



Mr. Richard Karney
Department of Energy
ENERGY STAR Window Program
Fax: (202) 586-4617
E-mail: richard.karney@ee.doe.gov

Re: ENERGY STAR Window Proposed Revisions

Dear Mr. Karney;

I am the Branch Manager of Arch Aluminum in Waukesha, Wisconsin. This letter represents the position of the 98 managers and employees at this branch.

Arch, a multi-branch national company (22 locations, 1500 employees), is one of the largest fabricator and supplier of glass products to the US construction market. As a major supplier of glass products (pyrolytic **and** sputtered Low-E products) to residential window manufacturers, we have a significant interest in the outcome of the ENERGY STAR program.

Based on our experience in handling pyrolytic and sputtered Low-E products, Arch Aluminum strongly recommends the following:

Adopt the 4-zone proposal and reject the 3-zone proposal

Our rationale for this position is based on the following:

- 1. The Four-Zone Proposal saves more energy than the Three Zone Alternative. This results in a direct benefit to the environment, the economy and most of all to the end homeowner/consumer.**

Background: DOE's own analysis shows that the four-zone alternative saves more energy than the alternative three-zone criteria. This savings is supported through DOE's use of RESFEN and DOE-2.1E modeling software. This software is the industry standard and performs an hour by

hour energy simulation using weather data specific for cities within each zone. Saving energy should be the highest priority and is indeed a mandate of the ENERGY STAR program.

Marketplace Impact: Year-in, year-out, consumers will benefit from lower overall energy use with the four-zone alternative.

2. The Four-Zone Proposal maintains a competitive marketplace for all types of high performance Low-E glass products.

Background: The four-zone proposal recognizes the energy attributes and benefits of high solar heat-gain (available through the use of pyrolytic coated Low-E products) in a wide geographical area. Specifically, windows that incorporate high solar heat-gain Low-E products will earn the Energy Star label with a direct benefit to consumers in the North Central and Northern Zones. In contrast, the three-zone alternative restricts the use of the ENERGY STAR label to market pyrolytic Low-E products in most climate zones throughout the United States. If adopted, the three-zone alternative would negatively impact the competitive marketplace, causing a rise in prices and a monopoly for a select group of glass manufacturers.

Marketplace Impact: By maintaining choices in the glass technology marketplace, regional window manufacturers will continue to tune their products for their local market which, in turn, enable them to effectively compete against the larger national window companies. Preserving choice between alternate glass technology has a direct benefit to consumers through competitive marketplace pricing.

3. The manufacturing and processing of pyrolytic Low-E products save energy and money as compared to the processing of sputtered Low-E products.

Background: The four-zone proposal maximizes the opportunity to use pyrolytic Low-E products in contrast with the three-zone criteria which severely impacts the marketability of these products in favor of sputtered Low-E products. Our knowledge base suggests that the production of a unit of sputtered Low-E glass (processed in a distinct, separate off-line electrically charged vacuum chamber) consumes up to 9 times the amount of energy needed to produce an equal unit of pyrolytic Low-E glass (produced on-line as the float glass is being produced). Further, fabricating soft-coat requires investment in additional equipment costing up to \$150,000 per location plus training to support the properly handling of the sensitive sputter coating. Pyrolytic Low-E glass, on the other hand, can be handled like ordinary float glass. DOE's analysis did not properly address these additional costs associated with sputter coated low-e glass..

Marketplace Impact: The four-zone alternative maintains a market for an existing high-performance glass technology (i.e. pyrolytic) that saves energy and money which has a direct benefit to window manufactures and consumers. In addition, adoption of energy efficient technology is accelerated by preserving a less expensive, easier-to-use, Low-E technology.

4. Recent increases in natural gas are scheduled to increase customers cost a minimum of 15% in the near future.

Background: DOE says that it prefers the Three-Zone Alternative because it allegedly reduces peak energy demand. Peak energy demand is not a mandate of DOE and their Energy Star Programs. Further, DOE minimizes the issue for natural gas price escalation as a temporal issue. The reality is that peak energy demand is also a temporal issue and based on recent reports substantiating that the electric utilities are actually faced with a surplus of energy generating

capacity. On that basis, the overall energy savings result is a solid argument and should take precedence over peak energy demand. This rationale supports the Four-Zone Criteria in lieu of the Three-Zone Criteria.

Marketplace Impact: Consumers will benefit from year-in, year-out energy savings as a result of adopting the Four-Zone Criteria.

The 4-zone proposal is good for the economy, the environment and the consumer. Based on the above and our position in the residential window industry, Arch/Waukesha recommends the adoption of the 4-zone proposal.

Sincerely,

Jon Johnson
Branch Manager

CC: Senator Russ Feingold (FAX 202-224-2725)
Senator Herbert Kohl (FAX 202-224-9787)