Testimony of Len Sauers, PhD Vice President Global Sustainability The Procter & Gamble Company

Before the Committee on Science and Technology U.S. House of Representatives Science and Technology Committee

Hearing on "The Future of Manufacturing: What is the Role of the Federal Government in Supporting Innovation by U.S. Manufacturers?"

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Introduction

Chairman Gordon, Ranking Member Hall and distinguish members of the Committee, thank you for inviting me to testify on "The Future of Manufacturing: What is the Role of the Federal Government in Supporting Innovation by U.S. Manufacturers?"

I am the Vice President, Global Sustainability at Procter & Gamble. I am responsible for the company's sustainability efforts. Four billion times a day, P&G brands touch the lives of people around the world. The company has one of the strongest portfolios of trusted, quality, leadership brands, including Pampers, Tide, Pantene, Duracell, Olay, Gillette, and Braun. The P&G community includes approximately 135,000 employees working in about 80 countries worldwide.

I want to thank you Mr. Chairman and Ranking Member Hall for champion roles in supporting the America COMPETES Act, authorizing federal funding for basic R&D and science, technology, engineering, and mathematics (STEM) education which creates the opportunity for P&G to find future skills to effectively innovate. P&G is a member of the Task Force on American Innovation, whose mission it is to support basic research in the physical sciences and engineering.

Innovation is P&G's lifeblood. When we look at innovation we are faced with three critical questions:

- How can we put consumer-driven innovation at the center of everything we do?
- How can we use innovation as a competitive advantage?
- How can we manage the risks of innovation?

P&G invests over \$2 billion in innovation annually. We have 24 innovation centers on 4 continents with over 9000 people in our R&D facilities. Over 1000 PhDs represent more than 120 scientific disciplines and hold over 35,000 patents globally.

A few years ago, we set a goal for innovation, moving to an open innovation model. Our goal was that 50% of all initiatives needed to have at least one significant external partner. We wanted to "turbo-charge" our innovation capacity. We built the capability to reach nearly 2 million researchers, entrepreneurs and companies doing work in areas relevant to our businesses. Today, we've met and exceeded our 50% goal and we are now building the next generation of our "connect and develop" capability.

Another key component of our innovation model is to develop an understanding of the consumer. Since 2001, we have spent over \$3 billion, more then double the industry average, to learn about the consumer. This leads us to breakthrough innovation, where we have delivered 110 new initiatives in the last 14 years that have made the Information Resources, Inc (IRI) Pacesetter's top 25 list. In 2008, P&G had 5 of the top 10 product launches in the U.S. and 10 of the top 25. We are expecting similar results when IRI announces their 2009 Pacesetter list.

At P&G, we focus our sustainability efforts to innovate improvements that matter to the consumer, making the most meaningful impact possible. Our commitment begins with our Purpose, Values, and Principles, where sustainability is embedded, and manifests itself in a systemic and long term approach. We strive to make our actions matter. We pursue our sustainability goals with the aim of improving quality of life now and for generations to come. In 2007, we established five sustainability strategies and goals for 2012. In March, 2009 we increased our goals to reflect our progress and to demonstrate our ongoing commitment to sustainable, responsible growth. Our five sustainability strategies are:

- Products delight the consumer with sustainable innovations that improve the environmental profile of our products.
- Operations Improve the environmental profile of P&G's own operations.
- Social Responsibility Improve children's lives through P&G's social responsibility programs.
- Employees Engage and equip all P&Gers to build sustainability thinking and practices into their everyday work.
- Shape the future by working transparently with our stakeholders to enable continued freedom to innovate in a responsible way.

Sustainable Product Innovation

Our goal is to develop and market at least \$50 billion in cumulative sales of "sustainable innovation products" which are products with a significantly reduced (> 10%) environmental footprint versus previous or alternative products. We combine two key strengths – consumer understanding and science to deliver sustainable innovations that do not require trade-offs in performance or value.

One example is helping consumers save energy and reduce their own Green House Gas emissions through the development of sustainable products. We developed Tide Coldwater, a new product technology which focused on cold water-washing, which delivers the same cleaning performance consumers expect from hot-water washing. If every household in the United States used cold water for laundry, the energy savings would be 70-90 billion kilowatt hours per year which is 3% of the total nation's household energy consumption while reducing CO₂ emissions by 34 million metric tons per year, which is about 7% of the US's Kyoto target.

In 2007, we began to convert our North American liquid laundry detergent portfolio to a 2X concentrated formulation. This innovation created the following benefits: less water (saving 500 million liters a year); reduced CO_2 emissions by more than 100,000 metric tons a year; reduced the amount of packaging materials by 15,000 metric tons per year; and reduced the number of truck loads by 40,000 per year.

And through our open innovation model, we partnered with one of our suppliers, which led to the development of a new polymer to be used in our powdered laundry detergent, which reduces surfactant levels while improving product performance.

Sustainable Operational Improvement

We continue to drive conservation efforts in manufacturing. Between raw materials and the creation of a product, we strive to reduce waste, water, energy and CO_2 through systematic conservation efforts. We apply smart eco-design through innovative construction process improvements. And we re-use where feasible giving new life to what was once waste. We have expanded our work from a focus on the core of our manufacturing operations to a holistic end to end view of opportunities.

Our goal is to deliver an additional 20% reduction (per unit of production) in CO₂ emissions, energy consumption, water consumption and disposed waste from P&G plants, leading to a total reduction over the decade of at least 50%.

We are proactively putting green technologies including solar, wind and geothermal in our plants where it makes good business sense. Examples of successful initiatives include the installation of a roof-mounted photovoltaic solar energy system at our Oxnard, CA facility which is projected to produce more than 1.9 million kilowatt hours during the first year of operation. Over 20 years, this system is estimated to product enough electricity to power over 3,200 homes for a year. Heat exchange units that capture heat for reuse at our paper plant in Mehoopany, PA reduces carbon emissions by 13,600 metric tons per year and the energy savings will be greater than the per-site energy consumption at 80% of our other facilities around the world. Finally we have designed eco efficiencies at our new paper plant facility being built in Box Elder County, Utah.

For decades, P&G has transported product in "multi-modal" fashion that is using multiple forms of transport. But today, we are shifting toward "intermodal" transportation, which uses shipping containers that transfer smoothly from one mode to another. An intermodal approach optimizes the transportation process. A transportation program in North America, P&G's first to incorporate an intermodal component has reduced transportation costs and improved sustainability, saving 11 million liters of diesel fuel annually.

Opportunities for the Federal Government to Enhance Manufacturing Innovation

We have identified five areas where the role of the U.S. Government is critical to innovation and manufacturing:

- 1. The government needs to drive research in the area of renewable energy to develop more alternatives and a grid that can deliver the renewable energy sources to manufacturers.
- 2. "The America COMPETES Act" needs to be reauthorized which will lead to the creation of new markets and technologies.
- 3. There is a need to continue to focus on STEM education and training. These skills are needed so that we can attract and build the best and brightest workforce. One of the top 3 skill sets that we seek for management positions are undergraduate engineers. For our plant technician roles we are looking for

demonstrated technical and leadership skills, ideally through trade schools and 2 year colleges.

- 4. There is a need to increase the collaborative government/industry innovation through the National Labs. P&G has a successful partnership with Los Alamos National Lab (LANL) where a comprehensive approach was developed to reduce operating costs and minimizing capital expenditures by predicting, preventing, and reducing equipment failures in our manufacturing operations.
- 5. Finally, the best way to preserve and create US manufacturing jobs and innovation in the U.S. is through sound and predictable policies, legislation and regulation that will foster a competitive manufacturing environment. Innovation can not move forward without a science based regulatory framework in place. If not handled with care, the cumulative effect of new legislation and regulation will result in added cost, regulatory burden and less rather than more flexibility for business.

Conclusion

Chairman Gordon, Ranking Member Hall and other members of the Committee, thank you for the opportunity to testify today and share with you the importance sustainable innovation is to Procter & Gamble (<u>www.pginnovation.com</u>). There is definitely a role for the federal government to ensure that the necessary skills and technologies are being developed to help manufacturers like P&G. We are supportive of the efforts to sustain federal R&D funding through the reauthorization of America's Compete for NSF, NIST, and DoE Office of Science and enhancing STEM education because the ability for us to continue to reduce our environmental footprint of our products and our operations depends on the skills of the future.