



Photo: Simplot/OEH

This was a great project with big energy savings, improved quality, boosted productivity and energy saving certificates to offset some of our capital costs.

Graham Bryant,
National Environment Manager,
Simplot Australia

Simplot Australia: keeping a 'Birds Eye' on energy consumption

ABOUT US

We are a leading food manufacturer of vegetable, meat and seafood products. We supply chilled, frozen and fresh products to Australia's major supermarkets and foodservice customers. Our brands include Edgell, Birds Eye, Leggo's, Chiko, John West, Lean Cuisine and Five Tastes.

Simplot's Bathurst plant primarily produces frozen and canned corn products as well as the iconic Chiko Roll and employs around 130 people.

OUR SITUATION

Simplot Bathurst is a seasonal operation incorporating canning and freezing of various vegetables and extruded products, plus frozen storage of raw material and finished goods. The plant operates two shifts a day during January to April (corn season) and 1.5 shifts a day during May till August (Chiko season).

Electricity and natural gas are our major sources of energy.



Photo: Simplot/OEH

BY THE NUMBERS

Cost of efficiency actions:
More than \$6 million

Verified energy savings:
1075 Megawatt hours (MWh) per year, 9.5% reduction in total site energy consumption

Greenhouse gas reductions:
960 tonnes per year

Estimated energy saving certificates: 7370



Photo: Simplio/OEH

The new efficient compressor



Photo: Simplio/OEH

Corn off the cob on its way to the new freezer tunnel

OUR ENERGY SAVING PROJECT

Following an audit of our refrigeration system, we carried out an extensive optimisation and upgrade of the refrigeration system in two stages including in stage 1 replacing two of our three freezer tunnels with a new, very efficient freezer with increased capacity, and in stage 2 our plant room was upgraded replacing the existing inefficient compressors with new equipment including variable speed drives and automated control systems.

WHAT IS MEASUREMENT AND VERIFICATION (M&V)

Measurement and verification (M&V) provides a way for businesses to calculate energy savings from efficiency projects using internationally recognised standards. Savings are determined by comparing energy use before and after a project is implemented whilst closely monitoring its key drivers. When designed and implemented correctly, M&V quantifies energy savings with high accuracy. The Office of Environment and Heritage (OEH) has [more information](#).

WHY DID WE MEASURE AND VERIFY?

Because this was a multimillion dollar project with significant energy savings, we wanted to confirm with high confidence, the return on our investment, and to take advantage of the cost savings available through claiming energy savings certificates (ESCs) through the State Government's Energy Savings Scheme (ESS) for stage 1 of our project.

OUR VERIFICATION PROCESS

Working with the Office of Environment and Heritage (OEH) we engaged a consultant to conduct our M&V and manage our application for energy savings certificates from start to finish. The consultant used the project impact assessment with measurement and verification (PIAM&V) method that allows us to forward create certificates for the next 10 years.

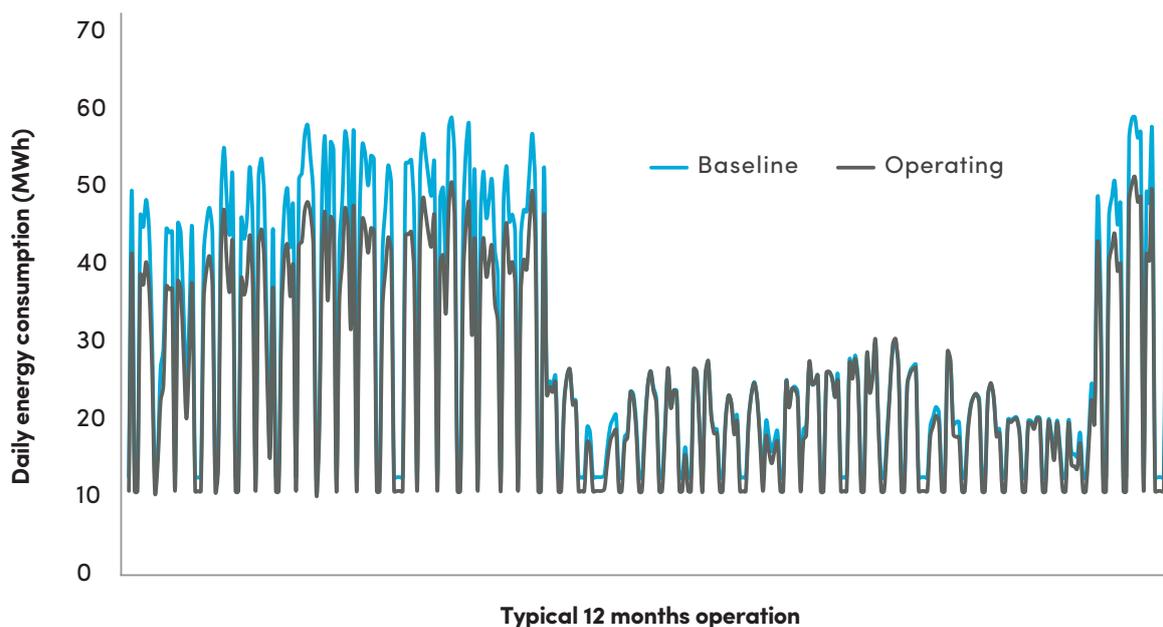
The consultant used actual energy consumption data and production data to develop baseline and operational energy-use models for a typical year of operation. When these were compared, the consultant could calculate our energy savings for a typical year.

INFORMATION

Creating energy savings certificates (ESCs) using an accredited certificate provider

Businesses wishing to claim ESCs under the [Energy Savings Scheme](#) should engage a suitable accredited certificate provider (ACP) who is familiar with the scheme and its requirements, and the energy efficiency project. The ACP manages the certificate creation process from start to finish, including all the administrative and [M&V requirements](#) established by the scheme regulator. The ACP's fee is often success-based and typically quoted as a percentage of the certificates with the balance traded and payable to the business. The NSW Government has a list of [ACPs](#).

Graph comparing baseline and operational energy use for a typical year



THE RESULTS

Our optimised and upgraded refrigeration system now responds better to ambient conditions and load requirements, and the stage 1 M&V shows that this is reflected in approximately a 10% reduction in our total site annual energy consumption. This amounts to a significant annual saving and a reduction in greenhouse gas emissions of more than 960 tonnes per year.

Further savings and additional ESC's are anticipated following a further M&V underway now after stage 2 was completed.

Other benefits from the project included improved quality, higher throughputs and reduced shifts, and provides the ability to process other vegetable types the previous freezers were not capable of processing.

TAKE ACTION

To find out more about reducing energy costs, contact the Business Support team at the Office of Environment and Heritage.

EMAIL

energy.saver@environment.nsw.gov.au

CALL

1300 361 967 (ask for the Business Support team)

VISIT

environment.nsw.gov.au/business