

Energy and Water Programs

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Sustainability

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Presentation overview

Greener Government Buildings (GGB)/ Energy Performance Contracting (EPC)

Victorian Energy Efficiency Target (VEET) scheme

Regulatory programs (EREP and WaterMAP)

Energy Management Guide

Energy and Water Performance

health



greenergovernment
buildings

Investment in energy/ water efficiency and carbon reductions

Stakeholders:

- Department of Treasury and Finance
- Department of Health
- Health services (all medium to large energy users) and AV
- Advisers (commercial, technical, legal)
- Panel of ESCOs (Energy Service Companies)

Target:

- Implement EPC in sites that represent 90% of portfolio's energy use by June 2018

DFS – detailed facility study

DFSA – DFS agreement

ESCO – energy service company

M&V – measurement and verification

About EPC – typical solutions

Projects are a basket of various solutions that meet a payback period of seven (7) years:



Lighting

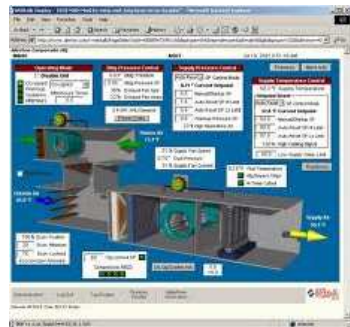
HVAC solutions

Building automation

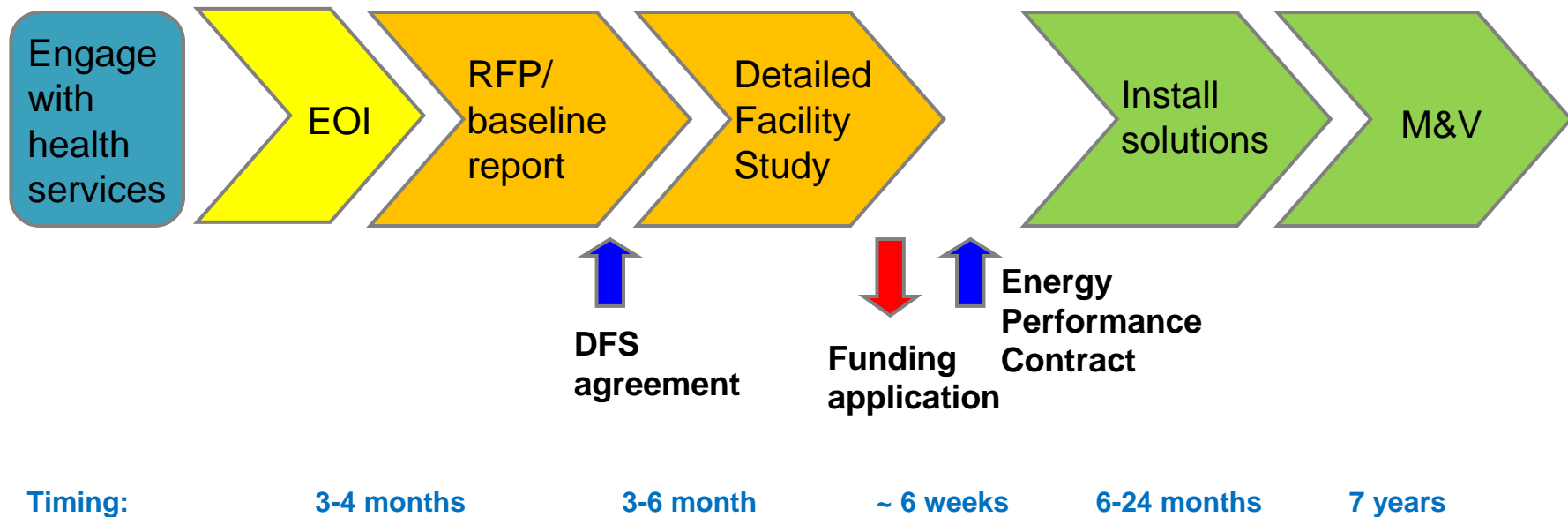
Power factor correction

Co-generation & tri-generation

Water conservation measures



About EPC – process/ timeframes



EPC Benefits

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Energy cost savings or cost avoidance (if costs continue to rise)

Reduced greenhouse gas emissions

Engineering infrastructure renewal e.g. new chillers

Reduced maintenance e.g. long life lighting

Improved metering and energy data management



GGB implementation in health

Process

- in line with DTF's process

Plan

- pilot with Austin Health
- nine tranches/ three health services per tranche (see website)
- all metro and most large rural health services

Progress

- Austin EPC (HRH & RTRC) is in tender evaluation
- Tranche 1 is in tender evaluation
- Tranche 2 – RFP released on 26 April 2013
- Tranche 3 – RFP to be released late 2013

EPC Measurement & verification (M&V)

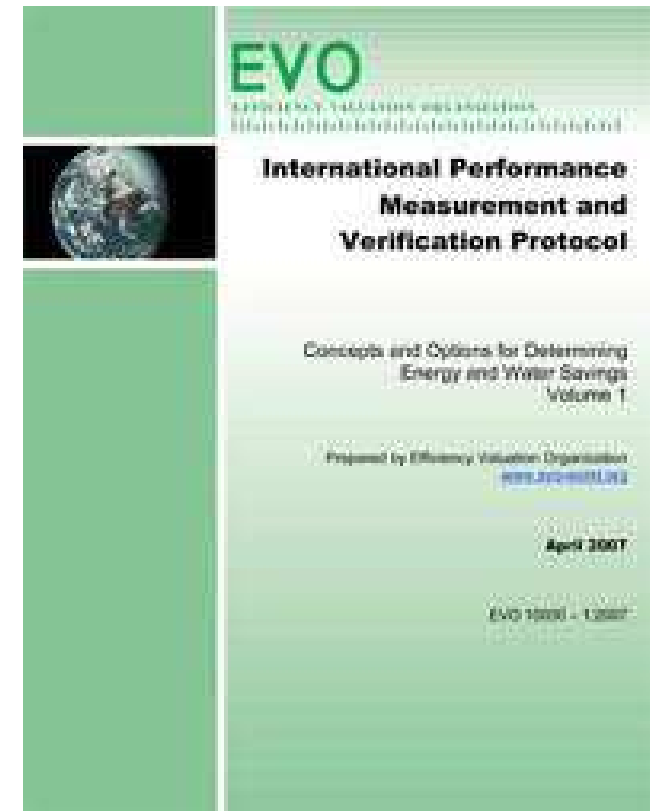
Are promises delivered?

M&V plan in accordance with an international protocol

Savings checked for the duration of the contract/ annual report

Savings are adjusted for changes in baseline

Independent review of annual reports



Information for M&V

Information around factors that influence energy and water consumption “materially”, examples:

- Capital works: a new building on site or central plant upgrade
- Change in operation: building use, new service delivered
- Technology: new medical equipment (e.g. higher resolution MRI)
- External: weather

Metering

GGB – More information

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Energy Performance Contracts: Energy: Sustainability in Healthcare - Department of Health, Vict - Windows Internet Explorer

http://www.health.vic.gov.au/sustainability/energy/epc.htm

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Energy Performance Contracts: Energy: Sustainability...

Sustainability in Healthcare

Health home > Sustainability in Healthcare > Energy > Energy Performance Contracts

Energy Performance Contracts

Energy performance contracting (EPC) is a means of delivering significant energy and water efficiency investment in existing facilities through a contract with an Energy Service Company (ESCO). The ESCO designs and installs efficiency measures and guarantees the energy and water savings, which are then used to repay the upfront investment for the initiatives over a 7 year period.

The Department of Health has a program to roll out energy performance contracting across the public healthcare portfolio in line with the Greener Government Buildings program target. The department's program for achieving this target is attached below. The program is flexible so as to ensure government, the department and health services achieve the best overall outcome from the Greener Government Buildings program.

Greener Government Buildings Program Roll out

The types of projects undertaken as part of an EPC could include HVAC (heating, ventilation & air-conditioning), upgrade of central engineering services, building management systems and lighting.

Further information on energy performance contracting in the healthcare sector is available in the:

- [Energy performance contracting in healthcare facilities: Factsheet](#)
- [Energy performance contracting in healthcare facilities: Guidelines for Victorian public health services](#)

EPC update

- [Greener Government Buildings program: EPC Update 1](#)

Sustainability updates

- [Sustainability Update 7 October 2012](#)

Videos

- [A collection of videos about the importance of sustainability within the healthcare system](#)

State Government of Victoria

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VEET – Victorian Energy Efficiency Target

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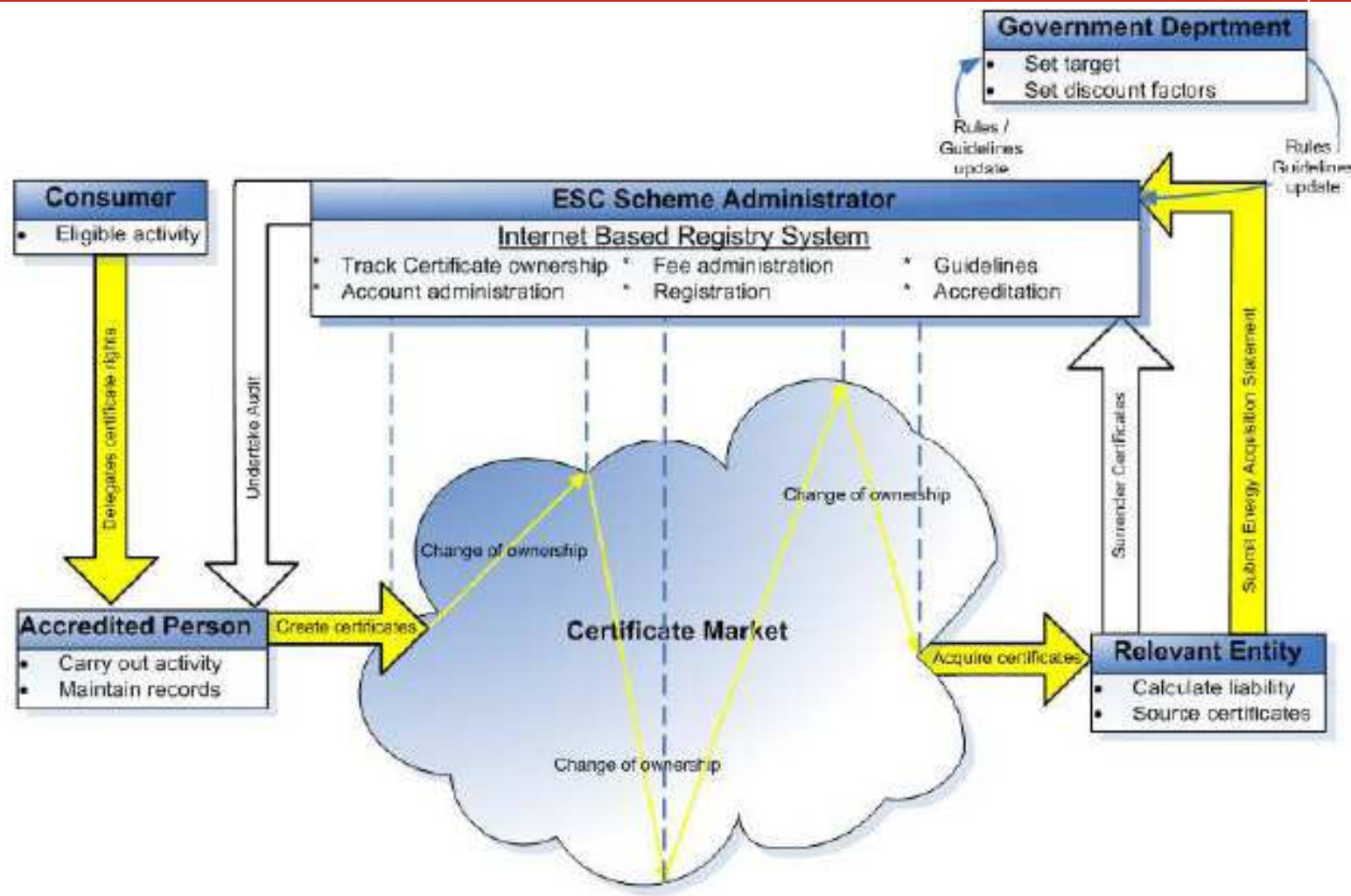
About the VEET Scheme

Investment in energy efficiency and carbon reductions

Stakeholders:

- Department of Environment and Primary Industry
- Essential Services Commission
- Registered Scheme Participants
- Energy Retailers
- Energy Efficiency Installers (e.g. electrical contractors)
- Residential and Commercial users of energy (inc. hospitals)

VEET transactions/ funding



Energy efficiency activities from which VEECs can be generated include:

- water heating
- space heating and cooling
- insulation/ windows
- shower heads
- lighting
- motors
- appliances e.g. televisions, and clothes dryers

Further information on VEET is available at www.veet.vic.gov.au.

VEET Participants – Commercial Lighting

ESC VEET - Windows Internet Explorer

https://www.veet.vic.gov.au/Public/Participants2.aspx

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ESC VEET

VICTORIAN ENERGY EFFICIENCY TARGET
Essential Services Commission

State Government
Victoria

VEET

- Home
- Energy Consumers
- Scheme Participants**
 - Getting Accredited
 - Energy Retailers
- How the Scheme Works**
 - Overview
 - Certificates (VEECs)
 - VEET Activities
 - VEET Activities by Sector
 - Product Approval
 - Audit and Compliance
- Registers**
 - VEECs
 - Products
 - Participants**
- Calculators**
- Forms**
 - General
 - Assignment - Residential
 - Assignment - Business
 - Creation
- Legislation**
- Publications**
- Consultations**
- Links**

Participants

This register lists all persons, be they individuals or companies, that have been accredited to create Victorian energy efficiency certificates (VEECs) in the VEET scheme.

Some Accredited Persons have also nominated to make their business information such as contact details and the regions they service publicly available on the register. You can see energy efficiency services in your region.

If you encounter difficulties using this register, please contact VEET Support on (03) 9032 1310 or veet@esc.vic.gov.au.

Business Name: - All -

VEEC Activities: Commercial Lighting

Activity Sectors: Business

Region: - All -

Search Clear

Search Result

<input type="checkbox"/>	Business Name	Number	Status	Phone	Website
<input type="checkbox"/>	Low Energy Supplies & Services Pty Ltd	A0005	Active	02 9965 5222	www.lowenergy.com.au
<input type="checkbox"/>	Green Energy Victoria	A0505	Active	95323033	www.greenenergyvictoria.com.au
<input type="checkbox"/>	Ozwide Group	A0147	Active	1300 344 333	www.ozwideelectrical.com.au
<input type="checkbox"/>	LEDified Lighting	A0570	Active	0399009900	www.ledified.com.au
<input type="checkbox"/>	Priority Group Australia	A0236	Active	1300 894 745	www.prioritygroup.com.au
<input type="checkbox"/>	Envirotec LED	A0445	Active	0422780413	www.enviroteclcd.com.au
<input type="checkbox"/>	Global Sustainability Initiatives	A0411	Active	03 9005 4700	www.globalsi.com.au
<input type="checkbox"/>	Lighting Partners Australia	A0417	Active	0423 880 889	www.360lus.com.au
<input type="checkbox"/>	Save Tonnes	A0340	Active	0403 068179	www.savetonnies.com.au
<input type="checkbox"/>	ecovantage	A0006	Active	03 9015 6888	www.ecovantage.com.au
<input type="checkbox"/>	Green Energy Trading	A0025	Active	03 9805 0700	www.greenenergytrading.com.au
<input type="checkbox"/>	Shine On	A0094	Active	1300 013 648	www.shineon-commercial.com.au
<input type="checkbox"/>	Energy Makeovers	A0028	Active	1300 90 14 16	www.energymakeovers.com.au
<input type="checkbox"/>	Lite Energy Pty Ltd	A0020	Active	02 8071 0121	www.liteenergy.com.au

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VEET – Lighting example



240V 50W Halogen Downlight



240V 7W LED Downlight

1 Replacement = 0.8 VEECs

Rebate = \$10 per VEEC [1 VEEC trades at \$15 minus admin and registration fees]

Total rebate = **\$8 per lamp**. For a \$50 to \$100 installed price, 15% to 8% reduction.

Other examples:

36W T8 to 28W T5 fluorescent tube = 0.5 VEECs

400W Metal Halide Outside Lamp to 200W LED = 7 VEECs

Ten (10) hospitals participate in the program (large metro and one regional)

EPA is sunsetting the EREP program from February 2013

Preparation of resource efficiency plans is now voluntary

EREP resources are still available on the EPA website:
www.epa.vic.gov.au

Regulatory Programs Update - WaterMAP

health

Preparation of WaterMAPs is also voluntarily

WaterMAP resources are still available on the DEPI
website: <http://www.water.vic.gov.au/>

Guide to energy management

health

Energy management in the public health care system

health

February 2013

Energy use in the public health care system

Hospitals are large energy users due to the nature of the services they provide. Victorian public hospitals use some 4,400 terajoules of energy every year¹. Despite significant growth in services delivered and floor area over the last seven years, the amount of energy used has remained relatively static.

A Commonwealth Department of Energy Efficiency and Climate Change report² found that of 10 large commercial building types assessed, hospitals were the second most energy intensive building type (universities are the most intensive). Hospitals were 45 per cent more energy intensive than the next most intensive building type (a city hotel) and 8 times more intensive than a school.

Modelling commissioned by the Australasian Infrastructure Healthcare Alliance (AHIA) indicates that the weighted average energy consumption for a large metropolitan hospital across all functional areas is 918 megajoules per metre squared per annum³.

Goals of energy management

Financial sustainability

The *Victorian Health Priorities Framework 2012-22: Metropolitan Health Plan* sets a priority of 'increasing the system's financial sustainability and productivity'. In 2011-12 the Victorian public hospitals spent around \$70 million on energy and these costs are increasing. From 2005-06 to 2011-12 energy costs have increased by 24 per cent. A key goal of energy management is therefore to reduce, or at least contain, the cost of energy to the health system.

Carbon reduction

The energy used by Victorian public hospitals generates some 700 megatonnes of carbon per annum. The department recognises the link between climate change and health and is therefore committed to reducing the amount of carbon generated by public hospitals from stationary energy.

Security of supply

Key topics covered:

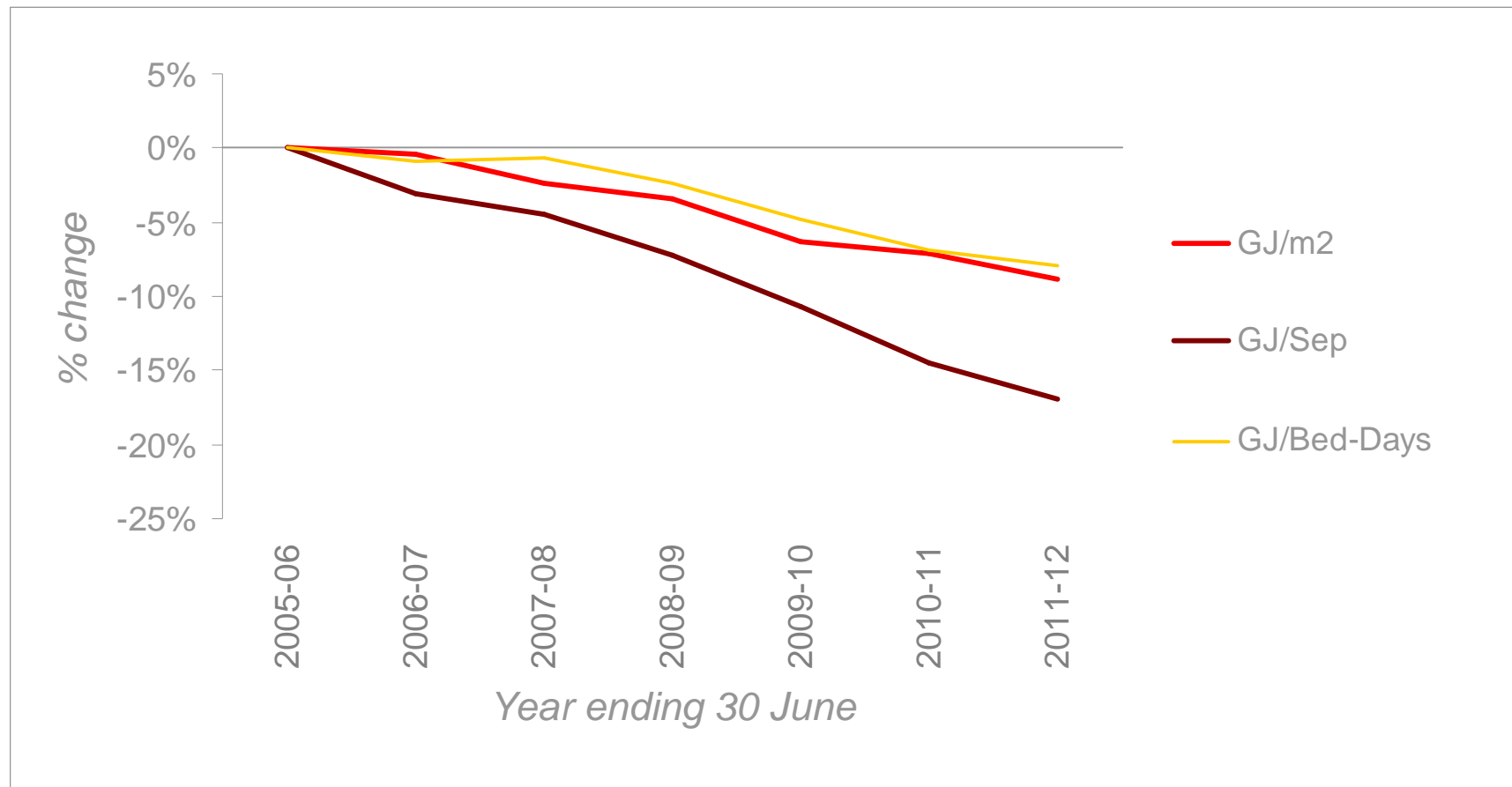
- Goals of energy management
- Key areas of focus
- Roles and responsibilities
- Programs supporting energy management
- Energy procurement
- Legislated requirements

Guide to energy management

Expectations of health services:

- Facilities are operated efficiently
- Sustainability integrated into capital projects
- Legislative requirements are met e.g. reporting to the National Pollutants Inventory
- Department's requirements are met
 - environmental management plans, and
 - public reporting of environmental performance
- Energy is procured in a way that delivers the most competitive price

Change in energy intensity



Thank you!

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(03) 9096 2063

www.health.vic.gov.au/sustainability