

Baseline Market Assessment Executive Summary

ENERGY STAR[®] High Efficiency Residential Windows

prepared by

Macro International, Inc.

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**BASELINE STUDY
AND MARKET CHARACTERIZATION
FOR THE
ENERGY STAR® FENESTRATION
PROGRAM**

Final Report

**Prepared For:
The Northwest Energy Efficiency Alliance**

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EXECUTIVE SUMMARY

Background

The Northwest Energy Efficiency Alliance (the Alliance) is supporting the efforts to promote Energy Star® level windows in the four Northwest states. A marketing effort is now underway to expand the use of qualifying fenestration items which would meet Energy Star specifications – windows and patio doors with U values of U-35 or less, and skylights with U-values of U-45 or less. The purpose of this study is to:

- Develop baseline information on market penetration of \leq U-35 window and patio door and \leq U-45 skylight estimates in the four Northwest states.
- Characterize the manufacture, distribution, and purchase patterns of windows, patio doors, and skylights in the four Northwest states.
- Identify and discuss factors influencing window and skylight purchases.

Approach

To obtain a comprehensive overview of the baseline of fenestration products, the consultants focussed on four areas:

1. A survey of window, door, and skylight manufacturers providing windows to the Northwest market. Survey findings provided estimates of total production of \leq U-35 windows and patio doors, and \leq U-45 skylights for the entire region.
2. A survey of high-volume builders of single and multifamily units in the Northwest. This survey identified the penetration of \leq U-35 windows and patio doors, and \leq U-45 skylights among larger builders.
3. A survey of Northwest retailers of windows, patio doors, and skylights. This survey identified the penetration of \leq U-35 windows and patio doors and \leq U-45 skylights among smaller builders, ‘do-it-yourselfers’, and remodelers.
4. A survey of Northwest builders in the high-end remodel business. This survey focused on the penetration of efficient fenestration products in this niche market.

Findings

Penetration of Energy Star level windows and patio doors in 1997 was approximately 15% region wide. Windows are somewhat more likely to be \leq U-35 than patio doors.

The retailer survey found that penetration of Energy Star level skylights in 1997 was considerably higher, with approximately four-fifths of skylights at that level. However, skylights make up a small proportion of total fenestration market.

Fenestration products are sold to builders through various channels. Manufacturers, window distributors, and retail outlets each carry a significant portion of sales of fenestration products.

Manufacturers, distributors, and retailers are carrying windows and doors which are \leq U-35. Virtually every individual brand and product line is sold in a range of U-values.

Retail stores make purchase decisions at the top – Decisions on fenestration purchases tend to be made at the corporate or regional level. Cost and quality are the primary considerations for corporate buyers.

Large-volume builders, builders of multifamily, and speculative builders are less likely to use Energy Star level products in construction. This is due largely to a focus on “first cost”. Lack of consumer awareness is also a contributing factor. Smaller builders, builders of custom homes, and remodelers are more likely to use Energy Star level products.

First cost comes first, efficiency is last. Price is the primary consideration, in purchasing fenestration products, followed by quality, appearance, and by energy efficiency.

There is uncertainty about the argon gas component of U \leq 35 products. Some retailers are not convinced of the quality or the long-term energy savings from argon-filled products. Such concerns seem to carry over from earlier experience with defective windows.

Fame still awaits Energy Star. Few of the retail staff and builders contacted in the course of this study had heard of Energy Star.