

The background of the slide is a dark blue color with a complex, hand-drawn diagram in a lighter blue or white. The diagram consists of numerous interconnected lines, circles, and plus signs, resembling a network or a flowchart. The lines are somewhat chaotic and organic, suggesting a process or system that is being analyzed or mapped. The overall aesthetic is technical and analytical.

Carbon Footprint Case Study: Oakhurst Dairy

Pure Strategies, Inc.

June, 2011

Solutions for a Sustainable Future

Pure Strategies Sustainability Consultants

- Pure Strategies: Calculating and translating carbon footprints for over a decade
- Case study: Oakhurst Dairy
- How is it done? Carbon Footprint preparation
- What next? Setting and working toward reduction goals

Engineers, Scientists, Manufacturing Experts, Business Professionals

Capabilities

- Corporate Strategy
- Clean and Lean Production
- Supply Chain and Product Stewardship
- Safer Chemicals and Materials
- Sustainable Product Design
- Life Cycle Analysis
- CSR Reporting
- Water Footprinting

Pure Strategies Sample Clients



**United
Technologies**



xerox



ROCKLINE[®]
INDUSTRIES





Carbon Footprint Case Study



Oakhurst Dairy



- Since 1921, the Bennett family has run Oakhurst Dairy by the motto "The Natural Goodness of Maine". Oakhurst is known for their quality, integrity and freshness.
- Oakhurst is the only truly local major dairy in Northern New England and Eastern Massachusetts. Headquartered in Portland, ME.
- All milk is sourced from local farms in Maine and Northern New England.

Oakhurst Products

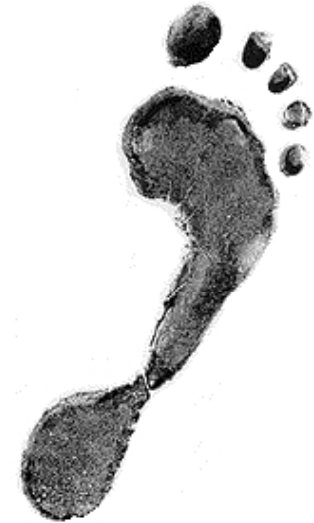


Milk, plus milk, cottage cheese, sour cream,
juices, cream products

Oakhurst Carbon Footprint history

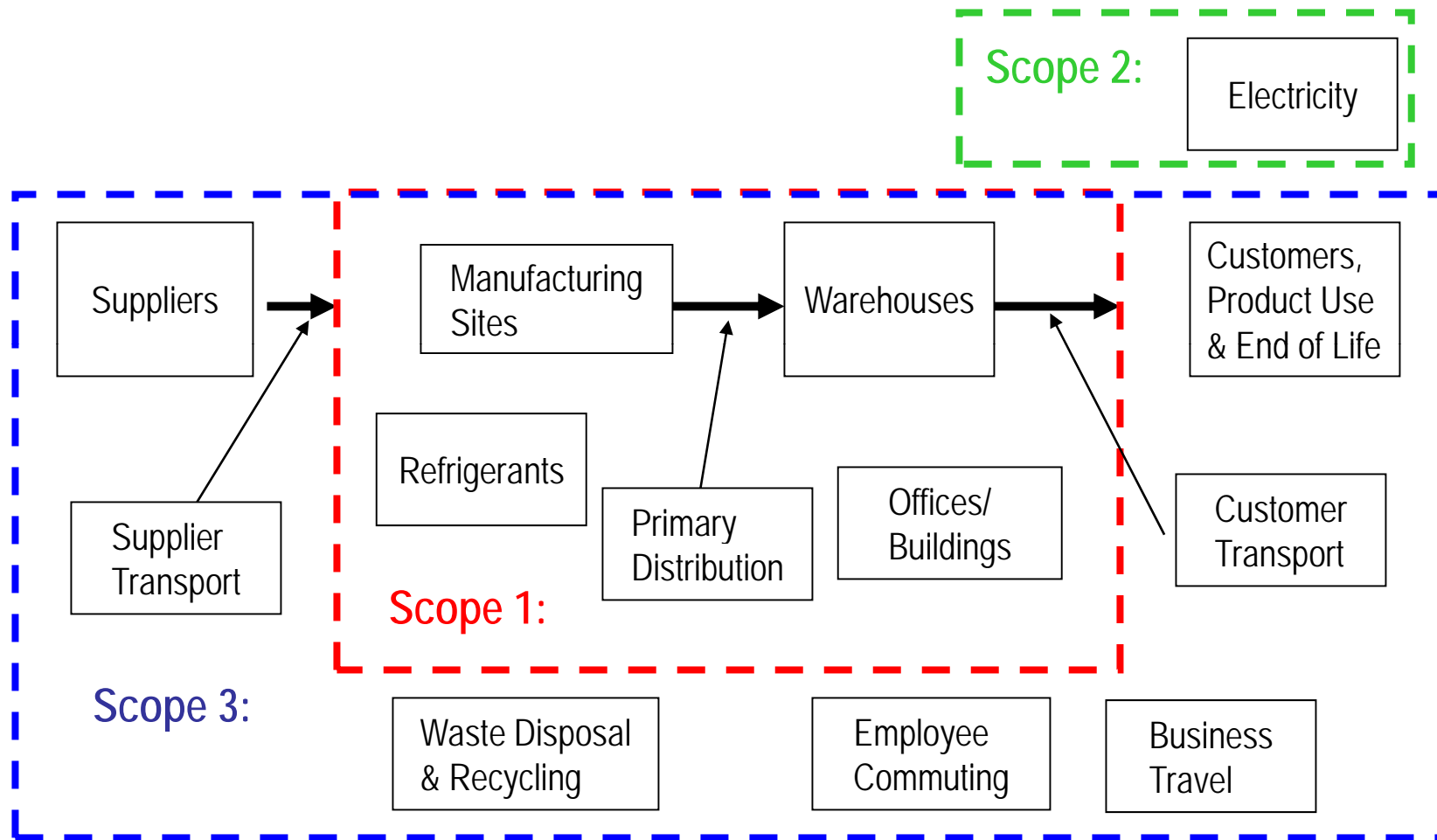
- Summer 2007 Pure Strategies calculated Oakhurst's carbon footprint for a case of milk for Walmart.
- Cradle to Walmart store
 - >80% emissions from farm. Remainder from plant and transport
- Have calculated and reported carbon footprint 2007-present

Preparing a Carbon Footprint



1. Identify Boundaries
2. Identify Sources
3. Collect Data
4. Prepare Footprint to International Standards
5. Assess Strategic Implications
 - goals, cost savings & reduction opportunities, external & internal communication
6. Public Disclosure

Carbon Footprint Boundaries



Typical Facility S1 & S2 GHG Emission Sources

- Electricity
- Refrigerants (HFCs)
- Stationary Source Fossil Fuels Combustion
 - Natural gas
 - Diesel
 - Heavy Fuel Oil (#6)
 - Propane
 - Kerosene
- Mobile Source Fossil Fuel Combustion
- Anaerobic WWT

Database Management

- Energy management programs
- Databases
- Excel spreadsheets

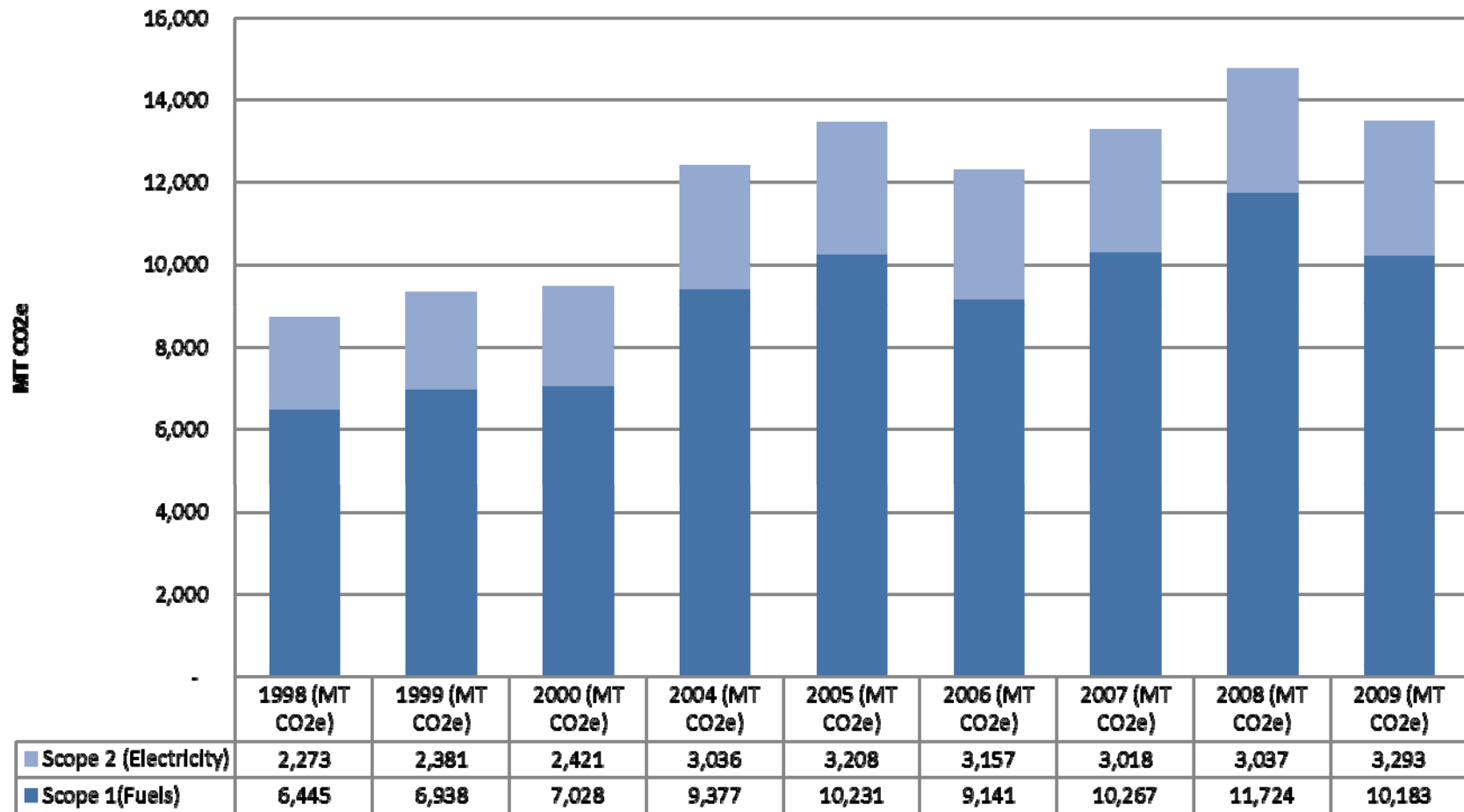
GHG Accounting Standards

Standard Set By

- World Resources Institute (WRI)
- World Business Council for Sustainable Development (WBCSD)

www.ghgprotocol.org

Oakhurst Carbon Footprint Results



GOAL SETTING AND PROGRESS

Oakhurst Sustainability Goals

Water - 20%

Plant Energy - 20%

GHG Emissions - 20%

Transportation - 20%

Solid Waste - 5%

Goals established in 2010, to be accomplished by 2014 using a baseline from 2008. The percentage goals below reflect our efforts to reduce ***per quart equivalent (QE) of milk produced.***



Initial carbon reduction projects

- Worker training
 - Employee awareness
 - Turning off equipment when not in use
 - Weekend shut down
- Solar
- Transportation
 - biofuel use and hybrid delivery vehicles
 - truck skirts and re-routing

2010 Progress

Reduced Plant Energy **6%**

\$58,740 saved in 2010

How did they do it??

- Upgraded lighting
- Replaced variable speed air compressor
- Installed a new ammonia refrigeration system
- Up-graded solar hot water system

Reduced Water **Use** by 9%

- Stopped doing full washes on 13 tanks
- Oakhurst operators reduced sanitizer use
- Keep the floors dry
- Shut floor chains and conveyors off during down time



Oakhurst Dairy Sustainability Dashboard

Jan 1, 2011

Metric	Unit		2014 Goal	Actual Change (YTD)	Current YTD	2008 baseline
Plant Energy	Btu/QE	IMPROVING	-20%	-6%	311	329
GHG Emissions	lb CO2/QE	IMPROVING	-20%	-9.9%	0.20	0.22
Water	gallons/QE	IMPROVING	-20%	-9.2%	0.28	0.31
Total Solid Waste	lb/1000 QE	OFF TRACK	-5%	+0.1%	6.69	6.68
Transportation	gallons/1000 QE	IMPROVING	-20%	-9.9%	5.33	5.91

CARBON FOOTPRINT EXTERNAL REPORTING

Reporting

The logo for the Carbon Disclosure Project, consisting of a grey square with the text "CARBON DISCLOSURE PROJECT" in white, all-caps, sans-serif font.

CARBON
DISCLOSURE
PROJECT

The Carbon Disclosure Project is an independent not-for-profit organization holding the largest database of primary corporate climate change information in the world.



April 2009; U.S. dairy, a \$200 billion industry, today formally announced its commitment to a roadmap for reducing greenhouse gas (GHG) emissions of fluid milk by 25 percent by 2020 — equivalent to taking more than 1.25 million passenger cars off the road every year.

Reporting (cont.)



Governor's Carbon Challenge

- One of the first Maine-based corporations to participate
- Voluntary goal-setting program to assist businesses and non-profit organizations accomplish their GHG reduction goals.

Customer interest

Walmart's Sustainability Goals



To be supplied
100% by
renewable
energy



To create
zero waste



To sell
products that
sustain our
resources &
environment

2

Walmart
Save money. Live better.

External Communications

- Consumers
- Information on website (solar energy and biodiesel)



- Direct communication to customers

Oakhurst Future Activities

- Education at home; tips for lowering personal carbon footprint
- Exploring investing in wind power
- Completing solar installation at depot sites
- Investigating conversion to natural gas, eliminating oil

Summary

- Oakhurst - Family owned business
- Track GHG emissions
- Disclosing Emissions
- Set Reduction Goals
- Important to their customers and consumers

Thank you, contact information

Charissa Rigano

Pure Strategies

crigano@purestrategies.com

www.purestrategies.com