Pella’s Energy Claim Methodology and Assumptions

- Window energy efficiency was determined by computer simulation using RESFEN 5.0 computer program, developed by Lawrence Berkeley National Laboratory, Berkeley, CA
- Window related energy consumption of existing windows were compared to replacement windows using the same home model
- The change in window related energy consumption was used to calculate the improvement in window energy efficiency
- Calculations were conducted using the default parameters for each location as established in RESFEN 5.0
- The construction selected was an existing one-story frame construction
- The HVAC system type selected was a gas furnace and electric AC for all locations
- The floor area assumed was 2,000 square feet
- The window area assumed was 15% of the floor space (300 square feet of window area) with equal distribution of windows on each side of the home
- The calculations did not include any assumed energy efficiency improvements for improved air infiltration
- The existing window selected to compare against in all locations was a wood or vinyl single-pane window with clear glass (U = .84, SHGC = .63)
- Replacement windows selected to compare against in all locations for Pella® products included:
  - 350 series products analyzed
    - 350 series double hung window with 1-1/4″ Advanced Low-E Triple-pane IG with argon with 3 mm glass (U = 0.19, SHGC = 0.24)
    - 350 series casement window with 1-1/4″ Advanced Low-E Triple-pane IG with argon with 3 mm glass (U = 0.17, SHGC = 0.20)
    - 350 series fixed window with 1-1/4″ Advanced Low-E Triple-pane IG with argon with 3 mm glass (U = 0.15, SHGC = 0.27)
  - Designer Series® products analyzed
    - Designer Series double hung window with 5/8″ Advanced Low-E IG with 2.5 mm glass with argon with 2.5 mm Low-E HGP (U = 0.24, SHGC = 0.24)
    - Designer Series casement window with 5/8″ Advanced Low-E IG with 2.5 mm Low-E HGP (U = 0.26, SHGC = 0.22)
    - Designer Series fixed casement window with 5/8″ Advanced Low-E IG with 2.5 mm Low-E HGP (U = 0.23, SHGC = 0.25)
- The window energy efficiency comparison was made for 94 cities. The 94 cities are the same cities ENERGY STAR posted city energy savings estimates for on their website as of 11/2/12. The cities are a sampling of all 50 states except Hawaii, consistent with the approach by ENERGY STAR. The table below lists the cities analyzed.
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