ENERGY STAR® ICT Product Roadmapping Workshop Organizing Document

TRACK 1: ENERGY STAR PRODUCT SPECIFICATIONS

INFORMING DOCUMENT PURPOSE.
Recognizing the unique nature of Information and Communication Technology (ICT) products − their complexity, their rapid evolution, their global applicability, their connectivity with many other product types − EPA and ITI see value in hosting an informal brainstorming dialog regarding the near term future of ENERGY STAR for ICT products and ICT-enabled solutions. This informing document is intended to assist participants in preparing for the Track 1 breakout discussion, enabling the richest and most productive discussion possible on July 10 and beyond.

DESIRED OUTCOME FROM TRACK.
By ICT product type, outline key considerations regarding the focus of relevant ENERGY STAR specification processes for the coming 3-5 years, to include thoughts on: market-driven product innovation; efficiency improvement opportunities; the technology roadmap, including costs and other constraints; and consumer choice and benefits. EPA and ITI anticipate that these considerations will be more fully discussed and documented through a limited set of conference calls hosted through the second half of the 2012 calendar year.

FRAMING DISCUSSION.
In establishing or revising an ENERGY STAR product performance specification, EPA employs a set of six key principles. These principles are not applied as a strict checklist per se, but as guidance during an iterative process to achieve the desired balance among the principles, using the best available market information. These principles are:
1. Significant energy savings will be realized on a national basis;
2. Product energy consumption and performance can be measured and verified with testing;
3. Product performance will be maintained or enhanced;
4. Purchasers of the product will recover any cost difference within a reasonable time period;
5. Specifications do not unjustly favor any one technology; and
6. Labeling will effectively differentiate products to purchasers.

In applying these principles, EPA seeks to recognize the unique nature of each product type and has worked with stakeholders over the last 20 years to tailor ENERGY STAR specifications to fit the product segment. For example, in recognition of the range of performance, features, and functionalities often present in ICT products, EPA has made a practice of structuring product categories such that consumers can find an efficient model in a product configuration, speed, or other sub-category. The ENERGY STAR specification for computers provides different energy consumption (kWh) requirements for numerous categories of desktop and laptop computers, as well as tailored requirements for workstations and thin clients. With this same aim in mind, EPA has provided allowances (adders) for key functionalities that warrant additional power, such as graphics, storage, etc.

Just as computer, monitor, and imaging equipment manufacturing partners were the first to partner with EPA on the ENERGY STAR program, ICT partners should be well positioned to work with EPA on approaches for the ENERGY STAR program in light of a quickly evolving ICT market. As the demand for data creation and digital transfer grows exponentially, the key market trends include: ubiquitous mobility; client and host appliance connectivity through the network; emergence of low power and connected standby modes; form factor innovation; and the emergence of cloud computing as an important operating model. Even in the midst of rapid evolution, the mainstream product designs and methodologies continue to mature. This has led to common product design with global applicability, the

use of common product categories for comparing like products in global product energy regulations (voluntary or MEPS-based), the competitive marketing of energy efficiency metrics, and increased use of standards-based methodology and test procedures.

In light of these trends, in some cases it may no longer be sufficient to think about individual products as standalone, but instead to think more holistically, taking into account the broader system and its efficiency impacts. For instance, at a system level the optimal efficiency will be achieved by balancing performance and serviceability for the user and system energy use in a way that in some cases may not result in the individual devices operating at their optimum energy efficiency. Also, as more products are networked and always connected, networked standby power losses could become significant.

In some cases, further impactful energy saving opportunities, and thus product differentiation, may not be available, suggesting that EPA sunset the ENERGY STAR program for those products.

In all cases, EPA seeks to ensure that the ENERGY STAR label is not associated with models of poor quality or models with features that are not compatible with a consumer or societal interest.   With regard to ICT products and the issues of toxicity and recyclability, and after consultation with stakeholders, this has recently resulted in proposed Partner Commitment provisions intended to mirror EU RoHS and IEEE 1680.1 requirements.

Meanwhile, energy efficiency regulation of ICT products is becoming more prevalent internationally, both using ENERGY STAR specifications and test procedures and using limits and testing standards specific to the country in question. EPA has actively promoted international harmonization of energy efficiency methodology and test methods based on international standards, where applicable. It is important that such leadership be continued.

KEY FRAMING QUESTIONS:
- What changes are expected from the ICT product market for next 3-5 years?
    - What new products/features are anticipated?
    - What are emerging and waning trends?
    - What are the energy considerations of the new products/features?
    - What will be the new opportunities for product efficiency?
    - How does this impact the role of ENERGY STAR?
- Are there any current ENERGY STAR ICT product categories where sunsetting may be appropriate?
- EPA remains interested in protecting the ENERGY STAR label against any association with undesirable products. With this in mind, are there any steps the Agency should consider taking specific to ENERGY STAR ICT specifications?
- What, if any, additional role could the ENERGY STAR program play in furthering global harmonization?