155+ members representing ~ 75% of all aluminum extrusion lines in the U.S. and Canada.

90% of all commercial fenestration is aluminum.

Less in residential, but aluminum is still a dominant material in the south where structural and durability concerns are paramount.
Energy Star and the Environment

- Energy savings are the focus, but DOE must also consider the entire environmental picture.
- In ES Zones 1 and 5, the draft criteria push consumers *away* from green materials like aluminum and wood towards questionable, less environmentally friendly products.
- We should examine all aspects of *cradle-to-grave sustainability*, but at a minimum, one easy concept is to promote use of recycled materials.
Proposal for Recycled Content Credit

- Credit would be given towards meeting U-factor criteria based on use of recycled materials.
- Use of recycled content in fenestration materials can provide significant *embodied energy savings*, which can then be equated to home energy savings over the window lifetime from changes in the U-factor.
- Initial analysis for 14 representative cities.
- Analysis performed for aluminum framing, but similar credit could be developed for other materials.
Recycled Content Credit

- The embodied energy savings from the use of recycled aluminum can be as significant as the energy savings from proposed reductions in U-factor!
What about Code Limitations?

- Do Energy Star criteria need to be capped by selected prescriptive code values?
- This seems to think only about replacement windows from a big box store.
- Ignores other methods of code compliance in *new construction* (area weighting, UA trade-offs, performance analysis).
  - Many green programs for *new construction* reference or require Energy Star windows.
  - These options should not be limited by the replacement window viewpoint.
Performance Trade-Offs

- For new construction, equivalent energy performance paths can be extended beyond base Energy Star prescriptive criteria.
  - Program inspector can verify window package satisfies equivalent performance requirements for that specific home and location.
  - Area-weighted averaging for entire window package can also be allowed.
- Extends range of consumer choice and technology.
- Encourages flexibility and innovative approaches.