

maine'spowerproject



maine'spower

INNOVATION, COLLABORATION, LEADERSHIP AND ACTION

Maines power update: November 2009. Actions on the ground, keeping CO2 out of the air

By
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Update on partners activities since the publishing of the final stage 3 report.

Energy management at Mt Alexander Hospital (now known as Castlemaine Health)

Overall the greenhouse footprint for the hospital is on target to reach the 30% emissions reduction target during 2010.

This result has been possible through a greater focus on energy efficiency (tracking to deliver a 15-17 % reduction in overall energy usage) and the purchase of 15% of electricity used as green power. Energy efficiency gains are estimated to save over \$35,000 per year for the hospital on 2008 electricity prices, which more than compensates for the purchase of the renewable energy in Green Power.

Actual details of the gains to date are summarized by Rod Woodford, Hospital Engineer.

“For the financial year 2008/09 our electricity consumption dropped by 5% from the 2007/08 figures, This is a good result and is in line with Castlemaine Health’s commitment to carbon reduction. The electrical consumption for July 09 was 6.4% lower than for the same period in 08 and 13.6 % lower in August 09 than August 08 and 16% lower in September 09 than September 08. The average reduction is at 12%, this is a great result these efficiency’s are mainly due to a number of upgrades to the mechanical plant and lighting including Variable Speed Drive’s (VSD) to the cooling units for the chillers, and main air-handling unit, the new lights in the corridors of Rehab and Acute are 30% more efficient. During November 09 there will be another 1400 lights changed which should further increase the energy efficiency of the Hospital.”

Don KRC

Don KRC is doubling the capacity of its Castlemaine operations, whilst reducing its greenhouse footprint per unit of production by over 50%.

This has been made possible by a combination of energy efficiency and energy recapture initiatives and the planned installation of 4 Mw of Cogeneration.

The expansion and completion of works should be finished by mid 2010 enabling Don KRC to easily exceed its 30% emission reduction target.

Good summaries of the role of the Sustainable Communities Initiative and CSIRO in general in assisting Don KRC make these investments are to be found at the following links.

From <http://www.ausfoodnews.com.au/2009/08/24/don-krcc-expansion-receives-victorian-government-support.html>

Don KRC's expansion receives Victorian Government support

August 24, 2009

James Ferre

Don KRC has received backing from the Victorian Government for their plan to boost plant capacity while reducing emissions.

The Victorian Government said they were keen to support the major investment by Castlemaine's largest employer, which will create 480 jobs and improve the town's energy and water efficiency.

The smallgoods subsidiary of George Weston Foods will receive a \$3 million grant to drive an expansion worth over \$150 million.

"George Weston Foods is already a major employer in central Victoria and this initiative provides additional jobs that will provide great opportunities for the region's workers and boost the region's economy," Premier John Brumby said. "This \$3 million grant will help to facilitate vital new water and energy efficiency jobs that will generate 280 jobs during construction and another 200 jobs at the Castlemaine plant, locking in the future prosperity of the region."

The planned \$150 million expansion will see the building of a 4 megawatt cogeneration unit - harvesting rain water and waste heat recovery to support additional production at the expanded facility.

The energy saving initiative has been made in conjunction with the three other leading Castlemaine businesses and with assistance from the CSIRO.

and <http://www.csiro.au/news/Castlemaine-shows-how-to-cut-emissions.html>

Castlemaine shows business how to cut emissions

Reference: 09/125

A pioneering business community initiative – the Maine's Power project in Castlemaine, Victoria – is on-track to achieve major reductions in greenhouse gas emissions from four of the town's largest businesses by 2010. 23 July 2009

CSIRO's finding that smallgoods manufacturer, Don KRC, could reduce its greenhouse gas emissions while doubling production capacity, is a key finding to be detailed today at a public event being held at the Mount Alexander Hospital, Castlemaine, to mark the project's conclusion.

Cited as a case study in the Garnaut Climate Change Review, the Maine's Power project partnered CSIRO, local community and government with the four businesses to collectively achieve a 30 per cent reduction in 2007 levels of greenhouse gas emissions by 2010.

"Following an initial evaluation of the energy use in the region and for the individual businesses, we were able to indentify a series of alternative energy supply options, including energy efficiency measures and suggestions on low-emission energy technologies, which were specific to each site," Dr Lilley said. The project set out to explore ways Continental Smallgoods manufacturer Don KRC, Flowserve, Victoria Carpets, and the Mount Alexander Hospital, could reduce the energy they

consume, implement alternate small-scale energy technologies and maintain reliable low-emission energy supply.

Project leader from CSIRO Energy Transformed Flagship, Dr Bill Lilley, said each business had specific energy needs and so the options available to achieve emissions savings had to be tailored to their individual operations.

“Following an initial evaluation of the energy use in the region and for the individual businesses, we were able to indentify a series of alternative energy supply options, including energy efficiency measures and suggestions on low-emission energy technologies, which were specific to each site,” Dr Lilley said.

“These recommendations have included ways to improve energy efficiency, technology upgrades to manage the way electricity is used, investment in new power generation technologies – like gas-fired cogeneration units or solar panels – and the purchase of ‘green power’.”

All the businesses in the Maine’s Power project are considering their preferred options for reducing greenhouse gases and are on-track to achieve the emissions target.

Don KRC accounts for two-thirds of the project group’s collective energy use. It is undergoing expansion and, following the recommendations of the report, is investigating the potential to install a four-megawatt cogeneration plant to provide power and hot water for its new facilities.

“A new cogeneration plant for Don KRC would not only secure a reliable low-emission power supply for it’s expanded operation but would also exceed the 30 per cent emissions objectives set out in the project,” Dr Lilley said.

“Based on Don KRC’s projected energy use for their new facilities, the business could reduce their emissions by around 60 per cent for each unit of product they produce.

“Employing strategies to improve energy efficiency and generating power close to where it is needed can result in a significant reduction in greenhouse gas emissions and also provide financial benefits to businesses. Furthermore, this approach has the potential alleviate local constraints in power supply and could avoid the need for costly upgrades to the network infrastructure.

“The Maine’s Power project provides an example to all Australia of how an enterprising business community can tackle the global issue of climate change by working together to address local sustainability challenges and opportunities,” Dr Lilley said.

The project, undertaken as part of CSIRO’s Sustainable Communities Initiative and the CSIRO Energy Transformed Flagship, was supported by funding from Regional Development Victoria, Sustainability Victoria - Smart Zones, the Mount Alexander Shire Council, as well as contributions from the local partners.

Financial Crisis and Maines Power

The other two partners in the Maine’s Power project have downsized their operations during 2009 in response to the global financial crisis.

Flowserve and Victoria Carpets have both had to shed jobs and cut production in response to falling demand for their products.

However both companies are optimistic about the future and will be further examining options to pursue energy efficiency and greenhouse emission reduction opportunities as outlined in the Maine’s Power project as conditions improve.