

MATERIALS MANAGEMENT CASE STUDY: Diamond Packaging

Going Green

The biggest challenge faced by a company that's defined itself as innovative and sustainability-focused since 1911 is to remain on the forefront of green business operation. After more than a century of sustainable business practices – in an industry where waste can quickly mount – making a difference often comes down to the incremental steps a company chooses to take. Diamond Packaging of Rochester, New York, chose the road less traveled, becoming the only American-owned folding carton manufacturer to achieve zero manufacturing waste-to-landfill status: the gold standard of green business operation.




Achieving the bragging rights was no easy task, requiring a relentless commitment to continuous improvement and the open willingness to embrace innovation not only within its own manufacturing, but also through quality waste management partnerships that enable it to practice the four Rs: Reduce, Reuse, Recycle and Recover. Specifically, this consists of a 98 percent manufacturing waste rate, in which all paperboard, plastics, metals and spent bulbs are recycled, and where remaining waste is recovered, thus eliminating the need for landfill disposal. Additionally, all office paper, printer toner and e-waste is also recycled.

Since opening its doors, Diamond Packaging's sustainability efforts have always followed a slow but sure evolution; with more than 100 years' experience to rely on, the company's ability to "right size" projects, in which the correct amount of material needed per project is carefully determined, had become second nature. Simultaneously, the company continued recycling paperboard, while also finding better end-of-life uses for leftover metals, wood pallets, plastics, and additional materials.

Redesigning a Truly Green Business

In 2007, led by Diamond Packaging's "Green Team," a select group of company personnel, the Greenbox Sustainability Initiative was born. The Initiative seeks to balance profitable business practices against environmental considerations by promoting sustainability in all aspects of packaging production. The team's holistic approach required a deep dive into every facet of Diamond Packaging's business. Through careful analysis, the company determined how to optimize the value of its packaging through every phase of its life cycle, minimizing negative environmental impact throughout its supply chain. Simultaneously, in that first year the Greenbox Initiative was launched, the company announced a commitment to purchase clean, renewable wind energy for 100 percent of its electrical energy requirements through wind energy marketer and developer Community Energy.

"Going green" can be an expensive decision for companies requiring detailed research into the initial and overall financial impact. In Diamond Packaging's view, however, its relationship with Covanta is a cost-positive one in a landfill.



Still, the Initiative affected every layer of Diamond Packaging's business, requiring a total review of its design and packaging methods as well as the evaluation of all materials and suppliers in order to make the best recommendation for each product. It also enhanced its chain of custody capabilities and has since obtained Forest Stewardship Council® (FSC) Chain of Custody certification from the Rainforest Alliance.

Despite this significant progress, the effort was far from finished. A strict analysis of the company's operational methods provided a critical opportunity for the implementation of impactful sustainability practices, from concept to completion. Specifically, the company foresaw greatly enhanced recycling, energy efficiency and process improvements, and the opportunity to reuse materials as clean energy.

Partnerships Close the Energy and Manufacturing Loop

In 2011, Diamond Packaging once again upped its sustainability goals, launching its zero manufacturing waste to landfill efforts. The company's recycling program – already strong – was revamped to cover 98 percent of company waste. Bolstering its capabilities, the Green Team struck an accord with Covanta's Niagara Energy-from-Waste (EfW) facility to find a far more environmentally and economically beneficial use for its regulated non-hazardous waste. It would now be converted into clean, renewable energy. This was a critical milestone, with Diamond Packaging now relying on Covanta to convert this waste stream into an energy resource, while eliminating the need for landfilling.

By July, 2014, Diamond Packaging leveraged the benefits of its partnership with Covanta even further, and expanded its agreement to include sending its municipal solid waste (MSW) for clean energy conversion. By September of that year, Diamond officially announced they had achieved zero manufacturing waste to landfill, and thus become the first and only American-owned folding carton manufacturer to achieve this lofty status.

The “Value” of Reuse

Achieving zero manufacturing waste-to-landfill status – the pinnacle of sustainable business practice – was just the beginning, as Diamond Packaging continued to forge new partnerships, eventually finding a way to “close the loop” on its manufacturing reuse. Today, the company is the start and end point for its own waste stream. With the help of Covanta, as well as additional partners, the waste stream that leaves the Diamond Packaging facility eventually returns to it in the form of raw materials.

Although there are costs associated with many facets of green manufacturing, many companies choose to justify them in terms of their contribution to “the greater good.” For its part, the Green Team sees a measurable financial benefit to go along with its environmentally sustainable manufacturing practices as a direct result of its relationship with Covanta.

Why Rely on Landfilling When You Can Convert Your Waste into a Resource?

When searching for Zero Waste to Landfill and material disposal options, companies and communities alike have found the resources Covanta brings to the table to be a worthy match for their needs. As one of the world's largest owners and operators of infrastructure for providing sustainable waste and energy solutions, Covanta's consultative approach offers benefits and value unmatched in the industry.

Let's Get Started!

For information about Covanta's waste water management programs please contact: 800-950-8749 or visit covantaes.com.