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The purpose of this letter is to comment on the proposed changes to the Energy Star CFL testing and certification procedures. Specifically, Energy Star has proposed to change the testing requirement for granting provisional Energy Star certification in the following manner. The current procedure calls for Energy Star to grant provisional certification after a CFL product has successfully completed 1,000 hours of performance testing at a NVLAP accredited laboratory. Energy Star proposes to abolish the provisional grant of certification entirely and require CFL products to successfully complete full life testing before any certification can be granted.

There are both advantages and disadvantages to this proposal as well as other, and possibly better options. The following paragraphs investigate these points.

1). Advantages of Tightening Up The Energy Star CFL Testing and Certification Requirements

a). Product Failure After 1,000 Hours of Testing

Many products that have been granted provisional approval after successfully completing 1,000 hours of performance testing have subsequently failed before completing the full life and performance tests. Thus, one result of the granting of provisional Energy Star certification at 1,000 hours is to grant certification to products that are not up to the Energy Star standard. This undermines the credibility of that standard and its standing in the marketplace as a symbol of reliability and quality.

b). Abuse of the Energy Star Testing and Certification System

There are also tales of manufacturers abusing the Energy Star system. For example, it is possible for a manufacturer to enter a product in the Energy Star certification process and claim that it is an 8,000 hour or 10,000 hour product. After 1,000 hours of testing the product is given provisional certification and is allowed to display the Energy Star logo on a product that claims it is an 8,000 or 10,000 hour product. If the product fails at any point before the completion of the 8,000 or 10,000 hour tests then it must relinquish Energy Star certification. However, in the meantime, it has sewn considerable ill will and confusion in the marketplace among retailers and consumers who have found to their chagrin that the product is not what was claimed.

c). The Need For Reform

Thus, there is a case for the reform of the system since if action is not taken, the Energy Star logo, which has become the most prominent symbol in the marketplace indicating that a product is of good quality and reliability will be undermined. This would have the effect of setting the market back considerably due to a loss of consumer confidence in CFL products. This should not be allowed to happen. Therefore, the Energy Star program managers are correct in their instinct to reform the system by tightening up existing testing and certification procedures.

2). The Other Side of the Coin: Impact on Industry

a). Pace of Innovation Depends on Rapidity of Return on Investment

In recent years, CFL products have evolved rapidly in quality, functionality, availability and price. Innovative products are being brought to the market very rapidly as manufacturers compete vigorously for a share of existing markets as well as to open up new markets to CFLs currently dominated by incandescents and halogens. Some of the most innovative CFL manufacturers are located outside the U.S., especially in developing countries

and especially in China. These manufacturers need to be able to realize a rapid return from their investment in new technology. The requirement to wait for the completion of full life and performance tests is at variance to the need for a rapid return on investment.

b). Potential for Stifling Innovation

The proposed new Energy Star requirement imposes, at minimum, a 6,000 hour, 8.3 month waiting period on manufacturers that can ill afford to let the fruits of their investments lie fallow for that length of time. If this new schedule is imposed, it could exert a brake on innovation in CFL technology as well as on the commercialization of new and innovative CFL products in the U.S.

Those innovative products that commercialized may be first introduced in Europe rather than the U.S. As a result, American consumers will suffer from not having access to the most advanced and competitive CFL products available. It would be a curious outcome indeed, if the Energy Star program, which was established to encourage innovation in energy efficient technologies and in expanding consumer access to such products, stifled technological innovation in CFLs and in constricting the American consumer's access to innovative products.

c). Devaluation of Energy Star CFL Certification

There is also another potential scenario. If manufacturers are required to wait at least 8.3 months before marketing their products in the U.S., it is possible that they will begin marketing of their products in the U.S. as soon as they have been granted those certifications that are mandatory (UL and FCC). Although they may still seek Energy Star certification, that certification may be forthcoming long after a product has been in the market and long after it has already captured a significant market share.

Alternatively, some manufacturers may forego the Energy Star testing and certification procedure altogether since if market acceptance of a new product can be achieved without such certification, then the rationale for obtaining it is not a very compelling one. The end result of this scenario is that the Energy Star CFL standard is diminished in stature and the marketplace for CFLs develops in a more chaotic manner with all of the attendant confusion, consumer risk aversion and general reluctance of the marketplace to take a chance on CFLs. This is reminiscent of the state of affairs before the Energy Star program began to engender consumer confidence in Energy Star certified CFLs and, as a result, brought some order to the CFL marketplace. A set back of this type would be tragic for all concerned and would threaten to negate many of the important gains that the Energy Star CFL program has made over the years.

3). An Alternative Option

As a result of these considerations, it is apparent that both the status quo and the proposed new regime are both problematic. However, there is a third option that may offer a solution. The alternative is to grant provisional Energy Star certification after testing reaches the benchmark of 40% of rated lamp life. For a 6,000 hour CFL, 40% of rated lamp life is 2,400 hours; for an 8,000 hour CFL, 3,200 hours; for a 10,000 hour CFL, 4,000 hours.

There are several reasons why the 40% of lamp life benchmark is the reasonable point at which provisional certification could be granted. Firstly, IESNA testing procedures already use the 40% lamp life benchmark as a major point at which to evaluate all pertinent lamp life and performance parameters. Secondly, the 40% of lamp life benchmark is widely used throughout the global CFL industry as a key indicator of whether a product can reach the manufacturer's rating or not. Thirdly, the Energy Star life and performance testing procedures use the IESNA procedures, which attach major importance to the 40% lamp life benchmark. Fourthly, by the time the 40% lamp life rating has been reached it is usually apparent if a CFL will pass the test or not.

If they have not already, the Energy Star CFL Program managers should take a close look at the available data on exactly at what point in the testing process most CFLs tend to fail. If Energy Star does not have this data it

could ask the major NVLAP certified independent testing labs that conduct most of the Energy Star CFL tests and ask them how many products fail within the 40% of lamp life time frame vs. fail after the 40% of life test. It would be surprising if more than a small percentage of the products that make it past the 40% life benchmark fail before reaching the end of the full life test. Moreover, it should be possible to estimate which products are likely to fail after the 40% lifetime benchmark based on performance data accumulated before that point in the testing process has been reached. Statistical methods for making such estimates have been reported to have been developed by NEMA.

a). Advantages of the Alternative Approach

The 40% lamp life benchmark is an attractive alternative from a pragmatic standpoint. It imposes a more stringent testing schedule and withholds provisional certification until much later in the testing process but not so late in this process as to impose a significant hardship on innovative manufacturers. It provides the marketplace with a much more reliable standard of a product's quality without also destabilizing the relative order of the marketplace that has been achieved in large part as a result of the Energy Star program. It advances the Energy Star program as an even better predictor of product quality without dampening the pace of innovation. It also encourages manufacturers to conservatively estimate lamp life so as to gain Energy Star certification as soon as possible, rather than engaging in the current practice of inflating rated lamp life claims at the start of the Energy Star testing process.

4). Interest of Dash Lighting

It should also be stated that Dash Lighting has a very practical, material interest in this debate. Although Dash Lighting is not currently an Energy Star partner, we do have a number of very innovative new CFL technologies under development, which will result in CFLs that are much higher performing, longer lived, more efficient and lower cost than the CFL products currently on the market. Dash Lighting plans to commercialize an entire product line of these advanced CFLs during 2003 and 2004 and to begin the testing and certification process for several products within, at most, 2 months from now.

Because Dash Lighting has invested many millions of dollars and many years of time in the process of developing and testing its new CFL products, there is a need to begin realizing a return on that investment as soon as possible. It is clear that the 6,000 hour rule would compel us to introduce our products into the U.S. market without Energy Star certification. It would also require us to divert a large share of our already planned production to Europe where we know the market will be receptive without Energy Star certification. However, we would much rather do the opposite: first introduce our products in the U.S. with Energy Star certification and proceed to enter other markets after first capturing a significant share of the U.S. market.

5). The Stakes

Will CFL technology continue to develop at a rapid pace and capture new markets from incandescents and halogens or will this progress be slowed? Will market confidence be increased or decreased in the Energy Star CFL certification process? Will the future of energy efficient lighting in the U.S. be brightened or will it be dimmed? These are the outcomes riding on your decision. Dash Lighting hopes that you make the right decision for all concerned.

Please feel free to contact me at any time should you have any comments or questions.

Best regards,

Thomas C. Gleason
Vice President