



March 2, 2012

Ms. Verena Radulovic
United States Environmental Protection Agency
Office of Air and Radiation
Washington, D.C. 20460

Dear Ms. Radulovic,

In response to your memo dated February 3, 2012, 3M is providing comments on Draft 2 of the ENERGY STAR Program Requirements for Televisions Version 6.0. We appreciate the opportunity to provide comments, and we continue to support the EPA's efforts to reduce the energy consumed by televisions.

We must begin by acknowledging the tremendous success of the ENERGY STAR program for Televisions and commending the EPA and stakeholders for their efforts to drastically reduce the energy requirements of televisions since the implementation of on-mode testing and certification began in 2008. We commend the EPA, also, for collecting and making publically available the data used to qualify products under the ENERGY STAR program. This data is immensely valuable to consumers and enables informed purchasing decisions by those for whom energy efficiency is important.

The ENERGY STAR Televisions program has doubtlessly reduced the power consumed by televisions when used in their default modes. The original motivation for evaluating television power consumption in the default mode was evidence in 2008 that most users did not change the settings of their televisions once they got them home. Hence, evaluating TVs in their default (or "home") mode was the most effective way for the EPA to estimate how much power the televisions used in the field. As long as users don't change the picture settings to increase brightness (which increases the power consumption), basing ENERGY STAR qualification on power in the default mode makes sense.

In July of 2011, 3M commissioned market research conducted by CBS Vision around television viewing habits, conditions, and preferences of consumers. Among the questions asked of the respondents was:

"To the best of your knowledge, have you or anyone else changed the picture settings on your newest TV since it was purchased?"

The responses were: Yes (46%), No (47%), Not Sure (7%)

Almost half of the respondents were able to affirm that they have changed the picture settings of their TV since it was purchased. If these sets were ENERGY STAR-qualified, the EPA has no visibility to the power that these 46% of sets are actually consuming. This data is opposed to the assumptions about user habits when the first on-mode power requirements were established for the ENERGY STAR Television standard in 2008. Improvements in user interface software have probably made it easier for users to change their television picture settings. In some cases, there are dedicated buttons on remote controls to put the TV in specific picture settings which take the television out of the (ENERGY STAR-qualified) default mode.

To address this recent finding, the EPA has recommended in Version 6.0 Draft 2 the implementation of a double prompt for the end user whenever she or he changes the picture settings from default. While this could be effective as a stop-gap measure to raise consumer awareness, 3M believes that this could ultimately be damaging to the ENERGY STAR brand. If someone wants to change the picture settings from default, it is likely because they are dissatisfied (for whatever reason) with the default picture settings. Double-prompting effectively ties the ENERGY STAR brand (twice) to picture settings that are deemed unsatisfactory.

3M believes that the most effective way to ensure low power consumption is to evaluate and reward TVs that have high efficiency (ratio of performance to power consumption). No one can predict how users will want to ultimately use their TVs. Some might like a very high brightness picture, and some might prefer a low brightness picture. By rewarding efficiency, the EPA can guarantee that the television will be using the lowest amount of power possible for whatever picture setting the end-user desires.

To evaluate efficiency, 3M continues to recommend power testing at a fixed luminance as is done for ENERGY STAR Displays less than 30". By testing at a fixed luminance, all TVs are evaluated on a level playing field, and power measurements become measurements of efficiency. Manufacturers would be free to ship their TVs in whatever mode they choose, and consumers would be free to use their TVs however they like and be certain that their ENERGY STAR-qualified TV was consuming the lowest amount of power possible for their given environment and visual preferences.

3M understands that the timeline is short for implementing a change to the test method, and there is little data that exists for TVs at a fixed luminance. It might be possible to interpolate fixed luminance power data from data that exists for televisions for which power and luminance measurements have been made at multiple settings.

If fixed luminance testing cannot be implemented in Version 6.0, 3M recommends that the EPA begin to require testing and reporting of power consumption at a fixed luminance. In the spirit of harmonization with the Displays standard, and in light of the

luminance capabilities demonstrated by the vast majority of ENERGY STAR qualified Televisions, 3M recommends power testing when the TV is delivering 200 cd/m² of luminance. By collecting and reporting fixed luminance power data, the EPA can begin to build the data set needed to change future program requirements, and consumers could have visibility to the most efficient TVs on the market.

Thank you for your consideration of these comments. We look forward to cooperating with the EPA during this process. As questions arise around these comments, please contact us for further discussion.

Sincerely,

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cc: Owen Sanford, ICF International