

## Golden North

### *Energy efficiency equipment case study*

#### ***Golden North chases gold in energy efficiency through the Food SA Business Case for Energy Efficient Equipment program***

Golden North is a manufacturer of premium ice cream and frozen yogurt products which are distributed Australia wide. The company was established in 1923 in the mid north regional town of Laura in South Australia. In 2006, Golden North became an official icon of South Australia, having been included in the Bank SA Heritage Icons list.

The facility at Laura manufactures take- home ice cream tubs, multipack, premium tubs, individually packaged impulse and non-packaged impulse scoop ice cream. The operations consume about 6930 gigajoules of electricity, with an output of 1760 tonnes of carbon dioxide. About 75% is consumed by the refrigeration plant, which makes this area a prime target for energy efficiency improvements.

In 2012, Golden North participated in the Food SA Business Case for Energy Efficient Equipment (BCEEE) program, developed in partnership with Zero Waste SA under the Energy Efficiency Information Grant Program, funded by the Australian Governments Department of Resources, Energy and Tourism. Through this program, a team of independent consultants and representatives from Golden North found significant opportunities to optimise the company's refrigeration systems. Some of these opportunities are:

- The installation of one single screw compressor as a replacement for multiple, less efficient compressors.
- The use of variable speed drives to allow a more efficient use of the compressor.

- The installation of water heat exchangers for oil cooling, resulting in a significant improvement in the full-load compressor efficiency.
- The installation of variable speed fans to control the condenser's discharge pressure.

Through the implementation of the full set of energy efficiency measures detected, Golden North stands to achieve the following savings:

- Annual energy savings of 641,000kWh.
- An emissions reduction of 655 tonnes of carbon dioxide, equivalent to avoiding the carbon dioxide emissions of 136 cars annually.
- Annual energy cost savings of \$127,700.

The proposed upgrade plan would require an investment of \$895,000. A proposal submitted to the Clean Technology Food and Foundries Investment program was successful, securing 50% of the total investment.

If you would like to learn more about the Food SA BCEE, please visit our Energy Efficiency Equipment webpage, which offers a wealth of information about energy efficiency opportunities and how to assess the business case for the uptake of energy efficient equipment and practices.