

# CitySwitch Green Office Sustainability Action Plan – Small Business

## Organisation details

- Organisation name:
- Address:
- Energy Manager:
- Contact details:
- Number of employees in office:
- NABERS rating commitment: 5 stars
- Current accredited NABERS rating and expiry date (if applicable):

## Recommendations summary

Recommendations	Costs Estimate / Potential saving	Priority
Light switches – installing switches into the three offices allows the lights to be turned off if there is enough daylight or if there is no one in the room.	Approximately \$500 per office	High
Ensure MFD is switched off each day or goes to inactive mode after one hour of inactivity	Zero cost	High
Daylight sensors – allows the lights to be automatically switched off if there is enough daylight (to be done as a potential alternative to light switching)	Approximately \$550 per light fitting (sensor, wiring, labour)	Medium
Lighting upgrade – T5's	Up to 30% electricity savings approx.	Low
Lighting upgrade – LED tubes	Up to 50%-60% electricity savings plus longer lamp life	Low
Replace PC's with laptops	Up to 70% electricity savings based on PC consumption	Low

### Benchmark NABERS rating input data

- Indicative or accredited rating? Indicative
- Electricity Billing Data = 7061.9 kWh
- Rated area (NLA) = 86m<sup>2</sup>
- Hours of Occupancy = 60 hours per week
- Postcode = 2135
- Computer count = 5

### Benchmark NABERS rating results

– Energy  5 stars

#### Excellent performance

Your office demonstrates excellent greenhouse performance and reflecting excellent design and management practices, high efficiency systems and equipment and/or energy sources with low emissions.

#### Your detailed energy results (Calculator version number 10.0)

Results for the 12 month rating period	NABERS Energy rating	NABERS Energy rating without GreenPower™
Star rating		
GreenPower™ included	0%	0%
Energy intensity	295 MJ/m <sup>2</sup>	295 MJ/m <sup>2</sup>
Total greenhouse gas emissions (scope 1 & 2)	6144 kg CO <sub>2</sub> -e p.a.	6144 kg CO <sub>2</sub> -e p.a.
Total greenhouse gas emissions (full fuel cycle – scope 1, 2 & 3)	7415 kg CO <sub>2</sub> -e p.a.	7415 kg CO <sub>2</sub> -e p.a.
Greenhouse gas intensity (scope 1 & 2)	71 kg CO <sub>2</sub> -e/m <sup>2</sup> p.a.	71 kg CO <sub>2</sub> -e/m <sup>2</sup> p.a.
Greenhouse gas intensity (full fuel cycle – scope 1, 2 & 3)	86 kg CO <sub>2</sub> -e/m <sup>2</sup> p.a.	86 kg CO <sub>2</sub> -e/m <sup>2</sup> p.a.
Benchmarking factor (previously know as Normalised Emissions)	56	56

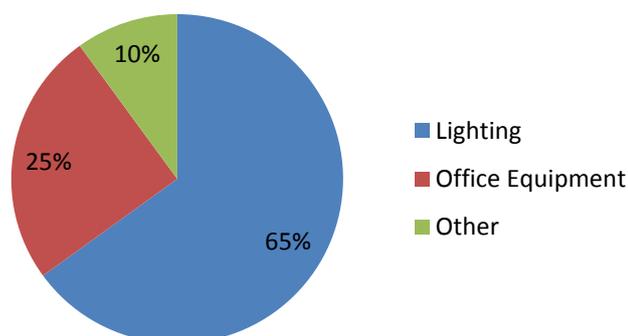
#### – Your energy data source inputs

Fuel type	Quantity	Unit	Emissions (full fuel cycle – scope 1, 2 & 3)	GreenPower™
Electricity	7061.9	kWh	7415 kg CO <sub>2</sub> -e	0.0%

### Sustainability Goals

- To improve or maintain 5 star NABERS Tenancy rating

The pie chart below gives a rough indication of energy usage in this office tenancy. The majority of energy is consumed by the lighting, with office equipment (PC's, printer etc) and other equipment (refrigerator, microwave etc) making up the rest. This means that the biggest potential for savings can be found in the lighting.



The table below lists what reduction in energy usage would need to occur to increase your NABERS tenancy rating. Target for improving by half a star is an average of **3.7kWh** reduction per day.

Possible NABERS Rating	Annual Reduction Needed (kWh)	Reduction needed per day (kWh)
5.5 Stars	1,343.9	3.7
6 Stars	3,249.9	8.9

### Base Building NABERS rating

- No base building rating. Office tower on top of a retail centre. Owners could potentially be asked for one if there is sub-metering or different electricity billing for the retail centre.

## Energy audit summary

The following items were noted from a walk-through of the office.

*You mentioned that lights and PC's were turned off each day by staff however there were offices that were either unoccupied or had ample daylight that still used electric lighting due to the unavailability of separate switching. The possibility of completing a lighting upgrade at this stage was low so initial recommendations (highest priority) would be to look at installing switching into the three offices which have plenty of daylight coming through the windows. Another option would be day light sensors if installing switches was not an option. Costs are below but are approximate only. For detailed costs and feasibility I would recommend speaking to a lighting/energy consultant or electrician. <http://www.ecosmartelectricians.com.au/> has a list of electricians which have been undergone specific energy efficiency training. I recommend getting at least 2-3 quotes for comparison. You could also speak to your building managers to see if they could provide a quote for you.*

Area	Lighting	Equipment
Reception	6 x T8 36w tubes	1 x PC
Kitchenette	3 x T8 36w tubes (no individual switch)	1 x fridge 1x microwave
Corridor & 1 <sup>st</sup> office	12 x 36w T8 tubes	1 x PC
2 <sup>nd</sup> office	3 x 36w T8 tubes	1 x PC, 1 x med MFD
3 <sup>rd</sup> office	6 x 36w T8 tubes	1 x PC
4 <sup>th</sup> office	9 x 36w T8 tubes	1 x PC

**Energy Action Plan**

To be filled out by signatory.

Item	Person Responsible	Est. Completion Date

**Sustainability Action Plan**

For other sustainability items non-energy related (e.g., water, waste, procurement)

Item	Person Responsible	Est. Completion Date

**Example items for Energy Action Plan**

**1/ Lighting (For more information click [here](#))**

- Upgrade lighting to more efficient alternatives such as T5 fluorescent tubes, compact fluorescents or LED technologies
- Install motion sensors in areas where appropriate e.g. meeting rooms, areas which are only rarely used
- Install daylight/photoelectric sensors near windows where ample daylight is received during the day
- Install lighting zoning so certain areas in the office can be switched off if no one is present
- Install a lighting control system which can control all the lighting automatically
- Identify light switches locations and provide information to explain what switches turns on certain areas to staff
- Consider de-lamping areas that may be over lit e.g. corridors
- Educate staff about the importance of switching off the lights when not required. Use posters, emails, meetings, etc.
- Working with cleaners, security or building management to request them to turn off the lights at night if no one is present in the office
- Replace old 'exit' signs with new LED models

## 2/ Office Equipment and Appliances (for more information click [here](#))

- Undertake a night time energy audit to identify what equipment is being left on overnight
- Implement a “Switch Off” policy for equipment, such as computer and monitors, that are being left on
- Put “Turn Off” stickers on computer screens, and light switches where appropriate
- Discuss with IT department about a “power saving mode” policy for computers
- Consider reducing the number of small printers in the office and only having one or two large, energy efficient multi-function devices’
- Turning down the brightness on your monitor can also save a small amount of energy
- Measure and show energy use to staff via posters, emails and labels on equipment
- Consider using laptops rather than PC’s
- Ensure printers and scanners turn to power saving mode after 30 minutes of inactivity
- Replace old, energy intensive items with newer energy efficient (high star rating) models. Go to [www.energyrating.gov.au](http://www.energyrating.gov.au) for more information.
- Clean out your fridge regularly, and make sure seals and thermostat temperatures are correct.
- Put a timer on the zip hot water system so it doesn’t heat at night time

## 3/ Server Room

- Contact IT Service Company for advice on possible energy efficiency options such as virtualisation.
- Check air conditioning unit in Server room, and possibly adjust settings (time of use or degrees). Check with IT before making any changes.
- Consider speaking to some Green IT companies for more detailed advice

## 4/ Electricity and Green Power

- Consider buying Green Power for your tenancy. Your electricity supplier will be able to assist with this.
- It is also worth investigating best current pricing for electricity. Various price comparison websites such as [www.energywatch.com.au](http://www.energywatch.com.au) , [www.goswitch.com.au](http://www.goswitch.com.au) , or talk to your electricity provider.

## 5/ Behaviour Change (for more information click [here](#))

- Implement a “Switch Off” campaign or competition for staff. Set targets and awards for achievements
- Providing information/training on household sustainability. This has shown to improve actions and involvement at work.
- Have a ‘green week’ in the office
- Offer incentives for innovative ‘green’ suggestions for the office
- Weekly emails with a sustainability question or fact

## 6/ Additional Energy Saving Measures

- Ensure that base building air-conditioning sensors are not being blocked as this can cause havoc creating hot spots and cold spots in the office
- Start tracking your energy consumption. Record each monthly bill into a spreadsheet so you can track changes over time. If there are spikes in energy consumption, investigate why.
- Install and monitor energy sub-metering for ‘real time’ energy tracking

### Example items for Sustainability Action Plan

### 1/ Waste (for more information click [here](#))

- When doing a tenant fitout, ensure that any fitout being removed is recycled with your contractor. Ask them for reporting.
- Use crockery mugs and metal cutlery rather than disposable
- Make sure the printer is defaulted to double-sided printing
- Have an area for stationary recycling
- Work with the base building owner to implement a recycling program. They may be able to supply recycling bins for your office.
- Implement an organic waste recycling program
- Ensure that any empty printer cartridges are recycled with Planet Ark ([www.planetark.org](http://www.planetark.org))
- Implement a battery recycling program. Many waste contractors have this facility already. Speak to your building manager who may be able to facilitate this. Alternatively, collect old batteries in a secure container and when full, take these to a facility (eg Aldi) for recycling.
- Recycle mobile phone with mobile muster ([www.mobilemuster.com.au](http://www.mobilemuster.com.au))
- Re-use office furniture where possible, but if not, donate it to charity (eg Salvation Army, Mission Australia, St Vincent de Paul, local charity)
- Recycle old computers and office equipment with Work Ventures ([www.workventures.com.au](http://www.workventures.com.au))

### 2/ Water

- If you are in control of the bathrooms, upgrade toilets to dual flush, high WELS rated units ([www.waterrating.gov.au](http://www.waterrating.gov.au))
- Replace conventional urinals with waterless urinals
- Place flow restrictors on kitchen and bathroom taps
- Upgrade shower heads to water efficient ones
- Only use the dishwasher when it is full

### 3/ Sustainable Procurement (for more information click [here](#))

- Ensure all office paper, note books, hand towel etc are Australian made, from recycled or FSC accredited timber sources
- Use non-toxic vegetable dyes for any commercially printed materials
- Buy fair trade coffee
- Ensure all cleaning products are 100% biodegradable and contain no harsh chemicals

### 4/ Other

- When updating your fitout, ensure low VOC paints, carpets and furniture are selected
- Choose furniture made of low-impact recycled or recyclable materials. Good Environmental Choice Australia or Eco Specifier have a list of furniture suppliers that comply with these criteria
- Install some plants in the office to improve air quality and create a 'sense of green'
- Use phone or video conferencing over car or plane travel
- Creation of a 'green team' responsible for all the above!

These recommendations should be used as a basic guideline to improve your offices' energy efficiency, and overall sustainability. For more detailed advice and recommendations we suggest the engagement of a sustainability consultant.

CitySwitch look forward to working with you and assisting on your sustainability journey.

For further information please contact your CitySwitch Program Manager, Christina Hughes at [christina@netbalance.com](mailto:christina@netbalance.com) or 0422 331 695.

[www.cityswitch.net.au](http://www.cityswitch.net.au)