

Green Tier Application – Tier 1

Attachment #2 – Environmental Performance

February 21, 2013

The New Glarus Brewing Company was founded in New Glarus, Wisconsin in 1993 with the goal of producing World Class craft beer and to become the most efficient Craft Brewery in the United States.

When the new Hilltop Brewery opened in 2007, it was already one of the most efficient breweries in the US with energy efficient insulated panel roof and wall construction, vessels constructed with energy efficient sprayed on insulation, well insulated process and utility pipelines, state of the art brewing vessels using new thermodynamic designs to reduce energy consumption, several heat exchangers to harvest and reuse thermal energy throughout the plant, and state of the art MBR wastewater pre-treatment plant.

In an ongoing effort to become the most energy efficient craft brewery in America, the brewery has added over \$100K in additional insulation, installed several motor frequency drives to better control the process and reduce energy usage, changed many incandescent lighting to hi-efficiency fluorescent, replaced several motors with the hi-efficiency motors, added two additional CIP systems to reduce water and chemical usage, made changes to the compressed air plant to reduce electrical consumption, added several more heat exchangers to harvest even more thermal energy, and started a recycling program using balers to recycle cardboard, stretch wrap, and super sacks.

Our current goals regarding energy and natural resource usage are:

- Water – currently using 3.5 barrels of water to make 1 barrel of beer. This is considered World Class. However, our goal is to use 2.5 barrels of water per barrel of beer.
- Natural Gas – currently using 1.22 therms per barrel of beer. This is also considered World Class. However our goal is 1.00 therms per barrel of beer.
- Electricity – Currently using 14.95 Kwh per barrel of beer. Our goal is 12.50 Kwh per barrel of beer.

To achieve these goals future investments include continued electric and electronic upgrades, continued investments in high efficiency motors and high efficiency lighting (LED), continued investments in heat exchangers, implementation of a water recycling and reuse program, upgrades to brewhall equipment, upgrades to refrigeration and boiler plants, an expanded recycling program, and investments in green energy such as solar and wind.