# Guide to Low Carbon Households



## **PROJECT FACTSHEET**



#### **KEY POINTS**

- This project is one in a series of low carbon guides, published by the CRC for low carbon living.
- This guide is aimed at existing households and explains in simple language how to reduce carbon emissions by saving energy and selecting energy efficient
- technologies, as well as explaining how to read energy bills, measure energy usage around the home, point the reader to more information about state specific concessions, rebates etc.
- The guide consolidates, summarises and gives accurate tips and examples of how to reduce energy wastage and costs for householders. The examples shown in this guide are measured in real-world households and energy and cost savings are calculated using engineering principles.
- This project was to create a guide for all Australian states and territories, rather than create new research, per se.

#### **CRC for Low Carbon Living**

We are a national research and innovation hub supported by the Commonwealth Government's Cooperative Research Centres programme that seeks to enable a globally competitive low carbon built environment sector.

With a focus on collaborative innovation, we bring together practitioners from industry and government with leading Australian researchers to develop new social, technological and policy tools for facilitating the development of low carbon products and services to reduce greenhouse gas emissions in the built environment. For more information visit <u>www. lowcarbonlivingcrc.com.au/</u>

## THE OPPORTUNITY / CHALLENGE

The opportunity this project is addressing is to accurately inform householders about reducing energy wastage, costs and carbon emissions, for all regions across Australia. Although a plethora of websites, magazine articles etc. that claim to offer energy savings tips exist, the team created a guide that was accurate, helpful and easy to understand for general users, and contained information that householders wanted to learn about. This was achieved by recruiting a steering group of industry experts and users' group of people that would like to read such a guide.

### **OUR RESEARCH**

Given the nature of the guide series, it was important to collate / consolidate existing knowledge from a range of sources, including academic papers, websites, magazines and general tips / advice, rather than create new research, per se. Our team gathered current knowledge about simple right through to complicated actions that can be adopted by occupants to reduce energy use in their homes. We meet with industry experts in various areas concerned with helping households to reduce energy use. We also met with some typical householders / users of such a guide and sought feedback on the type of information that they would be looking for.

#### **OUTCOMES**

A comprehensive guide has been published that has summarises a lot of existing information that helps householders to understand energy usage at home, and to take advantage of new technology such as renewable energy and energy efficient appliances. The guide directs readers to where they can find more information on their energy bills including the types of concessions that apply in each state of Australia. It then directs people to Chapters on each type of energy use in a home. There are separate Chapters on: heating and cooling, water heating, lighting, appliances etc. There are summary tables of different types of actions ranging from simple things that could be done by a householder, to more complex actions that might need to be done by a tradesperson.

The guide includes several worked examples of techniques to save energy, e.g. eliminating standby from appliances, and is backed up with respective cost savings based on a range of electricity tariffs. In some instances, these examples are based on different climate zones across Australia, e.g. the energy and hence cost savings of replacing an old 2-star air conditioner with a 6-star system. These examples are designed to help the reader see the economic value of taking energy saving actions, or selecting energy efficient appliances when purchasing new appliances.

#### USERS OF THE RESEARCH RESULTS

The guides will be available on the builtbetter.org website, which is a landing page for all the CRC for LCL projects. These seven guides, as well as other CRC project reports, can be easily viewed online or downloaded as a PDF document. Links can be easily shared. Members of our industry experts / steering group will use these guides to promote energy saving techniques to potential clients and people who are seeking advice on how to save energy and costs and lower their carbon impact.

#### LESSONS

The guide covers a lot of information about energy, cost and carbon saving tips, and is designed as a starting point for people from all over Australia. The team learnt that most people are motivated by money and although the guide covers tips on reducing energy wastage and carbon emissions, it was largely written from a cost saving perspective. The team also learnt that Australia has many different climate zones, energy retailers, concessions, and tariffs, and that creating a guide to motivate readers across a broad range of locations was challenging. The guide contains several actions (simple right through to complex) that can save a householder energy, and it contains many real-world examples that show how changing behaviour can affect your energy usage and save you money.

#### PROJECTTEAM

Project team: Dr David M Whaley (leader), Dr Cathryn M Hamilton.

**Steering committee:** Associate Professor Monica Oliphant (chair) and industry experts from: UniSA, Renew, Renewal SA, Uniting Communities, Sustainability House and TS4 Living.

## PROJECTREPORT(S)

The guide is available free to all, and can be accessed: https://apo.org.au/sites/default/files/resource-files/2019/05/aponid235381-1367181.pdf or via: http://builtbetter.org/node/7540

#### FURTHERINFORMATION

Forfurtherinformationaboutthisproject, please contact: E: ResearchNodeLCL@unisa.edu.au W: www.unisa.edu.au/IT-Engineering-and-the-Environment/Schoolof-Engineering/Research/Research-Node-for-Low-Carbon-Living/

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