



Crookston, MN

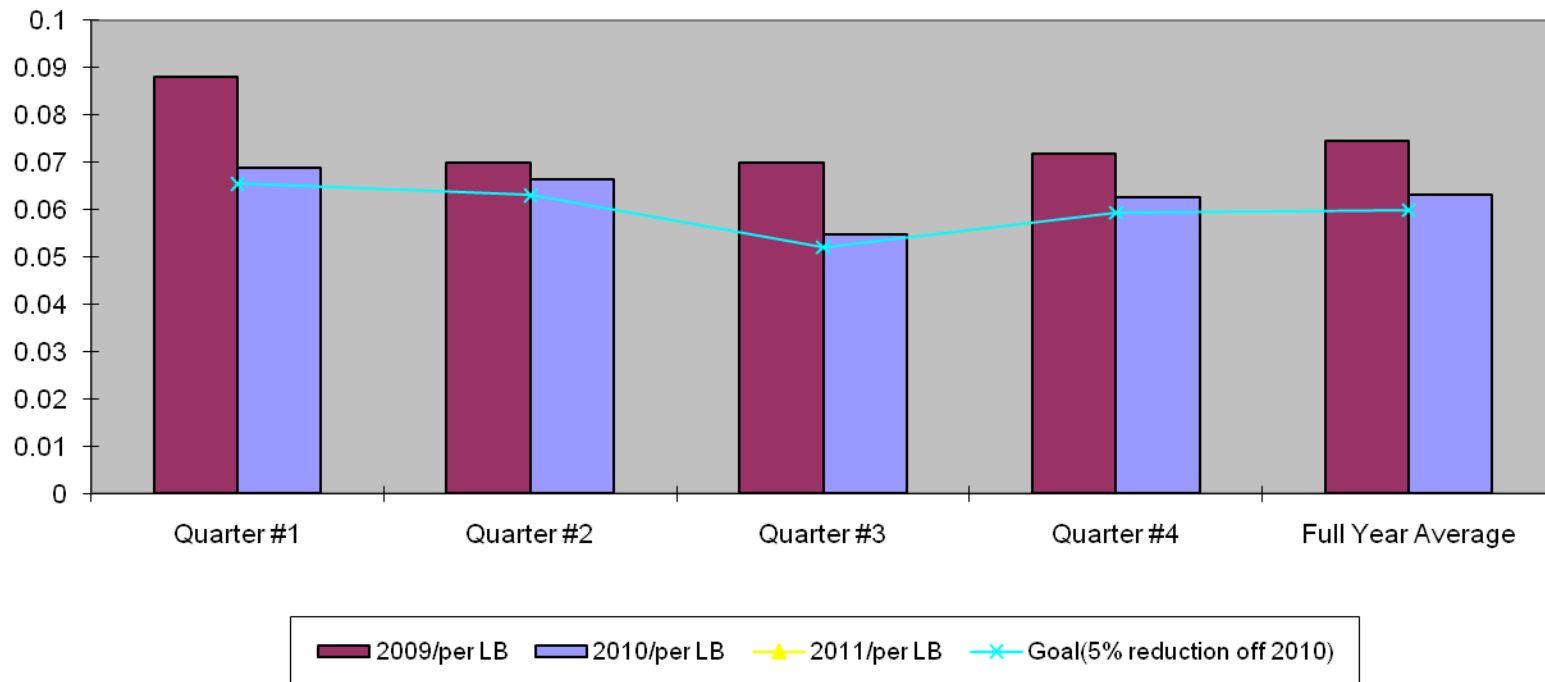
Resource Conservation



- It is our goal as a company to reduce resources now and into the future:
 - Electrical usage (KW)
 - Water Usage (Gal)
 - Natural Gas Usage (DTH)
 - Waste (Ton)
 - Examples on Usage Reduction on pages 3, 5, and 6

Graph of Kilowatts against production

Kilowatt usage per pound of production
Dahlgren and Company Inc
Resource Conservation-Electricity

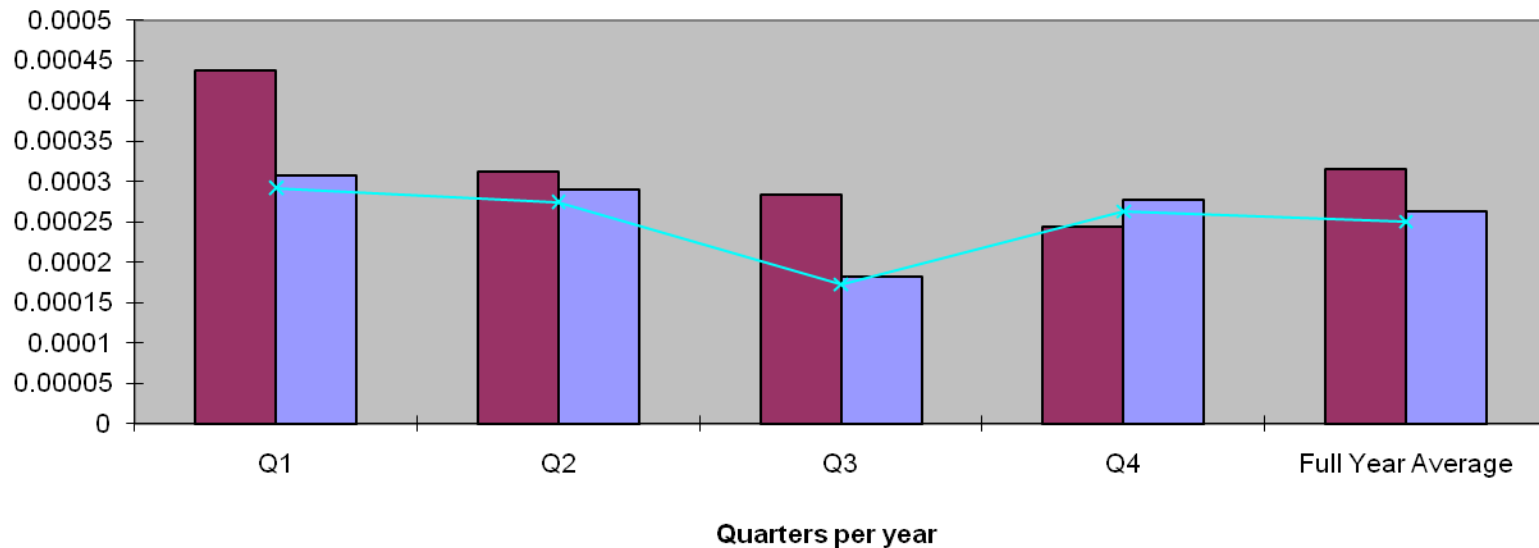


What graph represents

- **2009 Production**
 - 147,028,188 pounds produced
 - 10,945,355 Kilowatts used for production
- **2010 Production**
 - 167,201,267 pounds produced
 - 10,541,818 Kilowatts used for production
- **Savings**
 - 403,537 KW saved
 - 20,173,079 more pounds produced
 - 18% less KW's used per pound

Graph of Dekatherms against production

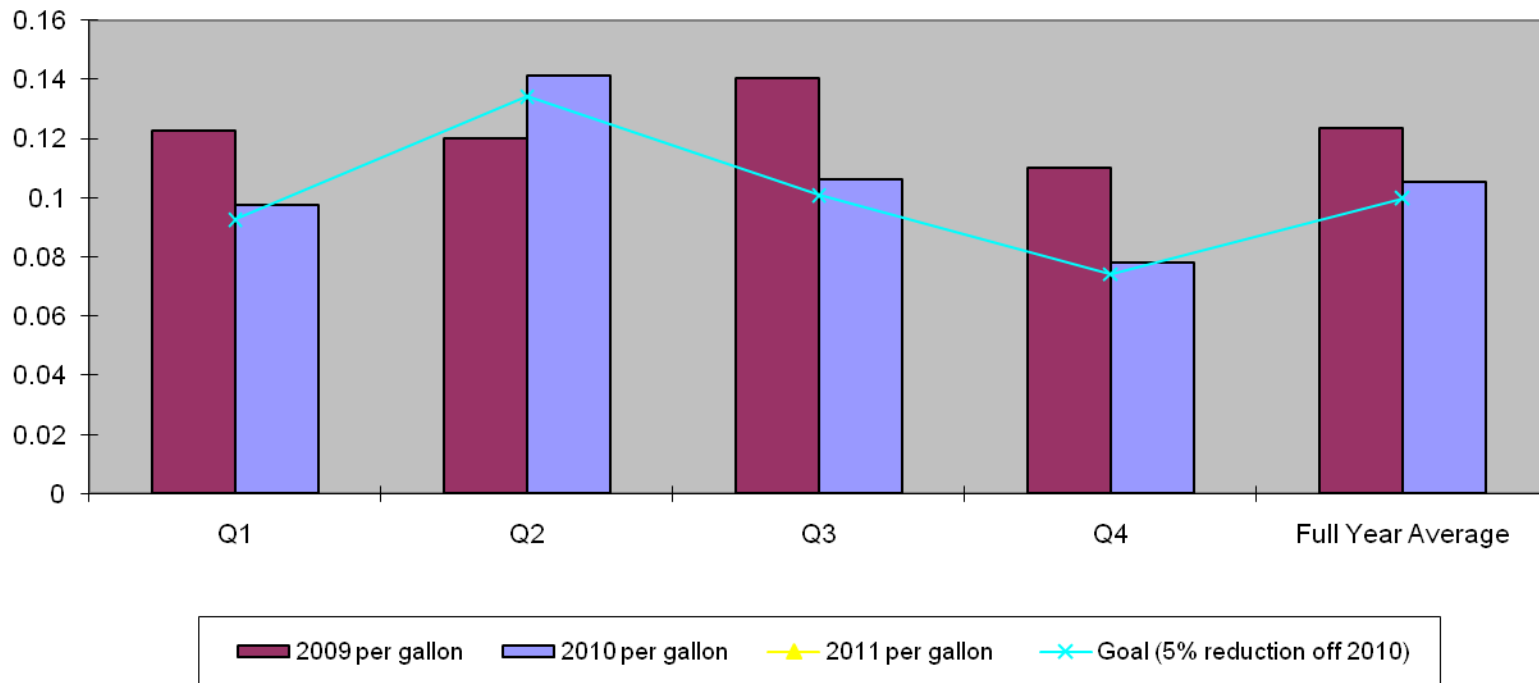
Quarter Comparison Chart
Dahlgren and Company Inc
Resource Conservation-Natural Gas



■ 2009 per lb ■ 2010 per lb ▲ 2011 per lb ✕ 2011 Goal (5%) Reduction

Graph of Gallons against production

Gallons used per pound of production
Dahlgren and Company Inc
Resource Conservation-Water



Energy Profiler

- [..\Desktop\Dahlgren RECON\Dahlgren Recon Profiler 2010.xls](#)
- Energy Profiler has given Dahlgren's a valuable tool to use when determining costs throughout the Facility
- Has helped in Management decisions on future projects
- Helped to determine were different Green Team priorities within our plant rank

On-Site Green Teams

- Teams made up of people within areas of the plant that they work in
- Elevator Green Team
- Roasting Plant Green Team
- Warehouse/Storage Green Team
- Office Green Team

Action Planners

What are they

How they work

How we prioritize them

Action Planner

Form on how projects go through
our Green Teams

- Dahlgren Action Planner.xls

Scrubber Water Recycling

- Recycling the water used in our air scrubber system in the Roasting Plant. This is a process that cleans the fan air off the Cooling Hopper Scrubbers and sends it to the Roaster Scrubbers before it goes down the drain.
 - Re-plumbing this water that previously went down the drain has saved about 2,000,000 gallons a year.

Scrubber System

Pressure Washer in Roasting Area

Parts washer used to clean roasting equipment

- Savings on Water
- Savings on Downtime
- Savings on Labor
- Saved roughly 186,000 gallons a year



Warehouse #9

- Determined current lighting (May 2010)
 - 33 fixtures at 465 watts each
- Installed new energy efficient fluorescent lighting (June 2010)
 - 18 fixtures at 150 watts (4-lamp) Down Sides
 - 15 fixtures at 228 watts (6-lamp) Down Middle

Energy Savings

- Prior lights used 134,423 KW of power
 - Cost was \$8,150 per year
 - (Based on 2010 cost per KW)
- New lights use 53,612 KW of power
 - Cost will be \$3,250 per year
 - (Based on 2010 cost per KW)
- Dahlgren's also had occupancy sensors installed on each fixture that reduces the KW usage by another estimated 50%, thus saving another 26,806 KW per year
- Bringing the bill down to \$1,625 per year.
 - A 500%+ reduction in cost of operation



Initial Cost and Payback

- Cost of new fixtures was \$5,700
- Cost of added on occupancy sensors was \$1,980
 - Total \$7,680 invested
 - Ottertail Rebate available for Watt Reduction
- Payback on new lights will take approximately 1.2 years.

Green Team-Action Planner

- Installation of a Plastic Baler
- **17 tons** recycled since June 2010
- Reduces waste being sent to a landfill
- Reduces waste that needs to be hauled out by another source
- Continues effort to recycle as much as possible
- Baled Plastic is sold for a profit



Green Team-Action Planner

- Installation of a cardboard baler on-site at Dahlgren's
- **35 tons** recycled since June 2010
- Reduces waste being sent to landfill
- Reduces waste that needs to be hauled out by another source
- Continues efforts to recycle as much as possible
- Baled Cardboard is sold for profit



Electrical Projects

- Replacement of Metal Halide lighting throughout **warehouses**. We installed T8, Energy Star rated Fluorescent lighting. The florescent lighting also provided more lumens per watt. The replacement of the Metal Halide lights saved:
 - - 216,974 KW of power a year
 - - \$15,532 dollars a year
 - - 120 tons of coal a year



Occupancy Sensors

- Installation of occupancy sensors at certain locations in the **warehouses**. This installment has further reduced the kilowatts used at the facility by an estimated 40% more:
 - 86,790 KW of power a year
 - \$5,641 dollars a year
 - 47 tons of coal a year



Composting un-usable product

- Dahlgren's produces about 1 lb. of compost for every 100 lbs. of production.
- In 2010, we kept **732 tons** of compostable material out of the landfill. Instead this product will be recycled and used as a future fertilizer in fields.



LED LIGHTS

- They use 54 watts per fixture
 - Testing Phase Right now
- Replacement of all the lights in Elevator would be very expensive at the current price



Green Team-Action Planner

- Installation of Nitrogen Generator on-site for Packaging
 - Savings on cost of trucking Nitrogen from another production site
 - Savings on tank rental and outside maintenance
 - Estimated savings for the year is \$90,000+ a year
 - (Anticipated increased expense in added electricity)

Nitrogen Generator



Generator System

Questions?