

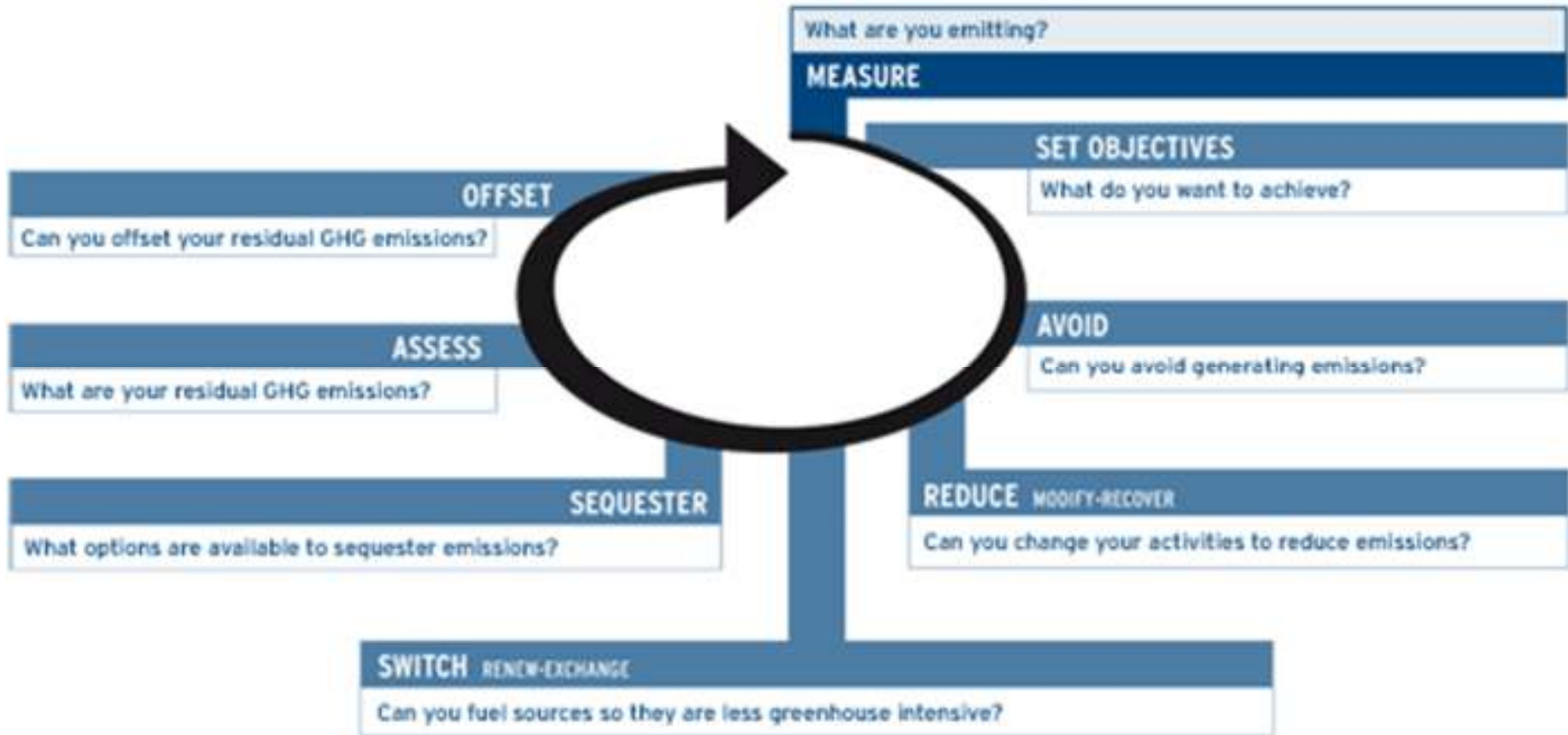


Tools for Local Government

Nick Bailey

VLGA Leading Edge Forum October 2010

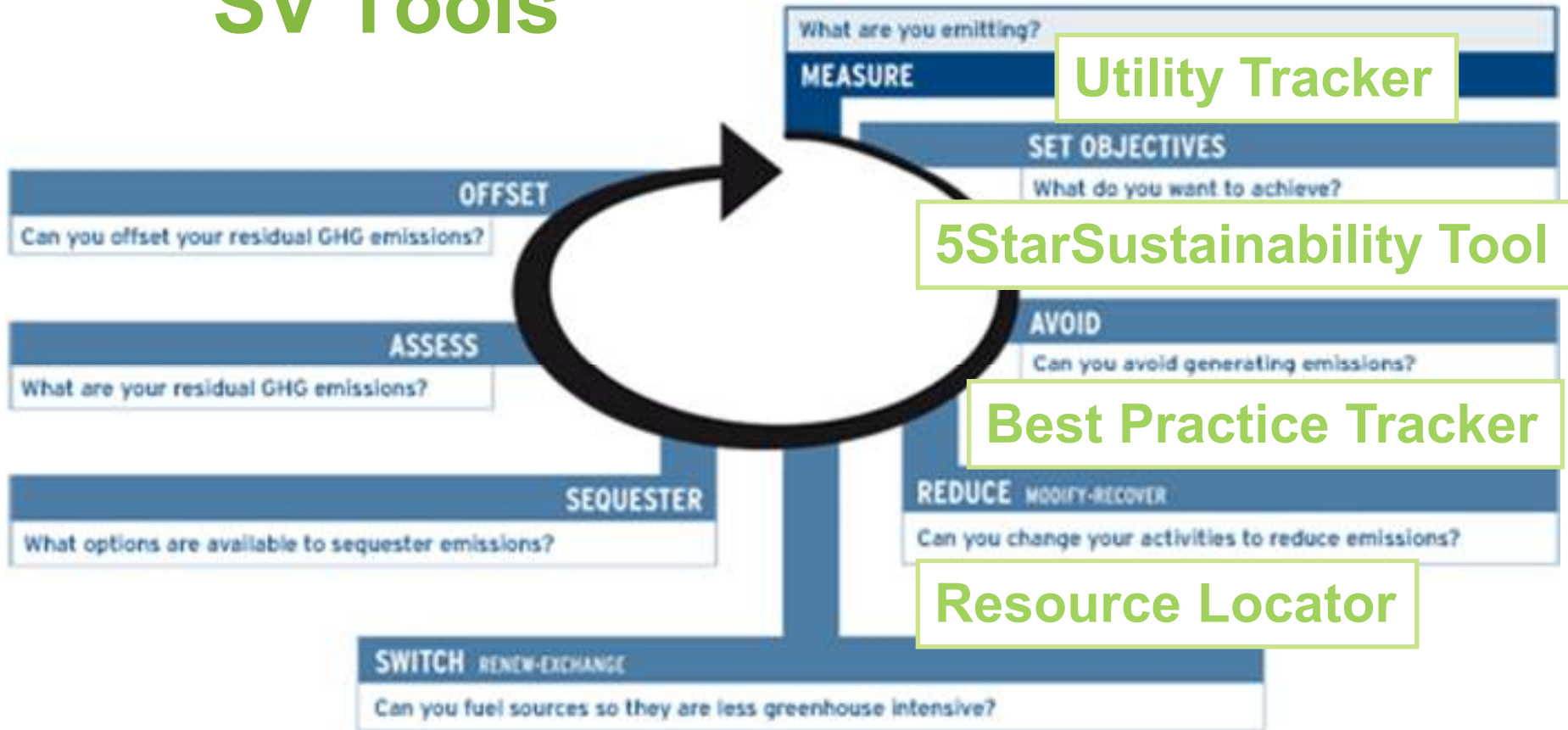
Carbon Management Principles



<http://www.epa.vic.gov.au/climate-change/carbon-management/#principles>

Carbon Management Principles

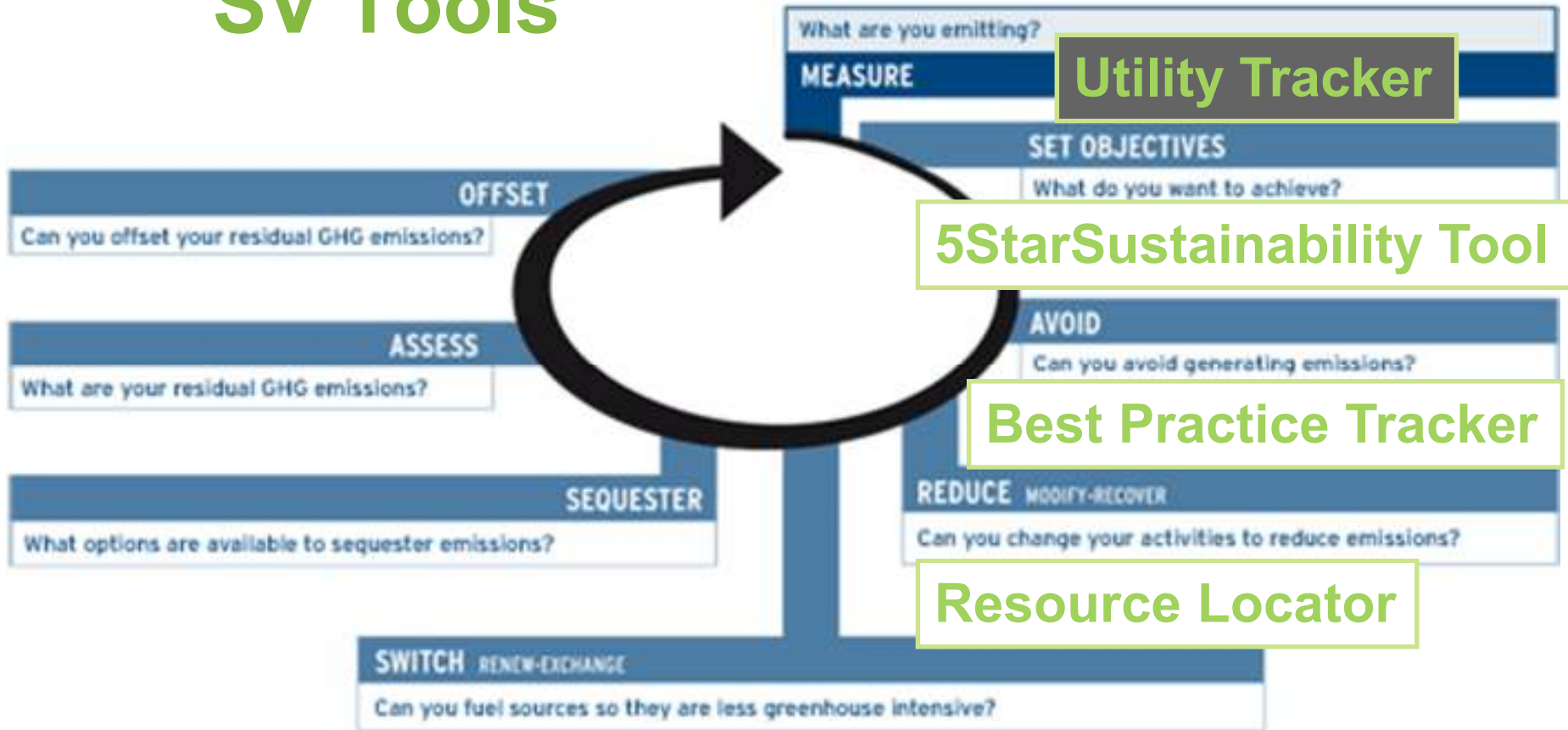
SV Tools



<http://www.epa.vic.gov.au/climate-change/carbon-management/#principles>

Carbon Management Principles

SV Tools



<http://www.epa.vic.gov.au/climate-change/carbon-management/#principles>

Utility Tracker

- > Utility Tracker is a stand alone utility management application designed for use by local government
- > Allows monitoring and reporting on usage and associated environmental impact of:
 - Electricity
 - Gas
 - Public lighting
 - Fleet assets
 - Water consumption

Utility Tracker



Utility Tracker

Invoice Detail History

For the report period 1/07/2005 to 30/06/2007

Invoice Date	Period (days)	Invoice Amount	MJ Total	MJ (Peak)	MJ (Off Peak)	CO2 (kg) Production	MJ per m2	MJ per day	Cost per m2	Cost per day
Site Type: Community Facilities										
Site Name: G.SAMPLE CIVIC LIBRARY										
Service: Gas			Supplier: AGL			SA Account No: 53106412401				
MIRN 7726 9841 2784										
04-Mar-07	63	\$367.75	47,602	0	0	3,018	2380.10	756	\$18.39	\$5.84
02-Apr-07	62	\$225.80	27,532	0	0	1,746	1376.60	444	\$11.29	\$3.64
30-Jul-07	63	\$439.50	59,636	0	0	3,781	2981.80	947	\$21.98	\$6.98
28-Nov-06	62	\$624.15	87,660	0	0	5,558	4383.00	1,414	\$31.21	\$10.07
27-Sep-06	58	\$1,075.50	159,923	0	0	10,139	7996.15	2,757	\$53.78	\$18.54
31-Jul-06	61	\$1,528.20	245,149	0	0	15,542	12257.45	4,019	\$76.41	\$25.05
31-May-06	148	\$900.10	138,972	0	0	8,011	6948.60	939	\$45.01	\$6.08
03-Jul-06	58	\$263.40	34,375	0	0	2,179	1718.75	593	\$13.17	\$4.54
Summary		\$5,424.40	800,849	0	0	56,774				
Service Summary		\$5,424.40	800,849	0	0	56,774				
Site Summary		\$5,424.40	800,849	0	0	56,774				

Site Name: G.SAMPLE ENTERTAINMENT CENTRE

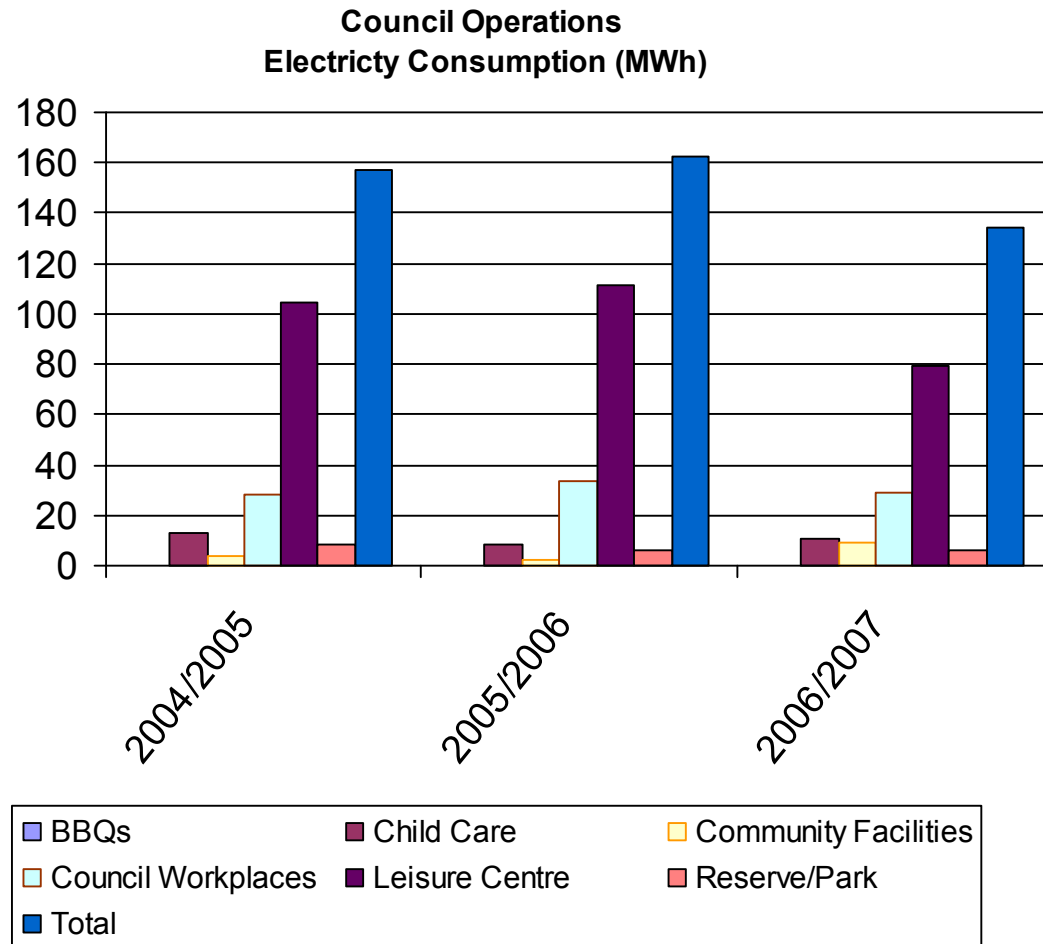
Service: Gas			Supplier: AGL			SA Account No: 53102385898				
MIRN 7758 9049 2199										
08-May-07	64	\$37.40	585	0	0	37	29.25	9	\$1.87	\$0.58
05-Mar-07	60	\$33.50	38	0	0	2	1.90	1	\$1.68	\$0.56
04-Jul-07	64	\$41.60	1,204	0	0	76	60.20	19	\$2.08	\$0.65
01-Nov-06	61	\$76.40	5,836	0	0	345	271.80	89	\$3.82	\$1.25

Wednesday, 23 June 2010

Page 1 of 5

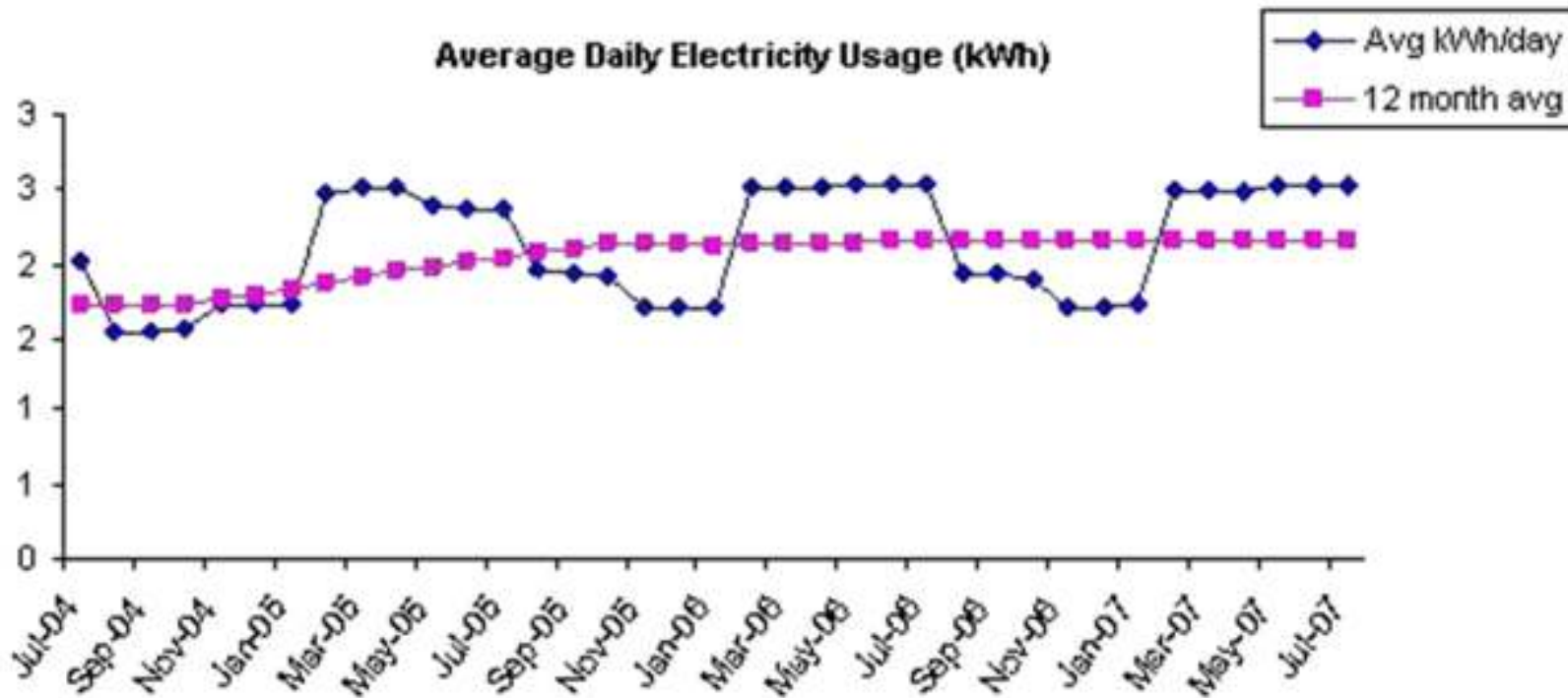
Utility Tracker

> Performance may vary in different operational areas e.g. Leisure Centres v Offices



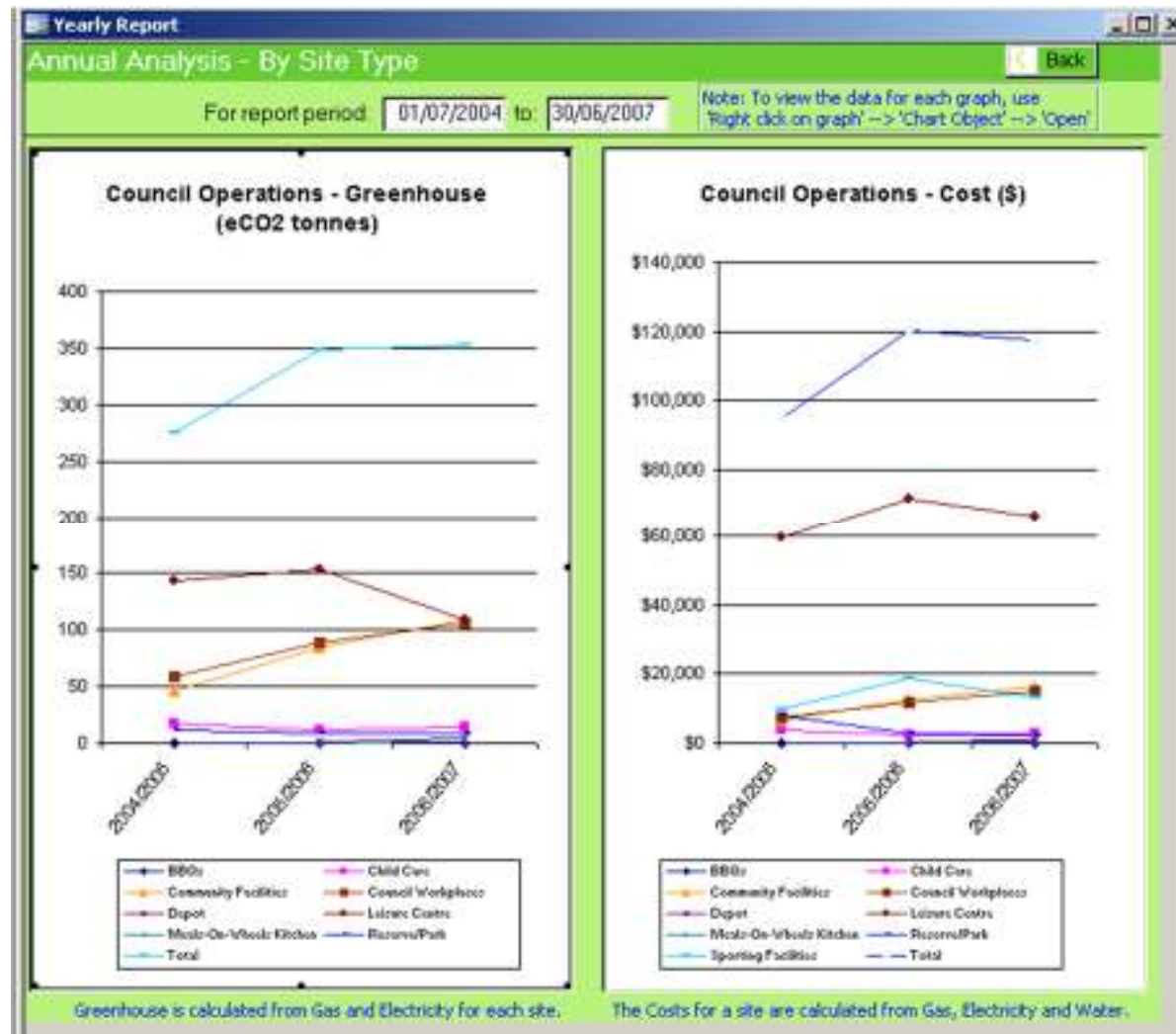
Utility Tracker

> Ideally establish position over a number of years



Utility Tracker

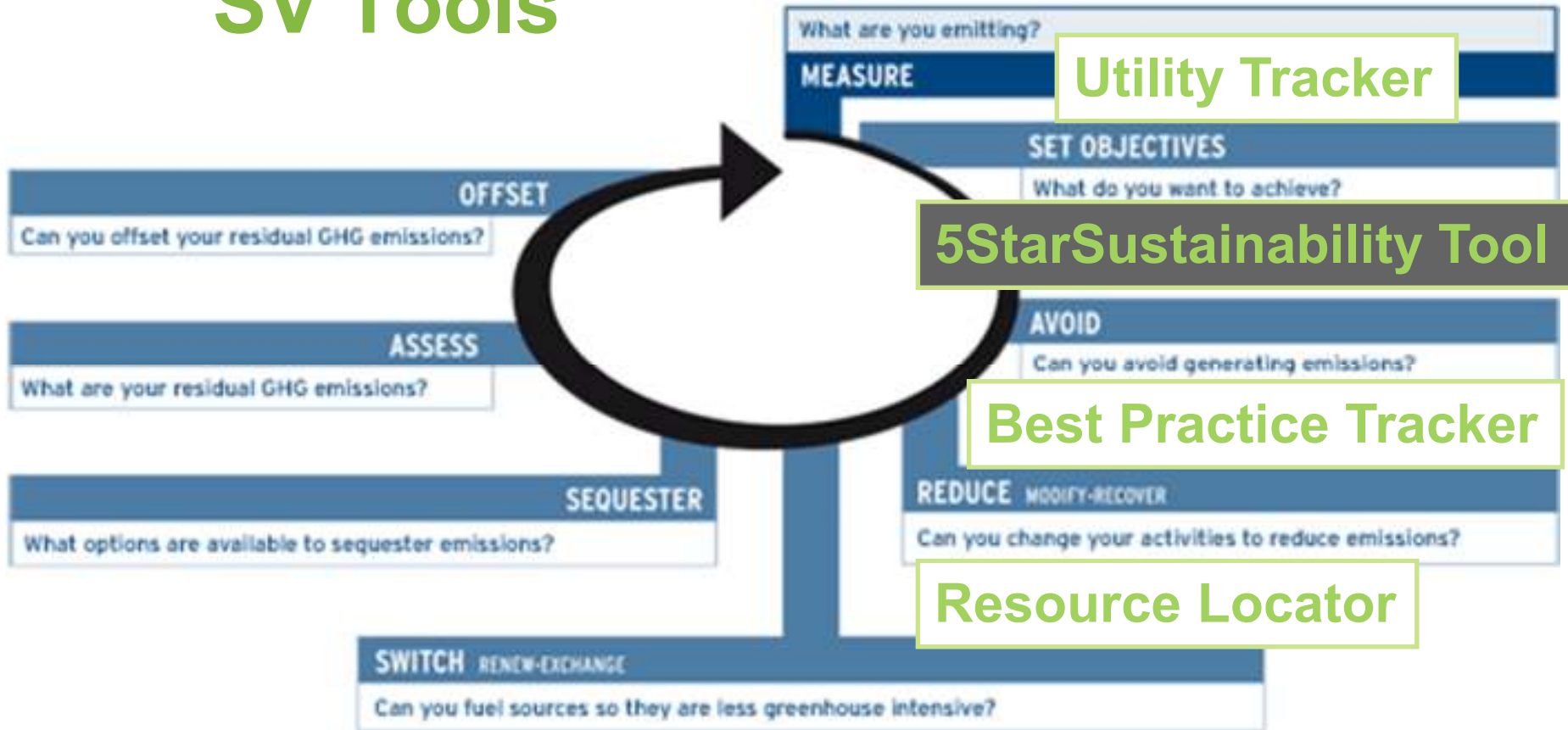
- > View GHGs and costs across the council



www.resourcesmart.vic.gov.au/for_government/energy_2310.html

Carbon Management Principles

SV Tools



<http://www.epa.vic.gov.au/climate-change/carbon-management/#principles>

5StarSustainability Tool

- > Transition from Waste Wise
- > Strong support from local government
- > Use entirely voluntary

5StarSustainability Tool

Each level in 5Star is a recognition of something above 'business as usual'

1 Star Set up & on the way
“Committed and active”

2 Stars Demonstrating ResourceSmart outcomes

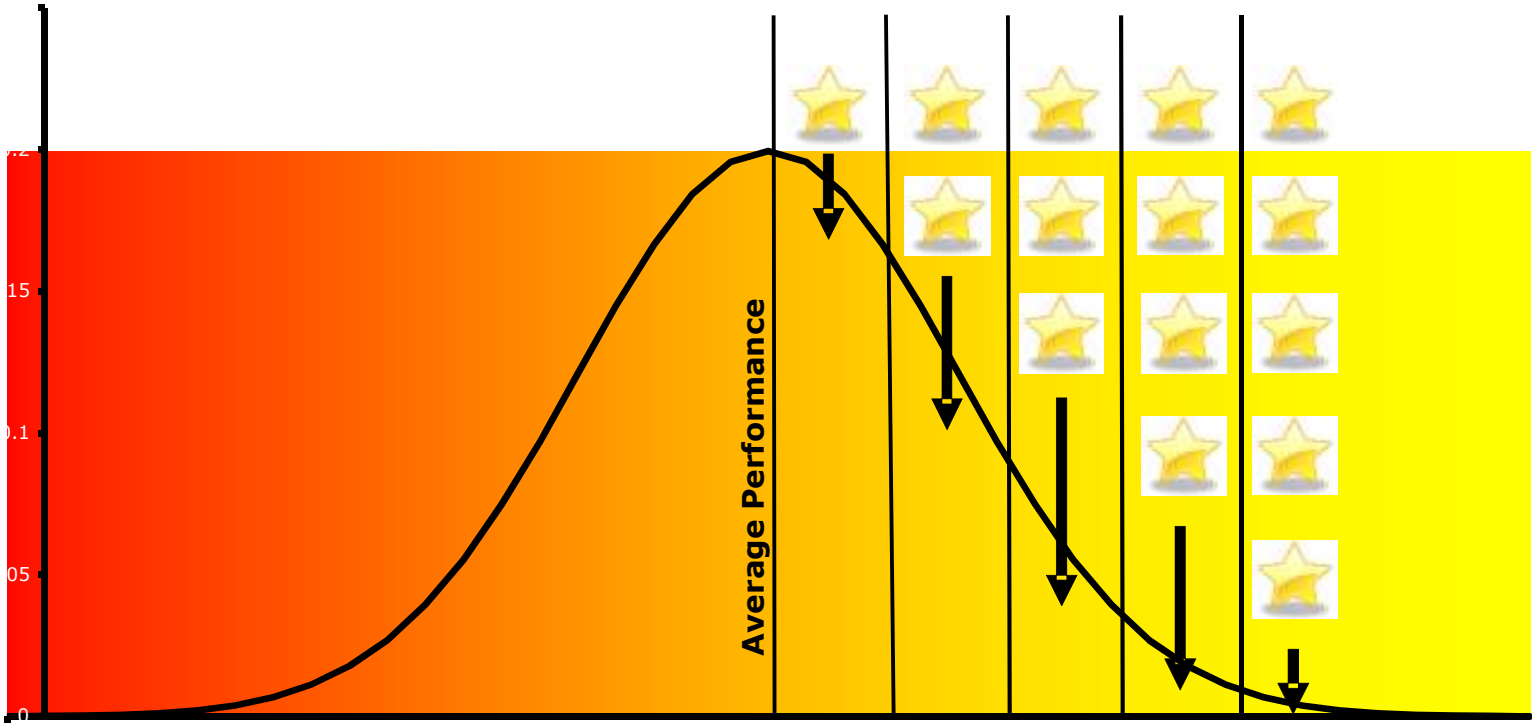
3 Stars Performing within the sector
“Tracked improvement”

4 Stars At your best
“Performance exemplar”

5 Stars Showing others the way
“Leading with influence”

5StarSustainability Tool

Normal Distribution of all Local Governments and their Eligibility for Star Rating



Normal Distribution of local government sustainability practices

5StarSustainability Tool

- > Identifies current level of performance
- > Indicates resources that will assist to improve performance
- > Provides the option of certification
- > Simple to use

5StarSustainability Tool



Questionnaire

- Internal Environmental Management
- Key Service Delivery
- Infrastructure and Facilities
- External Engagement
- Greenhouse Gas Emissions/Energy
- Water
- Internal Waste Management
- Procurement
- Responding to Climate Change

Part 1: Internal Environmental Management

Help With This ?

Please choose "Yes" if the statement accurately describes Internal Environmental Management at your organisation. If the statement does not apply choose "No".

Hide Forever x

Corporate commitment

Help With This ?

1 - Has Council clearly articulated its environmental goals and commitments in the most recent Council Plan? AND Does Council have a strategy or similar that outlines how these commitments will be achieved? Yes No

About this question

Does the most recent Council Plan include specific references to environmental actions and objectives. This could also include environmental targets. This question also requires that Council has a plan/strategy outlining how these commitments are to be achieved

5StarSustainability Tool



Questionnaire

- Internal Environmental Management
- Key Service Delivery
- Infrastructure and Facilities
- External Engagement
- Greenhouse Gas Emissions/Energy**
- Water
- Internal Waste Management
- Procurement
- Responding to Climate Change

Part 5: Greenhouse Gas Emissions/Energy

[Help With This](#)

Management

[Help With This](#)

1 - Has Council made a formal commitment to reducing energy and/or greenhouse gas emissions from Council's activities? Yes No

About this question

A commitment might take the form of a policy, targets or objectives that are publicly available. A formal commitment must be endorsed by Council.

You can upload evidence now

5StarSustainability Tool



Report

- [Select All/Unselect All](#)
- Internal Environmental Management
- Key Service Delivery
- Infrastructure and Facilities
- External Engagement
- Greenhouse Gas Emissions/Energy
- Water
- Internal Waste Management
- Procurement
- Responding to Climate Change

Overall Performance



Internal Environmental Management +	★★★★☆
Key Service Delivery +	★★★★☆
Infrastructure and Facilities +	★★★★☆
External Engagement +	★★★☆☆
Greenhouse Gas Emissions/Energy +	★★★☆☆
Water +	★★★★★
Internal Waste Management +	★★★★☆
Procurement +	★★★☆☆
Responding to Climate Change +	★★★★☆

5StarSustainability Tool



Report

- [Select All/Unselect All](#)
- Internal Environmental Management
- Key Service Delivery
- Infrastructure and Facilities
- External Engagement
- Greenhouse Gas Emissions/Energy
- Water
- Internal Waste Management
- Procurement
- Responding to Climate Change

Overall Performance



Internal Environmental Management +



Key Service Delivery -



Strategic, Statutory Planning & subdivisions



You have achieved 2 Stars in this element. This means you provide opportunities for staff to attend formal training and forums that contribute to the organisations knowledge of best environmental practices.

[Newsletter Proposal 100621.doc](#) 0.03 MB

Natural resource management, waterways & biodiversity



You have achieved 3 Stars in this element. This means that you have adopted management programs and plans for significant biodiversity assets and have undertaken a review of their effectiveness.

Waste Management



You have achieved 2 Stars in this element. This means you have adopted a Waste Management Strategy to assist with the management of community waste.

<http://www.available2ndquarter2010-11>

Carbon Management Principles

SV Tools



<http://www.epa.vic.gov.au/climate-change/carbon-management/#principles>

Best Practice Tracker

The Best Practice Tracker is an online tool designed to:

- > Help you benchmark a facility's energy and water performance against other comparable facilities.
- > Estimate how much energy can be saved by following recommended energy conserving actions.
- > Currently hold data on aquatic centres, libraries, child care, depots and offices.





Best Practice Tracker

Site 	Site Differentiation 	Pool Surface Area(M ²) 	Weekly Operating Hours 	Previous Measures Implemented 
Test Pool	Creche, Gym, Spa,	12,000	85	Use low flow showerheads and water restrictors , Fit aerators and flow
88	Basketball Court, Waterslide, r	500	60	
84	Gym, Sauna, Basketball Court,	0	70	
71	Gym, Spa, Activity Room,	725	98	Use low flow showerheads and water restrictors , Upgrade EXIT signs to new LED
69	Gym, Spa, Activity Room,	1,230	130	Pool covers, Use low flow showerheads and water restrictors ,
68	Gym, Spa, Activity Room,	1,230	130	Pool pump setback, Pool covers, Use low flow showerheads and
63	Gym, Spa, Sauna,	500	100	Temperature settings - widen dead-band, Enable powersave mode on all
56	Gym, Spa, Sauna,	0	102	Use low flow showerheads and water restrictors

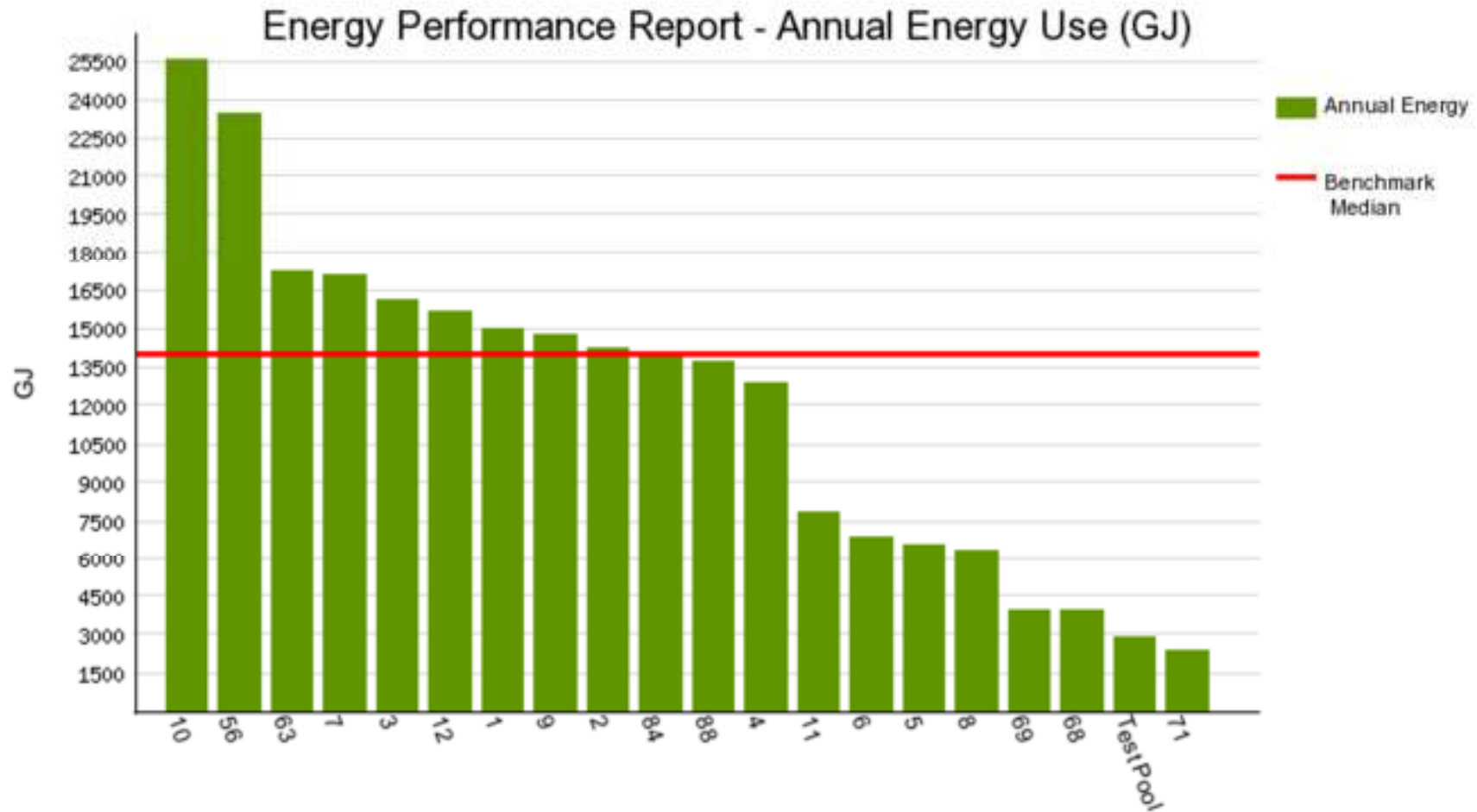
Best Practice Tracker

Site 	Annual Electricity Use(kWh) 	Annual Gas Use (MJ) 	Annual Energy Use (GJ) 
10	2,269,610	17,310,233	25,481
56	2,179,144	15,492,921	23,338
63	358,594	15,859,690	17,151
7	676,831	14,559,000	16,996
3	734,122	13,390,190	16,033
12	920,104	12,250,000	15,562
1	746,608	12,224,304	14,912
9	1,018,019	10,961,282	14,626
2	982,778	10,581,000	14,119
84	1,271,256	9,432,379	14,009
88	1,000,000	10,000,000	13,600
4	808,120	9,882,948	12,792
11	347,316	6,489,333	7,740
6	499,472	4,980,539	6,779
5	420,916	4,999,125	6,514
8	355,397	4,967,978	6,247
69	1,075,293	0	3,871
68	1,075,293	0	3,871
Test Pool	500,000	1,000,000	2,800
71	638,286	0	2,298

Best Practice Tracker

Site 	Annual Electricity Use(kWh/M ²) 	Annual Gas Use (MJ/M ²) 	Annual Energy Use (GJ/M ²) 
63	717	31,719	34.3
12	1,974	26,288	33.4
2	2,184	23,513	31.38
7	1,213	26,091	30.46
1	1,422	23,284	28.4
88	2,000	20,000	27.2
3	1,182	21,562	25.82
6	1,816	18,111	24.65
5	1,498	17,790	23.18
10	1,891	14,425	21.23
8	1,173	16,396	20.62
4	1,171	14,323	18.54
9	1,016	10,939	14.6
11	242	4,519	5.39
71	880	0	3.17
68	874	0	3.15
69	874	0	3.15
Test Pool	42	83	0.23
84	0	0	0
56	0	0	0

Best Practice Tracker



Best Practice Tracker

Your Tariffs are :

Electricity Tariff: \$0.1 Per kWh








Gas Tariff: \$0.02 Per MJ

We recommend the commissioning of an Energy / Water audit if you require more accurate estimates.

Select a savings measure from the list below you would like to consider.

- | | | |
|---|--|--|
| <input type="checkbox"/> Lower hot water temperatures - electric domestic hot water | <input type="checkbox"/> Lower hot water temperatures - gas domestic hot water | <input type="checkbox"/> Compact fluorescent lighting upgrade |
| <input type="checkbox"/> Enable powersave mode on all copiers | <input type="checkbox"/> Timers on drinks fridges | <input type="checkbox"/> Timers on tea and coffee boilers |
| <input type="checkbox"/> Run out timers on air conditioners | <input type="checkbox"/> Temperature settings - widen dead-band | <input type="checkbox"/> Upgrade EXIT signs to new LED illuminated signs |
| <input type="checkbox"/> Use low flow showerheads and water restrictors | <input checked="" type="checkbox"/> Pool covers | <input type="checkbox"/> Pool pump setback |
| <input checked="" type="checkbox"/> Lower pool temperatures | <input type="checkbox"/> Pool temperature setback | <input checked="" type="checkbox"/> Spa filtration off overnight |
| <input type="checkbox"/> Delamp | <input type="checkbox"/> Install occupancy sensors | <input type="button" value="Calculate Savings"/> |

Best Practice Tracker

Opportunity 	Total elec savings (kWh) 	Total gas savings (MJ) 	Total cost savings (\$) 	Cost of measure (\$) 	Total energy saved (GJ) 	Simple payback (years) 	Remove From List
Pool covers	23,400	800,000	7,090	30,000	884	4.23	<input type="button" value="Remove"/>
Lower pool temperatures	0	150,000	3,000	200	150	0.07	<input type="button" value="Remove"/>
Spa filtration off overnight	4,657	13,562	401	408	30	2.00	<input type="button" value="Remove"/>
Total Savings / Overall Payback	28,057	963,562	10,491	30,608	1,064	2.92	

Best Practice Tracker

Savings Report

Pool cover

Benefit

A pool cover cannot be recommended strongly enough. It will provide multiple benefits: energy savings - both gas and electrical savings, reduced chemical use, reduction in night time condensation and a reduction in the likelihood of rust forming in the roof structure. Nonetheless, pool operators generally dislike pool covers, as they mean more work for the staff. To help overcome this problem the pool winders should be motorised, and set up in such a way that it is easy and fast to put the covers on and take them off. They should be used any time that the pool is expected to be unused for more than 2 or 3 hours. In our opinion, the use of pool covers is non-negotiable. Maximum benefit will be gained if the air heating system is turned off when the covers are deployed.

What you need to do

Check all indoor heated pools and spas for pool covers. If the pool does not have a cover then the area around the pool will need to be analysed for suitability. Pool covers can be mounted up high, so often there is a solution for most pools. Once pool covers are installed, it is important to place the air handling systems on time clocks (if not already) and program the units to switch off half an hour after close and switch back on when the pool covers are pulled off. An alternate option to switching the air handling off completely is to dramatically reduce the overnight air flow volume through the installation of a Variable Speed Drive and control system. The purpose of this system is to slow down the rate of air changes and reduce the fan energy usage. Air heating should be switched off over night when the pool covers are deployed.

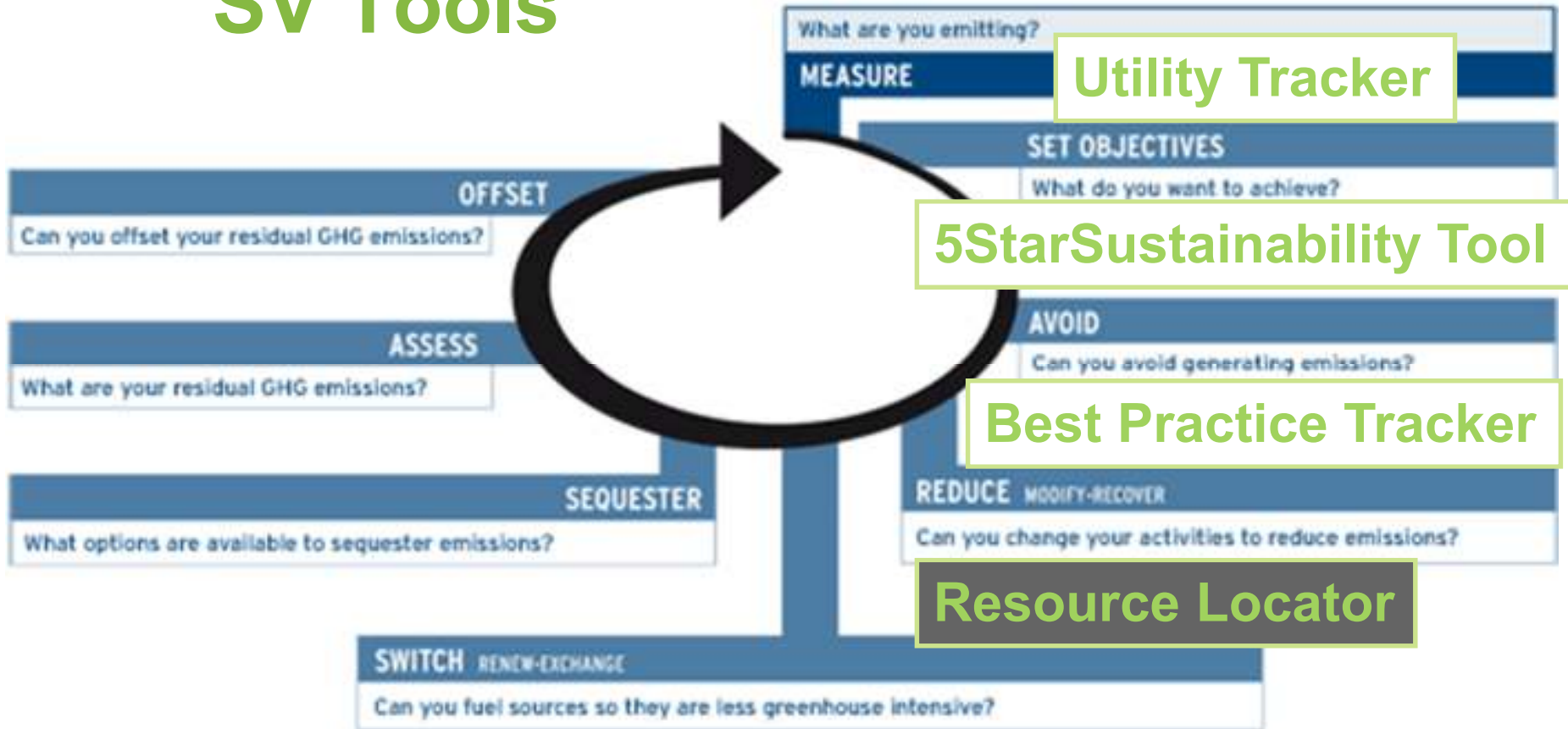
Calculations Summary

Total Elec Savings (kWh)	Total Gas Savings (MJ)	Total Cost Savings (\$)	Cost of Measure (\$)	Simple Payback (Years)
23,400	800,000	\$7,090	\$30,000	4.23

<http://www.bpt.carbonetix.com.au>

Carbon Management Principles

SV Tools



<http://www.epa.vic.gov.au/climate-change/carbon-management/#principles>

Sustainability Resource Locator

The screenshot shows the 'resourceSmart' website. At the top left is the logo. A green navigation bar contains a search box with the text 'Site Search' and a magnifying glass icon. On the left is a vertical menu with categories: Home, Behaviour Change, Biodiversity, Climate Change, Energy, Organisation Planning, Planning, Procurement, Sustainable Building, Waste, and Water. The main content area features the title 'Local Government Sustainability Resource Locator' and a welcome message. Below this is a tag cloud with terms like 'ABGR', 'Action Plan', 'Actions', 'Activities', 'Adaptation', 'atmosphere', 'Behaviour', 'Bike-share', 'Car Pool', 'carbon', 'Carbon Neutral', 'Fleet Program', 'Case Study', 'Efficiency', 'Emissions', 'Energy', 'Sustainability', 'Sustainable Design', 'waste', 'Waste Management', and 'water'. On the right, there is an image of hands holding a small plant. Below the image is a 'Featured Resources' section with expandable items: 'Behaviour Change (1)' and 'Biodiversity (1)'. At the bottom, there are sections for 'Popular Links' and 'Newly Added Links' with chain-link icons.

Sustainability Resource Locator

The screenshot shows the 'resourceSmart' website interface. At the top left is the 'resourceSmart' logo. Below it is a navigation menu with items: Home, Behaviour Change, Biodiversity, Climate Change, Energy, Organisation Planning, Planning, Procurement, Sustainable Building, Waste, and Water. To the right is a search bar with the text 'Site Search' and a magnifying glass icon. The main content area is titled 'Local Government Sustainability Resource Locator'. It features a list of categories on the left: Accountability, Business Planning, Data Management, Governance, Monitoring, Policy, Reporting, and Sustainability Plans. The main text area contains introductory text and a tag cloud with terms like 'Activities', 'Adaptation', 'atmosphere', 'Pool', 'carbon', 'Case Study', 'Efficiency', 'sustainability', 'waste', and 'Waste Management'. On the right side, there is an image of hands holding a small plant, and a 'Featured Resources' section listing 'Behaviour Change (1)' and 'Biodiversity (1)'. At the bottom, there are sections for 'Popular Links' and 'Newly Added Links' with chain-link icons.

Sustainability Resource Locator



resourceSmart

- Home
- Behaviour Change
- Biodiversity
- Climate Change
- Energy
- Organization Planning**
- Planning
- Procurement
- Sustainable Building
- Waste
- Water

Search 

Home > Organisation Planning > Reporting

Reporting

Reporting is crucial to map your improvement over time and also increasing necessary due to local, national and international guidelines.



EPA - Victorian Government Environment Management System

[See full details >>](#)

This page provides information about Government leading by example in developing an Environmental Management System

http://www.epa.vic.gov.au/projects/government_ems.asp

NAB - GRI Index 2008

[See full details >>](#)

NAB's 2008 Corporate Responsibility Report covers operations for the 12 months to 30 September 2008. It follows the benchmark triple bottom line reporting framework of the Global Reporting Initiative (GRI)

Sustainability Resource Locator

resourceSmart

Home > Organisation Planning > Reporting
EPA - Victorian Government Environment Management System

EPA - Victorian Government Environment Management System

This page provides information about Government leading by example in developing an Environmental Management System



- ▶ **Resource Name:** EPA - Victorian Government Environment Management System
- ▶ **Resource Type:** Web Page
- ▶ **Resource Link:**
http://www.epa.vic.gov.au/projects/government_ems.asp
- ▶ **Resource Description:**
This page provides the following information on Environmental Management Systems (EMS):

Sustainability Resource Locator



The screenshot shows the EPA Victoria website. At the top, there is a navigation bar with links for 'Site map', 'Subscribe', 'Careers', and 'Contact details'. Below this is a banner image of a woman in a hat and safety vest. The main content area is titled 'Victorian Government Environment Management System' and includes a list of topics such as 'Government leading by example', 'Implementation', and 'How does the EMS integrate existing government programs and initiatives?'. A sidebar on the left contains a menu with categories like 'About EPA', 'Air', 'Land', 'Noise', 'Waste', 'Water', 'Climate change', 'Environmental auditing', 'Litter', 'Partnerships and projects', 'Working together to reduce red tape', 'Brian Robinson Foundation', 'Channel Deepening Project - Port Phillip Bay', and 'Inspiring Environmental Solutions - Community'. A 'Resources' section on the right lists various documents and reports.

Site map | Subscribe | Careers | Contact details:



Home | [Partnerships and projects](#) | Victorian Government Environment Management System

Victorian Government Environment Management System

This page provides information about the following topics:

- [Government leading by example](#)
 - [What is an EMS?](#)
 - [Who is involved?](#)
 - [What are the aims?](#)
 - [What does the EMS cover?](#)
 - [Auditing](#)
 - [Environmental reporting requirements](#)
- [Implementation](#)
- [How does the EMS integrate existing government programs and initiatives?](#)

Government leading by example

In February 2002, at the national Business Leaders Forum on Sustainable Development, the Victorian Premier Steve Bracks announced his commitment to introduce best practice business tools for environmental management in Government departments. Under this initiative, Victorian Government departments are required to:

- adopt an Environment Management System (EMS)
- develop an environment improvement plan which includes waste reduction targets

Resources

- ④ [Ecological Footprint](#)
- ④ [Environmental Management Accounting Project](#)
- ④ [Environmental Management Systems](#)
- ④ [Life cycle management](#)
- ④ [Sustainability coverage](#)
- ④ [United Nations Environment Programme Finance Initiative \(UNEP FI\)](#)

Change size P

Partnerships and projects

- [Working together to reduce red tape](#)
- [Brian Robinson Foundation](#)
- [Channel Deepening Project - Port Phillip Bay](#)
- [Inspiring Environmental Solutions - Community](#)

<http://municipal.resourcesmart.vic.gov.au>

“Planning is an unnatural process; it is much more fun to do something. The nicest thing about not planning is that failure comes as a complete surprise, rather than being preceded by a period of worry and depression.”

Sir John Harvey-Jones

*ex Chairman ICI and presenter of BBC's
Troubleshooter*

“The first thing to do when you are stuck in a hole is to stop digging.”

Sir John Harvey-Jones

*Ex Chairman ICI and presenter of BBC's
Troubleshooter*