

Capsugel

ESTIMATED CUMULATIVE RESULTS (2012-2013)

Capsugel is a global leader in delivering high-quality, innovative dosage forms and solutions to its customers in the healthcare industry.

\$1.9M

IN AVOIDED ENERGY COSTS

9,500

METRIC TONS OF GHG EMISSIONS AVOIDED

4%

GHG EFFICIENCY IMPROVEMENT

300

TONS OF WASTE AVOIDED

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Key Environmental Performance Area: GREENHOUSE GAS EMISSIONS (FACILITIES)

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RESULTS

In 2013, as part of the Green Portfolio Program, Capsugel measured and managed global energy consumption in its hard capsule production facilities against a 2011 performance baseline.

In absolute terms, GHG emissions from these facilities increased approximately 8% compared with a 2011 baseline, while efficiency has improved approximately 4% (GHGs/1 Mil capsules) during the same period. The improvements in efficiency have helped Capsugel to avoid almost \$1.9 million in costs and an estimated 9,500 metric tons of GHG emissions in 2012 and 2013.

Capsugel: Facility GHG Efficiency (2011 Baseline)

Estimated Results	2012	2013	Total
Avoided GHGs (metric tons)	3,500	6,000	9,500
Avoided costs	\$635,000	\$1,254,000	\$1,889,000
Change in productivity (GHGs/1 Mil capsules)	-3%	-2%	-4%
Change in absolute GHGs	2%	5%	8%

Notes:

- See [methodology section](#) for description of avoided and efficiency calculations.
- The total % change is aggregate change between the baseline year and the most recent year of data. All other % changes are expressed as year-over-year.
- Reported numbers are rounded and may not produce the same results when used to analyze percent changes or total impact.

ACTIONS

In 2013, Capsugel achieved its greenhouse gas emissions results by implementing the following practices:

- Installed high-efficiency boilers and implemented boiler efficiency improvements, which included better condensing technology, economizers, blow-down heat recovery, and use of waste heat to pre-heat boiler supply
- Implemented lighting upgrades, which included changing to LED lamps and/or changing fluorescents to more efficient ones
- Optimized and increased efficiency of HVAC systems
- Installed heat exchanger upgrades to extract more energy from waste water and flue gases

FUTURE PLANS

Through 2014 and 2015, Capsugel is continuing its focus on energy efficiency and is considering or actively implementing additional improvements, such as:

- Establishing regular Energy Team meetings to share best practices across the global network and streamline the process to collect and report energy data in the company's new global reporting software
- Installing variable speed drives on motors to optimize performance
- Maximizing free heating and cooling opportunities on HVAC systems
- Minimizing compressed air losses

Key Environmental Performance Area: WASTE REDUCTION (FACILITIES)

RESULTS

In 2013, as part of the Green Portfolio Program, Capsugel measured and managed waste production and recycling in its hard capsule production facilities against a 2011 performance baseline.

In absolute terms, waste production from these facilities increased approximately 10% compared with a 2011 baseline, while efficiency has improved approximately 2% (kg waste produced/1 Mil capsules) during the same period. The improvements in efficiency have helped Capsugel to avoid producing approximately 275,000 kg, or 300 tons, of waste since 2011. During the same time period, Capsugel's waste recycling rate (waste recycled/production volume) increased approximately 76%, and it recycled approximately 6.6 million kg, or 7,300 tons, of waste between 2011 and 2013.

Capsugel: Facility Waste Efficiency (2011 Baseline)¹

Estimated Results	2012	2013	Total
Avoided waste (kg)	173,000	102,000	275,000
Change in productivity (kg waste produced/1 Mil capsules)	-4%	2%	-2%
Change in absolute waste produced	1%	9%	10%
Change in waste recycled (kg waste recycled/1 Mil capsules)	48%	19%	76%

Notes:

- See [methodology section](#) for description of avoided and efficiency calculations.
- The total % change is aggregate change between the baseline year and the most recent year of data. All other % changes are expressed as year-over-year.
- Reported numbers are rounded and may not produce the same results when used to analyze percent changes or total impact.

ACTIONS

In 2013, Capsugel achieved these waste reduction results by implementing the following practices:

- Continued to increase recycling of process wastes
- Reduced plastic waste in manufacturing process
- Implemented a recycling initiative for wood pallets, reducing landfill waste

FUTURE PLANS

Through 2014 and 2015, Capsugel is continuing to focus on reducing and recycling waste and is implementing or considering additional improvements, such as:

- Continuing to pursue additional opportunities to further reduce/recycle process waste streams
- Evaluating computer/electronic recycling options

Capsugel enrolled in the Green Portfolio Program in 2012 and is reporting results for the first time.

Note: Reported numbers are rounded and may not produce the same results when used to analyze percent changes or total impact.



¹ Capsugel has not recorded costs and revenues associated with its waste and recycling program and is evaluating this possibility for the future.