

IBM Comments:

“Draft Conditions and Criteria for Recognition of Accreditation Bodies for ENERGY STAR® Laboratory Accreditation” and “Key Milestones” Timeline

IBM appreciates the opportunity to comment on the Draft AB Requirements and the Key Milestones document. IBM supports EPA’s effort to define a set of requirements for qualifying and verifying the ENERGY STAR® attributes for the multitude of product categories covered by the ENERGY® STAR program. Establishing and implementing a transparent, consistent qualification and verification process is critical to maintaining the integrity of the ENERGY STAR® label.

As a manufacturer of enterprise IT equipment, IBM’s interest in these draft documents is limited to their implications for server, storage and network products. The Tier 1 Server Requirements have been in place for one year and the storage system requirements are currently in development. As discussed in the IBM comments to the testing and verification proposals that EPA presented in the file “ENERGY STAR® Products, Enhanced Testing and Verification, Consumer Electronics and IT Products” webinar, it is important that EPA not rush into a solution for the verification process for servers since servers are just beginning to enter into that portion of the ENERGY STAR® process. IBM is interested in working with EPA to design a workable approach to a qualification and verification system which takes into account the cost of servers, the multitude of potential configurations that can be created for a single product family and the complexities and expense involved with setting up and executing a test on a server system. Server, storage (in the future), and network (in the future) products are significantly more complex than most of the products EPA deals with in the ENERGY STAR® program and unlike consumer electronics, these products are not available “off-the-shelf” at a retail store.

IBM recognizes and supports the need for EPA to establish an accreditation body (or bodies) to administer the qualification and verification programs for each category or group of categories of product(s) and establish and execute processes to verify that testing laboratories are properly qualified and executing testing procedures to the established, documented requirements. The enterprise IT equipment industry has an established model available in the area of product safety testing. The program has the following components:

1. Manufacturers certify that the laboratories are in conformance with the requirements of ISO 17025:2005 "General Requirements for the Competence of Testing and Calibration Laboratories". The standard covers every aspect of laboratory management, from sample preparation to analytical testing proficiency, record keeping, and reports. It includes reviews of document control, corrective and preventive action, accommodation and environmental conditions, equipment, measurement uncertainty, evidence of traceability, and sampling, and authorization the laboratory’s testing and calibration results are technically valid.
2. The laboratory’s performance is reviewed and accredited by a third part accreditation body. For product safety testing, UL is the accrediting body and for EMC testing, the accreditation is performed by the National Voluntary Laboratory Accreditation Program. In the case of the UL accreditation, the manufacturers are able to submit product certification reports on their own behalf to governing body.

This program has all the components that EPA has indicated that it requires in a qualification and verification testing program and has established accreditation bodies to verify that the laboratories are performing to the ISO 17025:2005 requirements. In addition, it enables companies to perform product testing in-house to mitigate the complications that would be introduced to the process by the requirement that all qualification and verification testing be done by independent, third party

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laboratories. Our concerns, and our alternate proposal to enable in-house testing, were detailed in our April 30, 2010 comments to the “Enhanced Testing and Verification Proposal”.

These comments are being mentioned and repeated in this document, as the Key Milestone Timeline appears to suggest that only testing performed in independent, third party testing laboratories will be allowed for qualification and verification of ENERGY STAR product attributes. While some wording in the document appears to allow for testing at “EPA-recognized, accredited laboratories” without a restriction that the laboratory be independent from the manufacturer, there are three specific references to the use of independent third party laboratories for either qualification or verification testing. We are very concerned that portions of the Key Milestone Timeline seem to preclude the use of in-house laboratories, with the proper controls and oversight, for product qualification and verification testing.

IBM recommends that EPA allow the qualification and verification program for Enterprise IT equipment to be performed at the manufacturer’s in-house laboratories -- as is currently done for certain product safety requirements. Key considerations for such a program would include:

1. Require or establish the option for in-house laboratories to acquire a third party certification. There are laboratory certification standards that could be used to establish a lab’s credentials:
 - a. **System Manufacturing Test Qualified Laboratory** (Product Safety) - UL, TUV, etc. have programs in place that audit the laboratory to the ISO/IEC 17025 standard. This standard includes requirements for equipment calibration, test environments, training, test processes, test procedures, etc. In the end, the test data is accepted by the agencies for inclusion in a CB report that is used in the Declaration of Conformity for the CE mark.
 - b. **NVLAP (National Voluntary Laboratory Accreditation Program)** - NVLAP accredits public and private laboratories based on evaluation of their technical qualifications and competence to carry out specific tests or calibrations. This certification is used for EMC testing on our products.
2. To supplement the above, establish the option for third party witnessing of the testing process by the qualification and verification program manager or their designee.
3. Include the submittal of quality control documentation as part of the submittal of any qualification or verification data.

In-house testing offers several benefits:

1. Testing takes an extensive amount of time. IBM utilized 24 days of testing time to qualify the Power 750 Express system. This required a calendar period of over two months to allow for the acquisition of parts and assembly of the systems to be tested. Performing this at an in-house lab is expensive. Having the work done at a third party facility as well as having IBM resources at the lab for the configuration and set-up of the equipment would be redundant, add a prohibitive cost burden to the IT manufacturers, and require longer time periods to complete the tests.
2. It is difficult to procure and transport systems, particularly large configurations. There are opportunities to manage this efficiently in-house that are not available if testing is performed by a third party.
3. Manufacturers routinely test their equipment for various product safety and benchmark requirements. They are familiar with set-up requirements for both the hardware and the supporting software. Particularly on more complex servers, there is

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a significant amount of work involved in properly setting up and configuring the system as many enterprise servers require additional support equipment, such as consoles, storage arrays, and switching gear for operation.

In closing, the complexity and cost of enterprise IT equipment makes in-house testing the best option for both qualification and verification testing. Testing in a third party external lab introduces unneeded costs, scheduling and logistical difficulties and reduces the value of an expensive product as it no longer can be sold as new. A third party testing requirement will greatly reduce the number of server configurations that equipment manufacturers are willing to submit for the Energy Star program, reducing the amount of information available to the EPA and to the consumer and reducing the effectiveness of the program.

We are also concerned about the requirement that all new product models in the CE/IT category be tested in EPA-recognized, accredited laboratories beginning November 30, 2010 if the requirement is that the testing be done in independent, third party laboratories. There is not presently the capacity or capability in the third party laboratory community to perform the testing required to certify products, and the requirements for the testing making it highly unlikely that the required capacity can even have begun to be developed in that time frame. We believe that it will take until at least the second half of 2011 to get the necessary capacity in place.

The IBM team is available to discuss its technical concerns in more detail and to offer a tour of a testing lab facility to assist EPA in understanding the complexities involved in testing server equipment. Jay Dietrich (jdietric@us.ibm.com) is the IBM interface to the ENERGY STAR® program and would be happy to answer any questions you have or schedule a meeting with our technical team.

Thank you for considering our comments.