

## **☑ Checklist for Signers<sup>1</sup>: Green Chemistry and Safer Products Business Commitment, v. 1.0**

Customers are increasingly expecting companies to show leadership in developing safer products to protect health and the environment. This creates a market opportunity for innovative companies that are able to bring safer chemicals and products to market. A commitment to Green Chemistry and Engineering<sup>2</sup> can help demonstrate that leadership. This checklist is designed to measure progress in creating a culture of innovation and in supporting the building blocks necessary to develop safer products. The checklist is a guide to help identify and monitor progress over time. **The goal is to engage in some of the activities identified in each of the four areas with increased activity over time.**

Green Chemistry is broadly meant to include the Principles of Green Chemistry and Engineering, **including efforts to create safer chemicals, products and processes and the tools and resources used to achieve that goal.** The principles of Green Chemistry assume: knowledge of toxicology, and ecology as well as chemistry and business; an understanding of how molecular and material design can impact environmental and human health; an investigation of the attributes of molecules like fate, transport and biogeochemistry; and consideration of the sustainability of feedstocks. **Finished product manufacturers as well as chemical manufacturers are encouraged to use the checklist.**

### **Area 1: Education**

Reference to Policy Statement: “Value and support continuing education on green chemistry and sustainability issues among staff of signing organizations and encourage similar practices in companies in supply chains”

<b>Activity</b>	<b>Possible Metrics</b>
<input type="checkbox"/> Identify and support Green Chemistry training opportunities for relevant employees at the time of hire	# of new hire trainings; # times per year offered; # new hires taking training, % of relevant new hires completing the training
<input type="checkbox"/> Identify and support regular Green Chemistry training opportunities for all relevant employees	# of continuing education trainings offered, # of employees taking trainings
<input type="checkbox"/> Identify and support Green Chemistry training or learning opportunities for suppliers	# of c.e. training/learning opportunities offered, # of suppliers engaged, # of supplier employees taking seminars/trainings etc.
<input type="checkbox"/> Work with sector trade associations or other groups to identify seminars and training for sector members	# of associations approached, # of trainings offered, # of sessions at conferences
<input type="checkbox"/> Recognize staff doing outstanding work in Green Chemistry and Engineering including the development of safer chemicals, products and processes	Employee award created, # of employees recognized,
<input type="checkbox"/> Recognize suppliers doing outstanding work in Green Chemistry and Engineering including the development of safer chemicals, products and processes	# of suppliers recognized
<input type="checkbox"/> Include recognition for Green Chemistry innovators in company compensation considerations	# of employees recognized; Green Chemistry activity included in compensation reviews where appropriate

<sup>1</sup> The checklist is a roadmap to guide implementation of the *Policy Statement on Green Chemistry in Higher Education* authored by the Green Chemistry and Commerce Council, 2012

<sup>2</sup> Green chemistry is the utilization of a set of principles that reduces or eliminates the use or generation of hazardous substances in the design, manufacture, and application of chemical products.

Green engineering is the design, commercialization, and use of feasible and economical processes and products while minimizing or eliminating 1) generation of pollution at the source and 2) risks to human health and the environment.

### **Area 2: Hiring**

Reference to Policy Statement: “Value and support through hiring practices [all things being equal] people with demonstrated knowledge and ability in green chemistry and sustainability”

<b>Activity</b>	<b>Possible Metrics</b>
<input type="checkbox"/> Include explicit reference to desire for Green Chemistry and Engineering academic training in all relevant job postings	# of job postings with reference to GC and GE/all relevant job postings
<input type="checkbox"/> Hire candidates with Green Chemistry and Engineering training all things being equal	# of hirings with experience in GC and GE
<input type="checkbox"/> Incorporate Green Chemistry corporate goals and vision into relevant new hire orientation	New hire trainings include Green Chemistry corporate goals
<input type="checkbox"/> Include Green Chemistry and Engineering performance requirements in job goals including the development of safer chemicals, products and processes	# of employees with Green Chemistry and Engineering performance requirements

### **Area 3: Support and Communication**

Reference to Policy Statement: “Provide resources and support to work with academic institutions and suppliers [to advance the goals of the policy statement]”

<b>Activity</b>	<b>Possible Metrics</b>
<input type="checkbox"/> Provide co-op internship placements for students working in Green Chemistry and Engineering fields	# of Green Chemistry/GE student interns; # of GC/GE placement opportunities
<input type="checkbox"/> Provide support to local academic institutions to encourage Green Chemistry and Engineering training for students	# of institutions approached with information
<input type="checkbox"/> Work with local academic institutions on innovations needed for a green economy	# of publicly announced collaborations
<input type="checkbox"/> Communicate company Green Chemistry goals to suppliers	# of meetings/seminars held with suppliers including this topic; inclusion of GC&E goals in CDP, GRI or other relevant B to B communication platforms
<input type="checkbox"/> Publicly report on Green Chemistry/Green Engineering progress including the development of safer chemicals, products and processes	Report on innovations in Green Chemistry through the Toxic Release Inventory (TRI) and other public reporting; inclusion of GC&E goals in CDP, GRI or other similar reports; publishing case studies and reports on company progress toward GC/GE
<input type="checkbox"/> Provide assistance to suppliers in meeting their Green Chemistry goals	# of examples; impact of examples (\$, waste reduction, etc.)
<input type="checkbox"/> Signed the <i>Policy Statement on Green Chemistry in Higher Education</i> <sup>3</sup>	Sent message to GC3 with signon

<sup>3</sup> The *Policy Statement on Green Chemistry in Higher Education* authored by the Green Chemistry and Commerce Council, 2012 can be viewed here: [Business Commitment: Michigan Green Chemistry Clearinghouse](#)

**Area 4: Design and Innovation**

Reference to Policy Statement: "Commit to encourage, value and support the recommendations in the policy statement [all things being equal] in the company's innovation, product development and sourcing practices."

Activity	Possible Metrics
<input type="checkbox"/> Establish Green Chemistry products and processes as a primary goal of the organization	Broad executive policy promoting green chemistry in place; tracking # of KPI's based on Green Chemistry principles
<input type="checkbox"/> Regularly monitor progress toward Green Chemistry goals including greening product lines	Evaluation process in place to monitor progress toward safer chemistry goals including product development, # of product lines greened
<input type="checkbox"/> Embed Green Chemistry design criteria in product design guidelines and at each stage gate of product development	Green Chemistry criteria embedded in design guidelines, tools, processes and practices and at each stage gate of development
<input type="checkbox"/> Include Green Chemistry criteria in relevant sourcing protocols/specifications/contracts	Language in standard specifications/ protocols/ contracts requiring/rewarding greener chemical products or green chemical manufacturing
<input type="checkbox"/> Screen all new chemical ingredients for Green Chemistry attributes	Policy and process in place for screening chemicals
<input type="checkbox"/> Devote R and D dollars to Green Chemistry innovation	Dollars devoted to Green Chemistry innovation
<input type="checkbox"/> Commercialize products with Green Chemistry advantages over existing chemicals or products	# of products commercialized; value of products commercialized
<input type="checkbox"/> Commercialize inherently green chemicals or products (product designed to be green from the ground up)	# of green chemical products commercialized
<input type="checkbox"/> Commercialize products designed to be restorative or to increase resilience in ecosystems	# of restorative products commercialized

Form Completed by:

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Date:

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