The 77-Point Plan

Procter & Gamble takes an aggressive, customized approach to its long-term sustainability plan.
By Len Sauers, VP Global Sustainability, P&G Sustainability
On sprawling stretches of acreage all around the world, Procter & Gamble is executing its most aggressive expansion in the company's 171-year history— building 19 new facilities in the next three years.

Simultaneously, as the world's largest consumer packaged goods company, we are looking to actually reduce our global environmental footprint. Specifically, as part of the company's comprehensive sustainability plan, P&G is looking toward a 40 percent per-production-unit reduction in CO2 emissions, energy and water consumption, and waste disposal from 2002 to 2012.

In short, we need to grow and shrink at the same time.

For us, that meant a team for each of our new locations working to identify the most viable solutions, weighing established best practices, LEED recommendations, new ideas in the industry, and the unique opportunities given each facility's geographic locations and specific business demands. Then there is the added challenge to share our findings and results with one another.

This was taking a great deal of time, and was hampering one of P&G's greatest assets– our scale, which allows us to quickly reapply solutions for maximum global benefit.

Customizable Best-Practice Guide
Our goal was to create a single information source to guide all P&G new facility teams, regardless of their building type, location, size, or timeline. This guide would enable us to maximize, through the construction and long-term operation, a positive impact on the environment, the communities in which we are located, our employees, and the company.

The result is what we've come to call our "77-Point Plan." We are using it on all new construction to ensure sound sustainable and economic choices are made from the onset and throughout the scope of every project.

Five months in the making, it was a tremendous undertaking. But already, it is helping streamline decision-making and deliver both creative and results-focused sustainability plans that look at the holistic and long-range scope of each project.

Additionally, it has delivered one other critical piece to our planning: It has helped our teams view both the near-term realities and future possibilities. Specifically, we are not ruling out sustainability elements with the potential for sound returns, but

currently are not viable for our Company– perhaps they now are cost-prohibitive or technology has not advanced to support their immediate implementation. Instead, we are designing our buildings for possible future installation.

The 77-Point Plan

Before we put pen to paper, we collaborated with some top minds in the field, including LEED experts, Herman Miller, Arup (a consultant group), William McDonough, and other leading design consultants. McDonough and his experts helped create the design for a number of our facilities.

Our aim was to take the best in current industry knowledge and blend it with widely accepted best practices and cutting edge thinking. Then, we attempted to add P&G's own experiences, objectives, and strategies.

We divided our plan into eight key sections:

- Site
- Envelope
- Materials
- Water
- Lighting
- Passive Systems (natural ventilation, solar hot water, etc)
- Active Systems (energy efficient products, water cooled chillers, etc)
- Operations

In each section, we first outlined key considerations, leading industry thinking, and company perspective. Then, for each leading option, we gave key details, considerations, additional resources, and a chart showing potential impact on the key areas of CO2 emissions, water, energy, waste, environmental quality, and payback. Then, we rate each option.

In the end, we came up with 77 key elements for consideration. This remains a living document that we will revise and update as technology advances and as we all develop new best-practices. But for now, it is our "77-Point Plan."

The plan addresses items such as solar panels, geothermal energy, rapidly renewable materials, building orientation, premium efficiency motors, passive heating of outside air, recycled asphalt and thermal energy storage, just to name a few. It also gives each facility manager a goal for element adoption and measures to capture return on investment.

Three Guiding Points
It's a lot of details. But overriding the analysis, facts, and measures are three guiding objectives for us at P&G:

1. All design elements must be economically smart and bring positive returns:

P&G's guiding principle that sustainability must be sustainable in order to deliver true and long-term results. Some elements can be cost prohibitive or deliver minimal beneficial sustainable return – or both.

2. Creating an energizing work environment is key:

For us, a sustainable facility is not just about reducing CO2 emissions or energy use. It's also about looking at the site holistically, which includes the community, the environment, the business, and employees. Our aim is to create healthy, safe, and energizing work environments that will both inspire and empower our employees. Thus, throughout our plan, and across our new facilities, you'll see an emphasis on ventilation, sunlight, flexible work spaces, and outdoor amenities.

3. We build from an anticipatory design:

The aim is to create flexible and adaptable spaces that will accommodate potential growth, changes in business needs, and advances in technologies and strategies. Clearly, this creates multiple levels of complexity. But as change is simply inevitable, the time invested upfront to think through key details will pay off in the long run.

77-Points In Action

What does this all really mean in application? Around the world at P&G facilities, it is becoming part of the norm to include low-emitting materials, water-efficient landscaping, energy-efficient lighting, passive solar shading, premium efficiency motors, low E-glazing windows, and material reuse, to name a few examples.

Additionally, we are seeing some innovative solutions, which have both been shaped by the 77-Point Plan and have helped shape the plan itself for use at other sites.

On an arid stretch of acreage in Utah, our paper-making plant has been designed to touch nearly all of our key 77 points, aiming to be 50 percent more energy efficient than other paper-manufacturing facilities, highly engaging for employees, and adaptable to incorporate additional sustainability elements in the future.

They have adopted high-efficiency motors and designs from another P&G facility. They also have, through creative pre-build engineering, designed the facility to capture heat created in one phase of the paper-making process and using it to fuel another phase.

Across the million-square-foot facility, the team has skylights of varied sizes to maximize natural sunlight in areas of maximum occupancy, florescent lighting with motion sensors, and exterior louvers (external sunshades) to increase employee comfort and energy efficiency. The team is aiming to recycle 100 percent of the waste created during the paper manufacturing process and continues to investigate the viability of other options listed on our check list, including, recycled asphalt and geothermal energy.

In south-central Poland, our new Beauty Care manufacturing facility is projected to reduce CO2 emissions by 26 percent and energy usage by at least 11 percent. There, the team is using Rapidly Renewable Materials in the construction and Low-E Glazing on the windows, which carry a slightly higher premium, but reduce energy costs by as much at 30 to 50 percent.

And in Romania, our team studied wind and solar potential, rainfall, humidity patterns, and the solar path of the proposed site location before designing the building's sustainability plan. As part of its anticipatory design, the Administration Building roof faces due south, maximizing the possible future use of solar panels. Large windows throughout bring in natural light and connect employees with the outdoors, but also are high-efficiency glass, reducing energy use. Louvers reduce sunshine where and when necessary.

The team also has designed the facility to recover and reuse heat created in the manufacturing process to heat the building and its water.

The team is targeting a greater than 50 percent reduction in energy use, water use, and solid waste versus similar best-in-class facilities.

Key Advice

As with everyone, P&G continues to learn and grow in this space. But if asked for one key piece of advice, our facility experts would offer one piece of learning: first— and always— investigate the sustainability choices to ensure they are economically feasible. As we've benchmarked with others, we have seen that some organizations and companies are incorporating elements that may initially seem to advance a sustainable design, but in the end have very minimal to potentially negative impact on the environment and on the economic payback. It can be easy to be blinded by "green bling;" focusing on what will be sustainably sustainable has helped us innovate from the ground up.

Sidebar: Sustainability at P&G

P&G’s work to improve the environmental profile of its operations is just part of the Company’s sustainability strategy.

While sustainability has always been a part of P&G’s core, in 2007, P&G leadership made a renewed commitment to ensure that Sustainability is truly integrated into the rhythm of the business. They established five key “Sustainability Strategies and Goals,” addressing: products, operations, social responsibility, employees and stakeholders.

The Company’s goals are from 2002 through 2012 to:

- Develop and market at least $20 billion in “sustainable innovation products”

-- that leave an environmental footprint at least 10 percent smaller than their predecessors.

- Deliver a 40% reduction (per unit of production) in the Company's overall CO_2 emissions, energy and water consumption, and disposed waste.
- Enable 250 million children to Live, Learn and Thrive; prevent 80 million days of disease; and save 10,000 lives by delivering two billion liters of clean drinking water.
- Inspire and engage P&G's 138,000 employees to build sustainability thinking and practices into their daily work.
- Shape the future by working transparently with our stakeholders to enable continued freedom to innovate in a responsible way.

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