**Via Electronic Submission**

California Department of Toxic Substances Control  
Office of Legislation & Regulatory Policy  
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**RE: Proposed Regulation for Safer Consumer Product Alternatives**

IPC – Association Connecting Electronics Industries® appreciates the opportunity to comment on the Department of Toxic Substances Control’s (DTSC) proposed regulation for Safer Consumer Products (hereafter referred to as proposed regulation). IPC is a strong advocate of environmental regulations that provide an environmental and economic benefit and protect human health. IPC is seriously concerned that the proposed regulation will fail to improve the health and safety of California’s citizens because the proposed scope is unwieldy and unimplementable. IPC believes that in order for green chemistry to be a successful program the scope of covered products must be significantly narrower and focused on those products and chemicals to which the public are most commonly exposed. A targeted, prioritized approach will allow industry and DTSC to effectively use available resources. Should DTSC wish to expand the scope of covered products and chemicals, a phased-in approach would ensure that all products and chemicals of concern are eventually covered in the regulation. IPC is also concerned that the proposed six month time frame for alternatives assessments is impractical for companies to comply with and DTSC to enforce. The citizens of California, DTSC and industry would all be better served by a more manageable approach to a green chemistry regulation.

**I. About the IPC**

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 over 2,700 member companies, including over 250 member companies located in California. As a member-driven organization and leading source for industry standards, training, market research and public policy advocacy, IPC supports programs to meet the needs of an estimated $1.7 trillion global electronics industry.
IPC is heavily involved in a number of voluntary environmental initiatives including several of EPA’s Design for the Environment partnership projects, the development of the Electronic Product Environmental Assessment Tool (EPEAT) standard\(^1\), and the development of a green chemistry standard through the American Chemical Society and National Standards Foundation.

II. DTSC Should Adhere to the Original Plan for a Green Chemistry Regulation

IPC strongly encourages DTSC to adhere to its original science-based, lifecycle approach to evaluating chemicals under a green chemistry regulation. The California legislature initially envisioned a regulation that would move California toward a cradle-to-cradle economy, which focuses on a product’s lifecycle and attempts to ensure minimal waste or pollutants are produced at any stage of a product’s life. DTSC’s proposed regulation directly undermines this goal by proposing to publically list chemicals of concern and priority products prior to conducting an alternatives assessment. Listing chemicals of concern and priority products prior to fully evaluating the environmental, social and economical impacts of potential alternatives will create de facto black lists and could have detrimental unintended environmental consequences.

Electronics manufacturers use certain chemicals of concern because of their unique energy efficiency, safety or performance characteristics when no viable or environmentally-preferable substitutes exist. For example, review of the U.S. Environmental Protection Agency (EPA) Lead-Free Solder project\(^2\) illuminates the environmental trade-offs inherent in chemical substitutions. The study evaluated the environmental impacts of tin-lead solder versus lead-free alternative solders. According to the study, the increased energy use associated with the higher operating temperatures required for manufacturing lead-free soldered electronics was projected to cause higher air pollution, acid rain, stream eutrophication, and global warming impacts than tin-lead soldered electronics. Listing chemicals and products to be banned without conducting thorough, comprehensive alternatives assessments will inevitably lead to inadvertent negative environmental impacts.

III. DTSC Will be Challenged in Attempting to Implement and Enforce Such a Far-Reaching Regulation

The proposed regulation places a great deal of responsibility on the state of California. Given California’s limited resources, IPC is concerned that complete, appropriate enforcement and implementation of this proposed regulation may be beyond the current capacities of the state. In order to ensure an effective regulation, DTSC will need to hire a number of additional technical staff to evaluate the voluminous amount of information that will be received in a timely manner. Under the proposed regulation, DTSC staff must:

- Analyze all submissions to prioritize COCs and Priority Products.
- Evaluate and approve alternative assessment work plans and reports received from hundreds of manufacturers in a timely manner.
- Carry out enforcement action against manufacturers who do not obey any part of the regulation once implemented.

\(^1\) [http://www.epeat.net/](http://www.epeat.net/)

IPC encourages DTSC to implement the changes suggested in these comments to ensure the draft regulation is implementable and enforceable.

IV. DTSC Green Chemistry Should Complement Existing Efforts

IPC appreciates the intentions of California’s proposed regulation. However, the proposed regulation is overambitious and un-implementable. Due to California’s limited resources, development, implementation and enforcement of such an aggressive regulation is highly unlikely. DTSC might consider developing a regulation that takes advantage of work that is currently being done elsewhere. The California Health and Safety Code, the law mandating a green chemistry regulation, actually encourages such actions.\(^3\) In Europe, the REACH Regulation regulates all chemicals in commerce. Europe has devoted a significant amount of resources and an entire agency, the European Chemicals Agency (ECHA), toward developing and implementing REACH. ECHA is exclusively dedicated to evaluating chemicals, identifying risks and finding viable alternatives to chemicals of concern identified under REACH. Under REACH, an enormous amount of data and testing will be done on the use of chemicals. This data will include inherent hazard characteristics, exposure scenarios, and how much of the chemical is used annually. DTSC should examine how they can utilize this data in their quest to promote green chemistry in California.

V. A Narrow Product Scope is Vital for Feasibility

IPC believes DTSC should initially limit the scope of the regulation to product categories commonly used by consumers. The marketplace will be severely disrupted if DTSC attempts to regulate all products sold in California at one time. Some manufacturers may choose to stop selling a product in California altogether because they simply cannot comply with such a far-reaching regulation. Other manufacturers may reformulate their products in order to comply which could affect the performance and reliability of the product. Additionally, compliance with these regulations will likely result in increased prices to California consumers. A regulation that is focused on specific product categories will allow DTSC to use available resources more efficiently and implement a manageable regulation. As this program matures DTSC may choose to add additional product categories.

VI. The Chemical and Product Information Required is Extensive, Technical, and Not Readily Available

In the proposed regulation, DTSC proposes to collect a lot of information from manufacturers on individual chemicals and how those chemicals are used in products. Some consumer product manufacturers, even very sophisticated ones, do not have immediate access to all the information required by the proposed regulation. In many industries, supply chains are extremely lengthy and complex. Gathering information from hundreds of suppliers is difficult, time-consuming and costly. Small manufacturers will be at a huge disadvantage because they do not have the resources or leverage to gather and submit the excessive amounts of data DTSC is proposing to require. The proposed regulation, as currently written, does not explicitly state that

\(^3\) Division 20, Article 14, Section 25256.3, *Green Chemistry.* [http://www.leginfo.ca.gov/cgi-bin/displaycode?section=hsc&group=25001-26000&file=25251-25257.1](http://www.leginfo.ca.gov/cgi-bin/displaycode?section=hsc&group=25001-26000&file=25251-25257.1).
manufacturers are permitted to work together to gather information on chemicals. DTSC should consider modifying the language in the draft regulation to allow manufacturers to collaborate with one another on collection of critical information. DTSC can implement a more effective regulation by giving manufactures the option to collaborate and only requiring the essential information.

VII. The Process for Prioritizing Chemicals of Concern and Priority Products is Unclear

The process proposed by DTSC to prioritize chemicals of concern (COC) and Priority Products lacks transparency. While the proposed regulation lists prioritization factors that will be considered for the chemicals under consideration list, the COC list, the products under consideration list and the Priority Products list, it does not indicate how those factors will be used to determine whether a chemical is a COC or a product is a Priority Product. In other words, there is no indication as to what factors are most important in defining a COC or a Priority Product. DTSC should strongly consider the likelihood of public and environmental exposures to the COC in the product when prioritizing Priority Products. In addition, the proposed regulation does not address how a chemical or product will be evaluated if a piece of data is unavailable. The proposed regulation should clearly state how the data received from manufacturers will be used to identify and prioritize COCs and Priority Products.

When developing the list of Priority Products, it is unclear whether DTSC will identify products generically or specifically. For example, will DTSC list “cell phones” generically or “iPhone 3G version” specifically? If DTSC lists products specifically, there is no need for manufacturers to inform DTSC that they manufacture the specific product since DTSC has listed that specific product. If DTSC lists products generically would there be a process in place for manufacturers to declare that their product is not a Priority Product? For example, if a cell phone manufacturer produces a cell phone that does not contain a specific COC, there is no logical reason for that manufacturer to perform an alternatives assessment for that COC. The proposed regulation should clearly state how the data received from manufacturers will be used to identify Priority Products.

VIII. Prioritizing Chemicals of Concern is Essential for an Effective Regulation

IPC believes that DTSC has taken on an enormous, unmanageable task by proposing to gather data on hundreds of chemicals at once. Obtaining information about chemicals in products is not a simple task. When the European Union implemented the Restriction of Hazardous Substances (RoHS) Directive⁴ that restricts six chemicals in electronics products, it took the electronics industry several years to determine whether those six chemicals were in their products because the electronics supply chain is extremely complex. Due to confidentiality issues in the supply chain, an electronics manufacturer will not typically know what is in their product; gathering information on additional chemicals will require time and effort to gather that information.

DTSC needs to prioritize the chemicals of concern in order to have a manageable, effective regulation. Prioritizing the chemicals of concern and implementing a phased-in approach will

give manufacturers adequate time to determine whether their product contains a chemical(s) of concern. If DTSC attempts to regulate hundreds of chemicals all at once, the agency will not be able to enforce the regulation. DTSC will be inundated by the thousands of alternatives assessments for each use of each of the hundreds of regulated chemicals. By addressing hundreds of chemicals of concern at once, the extremely hazardous chemicals will be lost in the shuffle and may not be adequately addressed. Using a prioritized list of chemicals of concern will allow DTSC to phase-in additional chemicals at an orderly, manageable pace, resulting in an efficient and effective green chemistry regulation.

There are regulations in effect that DTSC could use as a guide to evaluate and prioritize chemicals of concern. The law actually encourages DTSC to consult with outside entities:

“... The department shall consult with other states, the federal government, and other nations to identify available data related to hazard traits and environmental and toxicological end-points, and to facilitate the development of regional, national, and international data sharing arrangements to be included in the [Toxics Information] clearinghouse” (Section 25256.3).

The Registration, Evaluation and Authorization of Chemicals (REACH) regulation and Canada’s Chemical Management Plan are just two examples of chemicals regulations that have used prioritization to implement a manageable and enforceable chemicals regulation. DTSC may wish to look to Europe’s and Canada’s plans when developing their own method for prioritizing chemicals.

IX. The Process for Performing an Alternatives Assessment is Complex and Burdensome

IPC believes that DTSC has grossly underestimated the amount of resources needed to conduct an alternatives assessment and substitution, if necessary. Finding viable alternatives that provide the same level of functionality and reliability takes a great deal of time (years) and effort. For example, the EPA’s Design for the Environment (DfE) Flame Retardant in Printed Circuit Boards Partnership has been working for three years to evaluate alternatives for certain flame retardants found in printed circuit boards. When evaluating alternatives, it often requires consideration of the entire product, a process that often takes several years, because drop-in replacements are rare. Manufacturers must conduct an analysis of each potential alternative to determine whether it is better for human health and the environment than the substance being removed. If the determination is made that the alternative is better, the manufacturer must produce a small number of products that contain the alternative chemical and those products must go through several rounds of requalification testing to ensure the product is reliable, functions properly and meets the same product specifications. If the newly formulated product

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6 http://www.chemicalsubstanceschimiques.gc.ca/en/

does not meet the performance specifications then the manufacturer must repeat the entire process. We urge DTSC to outline an implementation timeline of no less than four years for manufactures to complete an alternatives assessment. This time frame is similar to the time frame set forth in the European Union Restriction of Hazardous Substances (RoHS) Directive, which allows manufactures enough time to ensure that their product can function properly and reliably without the restricted substance. IPC members are still dealing with issues with lead-free electronics resulting from the RoHS ban on lead in electronics since that directive became effective on July 1, 2006. Giving manufacturers at least four years to conduct an alternatives assessment will ensure that consumer products manufactured and sold in California will function properly and reliably.

In some instances, COCs may be removed from a Priority Product for performance or feature improvements. In these cases, AA notification is unnecessary because the removal of the COC had nothing to do with removing or reducing the concentration of any particular chemical. In these instances, DTSC should not require manufacturers to provide an AA notification since the COC substitution was made for reasons other than the hazard trait of the chemical.

A single consumer product may contain more than one COC. In this case, manufacturers will need to multiply the resources expended because the costly, lengthy process for finding suitable alternatives would need to be done for each COC in the product. Simultaneous alternatives assessments will also create a large burden for DTSC since there are deadlines for when the agency must respond to work plans, extension requests, reports, etc. DTSC should modify the language in the draft regulation so that manufacturers are only required to conduct one alternatives assessment at a time.

DTSC should strongly consider forming and participating in partnerships that include all willing and affected stakeholders. Partnerships have the ability to bring the best resources and expertise together so that the alternatives assessment will provide valuable information that industry and DTSC can use. Partnerships will significantly reduce the amount of resources expended by both industry and DTSC because duplicative alternatives assessments will be eliminated. DTSC should strongly consider establishing partnerships in order to implement a manageable, enforceable regulation.

X. **DTSC Should Not Explicitly Identify Alternatives Assessment Methodologies**

It is not appropriate for DTSC to list the Green Screen for Safer Chemicals within the proposed regulation. While this is a valuable tool and has utility in evaluating chemicals, it has not been developed or maintained by a standards-making, consensus body. In addition, this tool is limited to a simplified hazard assessment of chemicals. It does not include a risk assessment section, nor is it able to deal with the unintended consequences of substance substitutions that would be revealed in a more in-depth lifecycle analysis. DTSC should review all available tools that consider both hazard and risk and were developed within or approved by accredited standards-making bodies. DTSC should then make these tools available on the DTSC website for use by all stakeholders. DTSC should not endorse one tool, especially given the fact that it solely focuses on hazard assessments.
XI. Protection of Confidential Business Information is Critical

DTSC should be mindful of the need to protect confidential business information (CBI) before requiring product ingredient disclosures on a public website. Many companies are appropriately concerned with CBI being readily available. It is common for companies to withhold certain information about what is contained in their products because that information is proprietary. DTSC needs to ensure that CBI is protected.

XII. Third Party Assessors Should Not Be Mandatory

DTSC should not require manufacturers to acquire multiple third party assessors to evaluate and validate all alternatives assessment data. This requirement is excessive, unnecessary and outside DTSC’s authority. The California Health and Safety Code does not include a mandate for third parties to evaluate data collected by manufacturers. The Health and Safety Code states:

“The department, in developing the processes and regulations pursuant to this section, shall ensure that the tools available are in a form that allows for ease of use and transparency of application. The department shall also make every feasible effort to devise simplified and accessible tools that consumer product manufacturers, consumer product distributors, product retailers, and consumers can use to make consumer product manufacturing, sales, and purchase decisions” (Section 25253(c)).

Requiring third party assessment and certification is an extremely costly requirement for manufacturers to comply with. DTSC should instead focus on the creation and maintenance of guidance materials as specified in Article 5, Section 69305(a). Guidance materials will assist the entire supply chain in determining what is necessary to comply with the regulation. In addition, a requirement for third party assessment will increase the burden for DTSC since the proposed regulation requires DTSC to evaluate and determine whether a third party assessor claiming to be qualified actually is qualified. Requiring manufacturers to use expensive third party assessors does not meet the law which requires DTSC to make simplified and accessible tools for manufacturers to use to make manufacturing decisions.

XIII. Conclusion

IPC is a strong advocate for scientifically-based environmental regulations that improve environmental conditions, protect human health, and stimulate the economy. It is essential for DTSC to scale down the scope of the green chemistry straw proposal in order to implement a feasible regulation. If DTSC attempts to take on too much at one time, the entire program may fail. DTSC, industry and citizens of California would be better served by an incremental program that implements a phased-in approach to chemicals regulations. IPC encourages DTSC to be more transparent in how COCs and Priority Products are chosen based upon the prioritization factors identified in the draft regulation. Finding viable alternatives will also cause significant negative impacts because it takes a great deal of resources to ensure that the alternatives are

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8Division 20, Article 14, Section 25251-25257.1, Green Chemistry. [http://www.leginfo.ca.gov/cgi-bin/displaycode?section=hsc&group=25001-26000&file=25251-25257.1](http://www.leginfo.ca.gov/cgi-bin/displaycode?section=hsc&group=25001-26000&file=25251-25257.1).
better for human health and the environment and provide the same level of functionality and reliability. IPC urges DTSC to allow ample time for manufacturers to complete alternatives assessment. Simplifying the draft regulation will enable DTSC to more easily implement and enforce the regulation.

IPC appreciates the opportunity to comment and encourages the agency to take our suggestions into strong consideration.

Sincerely,

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