MAKING ENERGY AND EMISSIONS REDUCTIONS PART OF THE BREW

By Ed Gregory

Brewing in Canada is a diverse and modern industry made up of two national brewing companies, several regional brewers and numerous microbreweries. Together, these establishments, which employ over 14,000 workers in 83 breweries across Canada, produced about 24 million hectolitres of beer in 2002. As voluntary participants in the Canadian Industry Program for Energy Conservation (CIPEC) Canada's brewers have been practicing responsible energy and emissions management since the mid-1970s.

CIPEC, with the support of the Office of Energy Efficiency, Natural Resources Canada, encourages Canadian industries to set and achieve energy efficiency targets. Energy efficiency in turn is linked to reductions in greenhouse gas (GHG) emissions. In its November 2002 Climate Change Plan, the federal government identified participation in CIPEC as an important means for meeting the country's Kyoto commitments.

The Canadian brewing industry is not classified as a large industrial emitter under the Climate Change Plan, and therefore is not governed by either covenants or emission targets. Nevertheless, the industry is doing its part, and over the years has made considerable progress in increasing its energy efficiency and achieving GHG emission reductions in production and distribution.

Compared with 1990, the industry now uses over 19 per cent less energy to produce a hectolitre of beer. This increase in energy efficiency has led to a reduction in GHG emissions:

- In 1990 the industry emitted 13.3 kilograms of GHGs for every hectolitre of beer produced but only 10.8 kg/hl in 2000 (most recent data available), a decline of 19 per cent. During this same period, the industry's real Gross Domestic Product (GDP) increased by 7.3 per cent.
- Based on GDP output, from 1990 to 2000 the brewing industry showed a net GHG emissions improvement of 23 per cent.

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energy efficiency and emissions reductions by improving their beer-making processes, plant infrastructure and packaging activities. Capital investment in new bottle-washing and pasteurization equipment is helping the sector improve energy efficiency and reduce GHG emissions.

Canada's brewers continue to pursue energy efficiency and emissions reductions by improving their beer-making processes, plant infrastructure and packaging activities.

Continuously advancing monitoring, control and maintenance procedures are enabling brewers to identify and implement opportunities for improvement. These measures include advances in production process systems, waste-trimming enhancements to post-run shutdown procedures and upgrades to heating, ventilating, lighting and air-conditioning systems. Companies are working to entrench accountability for energy and utility management throughout their organizations, creating an environment, which supports efforts to implement and sustain energy efficiency projects and practices.

On the distribution side, in April 2002, The Beer Store was given a "Fleet Excellence Award" from the national "Repair Our Air Challenge" for its efforts to improve energy management and reduce GHG emissions in its fleet of delivery trucks.

In a pilot project, special computers were installed in fleet delivery vehicles operating in London, Ontario, to reduce idling, save fuel and extend the working life of the trucks.

The results were impressive. Trucks in the London delivery fleet saw a 51 per cent reduction in vehicle idling — eliminating more than 3000 hours of idling time. During its first year alone, the pilot project saved The Beer Store more than 32,000 litres of fuel and reduced emissions by over 114 tonnes.

Not only has The Beer Store reduced its fleet energy consumption by 14 per cent, but the new technology has already paid for itself through the money saved in fuel purchases.

Of course, not all of the credit goes to computers. The drivers also contributed to the savings by simply turning their engines off during short deliveries.

The Beer Store also is improving energy efficiency at its retail outlets. In its newer stores, super-high-efficiency refrigeration equipment and low-energy-use lighting have been installed. This equipment represents the best available technology and is much more energy efficient than similar equipment used in other industries. As they are modernized, older stores will also benefit from the environmental and cost savings of newer technologies.

Perhaps the largest source of avoided emissions associated with the brewers business approach is the result of our packaging reduction, reuse and recycling program. The industry has attained a national return rate of 97 per cent for bottles and 85 per cent for cans. This combination of using refillable bottles and recovering all packaging at high recovery rates means a dramatic reduction in energy consumption, which means less CO2 emissions. As an example, in Canada brewers recover about 13,036 tonnes of aluminium annually, thereby avoiding over 52,000 tonnes of CO2 equivalents.

In every way, Canada's brewers are living up to their pledge to be one of the "greenest" industries on the planet.

Ed Gregory, of the Brewers Association of Canada, represents the brewing sector on the Canadian Industry Program For Energy Conservation (CIPEC) and serves as the CIPEC Communications Chair. **ET**