

A publication from Enbridge Consumers Gas for Industrial Energy Users, providing information on technology, programs and services.

Unilever's Monitoring and Targeting Program Captures \$1 million in Savings

Their natural gas savings earned them an Enbridge Consumers Gas incentive of \$30,000.

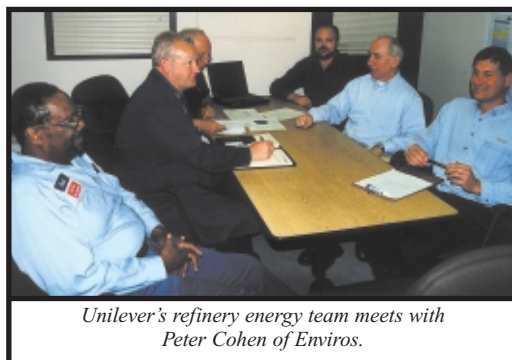
At a Glance:

- 1999. Unilever consults Enbridge Consumers Gas about Monitoring and Targeting (M&T).
- 2000. Enviros conducts a scoping study. Enbridge Consumers Gas assists with funding. The study identifies \$700,000/year in potential savings – \$260,000 from technical projects, \$440,000 from operational efficiency improvements.
- 2001. Unilever engages Enviros to help put in place an in-house M&T program starting February 1, 2001. Enviros guarantees the recovery of their fees in savings.
- Actual savings outpace projections for a year-end total of \$1 million. Natural gas savings qualify Unilever for a \$30,000 grant from Enbridge Consumers Gas.

Unilever Canada's Rexdale plant is part of the Unilever worldwide family of companies generating sales of \$70 billion annually. The Rexdale facility produces margarines (Imperial and Becel), as well as commercial shortenings and other refined oil products. The site ships 180 million lbs. of product a year.

them that an in-house M&T program would yield better results than outsourcing the plant's energy supply and management. Enbridge Consumers Gas assisted with financing a scoping study to identify no or low cost operational savings. The projected savings, in the context of increasingly volatile energy markets, persuaded

senior management to proceed. Unilever contracted Enviros to assist them in setting up an M&T program for the Rexdale facility. Enviros guaranteed the recovery of their fees in savings.



Unilever's refinery energy team meets with Peter Cohen of Enviros.

Monitoring and Targeting at Unilever

In the late 1990s, Unilever Canada explored a number of alternatives for reducing the Rexdale facility's utility bills. A meeting with Peter Goldman of Enbridge Consumers Gas and Guy Perry of Enviros convinced

The primary focus of M&T is energy saving through no cost or low cost operational changes.

The refined oils facility already had an extensive system of

What is Monitoring and Targeting?

M&T is a comprehensive approach to utility management and efficiency through ongoing monitoring and target setting.

Ten Key Steps

1. Conduct Scoping Study
2. Get Senior Management Buy-in
3. Improve Metering
4. Configure Software
5. Measure Utility Consumption and Production Variables
6. Develop Targets
7. Develop Opportunities Database
8. Energy Team Meetings
9. Actions
10. Training for Culture Shift

sub-metering for natural gas, electricity, steam, water and compressed air. These sub-meters provide precise information on actual consumption for many different areas of the plant. Energy teams have been put in place at the management and supervisory level and meet weekly in each activity centre of the facility (refinery, packaging, boiler plant, etc.). These teams review trends, identify problems

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and causes, and discuss solutions. The coming year will see Unilever's M&T program extended to workers in the plant through a series of training workshops. Total savings for 2001 likely will total \$1 million. And, as Chief Engineer Garry Swayze notes, "With an in-house system we keep both the savings and control." For the future Unilever plans to integrate M&T with Total Productive Manufacturing – a broad program to eliminate waste in every part of the organization. They are also exploring with Enbridge Consumers Gas the potential benefits of metering hydrogen and nitrogen gases.

The Two Sides of M&T

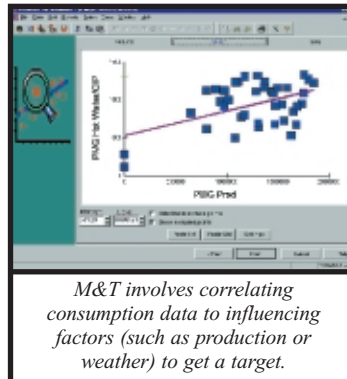
Unilever's M&T program has two thrusts: **operational efficiency** and **technical projects**. The two go hand in hand with 60% of the savings achieved



Correcting steam losses like this one has been a major factor in Unilever's impressive natural gas savings.

through operational efficiency and 40% through projects. Savings from operational efficiencies are achieved at **no or low cost**. At Unilever, energy teams meet to review data charts produced by **Montage** software, as well as project ideas in the **Opportunities**

Database. Actual consumption is compared to targets adjusted for production and other operating conditions. Operational savings are generated when the teams identify unusual trends –



either positive or negative and take appropriate action. As Swayze puts it: "The worst thing is to have improvement and not know how you've done it. M&T gives us the tool to understand it and sustain it." Examples of operational changes include switching off pumps when not

in use, lowering oil storage temperatures, and trimming cooling-water flows. Examples of successful technical projects include a pulsed air-blow for oil-line blowing, temperature control on cooling water, and re-circulating loops on cooling water for vacuum pumps.

A total of 83 ideas with an annual savings potential of over \$1.3 million have been identified.

Unilever Reaps Benefits Across the Spectrum

Unilever Canada's actual savings for the year were:

- **Natural Gas Savings – 2.2 million m³**
- **Electricity Savings – 1.9 million kWh**
- **Water Savings – 26.7 million Imperial gallons**
- **4.2 million kg reduction in CO₂ Emissions**

"That's the nice thing about this program. We save in all forms of energy, not just natural gas."

Garry Swayze
Chief Engineer
Unilever

Why not explore M&T for your facility?

M&T can be used successfully by medium to large industrial and commercial energy users. Enbridge Consumers Gas can help you determine if your facility is a good candidate.

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For further information on these programs and services, you can contact Michelle Parker, Enbridge Consumers Gas at:

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