

# Oriental Brewery

ESTIMATED CUMULATIVE RESULTS (2008-2013)

Oriental Brewery is a leading brewery in South Korea with a strong portfolio of brands including Cass, OB Golden Lager, and Cafri.

In 2014, KKR exited its investment in Oriental Brewery and 2013 will be its final year reporting into the Green Portfolio Program. During the company's participation in 2013, it achieved the results described below. KKR appreciates Oriental Brewery's contributions to the program and applauds the company's efforts to date.

**\$26.5M**

IN AVOIDED ENERGY COSTS

**120,000**

METRIC TONS OF GHG EMISSIONS AVOIDED

**\$5.3M**

IN AVOIDED WATER USE COSTS

**26.4M**

M<sup>3</sup> OF AVOIDED WATER CONSUMPTION

## Key Environmental Performance Area: GREENHOUSE GAS EMISSIONS (FACILITIES)

## RESULTS

In 2013, as part of the Green Portfolio Program, Oriental Brewery continued measuring energy consumption in its production facilities against a 2007 baseline. In absolute terms, GHG emissions from these sources have increased approximately 40% compared to 2007. Over the same time period, efficiency has improved by an estimated 22% (GHGs/hectoliter of beer). The improvement in efficiency helped Oriental Brewery to avoid an estimated ₩31.1 billion, or approximately \$26.5 million in costs and approximately 120,000 metric tons of GHG emissions since 2007.

### Oriental Brewery: Production Facility GHG Efficiency (2007 Baseline)

Estimated Results	2008	2009	2010	2011	2012	2013	Total
Avoided GHGs (metric tons)	11,000	12,000	17,000	20,000	25,000	35,000	120,000
Avoided costs	\$2,200,000	\$2,100,000	\$3,400,000	\$4,200,000	\$5,800,000	\$8,900,000	\$26,500,000
Change in productivity (GHGs/hl product)	-11%	-1%	-4%	0%	-2%	-5%	-22%
Change in absolute GHGs	-5%	1%	5%	16%	9%	9%	40%

**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, Oriental Brewery achieved these results by implementing the following practices:

- "Cass Fresh" won "Carbon Labeling Certificate," a government (Ministry of Environment) authorization of low-carbon-discharged products, for the first time in the beer industry
- "Cass Fresh" has adopted eco-friendly and 100% recyclable packages since 2012
- Continued efforts at all three OBC plants to reduce energy consumption by recovering waste heat from boilers and also by adopting high-efficiency electronic equipment (e.g. LED lamps and air compressors)

## Key Environmental Performance Area: WATER CONSUMPTION (FACILITIES)

## RESULTS

In 2013, as part of the Green Portfolio Program, Oriental Brewery continued measuring water consumption in its production facilities against a 2007 baseline. In absolute terms, water consumption in production facilities has increased approximately 61% compared to 2007 due to an increase in production. Over the same time period, efficiency has improved by an estimated 11% (m<sup>3</sup>/hectoliter of beer). The improvement in efficiency helped Oriental Brewery to avoid more than ₩6.2 billion, or almost \$5.3 million, in costs and more than 26 million m<sup>3</sup> of water consumption since 2007.

### Oriental Brewery: Production Facility Water Efficiency (2007 Baseline)

Estimated Results	2008	2009	2010	2011	2012	2013	Total
Avoided water consumption (m <sup>3</sup> )	2,000,000	3,100,000	3,700,000	4,300,000	6,000,000	7,400,000	26,400,000
Avoided costs	\$352,000	\$521,000	\$682,000	\$885,000	\$1,230,000	\$1,620,000	\$5,290,000
Change in productivity (m <sup>3</sup> /hl product)	-5%	-3%	-1%	0%	-2%	-1%	-11%
Change in absolute water consumption	2%	0%	9%	16%	10%	13%	61%

#### 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, Oriental Brewery achieved these results by implementing the following practices:

- Continuously invested in water-saving technologies in facilities (e.g. Washer)
- Implemented wide-ranging green campaigns and supported environmental activities, such as "One plant and one river" conservation initiative

Oriental Brewery enrolled in the Green Portfolio Program in 2010 and is reporting results for the fourth time.

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