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**Subject:** Top Tier --- Ingersoll Rand Comments

**Ms Vargas: Here are Ingersoll Rand Residential Solutions, makers of Trane and American Standard residential heating and air conditioning products, comments and suggestions on the top tier program. Thanks for the opportunity.**

Top Tier criteria should:

- Be based on performance, not a specific technology
- Selection should be at a level that top tier products will exist across the capacity range of residential products, not just smaller capacities
- The number of qualifying models should be large enough that the industry can get behind and promote the program. That requires that the program not differentially benefit one or two manufactures in an industry
- Take into consideration the current market share of various performance levels
- Take into consideration how close the market-leading products are to the absolute physical limits and the degree to which closing the gap is really significant.
- For HVAC, Top Tier should include installer certification that the product installation has been performed in accordance with ACCA Quality Installation [QI] procedures.

Identification Issues and Suggestions:

- HVAC manufacturers, distributors and dealers need to be able to promote Top Tier products in various media. Web sites and mobile apps will not be effective for the HVAC sales model
- If/when criteria are changed so that a former Top Tier product no longer satisfies the criteria, the manufacturer and merchants need a time window in which to purge their media claims.
- Identification of Top Tier products is intended to be limited to the EPA Energy Star web site, despite the fact that EPA reports that the consumers do not often refer to this web site. This could lead to legal challenges to EPA unless the top group is very narrow [almost a single model] and is updated in a very timely manner as new products are introduced that leap-frog the existing Top Tier products, and that the leap-frogged products are dropped from the listing. Dropping leap-frogged products which have been on the list a short time should be expected to severely dampen the interest of manufacturers to participate.
- Web sites and mobile apps will not be effective for HVAC sales model.

**The following comments are based in large measure on the charts from the 10/19/10 webinar.**

The target customer is one who always buys the “best” independent of price. The unstated assumption is that they are opinion leaders, and that others will follow their example. This assumption is probably not supported by experience if the product in question is not regarded as a good value by a substantial portion of the market.

In targeting the Top Tier program to the “**most** efficient products”, EPA may miss the opportunity this program offers. Paraphrasing a common expression: “EPA may lose the very good in a quest for the best.” Furthermore, EPA may lose the opportunity to impact a significant portion of the market.

The “Top Tier Strategy”, as portrayed with a bell-shaped in an early chart, is not very representative of the situation in HVAC industry. The most efficient air conditioners, heat pumps and furnaces in the market today are in the distribution tail on the far right hand side of the curve.

EPA asks, ““Would a Top Tier effort harm ENERGY STAR?” Since EPA has made quite a point of the benefit of a binary nature to the Energy Star program, the answer would seem to be in the affirmative.

The “Target Consumer” characteristics identify a very large subset of the general population. The gender, age, ethnicity/racial and home ownership criteria define a subset of approximately 50 million homeowners covering about 38% of all U.S. housing units! --- Non-owners are most unlikely to invest in a Top Tier HVAC system.

The chart with the four stickers is confusing. EPA has indicated that there will be no product stickers or hang-tags for Top Tier. What will these stickers be used for?

The Retail POP will have little impact on sales of HVAC since the point of sale for HVAC is usually the home of the purchaser. There is an exception in the sales center of large upscale developers. --- Note that something on the order of 75% of all HVAC sales are replacement units.

EPA’s opinion surveys were in Atlanta, NYC, San Francisco and Denver. Arguably, these may not be overly representative of the US consumer.

The Top Tier program is based to some extent on focus groups. In addition to the question of representativeness, there may also be reason to question whether the participants will vote with their pocketbooks the same way they did in the focus groups, especially when it comes to products which cost thousands of dollars.

The Key Findings chart indicates that “consumers get most of their info at retail and on line.” For HVAC there is not generally a sales room that offers a full range of products [like some big box stores do with white goods]. Consumer Reports seems to be a very significant source of information for the customer base EPA intends to target.

Relative to the Proposed Program Design chart:

- Superior efficiency is certainly appropriate if it is interpreted to be superior to the mass of the market or even superior to the Energy Star levels.
- Latest in Technological achievement may be a misleading concept in terms of HVAC. There are those who would argue that this means variable speed air conditioners, for example. These were introduced by The Trane Company [subsequently acquired by IR] a quarter-century ago. Without debating the merits of this technology which we introduced, its introduction is very much yesterday’s news.
- The set of qualifying models must be sufficient to draw customers, to create buzz, and to satisfy customers who are induced by EPA’s promotions to seek Top Tier products. For HVAC products, that means that it needs to cover a wide range of capacities and a moderate range of high efficiency and features. A typical manufacturer may have 60,000 split-system air conditioner combinations, hundreds of which should qualify as Top Tier.

The Category Considerations chart:

- Elimination of performance variation with climate/region eliminates air conditioners and heat pumps.
- Furnaces can essentially meet this criterion.

Thoughts on Frequency of Updates:

- Qualifying **thresholds** for HVAC should be updated not more frequently than once year, and this may be too frequent. --- AHRI can provide sales statistics by efficiency brackets for the preceding calendar year early in the first quarter of the next year to aid EPA in tracking the impact of the Top Tier program, or how “dated” the Top Tier levels have become.
- Listings of qualifying models should be posted promptly [say within 30 days] after EPA is notified by the manufacturer of the availability of a qualifying product.

- Consideration should be given to a vintage identification for Top Tier status. Otherwise, the manufacturer benefit is of too short duration to develop or market Top Tier models in the absence of significant market demand [and if such demand existed, EPA wouldn't be considering this program].
- In summary: put models on the list fast --- take them off slowly.

#### Mobile Apps

- This seems to be more geared to impulse purchases than would be expected to be the case with HVAC.

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