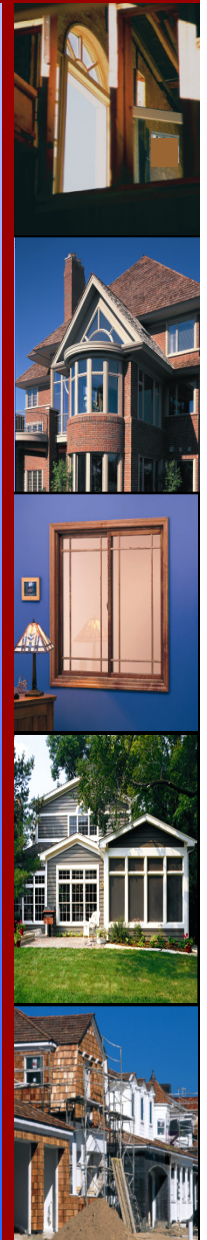
Key Market Development Drivers (*policy, economic, social & technical*)

◆ Environmental stewardship

- Energy efficiency
- Building codes & standards
- ENERGY STAR
- Federal legislation – tax credit, stimulus, climate change
- Voluntary/incentive programs
- Green building – sustainability

◆ New vs. existing construction

◆ Structural, operation, & safety requirements



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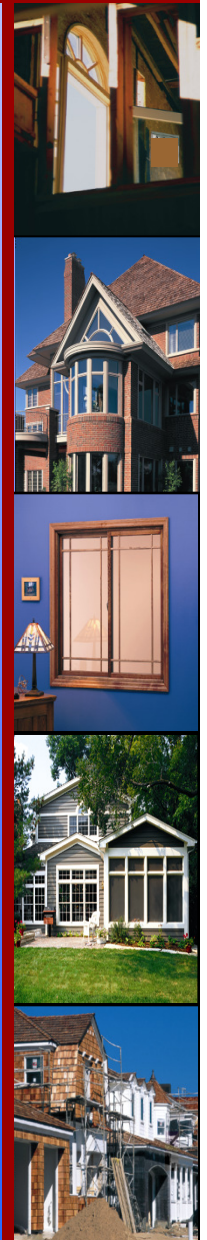
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Window, Door, & Skylight Market

◆ **Complex mix** – *can be sliced many ways:*

- **framing types** – *wood/clad wood, vinyl, fiberglass, aluminum*
- **glass types** – *single lite, two lite sealed, gas/no gas*
- **operation types** – *single hung, double hung, casement, slider, awning, fixed*
- **end uses** – *new construction, remodel, replacement*
- **distribution channels** – *distributors/dealers, big box, direct*
- **regional differences/trends** – *preferred operation types, climate, natural hazards, code requirements*



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U.S. Residential Window Market Snapshot

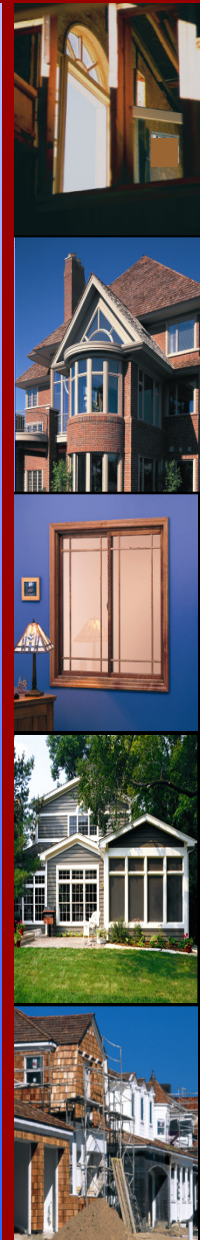
General trends

- ◆ Continued decline due to economy – less new construction, remodeling & replacement (R&R also driven by existing home sales)

Total shipments (all residential window types)

2005 = 70 million units (LC = 3.1M / MH = 1.2M)

2009 = 42 million units (LC = 2.3M / MH = 0.6M)



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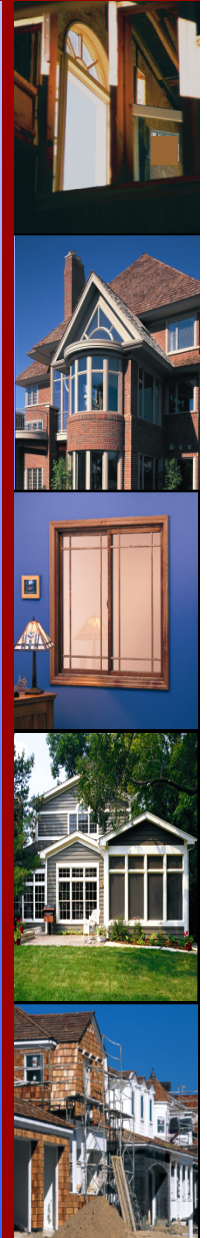
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U.S. Residential Window Market Snapshot **General trends**

- ◆ Turnaround? – Expected (depending)

Projected 2013

- New housing starts = 1.6M from current 710K
- R & R expenditures = \$151B from current \$121B
- Total window units = 68M from current 42M



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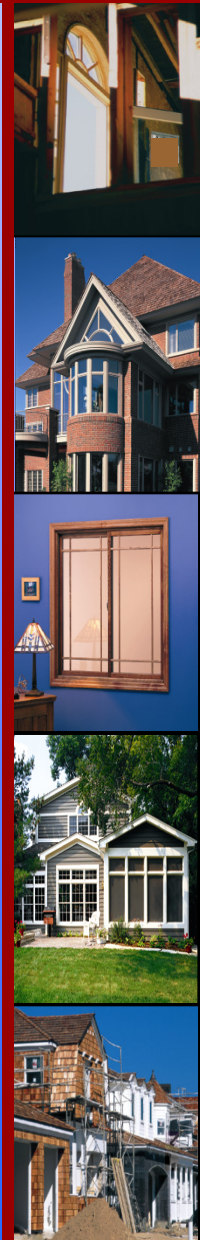
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U.S. Residential Window Market Snapshot

End use *(all types – framing, operation, glazing, etc)*

	<u>2007</u>	<u>2009</u>
New Construction	24.9M / 39%	11.4M / 27%
Remodel	15.4M / 24%	11.2M / 27%
Replacement	18.9M / 30%	16.3M / 39%
		(37M R&R by 2013?)



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U.S. Residential Window Market Snapshot

Operation type *(all framing materials)*

	<u>2007</u>	<u>2009</u>
Double hung	21.5M / 36%	14.7M / 38%
Single hung	13.4M* / 23%	7.8M / 20%
Casement	9M / 15%	5.1M / 13%
Gliding/slider	6M / 10%	5.6M / 14%
Awning	1.4M / 2%	0.78M / 2%
Fixed	4.6M / 8%	3.4 M / 9%
Specialty	0.75M / 5%	1.5M / 4%



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U.S. Residential Window Market Snapshot **Framing material**

	<u>2007</u>	<u>2009</u>
Wood/clad wood	15.1M / 25.5%	8.6M / 22.2%
Vinyl	36.5M* / 60.3%	25.5M / 65.6%
Aluminum	6.8M / 10.8%	2.9M / 7.5%
Other	2.0 M / 3.4%	1.9M / 4.8%

Information broken down further in reports



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U.S. Residential Window Market Snapshot **Glass usage** *(all types – framing, operation, glazing, etc)*

	<u>2007</u>	<u>2009</u>
Single pane	2.7M / 5%	1.6M / 4%
Double pane	55M / 93%	36.1M / 93%*
Other (triple, some dua-lite)	1.4M / 2%	1.2 M / 3%



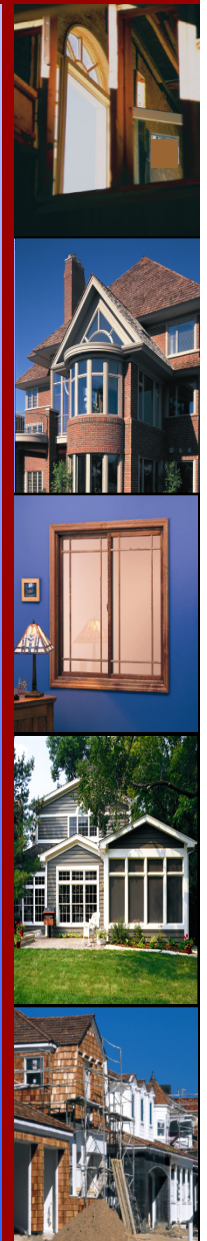
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U.S. Residential Window Market Snapshot **Ratings** *(all types – framing, operation, glazing, etc)*

	<u>2007</u>	<u>2009</u>
NFRC all	36.7M / 92%	37.2M / 95%
NFRC only	23.2M / 39%	15.5M / 39%
NFRC & ES	13.5M / 53%	21.7M / 56%*
No rating <i>(some tinted)</i>	4.4M / 8%	1.9M / 5%



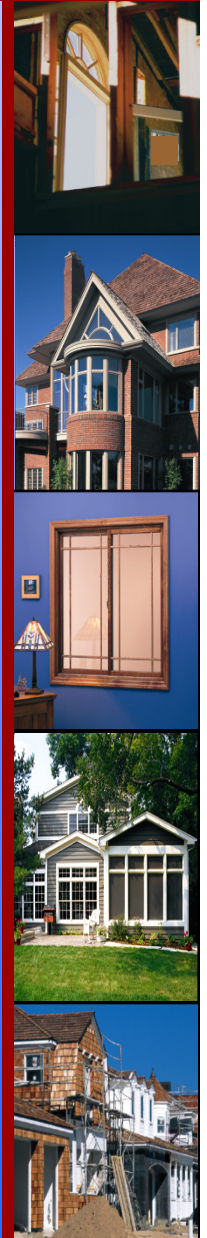
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WDMA Interest & Action in Promoting Energy Efficiency

- ◆ **NFRC**
- ◆ **ENERGY STAR**
- ◆ **Advocacy of federal incentives**
- ◆ **Advocacy of energy efficient building codes & standards**
- ◆ **Support of voluntary programs**
- ◆ **Seeking new opportunities**





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For additional information:

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VP Code & Regulatory Affairs

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