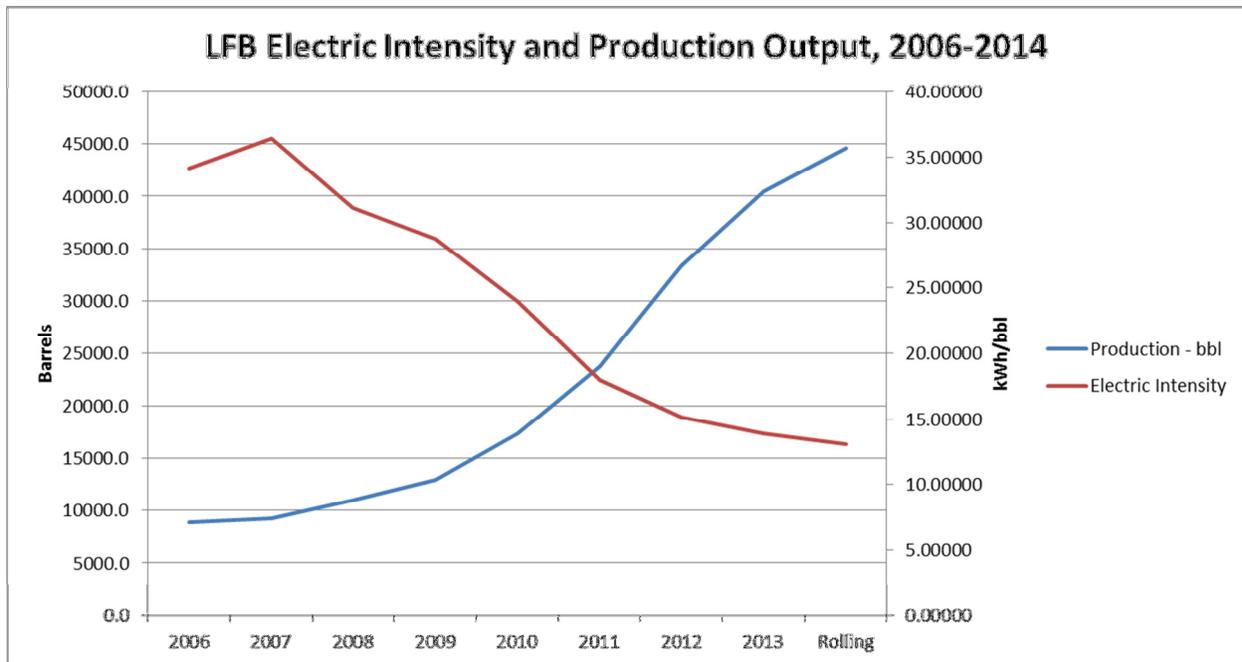


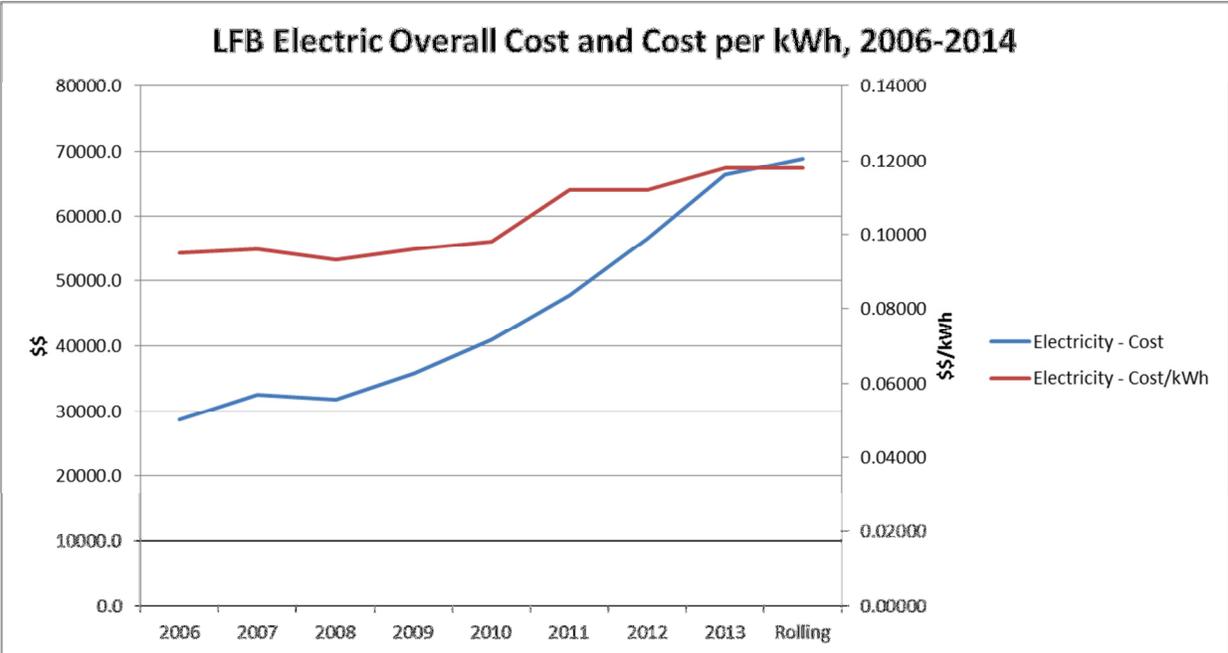
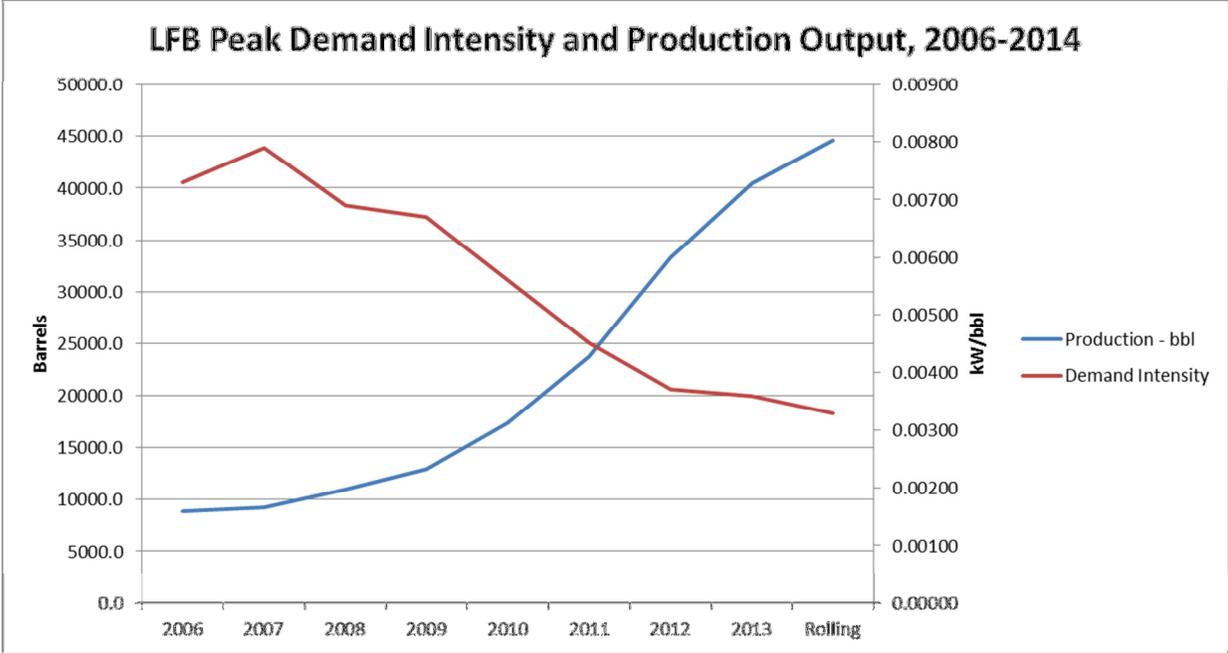
Energy Use and Efficiency Report for Lakefront Brewery

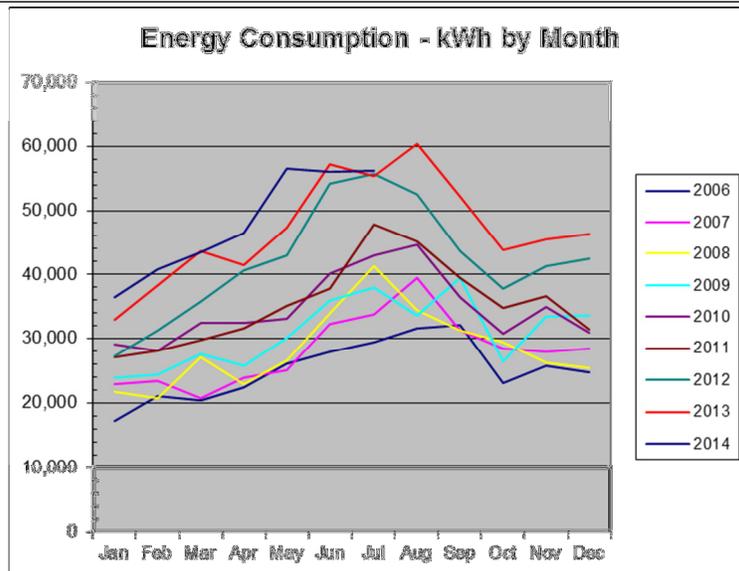
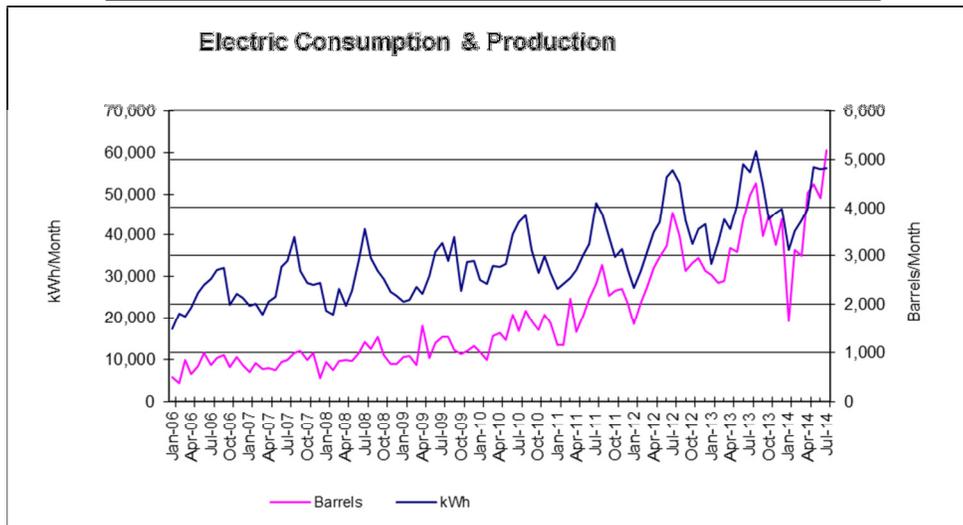
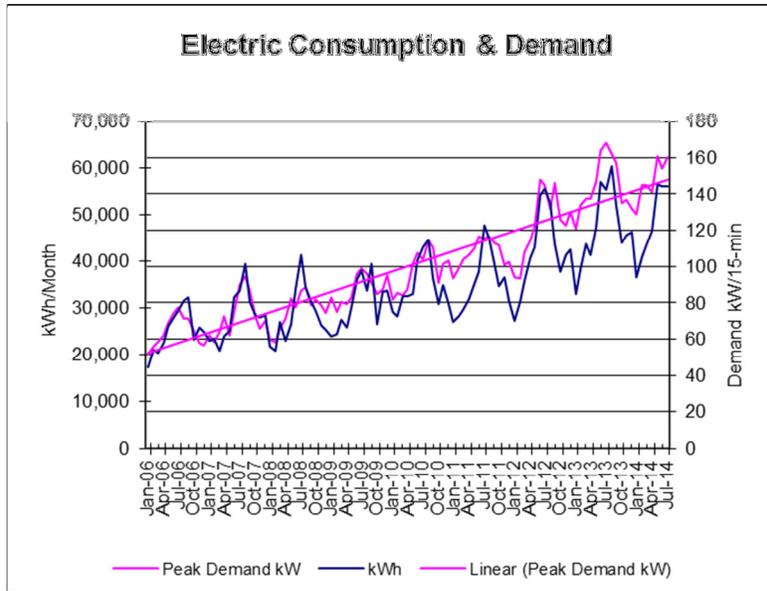
For calendar year 2013 and through July 2014

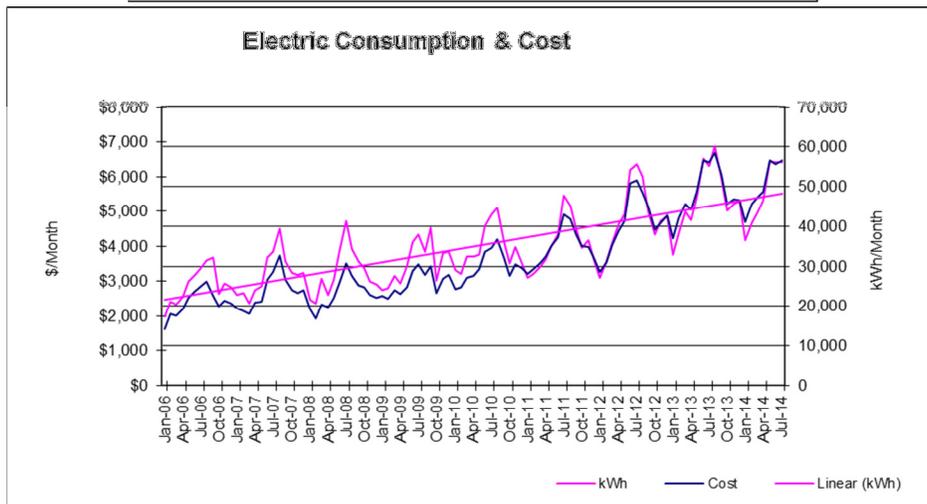
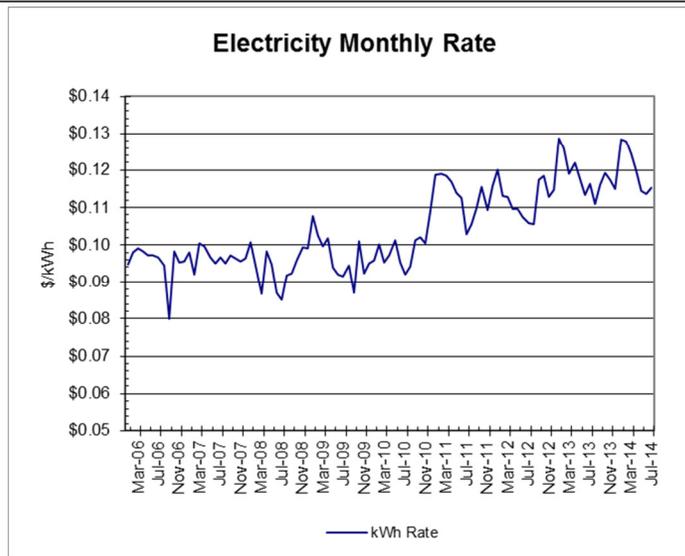
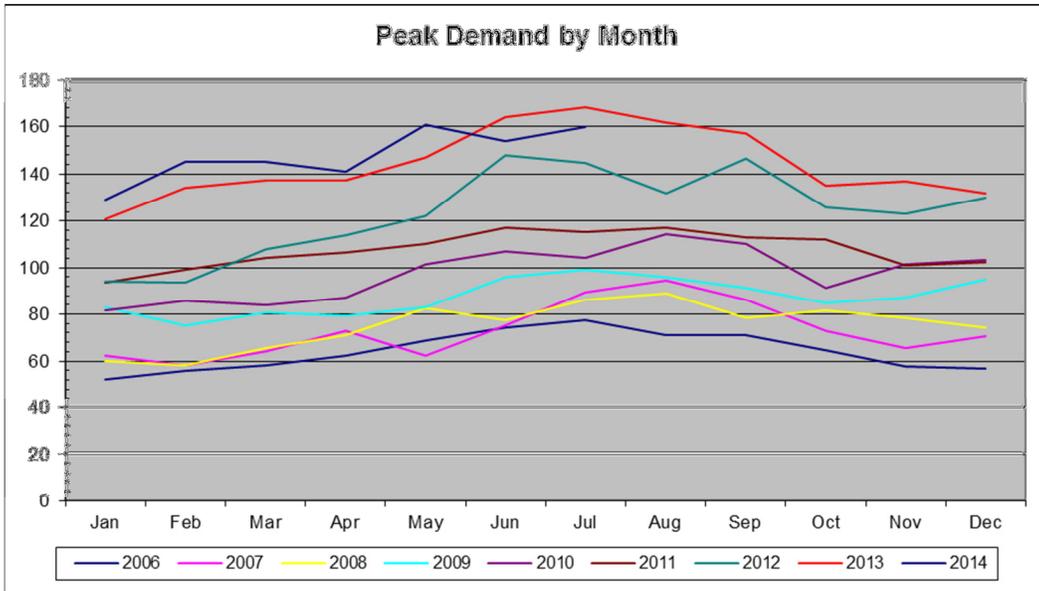
Electricity

2013 and the current year have seen further improvement in our electric efficiency. Though overall kWh use and 15-min peak kW demand are both up overall, normalized use is down. (kWh use up 11.65% in 2013 and 6.3% in 2014 YTD; kW demand up 16.92% in 2013 and 1.44% in 2014 YTD. Normalized, kWh/bbl down 8.05% in 2013 and 6.09% in 2014 YTD; kW/bbl down 2.7% in 2013 and 5.0% in 2014 YTD.) Cost per kWh was up slightly to \$0.118/kWh in 2013 and has remained relatively flat into 2014. Since our bill is a compound of actual use and demand charges, keeping the growth in our peak kW demand less than our growth in production output has been a big focus. To that end, we've incorporated variable frequency drives on motors whenever doing equipment upgrades to minimize overall motor current and starting peaks. Of course, it must be said that the cool summers we've seen these couple of years certainly helps keep our refrigeration systems running better and less often, we've also made improvements to their efficiency by fine tuning system settings and making better use of our heat recovery systems.



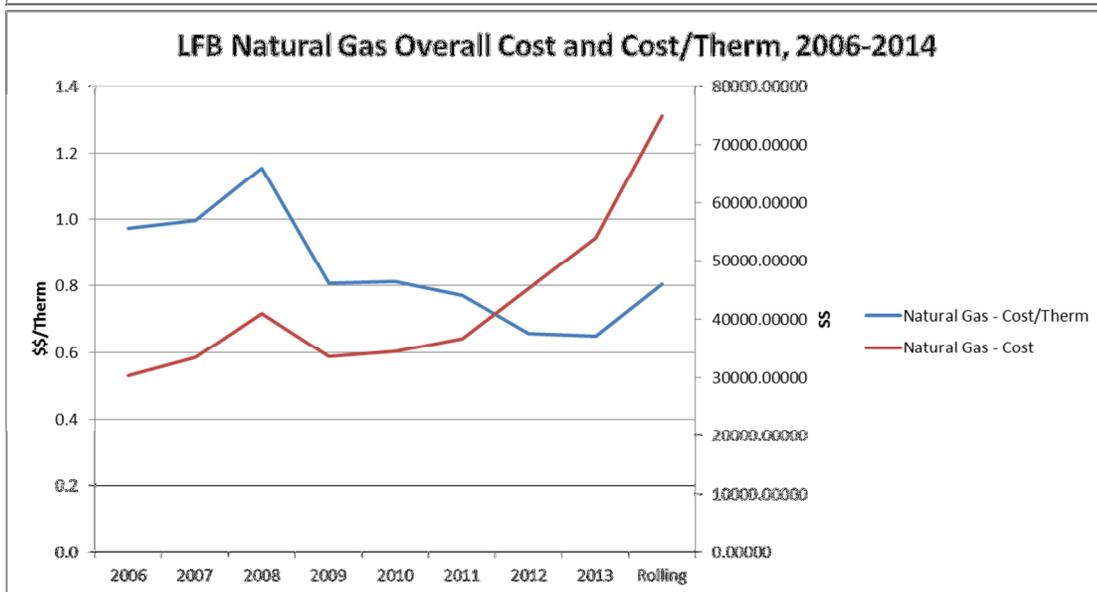
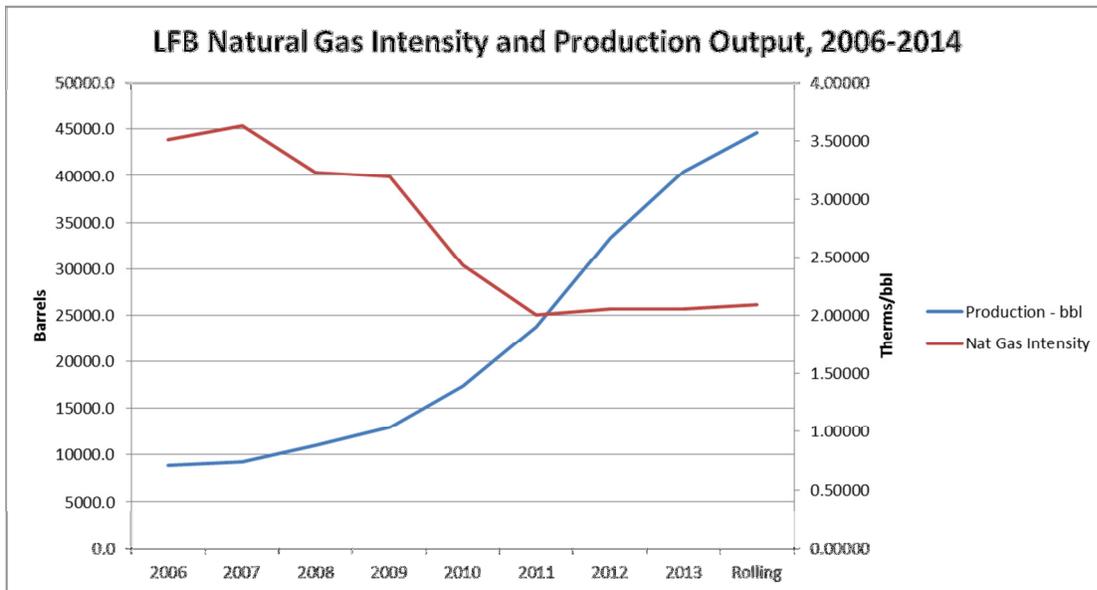




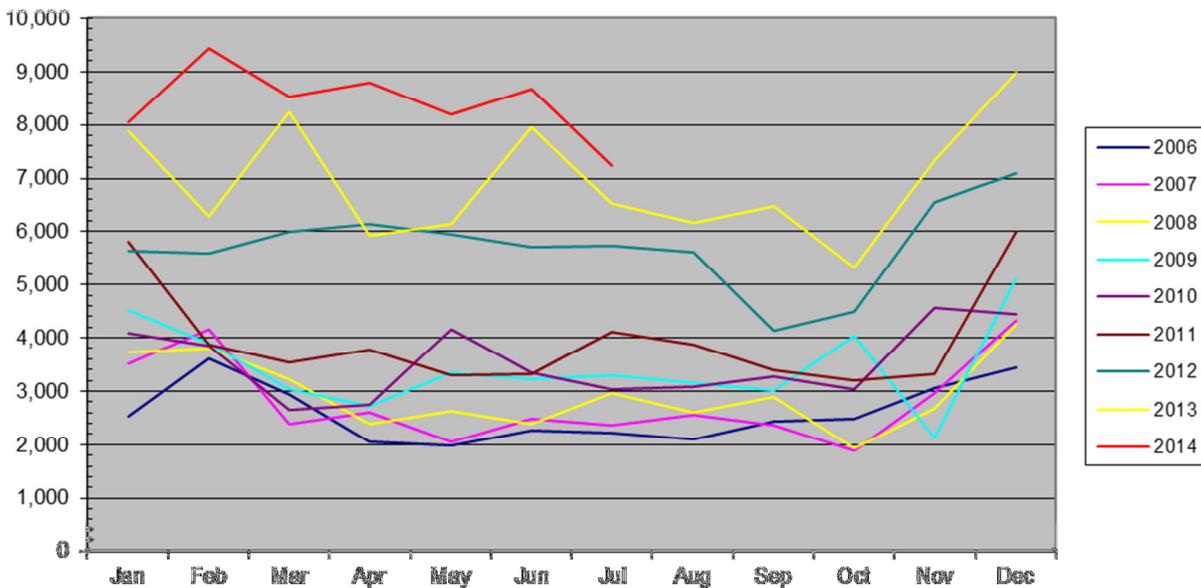


Natural Gas

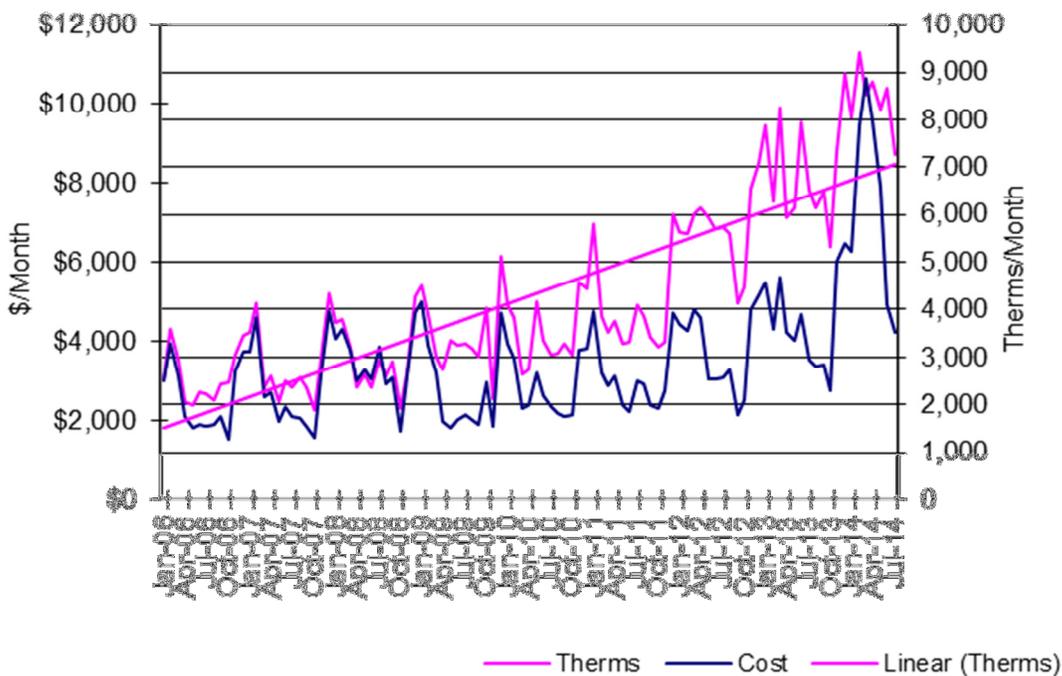
Where the cool summers have certainly helped our electricity use stay low, the super cold winter of 2013-2014 was brutal on our natural gas use and especially on our costs! In late 2013 we actually made a substantial investment in a new high-efficiency building-heat boiler to replace our aging Scotch Marine boiler. Though the winter had an effect, our natural gas use is generally tied to our brewhouse operations, and though our total therms is up quite a lot, our normalized use is only up slightly in 2014. (Total therms up 21.29% in 2013 and up 20.37% in 2014 YTD. Therms/bbl was down 0.06% in 2013 and up 1.49% in 2014 YTD.) Natural gas cost is another story. Due to a WE Energies pass through charge on natural gas due to depleted stockpiles over this long cold winter, we saw several record monthly bills early this year, and we've already spent nearly the same amount of money on natural gas through July 2014 as we did in all of 2013! (Total cost of gas up 19.4% in 2014 and 65.99% in 2014 YTD. Cost per therm down 1.52% in 2013 and up 21% in 2014 YTD.)

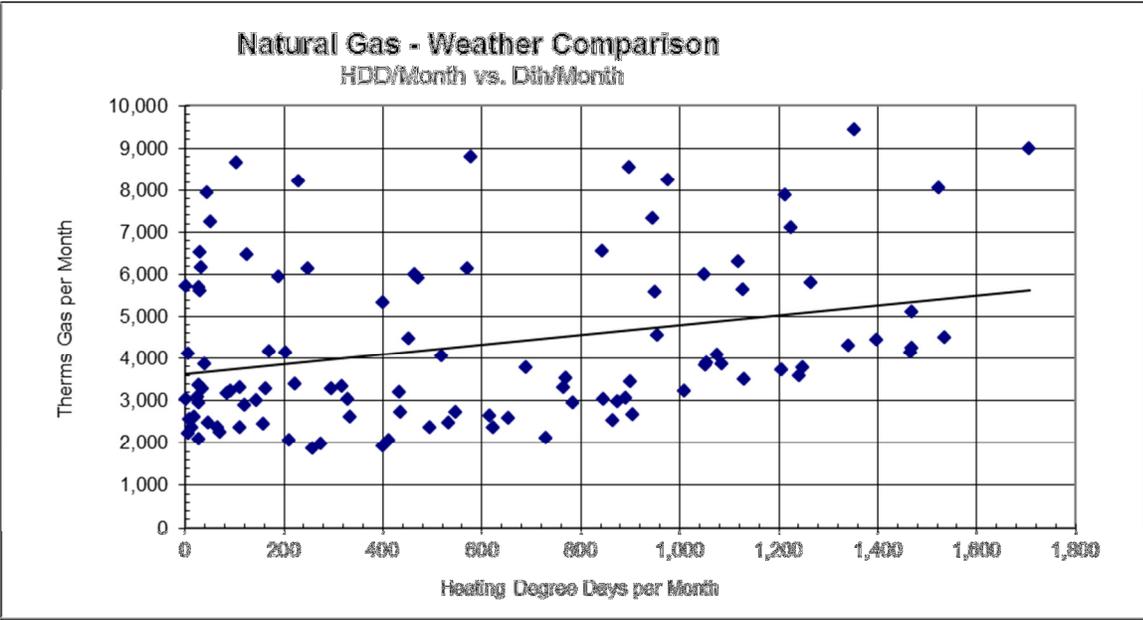
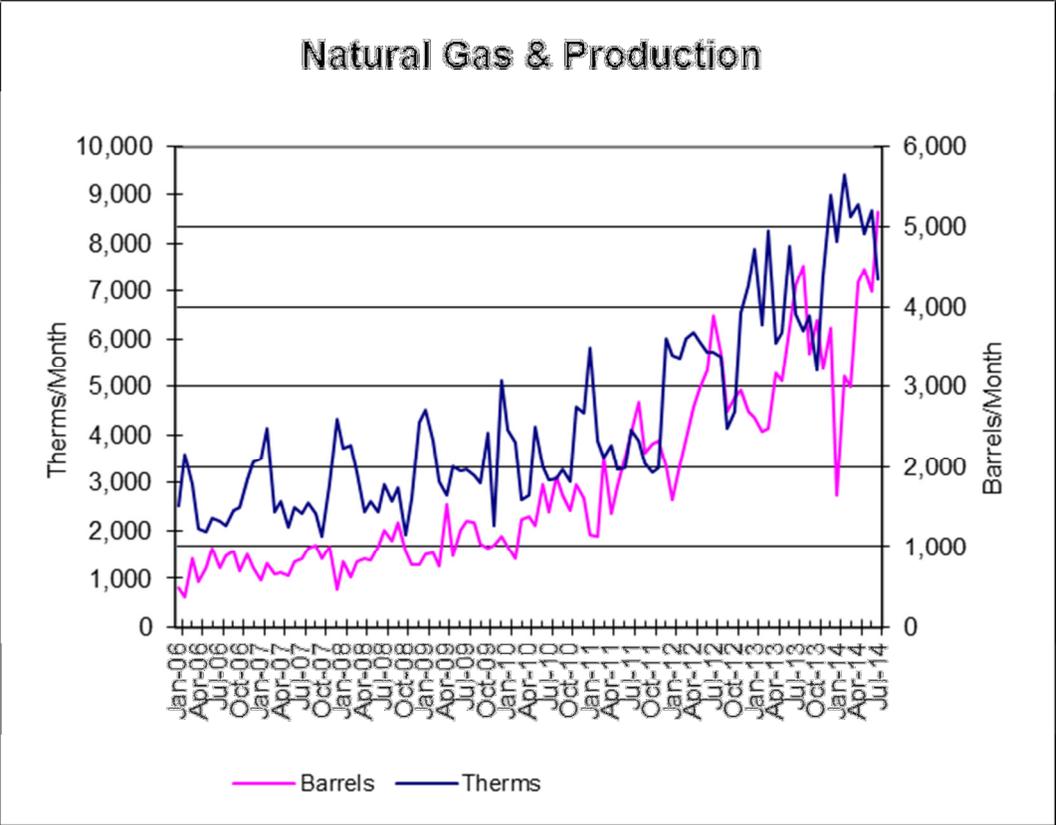


Natural Gas Monthly Therms



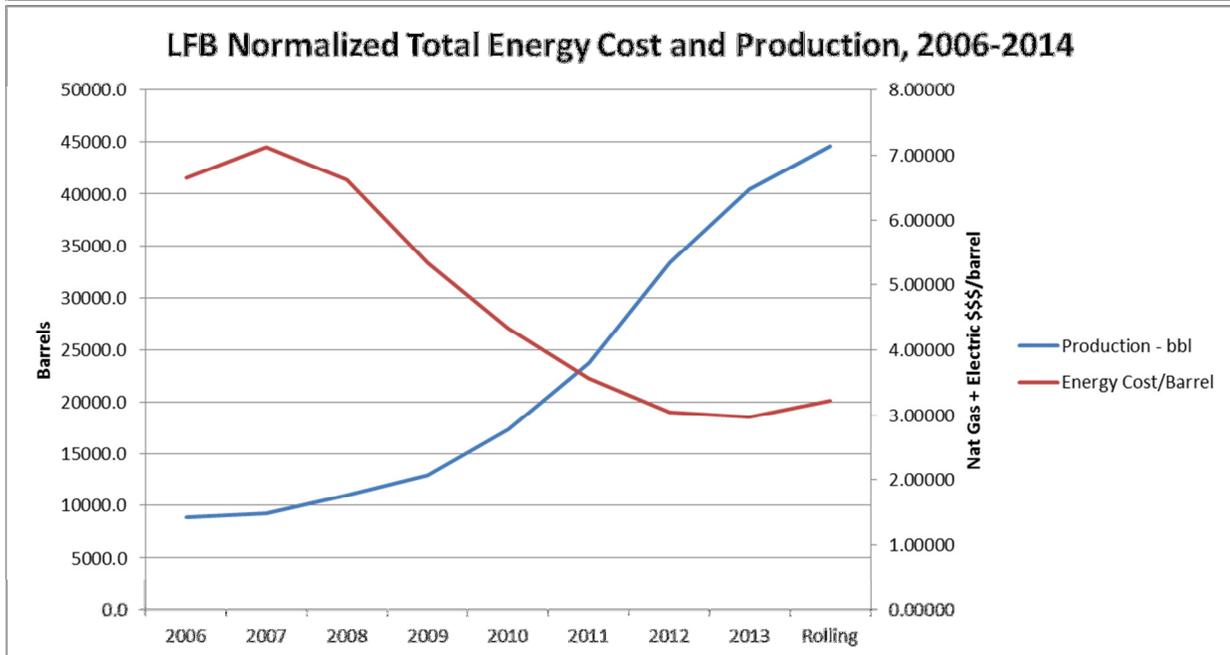
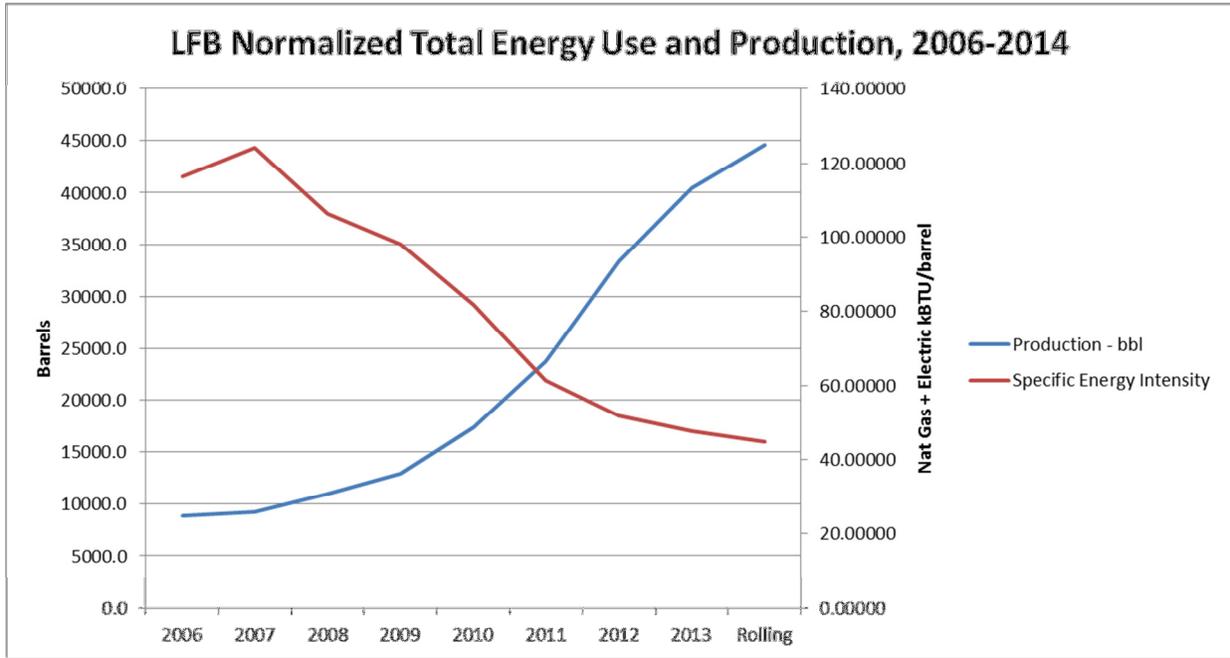
Natural Gas Consumption & Cost

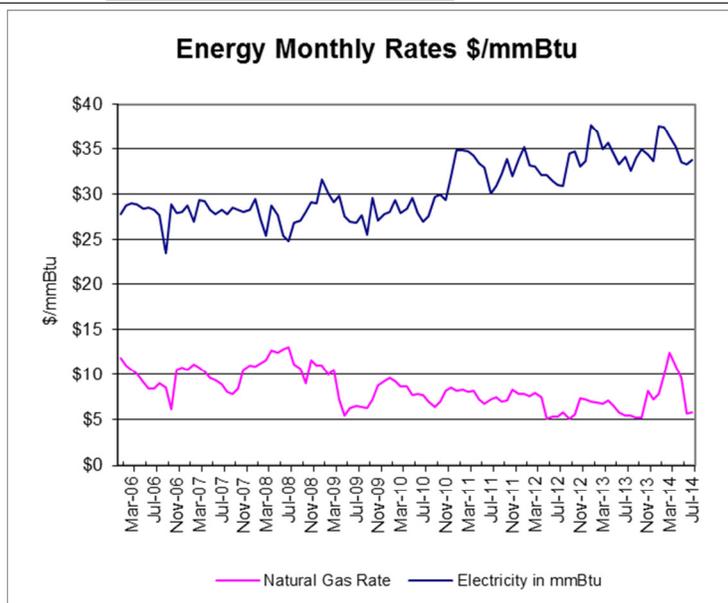
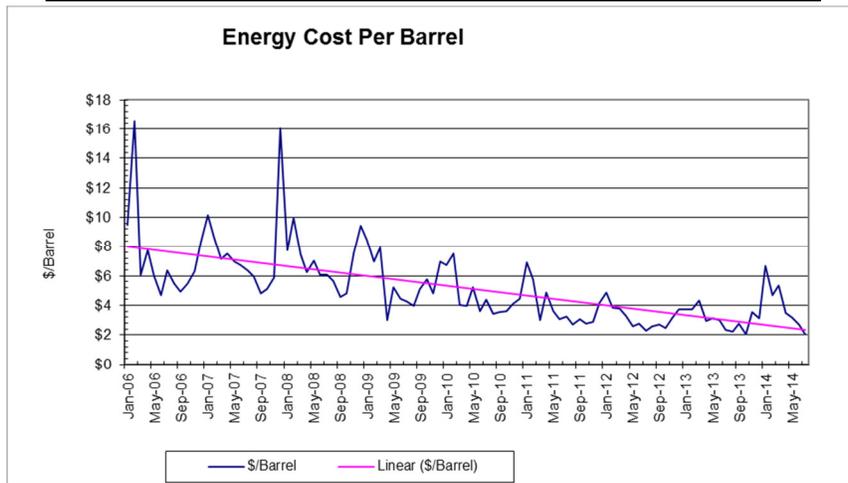
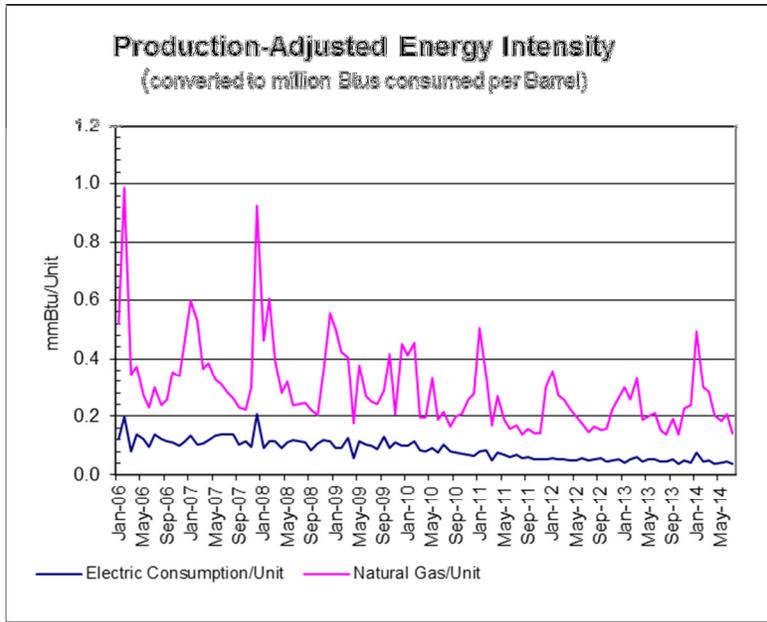


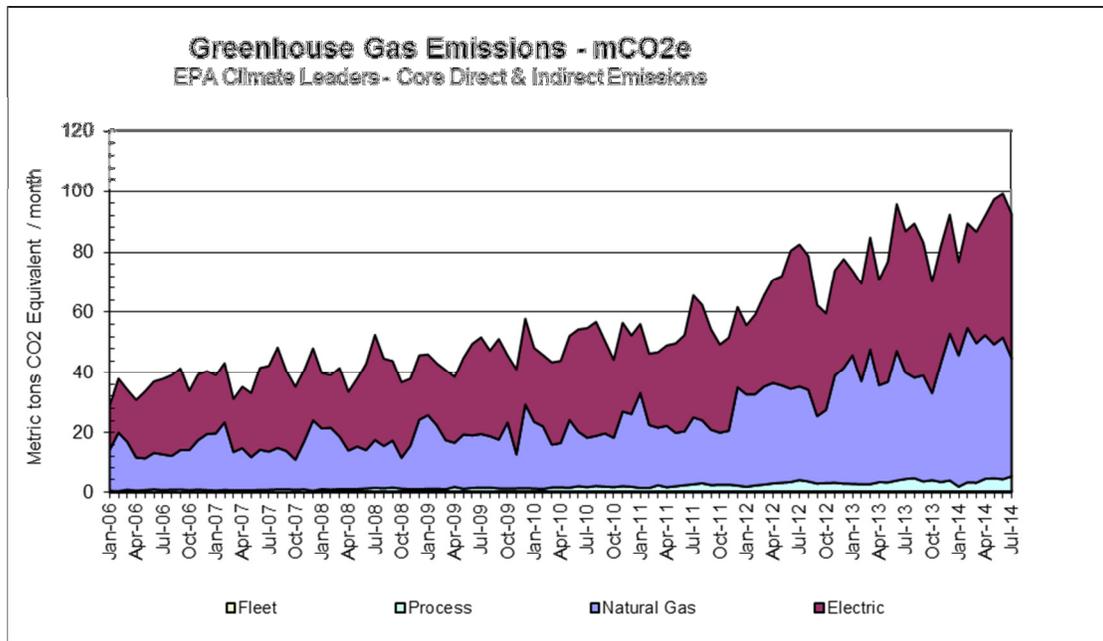


A note on this chart: the steeper the trendline, the more our natural gas use could be considered “tied” to our building heat costs. With such a flat trend, it shows our gas usage is mostly due to changes in production output.

Combined Energy Charts:







A note on this chart as well: though GHG emissions are included for production, i.e. the CO₂ given off during fermentation, this is a local GHG emission only, NOT a net increase of GHG's overall as it is offset by the CO₂ taken up in barley growth. (The GHG emissions from the farming activities themselves are of course a different story and are not addressed here!)

Water

Water use per barrel of beer sold has been relatively stable over the past couple of years at around 5.2 volumes water per volume of beer. This includes all brewery operations, not just production, and with tour traffic up and the restaurant operational hours expanded significantly of late, it's worth it to note that it takes much more water to flush the beer after use than to brew it! Further improvement on this number can look at some reuse possibilities in production, but a closer look at low flow fixtures in restrooms may have a greater effect.

