



March 11, 2011

U.S. Environmental Protection Agency
Mailcode: 28221T
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

RE: Solicitation of Input from Stakeholders to Inform the National Framework for Electronics Stewardship
(Docket ID No. EPA-HQ-RCRA-2011-0185)

IPC – Association Connecting Electronics Industries appreciates the opportunity to comment on EPA’s *Solicitation of Input from Stakeholders to Inform the National Framework for Electronics Stewardship* (Docket ID No. EPA-HQ-RCRA-2011-0185). IPC believes that EPA’s goal of encouraging the design, manufacture, procurement, and use of greener electronics should begin with a definition of a green electronic product. EPA’s framework for electronics stewardship must begin with robust, scientifically based definitions of the goals the Agency aims to accomplish. Manufacturers and purchasers would benefit tremendously from a clear, unified understanding of a green electronic product in order for all involved stakeholders to be on common ground. Once a definition is developed, EPA should structure its electronics stewardship framework around the concept that EPA provides the scientific expertise and guidance in developing programs, policies, and standards that promote the design, manufacture, procurement, and use of greener electronics as defined by EPA. Without EPA’s scientific expertise, final programs, policies or standards may result in costly and time consuming efforts with no commensurate benefit to human health and the environment.

IPC, a U.S. headquartered global trade association, represents all facets of the electronic interconnection industry, including design, printed board manufacturing and electronics assembly. Printed boards and electronic assemblies are used in a variety of electronic devices that include computers, cell phones, pacemakers, and sophisticated missile defense systems. IPC has more than 2,700 member companies, 1,700 of which are located in the U.S.

Before developing a framework for electronics stewardship, the EPA must establish a definition for a green electronic product. Defining a green electronic product ensures that all impacted stakeholders will be working from a common starting point. Working from a common starting point will eliminate assumptions and misunderstandings among stakeholders. Without a definition, policies, programs and standards will dictate requirements or criteria that could result in negative impacts on human health and the environment. In defining a green electronic product, the EPA may find it useful and necessary to also define environmentally preferable as it relates to electronic products. In order to define a green, environmentally preferable electronic product EPA must prioritize characteristics, or attributes, of a product that are essential in order for that product to be considered green. For example, energy used during the manufacturing process, raw material use, and recyclability may be a few attributes of importance. However, other stakeholders may view global warming potential, the use of hazardous materials, and energy used during usage of the product as most important. EPA should also consider the fact that some attributes may be mutually exclusive. For example, as shown in EPA’s lead-free solder study, the substitution of tin-lead solder for lead-free solder resulted in increased energy use associated with the

higher operating temperatures required for manufacturing electronics with lead-free solder. This increase in energy use was projected to cause higher air pollution, acid rain, stream eutrophication and global warming impacts. EPA's study serves as an important reminder that there are environmental trade-offs when substituting one substance for another. The EPA must lead the way in determining what attributes are of most importance in defining a green electronic product.

Throughout the development of a framework for electronics stewardship, the EPA should view its role as the provider of scientific expertise. The EPA has access to unparalleled researchers, scientists, and laboratories that equip the Agency with vital information necessary for developing scientific policies, programs, and standards. The Agency should take advantage of the information available in order to develop and maintain a framework for electronics stewardship. That framework can then be used when developing regulations, other Federal programs, and standards for industry.

In any standards development process, EPA's role should be to provide the scientific expertise needed in order to help stakeholders make viable, scientifically based, effective decisions. EPA has been involved in the development of the IEEE Electronic Product Environmental Assessment Tool (EPEAT) standards for imaging equipment and televisions. Unfortunately, throughout the entire standards development process, EPA failed to provide adequate scientific expertise needed in order for stakeholders to make decisions that would result in a standard that promotes real environmental benefits. EPA's lack of guidance has resulted in proposed standards for which the environmental benefit of several criteria is not demonstrated. EPA staff involved in standards development processes should provide the scientific expertise needed in order to develop a standard that provides a real environmental benefit to human health and the environment.

With an EPA definition of an environmentally preferable, green electronic product the development of the IEEE EPEAT standards would have been focused on scientific fact and resulted in standards that identify criteria that would adequately characterize an environmentally preferable, green electronic product. For example, both standards propose to eliminate the use of halogenated flame retardants without any discussion of the alternatives. Several proposals to include an alternatives assessment for any substance removed from a product were not supported because an alternatives assessment methodology does not exist that the standards could reference. Including a requirement for an alternatives assessment to be conducted for any substance removed from a product is essential because it will ensure the alternative is viable and safer for human health and the environment. EPA's DfE project would have been an excellent reference if EPA staff involved in the development of the IEEE EPEAT standards expressed support for the project. In this scenario, EPA personnel should have expressed concern with including criteria that eliminate substances without any inclusion of an assessment of the alternatives. Removing substances from products without any discussion of what will replace that substance and if the replacement better, risks harm to the environment and human health.

In conclusion, IPC believes that the EPA's framework for electronics stewardship has the potential to encourage the design, manufacture, procurement and use of greener electronics. The framework must include a clear, scientifically based definition of a green electronic product. EPA's framework must also be focused around the idea that EPA provides the scientific expertise needed to develop policies, programs and standards that promote the design, manufacture, procurement, and use of greener electronics.

Sincerely,

Stephanie Castorina
Manager, Environmental Programs