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 argon 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 argon 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.

Cities Pella Selected to Calculate Energy Efficiency (Cities in alphabetical order listed by state abbreviation first and followed by the name of the city)			
1) AK Anchorage	25) FL Tallahassee	49) MO St. Louis	73) RI Providence
2) AK Fairbanks	26) FL Tampa	50) MS Jackson	74) SC Charleston
3) AL Birmingham	27) GA Atlanta	51) MT Billings	75) SC Greenville
4) AL Mobile	28) GA Savannah	52) MT Great Falls	76) SD Pierre
5) AR Little Rock	29) IA Des Moines	53) NC Charlotte	77) TN Memphis
6) AZ Flagstaff	30) ID Boise	54) NC Raleigh	78) TN Nashville
7) AZ Phoenix	31) IL Chicago	55) ND Bismarck	79) TX Amarillo
8) AZ Prescott	32) IL Springfield	56) NE Omaha	80) TX El Paso
9) AZ Tucson	33) IN Indianapolis	57) NH Concord	81) TX Fort Worth
10) CA Arcata	34) KS Wichita	58) NJ Atlantic City	82) TX Houston
11) CA Bakersfield	35) KY Lexington	59) NM Albuquerque	83) TX Lubbock
12) CA Daggett	36) KY Louisville	60) NV Las Vegas	84) TX San Antonio
13) CA Fresno	37) LA New Orleans	61) NV Reno	85) UT Cedar City
14) CA Los Angeles	38) LA Shreveport	62) NY Albany	86) UT Salt Lake City
15) CA Sacramento	39) MA Boston	63) NY Buffalo	87) VA Richmond
16) CA San Diego	40) MD Baltimore	64) NY New York City	88) DC Washington
17) CA San Francisco	41) ME Portland	65) OH Cleveland	89) VT Burlington
18) CO Denver	42) MI Detroit	66) OH Dayton	90) WA Seattle
19) CO Grand Junction	43) MI Grand Rapids	67) OK Oklahoma City	91) WA Spokane
20) CT Hartford	44) MI Houghton	68) OR Medford	92) WI Madison
21) DE Wilmington	45) MN Duluth	69) OR Portland	93) WV Charleston
22) FL Daytona Beach	46) MN International Falls	70) PA Philadelphia	94) WY Cheyenne
23) FL Jacksonville	47) MN Minneapolis	71) PA Pittsburgh	
24) FL Miami	48) MO Kansas City	72) PA Wilkes-Barre	