



Energy Efficiency for Small Business Program

Energy Assessment Action Plan for Example Office

1. Why is energy efficiency important to your business?

Often just small changes like making better use of natural light or increasing your air conditioning thermostat by one degree in summer can make a big difference to the cost of your power bills over a year, and reduce carbon pollution.

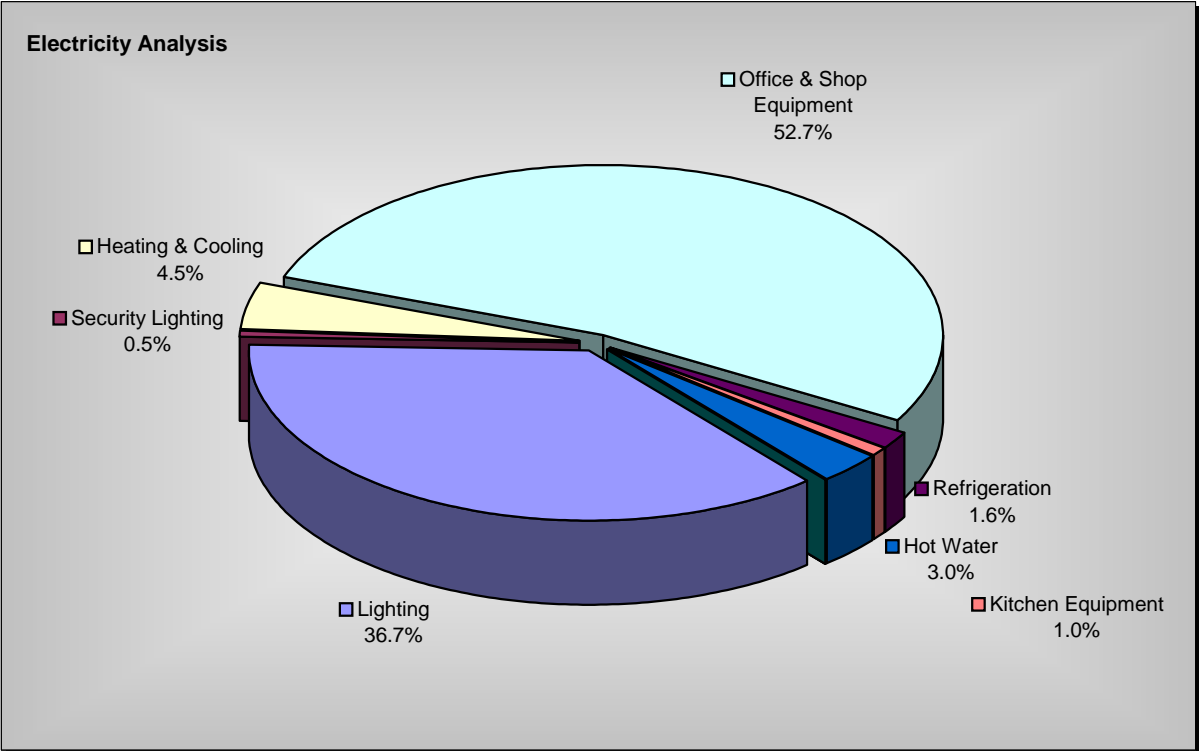
Over the long term, significant energy and financial savings can be achieved by operating existing equipment more efficiently or replacing outdated equipment.

The Energy Efficiency for Small Business Program, a part of the NSW Government's Energy Efficiency Strategy, will help you achieve this. By providing a subsidised energy assessment and rebates for the purchase and installation of technologies that use less energy, you can use more efficient equipment, design more efficient processes and change staff behaviour, reducing your energy use and saving you money.

Congratulations on taking this important step towards becoming a more energy efficient and environmentally friendly business.

2. Current Energy Use

From billing details supplied, the annual electricity costs for your business are \$86954.88 which is equivalent to approximately 706.1 tonnes of GHG per annum. This electricity consumption can be broken down as follows:



3. Energy Efficiency Action Plan

Following your onsite energy assessment, this Action Plan will recommend ways you can save electricity by improving the efficiency of existing equipment or installing new equipment that is more energy efficient. Return on investment timeframes are included for each action identified.

No Cost Energy Saving Actions

As a participant of the Energy Efficiency for Small Business Program you have agreed to commit to implementing no cost energy saving opportunities. Your Energy Assessor has identified these actions as follows:

Action
Reduce unnecessary use of lighting, install time switches. These can be push buttons or time delay switches. Note: time switches are relatively cheap and simple to install. Install sensor devices to automatically turn lighting on and off (e.g. when a room is not in use) and to control dimming, ensure external lighting is not in use during the day.
Help staff/personnel to use lights only when needed: locate switches throughout each area of a building to take into account the usage patterns of work areas, avoid having one or only a few switches controlling lights in large areas.
Educate all staff/personnel in the best practice use of lighting: remind staff to switch off lights when not needed (e.g. turning off lights in storerooms, toilets, meeting rooms etc. when not in use), provide easy to read signage near all lights that remind staff/personnel to turn off lights when not in use. Note: All personnel including cleaners, security guards and other contractors should be aware of best practice
Ensure your lighting is operating at its optimum level: keep lights and light coverings clean. Dirt and dust reduces light output and the life expectancy of lighting.
Set your thermostat to between 24°C and 27°C in summer and to between 18°C and 20°C in winter. For every degree you raise your air conditioning set point in summer or lower your set point in winter, you will save up to 10% in energy use.
Maintain air conditioning systems according to the manufacturer's instructions. This includes ensuring that the system is free of dust; burners, coils and filters are clean, pipes are insulated; and there are no leaks. This ensures equipment is operating efficiently, saving energy and costs.
Turn off equipment that is on standby power and save up to 10% energy use. A simple action of turning off devices such as computers overnight or when not in use for extended periods is a zero cost opportunity for energy savings.
Switch computers to most efficient power saving mode. Savings of up to 40% can be made.
Check refrigeration seals regularly. Seals in poor condition allow cool air to escape, resulting in higher energy consumption and costs. Refrigeration Seal Test: Close the door on a \$5 note. If you can easily pull the note out then you need to replace the seals. Visually inspect the seals for cracks and signs of wear, particularly at the bottom of the door.
Fridges that require defrosting should be defrosted 2 to 3 times per year. Defrosting maintains the efficiency of the refrigeration unit.
Switching off all kitchen equipment at the powerpoint saves you money. Equipment that is in 'standby' mode is still using up to 10% of overall energy use.
Use cold water for dishwashers that heat water as part of their wash process. If your dishwasher heats water during the operating cycle do not connect the machine to the hot water tap.
Use dishwashers only when full to conserve energy and water.
When replacing equipment, ensuring that it has been certified by Energy Star is guaranteed to save you money.

Worthwhile Low Cost Energy Saving Opportunities

By making the following low cost changes you could save approximately \$9529.19 annually.

Number	REPLACEMENT TYPE	DESCRIPTION	Estimated Cost	Potential Savings pa	Payback (months)
1	LIGHTING	Replace 50W with 35W IRC halogen downlight - 80 in Offices	\$1,756	\$2,562.48	8
2	HOT WATER	Install timer on Zip HWS	\$135	\$77.22	21
3	LIGHTING	Install 13 Voltage Reduction Units	\$12,155	\$6,889.49	21
TOTAL			\$14,046	\$9,529.19	

Actions Eligible for REBATE (greater than 2 year payback)

The following table lists the actions that will improve energy efficiency and result in cost savings for your business. Preference should be given to implementing these actions, in the order of priority as listed.

Number	REPLACEMENT TYPE	DESCRIPTION	Estimated Cost	Potential Savings pa	Payback (years)
1	LIGHTING	Install Fluorescent T5 Conversion Kits - 880 in Offices	\$39,600	\$8,341.14	4.7
2	LIGHTING	Install Fluorescent T5 18W Conversion Kits - 25 in Offices	\$1,000	\$138.91	7.2
3	SECURITY LIGHTING	LED Exit sign - 40 in	\$9,800	\$352.99	27.8
TOTAL			\$50,400	\$8,833.04	

The energy efficiency technologies identified in the table above are projected to save you \$8833.04 per year. Once the technologies are installed and have been paid off you will have an ongoing saving which can be used to develop your business.

4. Applying for a rebate

This Action Plan has provided you with a range of opportunities for reducing your businesses operating costs and greenhouse gas emissions. It is suggested that you implement the no cost/low cost initiatives as soon as practicable, preferably within a period of 3 months from the date of the assessment.

In order to qualify for financial assistance through the Energy Efficiency for Small Business Program, the installation of energy efficient technologies with a greater than 2 year payback will need to occur within 6 months of the date of this assessment.

Rebates will be paid for improvements to lighting, including skylights, heating, ventilation and air conditioning, boilers, air compressors, commercial refrigeration, electric motors, insulation and hot water systems.

Preference should be given to implementing energy saving opportunities in the order of priority as listed in the table above. A Certificate of Participation will be sent to you, recognising your efforts in reducing greenhouse gas emissions and your participation in the Energy Efficiency for Small Business Program.

5. Further information

Email address for obtaining rebate application form sustainbus@environment.nsw.gov.au

The following product information web sites and associations may be able to assist you with your retrofit:

Selection of energy efficient products with energy rating -	www.energyrating.gov.au
Compressed air suppliers -	www.compressedair.net.au
Refrigeration association and suppliers -	www.raccansw.asn.au
Specialist Contractors of Air Conditioning Dealers Association -	www.acda.com.au
National Electrician and Communications Association -	www.neca.asn.au
Directory of suppliers of energy services and products -	www.energysmartallies.com
Site to help consumers choose products -	www.choice.com.au
Selection of environmental construction products -	www.infolink.com.au
Suppliers of sustainable products -	www.sustainablechoice.com.au

6. Disclaimer

This report documents the results of preliminary observations and analysis of material provided to Advitech by the business.

In preparing the report, we have relied upon information provided by Department of Environment and Climate Change, the business and others through referral to form our conclusions. Whilst we have reviewed this information to assess its reasonableness and internal consistency, we are not able to take into account specific and/or abnormal circumstances that may impact your energy use. In particular, where a lighting reduction unit has been recommended clients should ensure that adequate lighting levels are maintained when the unit is in use. In this regard the manufacturer's instructions regarding lamp replacement should be adhered to.

Savings estimated in this report may be understated due to the impact of Time of Use pricing (where applicable). Average costs have been assumed, however where appliances primarily operate during peak pricing periods, replacement costs will be even more attractive.

The findings, conclusions and recommendations and all written material contained in the report represents our best professional judgement based on estimated and generic data and visual inspection where appropriate. Recommendations have assumed average conditions and historical usage.

Advitech warrants that our services have been performed in a professional manner and in accordance with applicable professional standards.

