Light Bulb Moments

Take Control of Your Electrical Use & Costs

A Resource Guide for Welfare Agencies to Assist Clients, Colleagues and Community

Sustainable Living Armidale

This resource was developed & written by Debra Mill & Patsy Asch with layout and IT support from Iain MacKay

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NSW GOVERNMENT | NSW Environmental TRUST

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Introduction

This resource has resulted from conducting capacity building workshops and action learning with eleven Armidale Welfare Agencies participating in the Reducing Energy Workshops run by Sustainable Living Armidale during 2013. It details the rationale for reducing electrical demand, the activities that brought about significant learning for the Armidale welfare and sustainability community and the useful tools that resulted. It has evolved from collaboration between local agencies that were seeking a win-win outcome for all stakeholders.

One of the most significant things learned from conducting the capacity building workshops with eleven local welfare agencies was recognising that people accessing welfare agencies learn much better through conversation and from trusted sources rather than generalised and impersonal information. Our results indicate that the increasing reliance on self-service and IT based information systems may be counter-productive for engaging clients that require additional support.

We also discovered that engaging people in change was more successfully undertaken when seen as a cyclic process, rather than a one-off event. Change was more likely when a number of engagement opportunities were strategically developed over time with the support of ongoing and established relationships.

The learning from these workshops has implications for how welfare workers and agencies engage with and respond to clients presenting with issues related to their electrical bills. Developing relationships of trust and having repeated opportunities to reconnect around the issue, combined with an emphasis on the change process, allows both the worker and the client to recognise 'light bulb moments' when change seems not only desirable but also possible. This learning is the foundation of this resource.

If you wish to provide any future feedback to improve how this document may be accessed or used, please contact either Debra Mill or Patsy Asch from Sustainable Living Armidale on the following email: info@slaati.org

Using this Resource

When you see this eye symbol throughout the text it refers to an image relevant to the text. You may click on it in the body of the text and it will take you to the image immediately. You may also scroll to the Handouts & Visual Resources in Part 4 where the labelled document may be found.

When you see this video symbol throughout the text it refers to a relevant video. You may click on it in the body of the text and it will take you to the video immediately.

Part 1: Why Reduce Consumer Demand?

Increasing CO2 Emissions

Climate scientists reported in 2013 that the increasing number of heat waves, droughts, floods and wildfires which are being experienced across Australia are linked to increasing CO2 emissions around the world[1]. It is predicted that as emissions rise, so too will the extremes in weather resulting in a greater need for electricity to assist with cooling and heating. The impact of rising emissions is a serious threat to the environment, food production, health, safety and livelihoods of everyday Australians as well as increasing costs of recovery and rehabilitation[2].

Increasing Consumer Costs

In NSW, electrical energy pricing has gone through a period of rapid increase over the last five years and is a highly politicised issue. These price rises are due to a combination of reasons. The distributors of electricity have been privatised which means all retail companies are entitled to make a reasonable profit. During the 2012-13 financial year electricity companies in NSW almost doubled their after tax profit from the previous year increasing from $771 million to $1,363 million[3]. This has contributed to consumer price rises.

Over the last five years the NSW energy network (the poles and wires that transport the electricity) has been government owned so it has been their role to maintain it. To meet the perceived future energy demand and overdue maintenance, an extensive and costly investment in upgrading the poles and wires was undertaken. This investment has contributed to well over 70% of the recent price rises for consumers[4]. Despite the political rhetoric, only about 6% of the price rise is due to efforts by State and Federal governments to invest in renewable technology, tackle pollution and the carbon tax[5]. All of these costs are passed onto the consumer.

ARMIDALE INTERAGENCY NETWORK MEMBER COMMENTS

"Some older people are so afraid of their electrical bills that they hardly turn on their heat in winter... they sit there freezing"

"I had a client whose quarterly bill over winter was $1500. They had no way of paying it even with their payment plan"

"So many people don't know about the rebates. Even as a worker I didn't know about them"

[1] IPCC, 2013: Summary for Policymakers. In: Climate Change 2013: The Physical Science Basis. Found at: http://www.ipcc.ch/

[2] Global Humanitarian Forum, Geneva, 2009. Climate Change: Human Impact Report. Found at http://www.ghf-ge.org/human-impact-report.pdf

[3] Recorded in the NSW Auditor General's Report to Parliament on 4 Nov 2013 found at http://www.audit.nsw.gov.au/News/Volume-Four-2013-focusing-on-Electricity---Good-audit-result

[4] Media Release July 2012: "Rob Murray-Leach, CEO of the Energy Efficiency Council talks about why energy prices are rising." Found at: http://www.youtube.com/watch?v=zAHxaHkNb34

[5] Ibid http://www.youtube.com/watch?v=zAHxaHkNb34

The Australian Bureau of Statistics has shown that the pressure of rising prices, government policy and technological change has led to a 23% saving in domestic electricity consumption since 2002[6]. As the household sector becomes more energy efficient it reduces demand and lowers consumption. The downside is that as demand is reduced, prices rise to maintain the same retail income, at least in the short term[7]. The plus is that it has meant plans to build a new coal-fired power station in NSW have been put on hold. Another significant gain is the potential reduction of carbon emissions, when and if electricity from fossil-fuel generation is cut.

Transmission & Distribution of Electricity

Increasing Agency Workloads

In December 2012, Welfare Agencies in Armidale, NSW, were sharing concerns through their local Interagency Network about the growing impact of the costs of electricity on individuals, workers and services across the community[8]. They were experiencing an increasing demand on their time and services to assist residents who were unable to pay their bills. Residents were increasingly requesting assistance to negotiate payment plans, access rebates and prevent electricity being cut off. In Armidale, where the winters are severe, the workers considered it a serious social justice, health and well-being issue.

[6] Australian Bureau of Statistics, Energy Account Australia 2011-12 found at http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/4604.0main+features42011-12#USE%20OF%20ENERGY

[7] Hoch, L. 2012. Policy options for maximising downward pressure on electricity prices, Final Report prepared by Oakley Greenwood for The Australian Industry Group, Brotherhood St Laurence, CHOICE and the Energy Efficiency Council, found at http://www.aigroup.com.au/link/dU

[8] Armidale Interagency Network Meeting Minutes, December 2012 & February 2013. Armidale Dumaresq Council.

Part 2: Energy Reduction Capacity Building Workshops for Agencies

During 2012-13 Sustainable Living Armidale Inc. (SLA) conducted several "I Can Do It!" Home Sustainability Workshops to assist people live more sustainably and comfortably in their homes. SLA learned about the issues regarding the impact of electricity costs on the community through the Armidale Interagency Network (AIN). SLA proposed a collaborative effort over the next year to build the capacity of Welfare Workers to respond to community concerns about electrical consumption and also improve actions that lower electrical costs and emissions associated with their own bills. The intention of this approach was for workers to not only benefit from lowering their own costs and emissions but in doing so, gain greater understanding about the challenges their clients may face in making similar changes. It was further intended that this shared capacity, spread across eleven local welfare agencies, could form the basis of future regionally strategic and collaborative action, should it be desired.

SLA conducted three energy reduction capacity building workshops for welfare agency workers over two electrical bill periods. This enabled participants to learn about their own energy use, be supported while reducing their consumption and provide feedback on their learning whilst implementing these ideas with family, colleagues and clients. Some of the workers had already reduced their energy consumption prior to participation in the workshops. Many others identified additional behavioural and billing changes that further reduced their bills with one participant reducing their winter electrical costs by 50%[9].

Critical Learning & Implications for Workers

Creating conditions for learning and change

During the workshops many stories were told about how clients and workers alike had been visited by home energy assessment services and had still not managed to make changes to their electrical consumption or their bills. When we further explored this it became clear that information alone was not enough; these people required additional assistance to resolve the barriers around making successful change. For some it was as simple as understanding how to reconnect all of their entertainment equipment after receiving a new Master and Slave switchboard following their home energy assessment. But, who could they ask for help?

WORKER TESTIMONIALS

"Engagement with the energy reduction project has assisted the Armidale Interagency group to gain a sense of collective responsibility to assist low income families and vulnerable citizens to manage their power bills"

Marjorie Henzell (Centrelink)

"This information shows us that this is not just about the client. It gives us, as workers, something to work with. We now also have a supportive network across the agencies to call on as a resource"

Neroli O'Brien (Safer Options For Armidale Worker)

[9] Data obtained by comparison of the kWh consumed over two billing periods with the 12 months prior.

The workers reported that some people felt too ashamed to ask, did not know who to ask, or felt that no one was really interested, or that the effort of finding someone to talk to was worse than just paying the electrical bill. Our collective discussion identified that the information out there was great, but there seemed to be a strong need for an additional role of assisting people to take the next step when they got stuck.

When people do not speak English as a first language, or have literacy issues, or have a number of more important priorities to attend to (eg. Significant family or health crises) that may impact on their available energy and ability to act, then it would be useful if workers have the resources and skills to be able to assist them. If workers wish to engage people into alternative behaviours that may reduce stress and improve wellbeing, then trust and good preparation about the need for change is essential. Interestingly enough, the facilitators of the capacity building workshops noticed that the very same issues (available energy, priority of the issue, adequate preparation) affected the participating workers' ability to reduce their own energy consumption and costs. People are most likely to succeed in bringing about change when the change is something they really want to achieve, they know how to do it and it becomes a priority. It became clear in the Capacity Building Workshops that understanding how to help people prepare for learning and change would be valuable.

The benefits of taking a learning and change approach include increased client engagement, collaboration and commitment across clients, organisations and community which results in more effective problem solving. Sharing this information between workers provides for a better identification of inhibitors to change and the collective development of alternatives to resolve them. Working in this way is more likely to assist people to address a sense of helplessness that might otherwise prevail.

Agency workers participating in the Energy Reduction Capacity Building Workshops

Adapting information to particular needs and circumstances

Matching the type of information provided to the needs of people attempting to change is quite important. The workers reported that information that was adapted to meet the immediate needs of clients was more likely to engage them. During the capacity building workshops we found that the most successful and preferred method for learning about the material was through conversation combined with visual images.

Addressing individual learning needs and discussing the topic in a way that does not elicit shame is important for facilitating learning and change. Many workers during the workshops discussed how helpful it was to share their own learning experiences with clients and colleagues around changing their behaviour to reduce their own electrical use and bills. This sharing of experience, despite the perceived power imbalance between the worker and client, encouraged a collaborative approach and normalised the challenges of behaviour change. If the worker was struggling, then maybe it was ok for the client to be struggling a bit too! Sharing learning experiences also encouraged conversations that were related to individual circumstances, creating an opportunity to clarify and personalise written information. Breaking the information down to specifics in each person's home appeared to be very helpful in eliciting change behaviours because it identified and reduced the barriers to action.

Importance of trust and non-judgmental relationships

It became very clear to the agency workers who participated in the capacity building workshops that if learning and change was just about providing information then clients they had provided information to would have changed. When they tried to share with friends and colleagues the ways in which they were attempting to reduce their own electricity bills they found factual information of lesser importance than conversations about how they did it and how they addressed dilemmas or issues that had prevented prior action.

Having these conversations requires an element of trust and non-judgement around some of the issues discussed. The skills for building trust and rapport are important and this involves showing warmth, a friendly manner, sharing your own energy struggles and being person centred. **Workers highlighted that there may be tensions for some agencies between efficiency and quality of service that may impact on meeting these types of needs**. It was acknowledged that if you could not afford the time then it was better to refer people on to agencies that could. The difficulty for all the agency workers was identifying who that actually may be, due to service staff parameters tending to be highly focussed on time efficiency. However, spending time initially to help the client resolve dilemmas and build readiness for further action may save time later.

Identifying what you do control

Breaking the power of helplessness in the face of high electrical bills requires understanding what you control and what you do not. Knowing this leads to clearer decisions and actions. It helps to:

- better understand your bill – it can help you know where the bulk of the electricity is being used in your home in case you wish to make changes;
- find out whether you may be eligible for energy rebates and apply for them – it reduces the bill, but does not reduce your use or emissions;
- learn how to reduce energy use in your home to reduce emissions and possibly, costs.

As a group we explored ways to increase awareness and control over electricity consumption. This was particularly important given that most people were unaware of the impact of their electrical use until the bill arrived months later. We wanted to help people be more aware of their electrical use at the time of use so they could increase control over their use and costs. We discovered that helping people work out the cost of the higher energy consuming items per hour and placing this on a sticker that was visible on the appliance was a useful strategy in raising awareness within the household about when and how long to use it. **Immediate feedback on your power use is more likely to increase a sense of control and reduce helplessness.**

What you control	What you do not control
• The power switches in your home • How often, how long and which appliances you use • Types of homes you rent or live in • How you live in your home to conserve energy or manage the temperature • Green Energy Options with bill	• Daily Service Fee • Taxes • The price of electricity/kWh (tariff)

Figure 1: Identifying what you do and do not control with your electricity bill

Implications for Agencies

Responding to increasing energy costs is a complex issue that impacts on consumers, agencies, workers, electricity retailers and government agencies that requires learning across a number of domains (energy reduction strategies, understanding change processes, consumer protection, advocacy with retailers, complaints procedures, negotiating systems, etc). Traditional ways of dealing with these types of issues have resulted in education programs delivered to specific populations. An example of this has been the NSW energy assessment program[10] which specifically targets low income householders.

Agency workers discussing electrical bills

The recent workshops conducted by SLA have demonstrated that these approaches (assuming change from a one-off home energy assessment and delivery of information) are still not adequately engaging all people in behaviour change. The workshops have also highlighted the extensive resourcing required for workers to assist clients, given the diversity of the issues. There has been a swing towards innovative and collaborative approaches that engage all stakeholders in identifying and responding to the key factors in making effective change[11]. Investing in collaborative approaches requires coordination and inclusion of all stakeholders in the identification of key issues and direction of responses chosen, requiring engagement and active participation of the harder to reach stakeholders.

[10] NSW Government Home Energy Assessments, free to low income households, found at http://lowenergyliving.com.au/free-energy-assessment/

[11] A public policy paper produced by the Public Service Commissioner, Lynelle Briggs, 2007, Tackling Wicked Problems: A Public Policy Perspective, Australian Public Service Commission. This paper identifies the importance of innovative and collaborative approaches to ensure more effective social change. Found at http://www.apsc.gov.au/publications-and-media/archive/publications-archive/tackling-wicked-problems

The Salvation Army has received Commonwealth Government funding, Australia wide, to provide a Home Energy Saver Program (HESS) beginning in July 2012. As of Dec 2013, it has had its funding reduced and the HESS Program is now ending in June 2014. The HESS Program offers home visits involving an assessment and follow up service for low income groups. Demand for this service is slowly increasing as agencies and community groups become aware of its existence. It is concerning for SLA and local welfare agencies to observe decreases in the types of services that may be helpful. SLA has received continual feedback from eleven agencies throughout this project that people require opportunities for follow through support to make successful change. Agency feedback has emphasised that successful change requires a number of re-engagement opportunities and trusting relationships to discuss the barriers to change. Successful change is a cyclic process – not a one-off event.

As of December 2013, many agencies are still learning about these issues and advocating for clients independently, based on clients opportunistically requesting assistance. Responding strategically to these client initiated opportunities for engagement is important. Given that Agencies vary across the primary, secondary and tertiary interventions, it may be helpful to improve coordination and referral between the available services in order to improve responsiveness based on what we have learned to be effective. The recognition and incorporation into service delivery about successful change being a cyclic process would be a good first step. It may also be helpful to identify whether services have the ability and resources to support this process of change.

To date, The Armidale Interagency Network has been undertaking some of these coordination functions. It has extended its role from information sharing to strategically collaborating with Sustainable Living Armidale to develop a local response that may be useful to all agencies – but resources for continuing work have been exhausted. Despite the development and availability of this *Light Bulb Moments* resource, which supports the development of worker capacity, these workers are still responsible to carry out their core business while attempting to absorb additional work. The question still remains as to whether any Agencies have the scope and resources to assist people requiring further support, and if so, which ones.

Agency workers at the Capacity Building Workshops

Part 3: Using the Tools

Stages of Change Model and Active Listening

The Stages of Change Model (SOC) combined with the skills of Motivational Interviewing (MI) has a has been used extensively and effectively in engaging people in making changes not only with drug and alcohol issues but also other habitual behaviours world-wide[12]. Due to its effectiveness, simplicity and applicability the SOC Model was used as a tool in the Capacity Building Workshops to help workers decide when, if and how to use the available energy reduction information with friends, colleagues and clients.

The Stages of Change Model[13] was initially developed by observing how people changed without assistance. It provides an understanding that change involves a number of processes represented as stages. Change may be inevitable when people are willing, see it as a priority and have the resources and capabilities to carry it out – a concept known as 'readiness'. Working together to build readiness occurs at the Preparation stage of change (see the model in the next section).

Figure 3: Three aspects to building readiness for change

Understanding conditions of 'readiness' assists workers to recognise that clients have challenges to overcome as they progress through the stages. If a person is hesitant or unwilling to make change then the person is not 'in denial', but is not quite 'ready' or the desired change is more complex and may require more attention than originally thought. Progression to the next stage is unlikely until the current challenge is resolved. The various life circumstances and resources that people attempting change may be experiencing could determine whether they feel supported or hindered in resolving the challenge at hand. If they do not have adequate abilities or support to reflect on and resolve complex and confusing decisions then they may become stuck, perhaps abandoning or giving up the hope of change.

[12] Miller, W. & Rollnick, S. 2012 (3rd Ed) Motivational Interviewing: Helping People Change. Guilford Press.
[13] For further information on Stages of Change go to the Australian Department of Health website at http://www.health.gov.au/internet/publications/publishing.nsf/Content/drugtreat-pubs-front9-wk-toc~drugtreat-pubs-front9-wk-secb~drugtreat-pubs-front9-wk-secb-3~drugtreat-pubs-front9-wk-secb-3-3

A process known as Motivational Interviewing (MI) helps identify the attitudes and skills that support people's attempts to change[14]. The intent is to create conversations that ensure genuine collaboration and non-judgmental approaches to assist people who are exploring possible changes. Some of the core MI skills include: open questions, affirmation, reflection of content and feeling and summarising. Most welfare workers have been trained in these 'active listening' skills. A supportive stance of curiosity plus active listening helps the worker to remain present, reflective and non-judgmental about the issues related to change. MI provides training in additional skills that helps workers recognise when and how they could better respond to support change processes. No one needs to have the skills of MI to use the tools in this document, but engaging in further training may enable you to extend your skills. Further information about MI can be found at their website[15].

Resistance, disengagement or denial in this approach is not considered a quality of the person but is reflective of the quality of the helping relationship. In MI resistance is defined as a momentary mismatch between the support being offered and the stage of readiness of the person considering change. The client is not resisting change so much as the type of support being offered to them at that particular moment. To salvage the helping relationship at this point it is useful for the worker to slow down, actively listen and become curious and actively ask what is getting in the way.

Changing ones actions can be helped or hindered by the complexity and interaction between learned responses, social norms and/or environmental factors that shape the decision making processes in everyone's lives. The 'stuckness' that can occur in attempting change is known in MI as 'ambivalence', feeling both positive and negative at the same time about the prospect or consequences of change. Ambivalence, or getting stuck, means that people are likely to keep putting off change until the dilemma is resolved.

You do not have to be a counsellor to be successful with this approach, as many teachers, youth workers and doctors have learned these skills, but it does help to be able to suspend your own or your organisations goals while you attend to and clarify what is important for the person who is attempting change. Research shows that it generally takes four to six attempts to make change more permanent[16], so seed planting, relationship building and light bulb moments are big achievements.

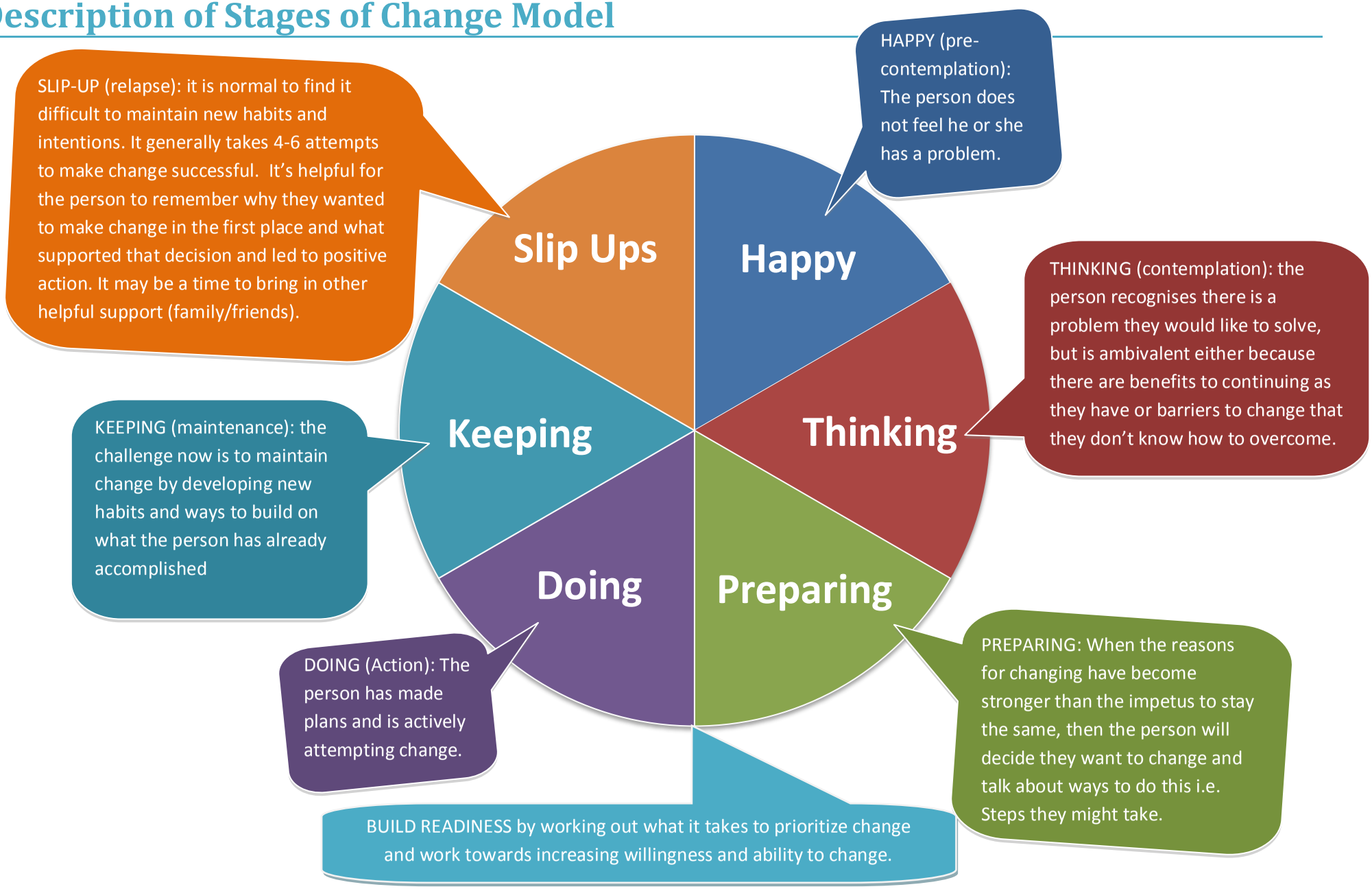
The attitude and skills consistent with the Stages of Change Model, Active Listening and Motivational Interviewing have been embedded in this resource by pairing the energy reduction information with the appropriate stage of change. You will find in the next pages a description of the Stages of Change and examples of helpful responses. Slowing down, remaining curious and discovering together, in a genuine way, what both helps and hinders a person's steps towards change is the key to progress!

[14] Information about MI can be found at the MI website http://www.motivationalinterview.org/

[15] Further information on how to learn change-talk skills can be found at the motivational interviewing website http://www.motivationalinterview.org/clinicians/Side_bar/skills_maintenence.html

[16] Prochaska, J., DiClemente, C. & Norcross, J. 1992. In Search of How People Change. Applications to Addictive Behaviours. The American Psychologist, Sep;47(9):1102-14.

Description of Stages of Change Model



Helpful Responses for Supporting Energy Reduction

"I was going well and then...!"

Feedback: "What is one thing you could do differently next time? If you did that how would that affect your confidence? Is there anything else you need to plan for? Who could help?"

Tools: Promote mistakes as learning opportunities and practice, identify new learning and build confidence, identify supports and resources.

"There's nothing I can do about it!"

Feedback: "Have you overcome things that you thought you couldn't before? What helped? Do you know where to find more info about how to reduce your energy use and costs if you wanted to?"

Tools: Rebates, Tip Sheets, Free Bubble Wrap

"My kids/partner can't see the point!"

Feedback: "Where could you start? What's your plan around that? Who could help?"

Tools: Plan for the unexpected or difficult times, find out how others deal with it, get more info.

"I do worry... it would be good for the kids... BUT other things just keep cropping up."

Feedback: "You don't see it as a priority in your life right now, but at the same time you are worried about what your kids are learning and preparing them for their future. Would doing something make you feel less worried?"

Tools: Active listening, Identify important reasons for change and assess pros & cons

"I'm doing well, what else can I do?"

Feedback: "How are you making it work? What did you find helpful? What keeps you going? What will you think of yourself for having persisted with this?"

Tools: Link with supports, find like-minds, share achievements & challenges, what else?

"I'd like to but I am not sure about...?"

Feedback: "What have you tried before?" "Would it be helpful to find out what others are doing?" "What could be the first small step that may make a difference?"

Tools: Help people get ready, willing and able eg. information on bill reading, home energy audits, saving energy tips, where to get future help, bubble wrap, rebates, etc.

Happy with how things are

"I don't have a problem" or "There's nothing I can do about it!" are types of statements summarising the position of someone who is in this pre-awareness stage of change. They may have experienced a bill they cannot pay, may require your assistance in some way, but may see no connection to their own decisions or actions and may even feel powerless to act in the future. They may perceive that the total size of their bill is not of their making (and they may be partly correct), they may feel victimised by the system, perhaps even thinking there is nothing they control. Certain workplace or family responses my unintentionally reward continued inaction by not supporting the kinds of interactions or conversations that help people prepare for change. They may say they wish to prevent this occurring in the future but have no plan to do so. After leaving the service they may not think any further about this issue.

People are generally happy to continue their same behaviour because they are rewarded for doing so - it is comfortable, little thought is required and there may be little awareness of **negative consequences**. Their behaviour may be affecting other people negatively but if it is not affecting them in a negative way then they may see little reason to change. Other family members or agency workers may notice this attitude and judge it negatively, because it is affects them negatively. You can ask someone to change, and they may choose to do so for the relationship, but their determination may be low if they are not experiencing any problems or benefitting from the change. Often demanding that someone change may result in argument, resentment or passive resistance. Feeling pressured could result in less interest with this topic in the future. It is only when important goals, values or desires are threatened and they can link these to their own behaviour, that change is considered. Due to their past experiences, some people may only take change seriously after the threatened events actually occur.

HELPFUL RESPONSES

Inform about Rebates

Provide information on the rebates this person may be eligible to claim. You could even assist them to apply. Helping people to obtain rebates will lower their costs without having to change their behaviour and may create a relationship to foster future changes. Some people may be expressing learned helplessness and your responses will model alternatives to hopelessness and helplessness. If you require support or information from the Energy & Water Ombudsman NSW, they can be contacted on 1800 246 545 or at www.ewon.com.au/

Poster and Handout on Eligibility for Rebates

Inform about Hardship Programs

Many people who present at agencies with large electrical bills that they cannot pay may be experiencing crisis. It is helpful to spread the word amongst client groups that if people contact the electrical company the moment they know they may have difficulty with the bill the more likely the company will be to assist them with a Hardship Program. All electricity suppliers will require clients to meet certain requirements if they agree to a program but at least their electricity will not be cut off. If you require support or information from the Energy & Water Ombudsman NSW, they can be contacted on 1800 246 545 or at www.ewon.com.au/

Poster on Hardship Programs

Offer Assistance with Bubble Wrap Insulation

If desired, help the person to access and install bubble wrap on glass windows and doors in particularly cold rooms, or throughout their entire home. This strategy also works to help keep the home cooler in summer. This is a very low cost pseudo-double glazing option; a roll purchased for around $25 is sufficient to insulate glass panels with a small house. As of summer 2013, The Armidale & District Women's Centre and The Men's Shed are both distributing bubble wrap free of charge, while stocks last. This action has the potential to increase home insulation by up to 5 degrees[17], reducing heating costs in winter and cooling costs in summer. This highly visible action will also provide a discussion point and raise awareness with their family or visitors – because the temperature change will be noticeable.

Installation of bubble wrap at ADWC and testing for effectiveness

In addition, people can also be shown how to heat up or cool down their home by capturing or avoiding the sun's heat. If these actions are undertaken they will be more comfortable in their homes for longer before needing to use heating and cooling appliances.

Tips for Insulating Glass

Other Assistance

No Interest Loan Schemes (NILS) and financial counselling may also be of assistance.

NILS Scheme:

- Armidale Neighbourhood Centre: Mon-Thu 6772 4373

Financial Counselling:

- Moneycare, The Salvation Army, 6771 4188
- Anglicare Northern Inland 6701 8200 - gambling related financial counselling only

[17] Verified by thermal imaging camera, during a 2013 Armidale winter by SLA and New England Thermal Imaging.

Thinking about change

"I do worry a bit... it would be good for the kids... BUT other things just keep cropping up." This is the type of language you may hear when someone is ambivalent, still unsure about change - thinking both positively and negatively about it at the same time. This stage describes the types of dilemma's people may experience when they begin to seek support; they may describe being stuck. They may be experiencing discomfort due to swinging between contradictory thoughts and feelings. They may be able to identify both benefits and costs for them and their lifestyles and may feel uncomfortable when they think about it because they don't know how to resolve it. These feelings can be avoided, of course, by choosing not to think about it or dismissing change as impossible.

Being able to express the difficulties in a safe and respectful environment enables people to reflect on their dilemma. If they perceive they do not have the resources to resolve their dilemma then they may decide that they cannot change. This may be a temporary state especially if ambivalence is likely to arise again in the future.

When people express a strong desire and clarity about why they want to change then they have moved into the next stage – preparation. People often swing between stages of change (eg. between thinking and preparation) and it may help to have these conversations again as a way to remember why they decided to commit to this change in the first place.

HELPFUL RESPONSES

Actively listen

Explore the benefits and costs of making change, for now and in the future. Explore the benefits and costs of not changing, for now and in the future. Ask how they may feel or think differently about themselves (or how their kids/partner may think or feel differently about them) if they worked towards making change, rather than avoiding or thinking it is not possible?

Handout on Decision Making When You're Stuck

Show appliance costs per hour

Help the person identify a couple of the most costly appliances in their homes. If desired, provide stickers for these items with the hourly cost displayed to assist with memory. This highly visual sticker may also provide a discussion point and support for changing behaviour with their family or visitors. This action will enable them to have greater control over heavy consumption items that will impact their energy use decisions and bills. Lots of small changes can also add up to large savings.

Hand out on running costs per hour for common appliances

Provide support and handouts matching their priorities for change

It is helpful if workers suggest areas for change based on client priorities including information on rebates, hardship programs, appliance costs, appliance tips and bubble wrap. Providing handouts as in the previous stage may be helpful. Once action has started in the area of their choice then other areas are likely to follow. Help clients identify where they can go for further help if they choose to take one small but meaningful step that would make a difference to them. Understanding their bill may also be helpful (found in the next section).

Preparing for change

"I'd like to but I am not sure about...?" This statement is an example of a person in the preparation stage of change. They express a desire to change and may have begun to make small changes but may feel frustrated in their ability to continue due to perceived or actual barriers. Planning can help to overcome these barriers. The expressed confidence of a person is a good indicator of their likelihood of moving into action. Confidence may be categorised as low, medium or high or on a scale of 1-10. The higher the expressed degree of confidence the more likely they will prioritise putting a plan into action. People need to feel ready (it's a priority right now), willing (high desire right now) and able (have the resources and capability to carry it out right now) if they are to move onto the next stage. The handouts and information below will help identify what may be missing in their plan and build their confidence and readiness.

Assist people to plan. Begin with solutions that are the easiest or have the most impact in the direction of their desired change. When people experience successful change, no matter how small, it increases confidence in making further change. Build plans around reminders, repetition and rewards for the various changes attempted.

Be aware people may oscillate between feeling ambivalent about change and preparing for change. This is normal. As a helper in this change process, be ready to return to earlier conversations that helped the person focus on why this change is still important to them. It may take a number of conversations about this. Help the person attempting change to develop ways to remember and focus on how important the change is during their everyday activities.

HELPFUL RESPONSES

Identify what helps support successful change

It may be helpful to explore peoples past experience of change and help them identify what supported successful change. Relevant questions might be: How determined were they, what helped them stay committed, who did they talk to, what resources did they need to find? Ask them to rate how confident they feel about their ability to make this change. Ask what would have to be different to increase their confidence.

Know what you control and what you don't

Most people who wish to make a change need to start by working out what they control with their bills and what they don't. It is important that people realise that their consumption is only part of the bill. The only aspect that the consumer controls is their use, so knowing where most of their electricity is currently being used in their home is helpful.

Where Electricity is Commonly Used in Your Home

Understand your electrical bill

Helping people to understand their own electrical bill if they provide it is a good place to start. This can also show them what their consumption is and where they can begin to reduce it. If people wish, help them understand how to read it.

Handout and video link on Reading Your Electrical Bill

Free Home Energy Audits

If people wish to get more information on how to specifically reduce their energy use in their homes then they could book an appointment for a local or NSW home energy audit at the following contacts:

Free Local HESS Program contact:	Peter Stanley, Mob: 0419 878 071 (until June 2014) Salvation Army Office: (02) 6771 1632
Free NSW Home Energy Program:	1800 569 363 (costly if rung from mobiles) or (02) 9943 0650 http://lowenergyliving.com.au/free-energy-assessment/ and http://www.livinggreener.gov.au/rebates-assistance/nsw/home-energy-assessment

If you would like to involve your family and increase everyone's knowledge about helpful actions then you could conduct your own home energy audit by going to the Living Greener website below to get tips. You could also borrow the Home Energy Kit from the Armidale Library. It is very easy to use and a great family learning exercise.

http://www.livinggreener.gov.au/rebates-assistance/nsw/home-energy-assessment-kit

Home Energy Saving Tips

Information in this handout on appliance costs and home energy saving tips may be useful. The chart lists appliances in order of heavy to lighter energy used per hour, including tips for reducing costs. It also provides another column to help identify the energy saving measures you may wish to try. It may be very educational to place a sticker on the appliance showing the cost per hour.

Handouts on Heating, Cooling, Light Bulbs, TV's & Standby and Energy Saving Tips

Acting for change

"I have begun" or "I am doing well, what else can I do?" are some examples of the types of things being said by someone who is in action. Their decisive way of communicating what they have been doing leaves you with little doubt they have already begun to make changes. They will have taken some steps and they may need assistance with further ones. It is important to affirm their achievements and provide support and guidance to any further steps that may be desired. They may require assistance with firming up their plans to ensure they continue to be effective. These people will be working hard to break old habits and may need assistance with cues and reminders for doing things differently.

HELPFUL RESPONSES

Ask about and reinforce their plan of action

Discuss with the person what they have already been doing and what else they may wish to do. Ask them how they are reminding themselves to do things differently, how often they are doing it, how they are rewarding themselves for maintaining change what difference it is making to them. Ask if they have thought of any possible problems they may encounter continuing to do this. Explore possible ways they could plan for these expected problems.

Additional support

Offer supportive information, websites and connections with other individuals or organisations that may be helpful. Please see the Additional Resources at the back of this resource.

Keeping a change

"My kids/partner can't see the point?" This is something you are likely to hear when someone is acting on change but may be faced with perceived or actual barriers in being able to continue to do so effectively. There are often expected and unexpected issues that may make it tricky to maintain the desired level of change.

- Unlearning old and automatic habits, such as forgetting to turn lights off when you walk out of the room or leaving the mobile charging all night, may require a good plan eg. Hang a coloured string from the light for a while, put a sticky note on your phone or place it in another location to remind you.
- Getting kids to cooperate and turn off their bedroom light, using less hot water for the shower or turning off the computer or TV at the wall can be challenging especially when they may not experience consequences that concern them eg. Paying the bills. It may be helpful to do a home energy audit together, discuss costs and ask how they can help. New household rules could be set. If the family can save a bit more money there are likely to be rewards in doing other (desirable) activities together. If there is still no cooperation, perhaps linking the unnecessary costs to a reduction in pocket money could be helpful. **Placing a sticker on the item showing the running costs per hour may also be helpful.**
- Gaining the cooperation of partners can be challenging depending on the degree to which your values may be aligned around the issue. Even if your values differ in emphasis they still may be compatible or able to be negotiated. For example, people may be motivated to change for environmental concerns, or helping the kids learn, or wanting to lower costs. All of these may be reasons for changing behaviour. Some may wish to continue as they have and are not sufficiently concerned at this time. If you are the only one desiring change then it may be helpful to read about the 'Happy Stage of Change' in order to explore any potential for change. Asking your partner "what would have to be happening for you to pay more attention to this?" maybe useful. It may be helpful to ask your partner to do a home energy audit with you.

CAUTION: These value differences in relationships may lead to difficult conversations. For couples that have a history of sharing concerns and joint problem solving then these conversations may result in money saved and enriched relationships. Depending on relationship circumstances and personal safety issues, it may not be helpful to encourage some couples to confront these issues.

- Moving homes, and the choice of home design, may or may not be helpful for energy conservation. It may require you to experiment with how to protect yourself from cold and heat while conserving electricity eg. Open plan living requires different forms of heating compared to closed room living; homes with little or no insulation are colder and hotter.

Handout on Before You Rent Checklist for Tenants

- Adapting to seasonal changes and keeping your energy use down ie. by closing doors or hanging curtains, can create zones so that one area or room is warmer in winter, another cooler in summer. Instead of turning on the air conditioner move to the other side of the house during summer.

Learning occurs one step at a time and not everything needs to be completed at once. Learning in one area will naturally lead to learning in others. It may be helpful to encourage people to find friends or others who may be experiencing success with some of these challenges so they can explore options of how to address them in their own lives. Identifying how to gain support around these potential barriers is critical to maintaining changes they have made.

HELPFUL RESPONSES

Planning around the problems

Help people identify the barriers and build a plan around it. Encourage them to talk to others who may be able to help.

Video: Darren was Horrified! A couple making change to their electrical bill

Sharing their learning

Encourage people to share their learning with others in order to reinforce their achievements and spread the word about the benefits of experimenting.

Dealing with slip-ups

"I was going well and then...!" People are likely to be saying these types of things after experiencing one of the difficulties of trying to keep a change. Sometimes they will be feeling discouraged or overwhelmed by the issue and this may prevent re-engagement with change. Change takes practice and seeing it as a learning experience rather than a personal failing is important.

HELPFUL RESPONSES

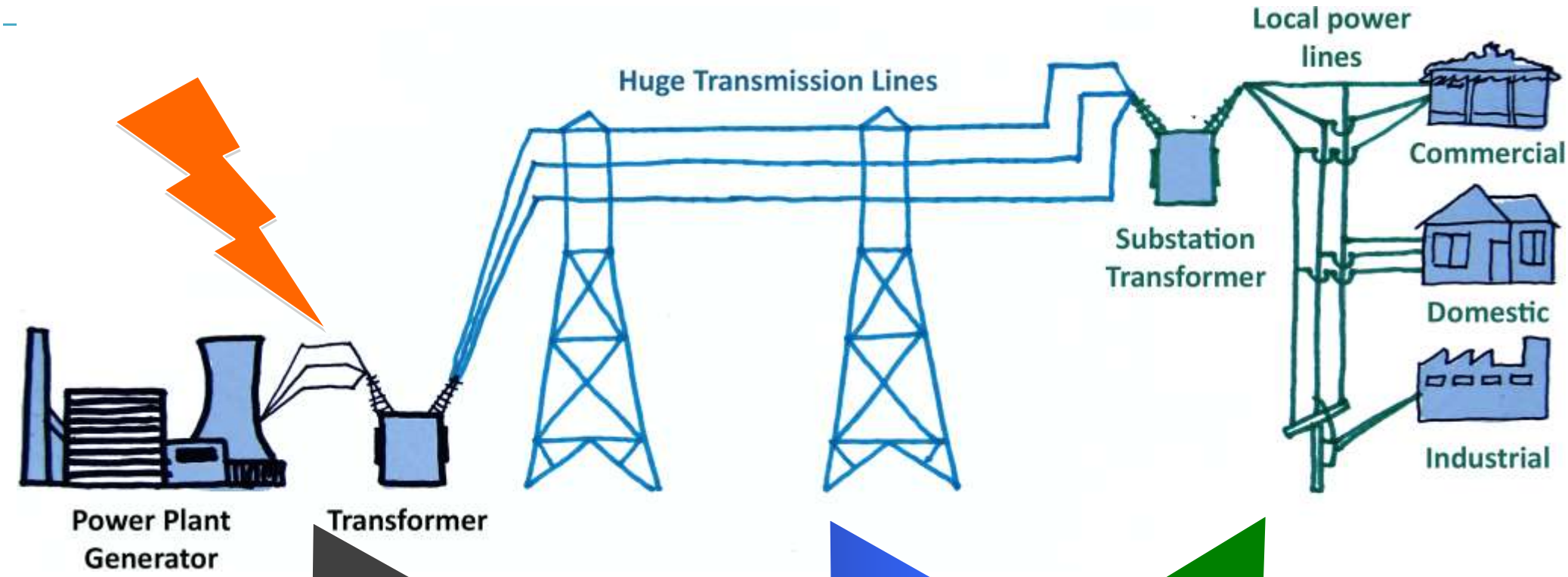
Active Listening & reminding about change being a process

The person may need to express their discouragement and may need to weigh the pros and cons of continuing to attempt change.

Explore how to re-build confidence

Encouraging people to remember the achievements they have made so far, is useful. Ask the following questions: what achievements have you made; how have you overcome other hurdles in your life; and what might assist you to get back on track? Explore how to do things differently and ask them again why it was so important to make this change in the first place. When people hear themselves saying these things they are more likely to act on it.

Part 4: Handouts & Visual Resources
Handout 1: NSW Transmission & Distribution of Electricity



Over 93% of our electricity comes from coal-fired power stations all the way from the Hunter Valley.

The black and blue segments are currently owned by the NSW Government.

The green segment is owned by private retail companies, like Origin Energy, that sell us our electricity.

Our domestic electricity bills include charges for the whole system: generation, transmission, retail and taxes.

Handout 2: Eligibility for Rebates & Poster

1. Am I eligible for the Low Income Household Rebate?

To be eligible for the Low Income Household Rebate, you need to:

1. Be a NSW resident; and
2. Be a customer of an electricity retailer, or a resident of a retirement village, or a long term resident of a caravan or mobile home park; and
3. Your name must be on the electricity account for supply to your principal place of residence; and
4. You must hold either of the following cards:
    - A Pensioner Concession Card from the Department of Human Services (formerly Centrelink) or the Department of Veterans' Affairs; or
    - A Health Care Card from Department of Human Services; or
    - Gold Cards from the Department of Veterans' Affairs marked with:
    - Totally and Permanently Incapacitated or
    - Disability Pension or
    - War Widow or War Widower Pension

Rebate: $235 for 2014

http://www.energy.nsw.gov.au/customers/rebates/low-income-household-rebate

2. Am I Eligible for the Family Energy Rebate?

To be eligible for the 2013-2014 NSW Family Energy Rebate, you must:

1. Be a NSW resident; and
2. Be eligible for the Federal Government's Family Tax Benefit A or B at any time during the 2012-2013 financial year, and have received a relevant payment; and
3. Be an account holder of an electricity retailer, or a long-term resident of a caravan or mobile home park, whose name appears on the electricity account for supply to her/his principal place of residence.

Family energy rebate: $150 for 2014-15

http://www.energy.nsw.gov.au/customers/rebates/family-energy-rebate–

3. Am I entitled to the Life Support Rebate?

1. If you have an electricity account in your name and you or someone else in your household requires one of the following items of medical equipment to sustain that person's life, you may be entitled to a Rebate on your electricity bill:

2. Eligibility is dependent on a list of machines

    a. Positive airways pressure (PAP) device

    b. Enteral feeding pump (formerly known as Kangaroo Pump)

    c. Phototherapy equipment

    d. Home dialysis

    e. Ventilators (formerly known as 'respirator')

    f. Oxygen concentrator

    g. Total parenteral nutrition

    h. External heart pump

Life Support rebate: the amount depends on the type of machine and how many hours you use it per day. It is difficult to figure out without help.

http://www.energy.nsw.gov.au/customers/rebates/life-support-rebates –

4. What is the Medical Energy Rebate?

The Medical Energy Rebate is for customers who have an inability to self-regulate body temperature when exposed to extremes (hot or cold) of environmental temperatures. It is associated with certain medical conditions such as Parkinson's disease and Multiple Sclerosis.

Who is eligible for the Medical Energy Rebate?

Eligibility for the Medical Energy Rebate is based on meeting both the primary and secondary qualifying conditions.

1. Generally, either the account holder or anyone residing at the residence must have an inability to self-regulate body temperature. This requires the completion of the Medical Energy Rebate Application Form, signed by a medical practitioner who has been treating the patient for at least three months;

2. The account holder must have one of the following concession cards:

    - Pensioner Concession Card issued by either the Department of Human Services or the Department of Veterans' Affairs (DVA);

    - Gold Card issued by the DVA;

    - Health Care Card issued by the Department of Human Services.

Medical Energy Rebate: $235 for 2014.

http://www.energy.nsw.gov.au/customers/rebates/medical-energy-rebate

Do you want to pay less for your electricity?

Apply for NSW Government Energy Rebates

Who is Eligible?

Low income households

People with special medical needs

http://www.energy.nsw.gov.au/customers/rebates

Are You Having Trouble Paying Your Electricity or Gas Bill?

Phone your Energy Provider as soon as possible about their

HARDSHIP PROGRAM

Origin Energy (& Country Energy)
13 24 61
www.originenergy.com.au

AGL Energy
13 12 45
www.agl.com.au/residential

Energy Australia
1 300 723 492
energyaustralia.com.au

Kleenheat Gas
13 21 80
www.kleenheat.com.au

Energy and Water Ombudsman NSW 1800 246 545
www.ewon.com.au

Handout 4: Tips for Insulating Glass

The red areas in the infrared picture of the house show where heat escapes in winter and enters in summer. Insulating your ceiling, windows and doors helps to block this movement of heat.

Bubble Wrap Windows

(a cheap form of double glazing)

Benefits: in most houses the greatest heat loss in winter is through window glass. The greatest heat gain in summer is also through the glass. By covering the glass with bubble wrap, you minimize the heat loss and gain.

HOW TO USE:

1. Cut pieces of bubble wrap exactly the size of the glass panes on your windows
2. Clean the window glass
3. Wet the glass (if you have a spray bottle, that's the easiest)
4. Press the flat side of the bubble wrap against the window
5. BINGO that's all there is too it. Alternatively, if you can afford it you can cover the whole frames with Perspex or double glaze your windows

Use Of Curtains And Pelmets

Benefits: Curtains are another way of controlling the loss of heat through windows. They are most effective when they go all the way down to the floor.

In Winter: open the curtains in the morning once the sun is up—especially curtains on any windows where the sun shines in. Close the curtains in late afternoon, as soon as the temperature drops.

In Summer: do the opposite. Close the curtains during the heat of the day and open them and your widows when the temperature is lower outside than inside.

Pelmets

Benefits: warm air rises and cool air falls. As the air behind a curtain cools, it drops toward the floor drawing the warm air from the top of the room down across the cold glass. This creates a circular draft that cools the room. By putting pelmets (a box) across the top of the curtains you can prevent this flow of air.

Construction: pelmets can be made of two pieces of wood, or fabric, at right angles with a piece at either end. Almost anything can be used that stops the airflow. For example, a bent piece of cardboard or a rolled up towel or blanket.

Use snakes and weather stripping around doors

Close off areas of the house where no one is sitting or working

Change where you do things at different seasons to match room temperatures

FREE BUBBLE WRAP while supplies last: Armidale and District Womens' Centre (6772 9540) and Armidale Mens' Shed (6772 5899) Often one can find free bubble wrap that was used for packaging

Handout 5: Decision Making When You're Stuck

THE DILEMMA:

What's Good About Continuing In The Same Old Way	What's Not Good About Continuing In The Same Old Way

WHAT IS THE CHANGE?

What's Good About Making This Change	What Might I Have To Deal With To Make This Change

EXAMPLE DILEMMA: *Not sure whether to contact my energy retailer (provider) to find out about doing a Hardship Program*

What's Good About Continuing In The Same Old Way	What's Not Good About Continuing In The Same Old Way
"I don't have to feel ashamed ringing up people I don't know" *"I don't want to have to put in all that effort to learn new stuff"* *"It is all too hard to think about"* *"I don't have to try to get the kids to change what they are doing!"*	*"But... I might feel more ashamed if I can't pay the bill"* *"But if I don't learn something about it how will I ever deal with?"* *"But... if I keep putting it off the electricity will get cut off and that will take a lot more effort to sort out."* *"But... if I don't try the kids won't get a chance to learn any better"*

EXAMPLE OF A CHANGE? *If I set up a Hardship Program...*

What's Good About Making This Change	What Might I Have To Deal With To Make This Change
"I will keep the electricity on even if I can't pay the bill now" *"If I learn about reducing my electrical use the bill will be much less"* *"if I try I will gain confidence in dealing with this organisation"* *"I can show my kids how to solve these types of problems"*	*"I will have to deal with asking someone I don't know for help"* *"I will need to find someone to help me work all this out"* *"I may need to accept the conditions of the Hardship Program"* *"It will take time to show the kids, and myself, how to do this"*

Handout 6: Running Costs per Hour of Common Appliances

RUNNING COST OF APPLIANCES: per hour at $0.35/kilowatt

Red = high annual costs | brown=medium | green=lower annual costs

Appliance		Energy Use/Hour	Cost/Hour Used
Electric hot water *(you may have gas or solar hot water)*		Turns on and off	About 25-30% of Household Electricity
4 Burner cook top		6000w per hour (all 4 burners)	$2.10/hr
Dishwasher ***if it Heats Water***		2200w per hour	77 cents / hr
Refrigerator		Turns on and off	About 73 Cents each day
Large plasma TV		310w per hour 21w standby	39 cents / hr . 7 cents / hour
Smaller LCD TV		240 w per hour	8.4 cents / hr
Oven		2400w per hour	84 cents / hr
Clothes dryer		2400w per hour	84 cents / hr
Cordless phone		3 watts	2 cents / hr
Small Computer awake		150 watts	5.25 cents / hr
Electric kettle		1000 watts	35 cents / hr
Clothes washer		1000 watts	35 cents / hr

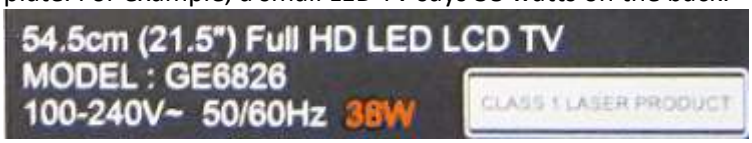
Microwave		1000 watts	35 cents / hr
Electric blanket		120-200 watts	4.2-7 cents / hr
Ceiling fan		100 watts	3.5 cents / hr
Iron		1000 watts	35 cents / hr
Hair dryer		1000 watts	35 cents / hr
Toaster		1000 watts	35 cents / hr
Vacuum		1200 watts	42 cents / hr

See separate diagrams for heating and cooling.

The running cost of an appliance depends on the electricity the appliance uses and the length of time it is used: a 1000 watt iron takes one hour to use one kilowatt, while a 500 watt vacuum cleaner takes two hours to use one kilowatt. The use of electricity is measured in kilowatt hours**. A kilowatt hour** = using 1000 watts for an hour.

How to figure out the cost of using an appliance:

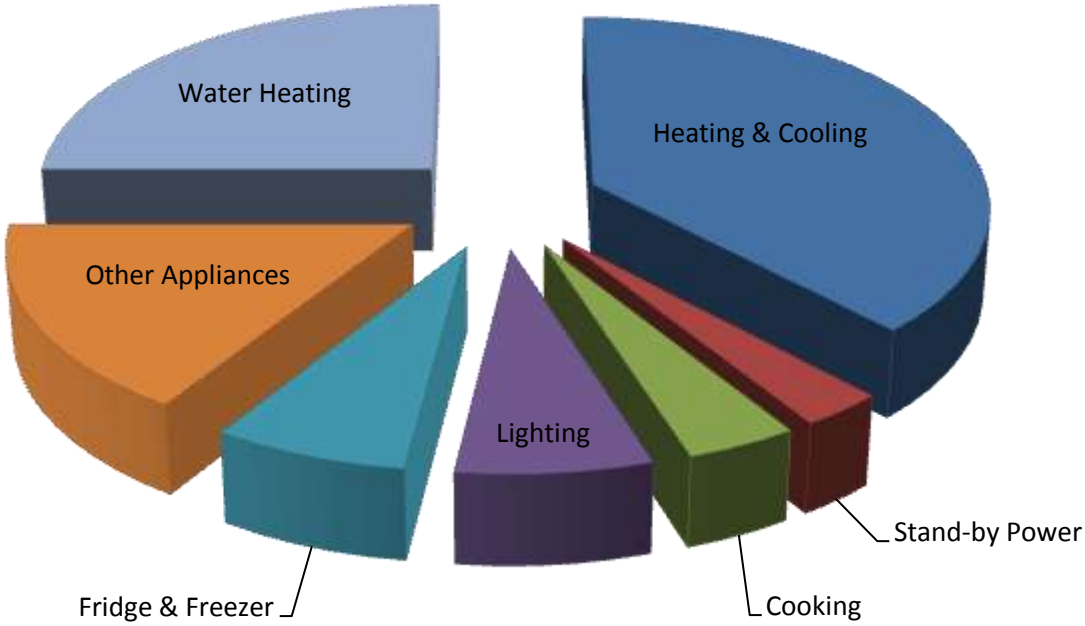
1. Find out the wattage: most appliances list the watts on the back or bottom on a manufacturing plate. For example, a small LED TV says 38 watts on the back.



2. Divide the watts by 1000 to get kilowatts. (The usage on bills is in kilowatts)
    a. So an LCD TV that uses 240 watts, uses 240/1000 = 0.240 kilowatts/hour.
    b. A hair dryer that uses 1000 watts would be 1000/1000= 1.0 kilowatt / hour
3. To figure out how much the appliance costs per hour, multiply the kilowatts by the current cost of electricity per hour (the tariff).
    a. In 2014 the cost of running the LCD TV will be 8.4 cents per hour (0.240 X 35 cents = 8.4 cents per hour)
    b. The hair dryer costs 35 cents per hour (1.0 X 35 cents = 35 cents per hour)
4. To figure out how much electricity the appliance is using you need to know how many hours you use it.
    a. If the TV in on 3 hours a day it will cost 25 cents per day (8.4 X 3 = 25.2cents per day or $22.68 on a 90 day bill)
    b. If the TV is on 10 hours a day it will cost 84 cents per day (8.4 X 10 = 84 cents per day or $75.60 on a 90 day bill)

Standby mode: 5 to 10% of the electricity used, in an average household, is from leaving the appliances on standby, so, *turn appliances off at the wall.*

Handout 7: Where Electricity is Commonly Used in Your Home



South Australia 2008 www.sa.gov.au

New England may be slightly different due to higher heating bills but less or no air conditioning

Handout 8: Reading Your Electrical Bill

Front page of an Origin bill: 2013

origin

6698.Oct.All

IT'S EASY TO MOVE

Arrange gas and electricity for your new place, online or over the phone. It'll only take a few minutes. And there's no heavy lifting required.

GO TO ORIGINENERGY.COM.AU/MOVE OR CALL 13 MOVE
BUSINESS CUSTOMERS, CALL 1300 661 544

821260-009049

Electricity
Tax Invoice: 129000319335 Issued: 12 Nov 13

Enquiries & moving address (8AM - 6PM Local Time Mon - Fri)	13 24 61
Faults or emergencies, call Essential Energy (24hrs)	13 20 80
Visa or MasterCard Payments (Processing fee may apply*, see reverse)	1300 658 783

Account No:

Total Amount Due:	$617.29
Debited On^ :	02 Dec 13

Preferred Payment Method: Direct Debit.

Amount Due Includes Discounts, see over for details.

Amount Due and Due Date

Service Address:
Meter Read: Actual
National Meter Identifier (NMI): 44072817416

Account Summary: 14 Aug 13 to 11 Nov 13

Opening Balance	$1,305.44
Payments Received - Thank You	$1,292.39 CR
Pay On Time Usage Discount (incl. GST of $1.19 CR)	$13.05 CR
Balance Carried Forward	$0.00
New Charges	
Other Charges & Adjustments (see over for details)	$7.75
Total Electricity Charges incl. Discounts (see over for details)	$609.54
Total Amount Due - incl. Overdue Amount	**$617.29**
New Charges incl. GST Charges of	$54.92

^Payments received after the due date may incur a fee of $12.00

Your Current Energy Agreement is:
DailySaver
- 12 month energy plan. Exit fees may apply during this period.

Benefits Applied To This Account:

This family's average cost of electricity per day is $6.77 plus GST. Their average daily electricity usage is 29.98 kilowatt hours

Important Information

Some Origin energy prices changed on 1 July 2013. If this change affects you, your new prices will be set out in the usage details on this bill.
"With Origin's 'My Account' you can manage your account online, choose electronic billing or pay your bill all in the one place. Register today at originenergy.com.au/myaccount"

Origin Energy Electricity Ltd ABN 33 071 052 287

6701.Oct.NSW/QLD

MY
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Take the m
Profile. Sin
Profile to se
along with tips on how you could save energy.

REGISTER FOR MY HOME PROFILE AT ORIGINENERGY.COM.AU/MYACCOUNT

Over the billing period this family's electricity emitted 2.9 tons of CO2

Average Cost Per Day:	$6.77
Average Daily Usage:	29.98 kWh
Same Time Last Year:	N/A
Indicative Greenhouse Gas Emissions (Tonnes)	
Generated This Account:	2.9T
Same Time Last Year:	N/A
Saved With a Green Product:	N/A

For more information on greenhouse gas emissions visit **originenergy.com.au**

Page 2 of an Origin bill

Payments Received - Thank You

11 Sep 13	Australia Post - Visa	$1,292.39 CR
Total Payments Received		**$1,292.39 CR**

Other Charges & Adjustments

06 Sep 13	Late Payment Fee (No GST)	$12.00
11 Sep 13	Card Payment Fee (Incl. GST of $0.70)	$7.75
11 Sep 13	Late Payment Fee (No GST)	$12.00 CR
Total Other Charges & Adjustments (Incl. GST of $0.70)		**$7.75**

Electricity Usage and Service Calculation

Next Scheduled Read: 11 Feb 14 (+- 2 business days) **Last Meter Read:** 13 Aug 13

Description: General Domestic

Billing Period: 14 Aug 13 to 11 Nov 13 (90 Days) (A = Actual, E=Estimated)

Usage:

Meter No.	Current Reading	Previous Reading	Usage kWh	Total kWh	Bill Days
34097	96207(A)	95166(A)	1041	1041	90
34098	85144(A)	83487(A)	1657	1657	90

Charges:		Usage kWh	Charge/Rate c/kWh	Amount $
Peak Energy Use	1	1041	31.11	323.86
Controlled Load Off-Peak 1 Energy Use	2	1657	12.22	202.49
Service to Property	3			112.31
Service to Property Off-Peak 1	3			10.21
Sub-Total				648.87
Less Discounts & Rebates				
Base Usage Discount (15%)	4			78.95 CR
Direct Debit Usage Discount (1%)	4			5.26 CR
Pay-On-Time Usage Discount (2%)	4			10.53 CR
Sub-Total				94.74 CR
Sub Total Electricity Charges				**$554.13**
GST				**$55.41**
Total Electricity Charges				**$609.54**

The table to the right allows you to compare your average daily electricity consumption with other households in your region.
For more information on electricity usage and energy efficiency visit **www.energymadeeasy.gov.au**

5 **How you Compare**

Household size	1	2	3	4
Summer	12.1kWh	15.6kWh	19.1kWh	22.6kWh
Winter	14.7kWh	18.4kWh	22.1kWh	25.8kWh

1. Over the billing period the family used 1041 kilowatt hours of electricity for their appliances. Each kWh cost 31.11 cents, totalling $323, plus GST. (With GST, the cost was almost 35cents/kWh)

2. Controlled load, or off-peak, is usually only for electric hot water that is reheated during the night when the price of electricity is cheaper. They used 1657 kWh charged at 12.22 cents per hour, totalling $202.49

3. All households who are connected to the electricity grid pay a service charge. It is the daily cost of getting electricity. This house has two meters so they pay two service charges

4. There are different kinds of rebates. They may depend on your plan, whether you use direct debit. if you pay on time, or if you are eligible for a government rebate.

5. This chart shows average electricity use per day for different sized households. This house uses 29.98 kWh per day (see page 1) almost double the average for a two-person family.

Front page of an AGL bill: 2013

Your electricity account.

Below is a summary of the bill. See page 3 for details

Your account summary.

Account name	
Supply address	ARMIDALE NSW 2350
Supply period	7 May 2013 to 6 Aug 2013
Previous balance	$0.00
Payment received	$0.00
Balance brought forward	$0.00
New charges and credits (see overleaf for details)	
Usage and supply charges	$470.30
Credits and rebates	$134.44cr
Total GST for new charges	$43.59
Total amount due	**$379.45**

Late payments may incur a fee of $14.00 (incl. GST). If you are unable to pay, call 131

Since May 2013, you've received **$134.44** in discounts on your AGL electricity bills.

175 YEARS SUPPORTING THE COMMUNITY

AGL Energy in action.

Your account number	#######
Total amount due	**$379.45**
Due date	**27 Aug 2013**
Discounted amount due if paid by the due date	**$360.51**

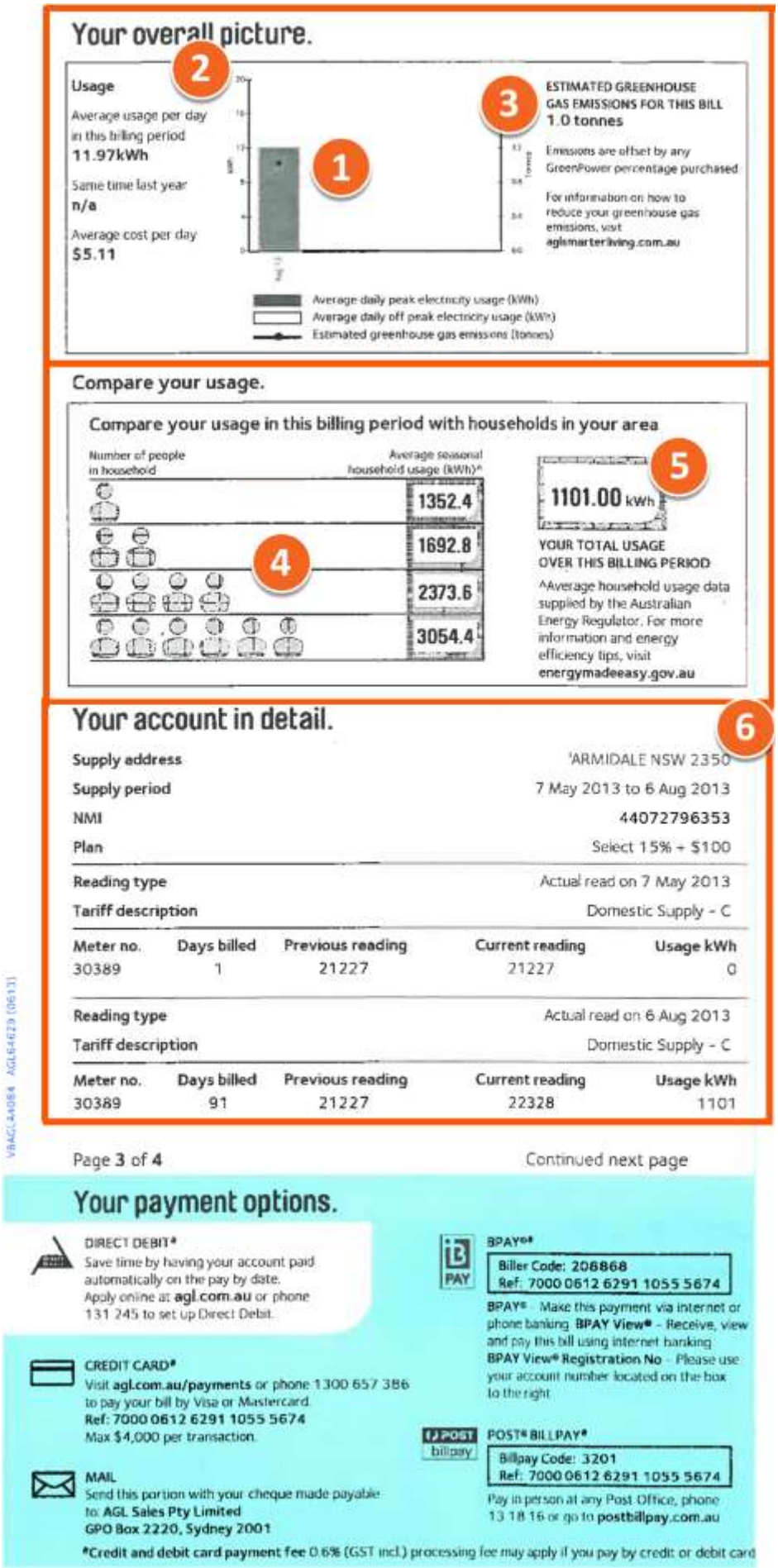
Getting in touch.

Call 131 245

Visit ...gl.com.au

Here is the account number, amount due, due date and a discounted amount due if the bill is paid on time.

Page 2 of an AGL bill



Your overall picture.

Usage

Average usage per day in this billing period
11.97kWh

Same time last year
n/a

Average cost per day
$5.11

ESTIMATED GREENHOUSE GAS EMISSIONS FOR THIS BILL
1.0 tonnes

Emissions are offset by any GreenPower percentage purchased

For information on how to reduce your greenhouse gas emissions, visit **aglsmarterliving.com.au**

Average daily peak electricity usage (kWh)
Average daily off peak electricity usage (kWh)
Estimated greenhouse gas emissions (tonnes)

Compare your usage.

Compare your usage in this billing period with households in your area

Number of people in household	Average seasonal household usage (kWh)^
	1352.4
	1692.8
	2373.6
	3054.4

1101.00 kWh

YOUR TOTAL USAGE OVER THIS BILLING PERIOD

^Average household usage data supplied by the Australian Energy Regulator. For more information and energy efficiency tips, visit **energymadeeasy.gov.au**

Your account in detail.

Supply address	ARMIDALE NSW 2350
Supply period	7 May 2013 to 6 Aug 2013
NMI	44072796353
Plan	Select 15% + $100

Reading type	Actual read on 7 May 2013
Tariff description	Domestic Supply - C

Meter no.	Days billed	Previous reading	Current reading	Usage kWh
30389	1	21227	21227	0

Reading type	Actual read on 6 Aug 2013
Tariff description	Domestic Supply - C

Meter no.	Days billed	Previous reading	Current reading	Usage kWh
30389	91	21227	22328	1101

Page 3 of 4 Continued next page

Your payment options.

DIRECT DEBIT*
Save time by having your account paid automatically on the pay by date. Apply online at **agl.com.au** or phone 131 245 to set up Direct Debit.

BPAY®*
Biller Code: 206868
Ref: 7000 0612 6291 1055 5674
BPAY® - Make this payment via internet or phone banking. BPAY View® - Receive, view and pay this bill using internet banking. BPAY View® Registration No - Please use your account number located on the box to the right.

CREDIT CARD*
Visit **agl.com.au/payments** or phone 1300 657 386 to pay your bill by Visa or Mastercard.
Ref: 7000 0612 6291 1055 5674
Max $4,000 per transaction.

POST® BILLPAY®
Billpay Code: 3201
Ref: 7000 0612 6291 1055 5674
Pay in person at any Post Office, phone 13 18 16 or go to **postbillpay.com.au**

MAIL
Send this portion with your cheque made payable to: **AGL Sales Pty Limited**
GPO Box 2220, Sydney 2001

***Credit and debit card payment fee** 0.6% (GST incl.) processing fee may apply if you pay by credit or debit card

1. **Overall picture:** The grey bar represents the average energy this house used per day. If they had had more bills from the same company there would have been several bars to show the different amounts used each billing period.

2. This household used an average of 11.97 kilowatt hours per day, at a cost of $5.11 / day plus 10% GST.

3. They emitted about 1 tonne of greenhouse gasses.

4. **Comparisons:** This chart shows the average kilowatt hours used depending on the number of people in the house.

5. This household is quite economical. It only used 1101 kWh during the billing period, well below average.

6. **Account details:** Here is information about the type of account, and a summary of the meter readings.

Page 3 of an AGL bill

Your account in detail (Continued).

Reading type			Actual read on 7 May 2013	
Tariff description			Domestic Supply - C	
Meter no.	**Days billed**	**Previous reading**	**Current reading**	**Usage kWh**
30390	1	03707	03707	0
Reading type			Actual read on 6 Aug 2013	
Tariff description			Domestic Supply - C	
Meter no.	**Days billed**	**Previous reading**	**Current reading**	**Usage kWh**
30390	91	03707	03707	0

Balance brought forward		Charge $0.00
New charges and credits		
Usage and supply charges		
Old Rate Prorate 7 May 2013 to 1 Aug 2013 87 days		
Peak 1040 kWh @ $0.3129	$325.42	
Controlled Load 1 0 kWh @ $0.1229	$0.00	
Supply Charge	$109.17	
CL1 Supply Charge	$9.92	
New Rate Prorate 2 Aug 2013 to 6 Aug 2013 5 days		
Peak 61 kWh @ $0.3111	$18.98	
Controlled Load 1 0 kWh @ $0.1222	$0.00	
Supply Charge	$6.24	
CL1 Supply Charge	$0.57	
Total usage and supply charges		*$470.30*
Credits and rebates		
10% Guaranteed Peak Discount	$34.44cr	
Account credit	$100.00cr	
Total credits and rebates		*$134.44cr*
Total GST for new charges		$43.59
Total amount due		**$379.45**

175 YEARS SUPPORTING THE COMMUNITY

AGL Energy in action.

Your account number	#####
Total amount due	**$379.45**
Due date	**27 Aug 2013**
Discounted amount due if paid by the due date	**$360.51**

1. This is a repeat of the summary on page 2. There are two different meter readings because the price of electricity changed during the billing period.

2. The first 87 days of the billing period the rate was 31.29 cents per kilowatt hour (kWh). The household used 1040 kWh so the cost was $325.42 plus GST.

3. Controlled load (like off-peak) is for electric hot water. This household doesn't seem to have electric hot water because they used no kWh on their controlled load service.

4. Every household that gets electricity from an energy company pays a supply charge. This household is paying a second supply charge of $9.92 for their controlled load service.

5. This box, for the last 5 days of the billing period, is like boxes #2, 3 and 4 above: The kilowatts used, at the new price of 31.11 cents per kWh, and the controlled load and the supply charges.

6. There are many different credits and rebates, depending on your service plan, whether you pay on time and whether you are eligible for government rebates. Their 10% credit is probably part of their agreement with AGL. It may relate to having peak and controlled load service.

Handout 9: Heating, Cooling, Light Bulbs, TV's & Standby

Electric Heaters

The more efficient a heater the less time it needs to run, saving money

Radiant heaters (e.g. bar heaters) tend to be small (700 - 2500W)

They are like fires, they only heat the air right in front. Radiant heaters are fast but the most inefficient. They are only good to heat small spaces. Bathroom heat lights are also radiant heaters. They are expensive per hour, but they heat the air quickly and should only be used when showering.

$0.35 – $1.00 per hour

Convection heaters - (1500-2500W)

A fan blows air across the heating element and into the room. They are also good for quick heat but are expensive to run over many hours. Moderately efficient

$0.52 - $1.00 per hour

Conductive heaters including oil heaters (1500-2500W)

Heat is transferred from the element to another substance such as the metal side of the heater or radiator so they give off more heat. This is combined with a fan. Good for medium sized area. Often has a thermostat. Efficient

$0.52 - $1.00 per hour

Reverse Cycle - (2200 - 8000W) THE MOST EFFICIENT

Like a refrigerator, in summer these draw warm air out of the house. In winter, they reverse the cycle. They use a lot of electricity, but they are very efficient and good for heating large areas. A thermostat automatically controls the running time, turning it on and off as needed.

$0.77 - $2.80 per hour

Ways to cool your home

Windows and Doors

A free way to have a cool house in summer is to use doors and windows. Open at night and in the early morning, close on hot days and pull curtains or shade cloths.

N/A

Fans

Fans, particularly ceiling fans, are an excellent option. They cost about 3-4 cents an hour to run. **Most houses in Armidale rarely need air conditioning so why spend the money?**

3-4 cents an hour

Portable Air Conditioners

Most are not very efficient and expensive to run. Many need a hose installed that draws hot air out of the house.

1000watt costs $0.35 / hr

4400watt costs $1.64 / hr

Evaporative Coolers

They work by blowing air over water. It is similar to feeling cool as water evaporates when you get out of a pool. But they don't work if it is humid. Large systems are installed in the roof.

285watt costs $0.10 / hr

425watt costs $0.15 / hr

Reverse Cycle

These draw warm air out of the house like a refrigerator draws warm air out of a fridge. are very efficient and good for large spaces.

2200watt costs $0.70 / hr

8000watt costs $2.80 / hr

Cost per 24 hours for the same amount of light

100 watts

Incandescent (the old ones)

84 cents

60 watts

Halogen

50 cents

11 watts

CFL (Compact Fluorescents)

9 cents

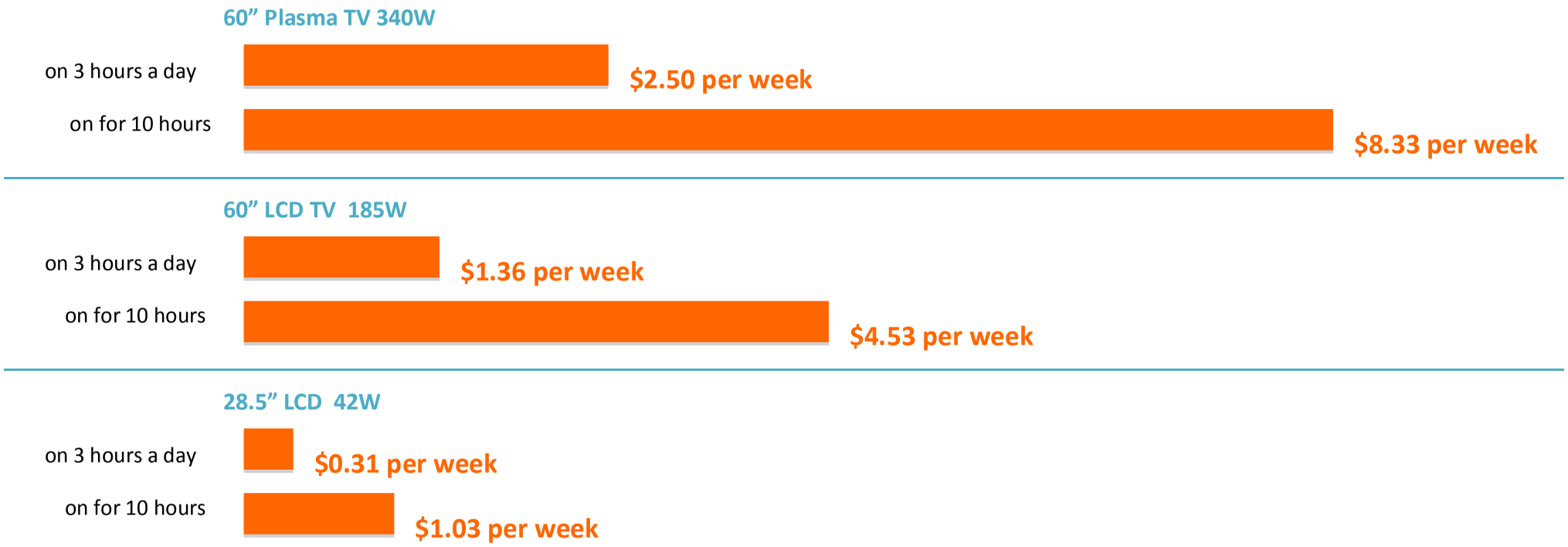
4 watts

LED

3.4 cents

Televisions - Comparative Costs

Cost for a week at 35 cents per kilowatt hour



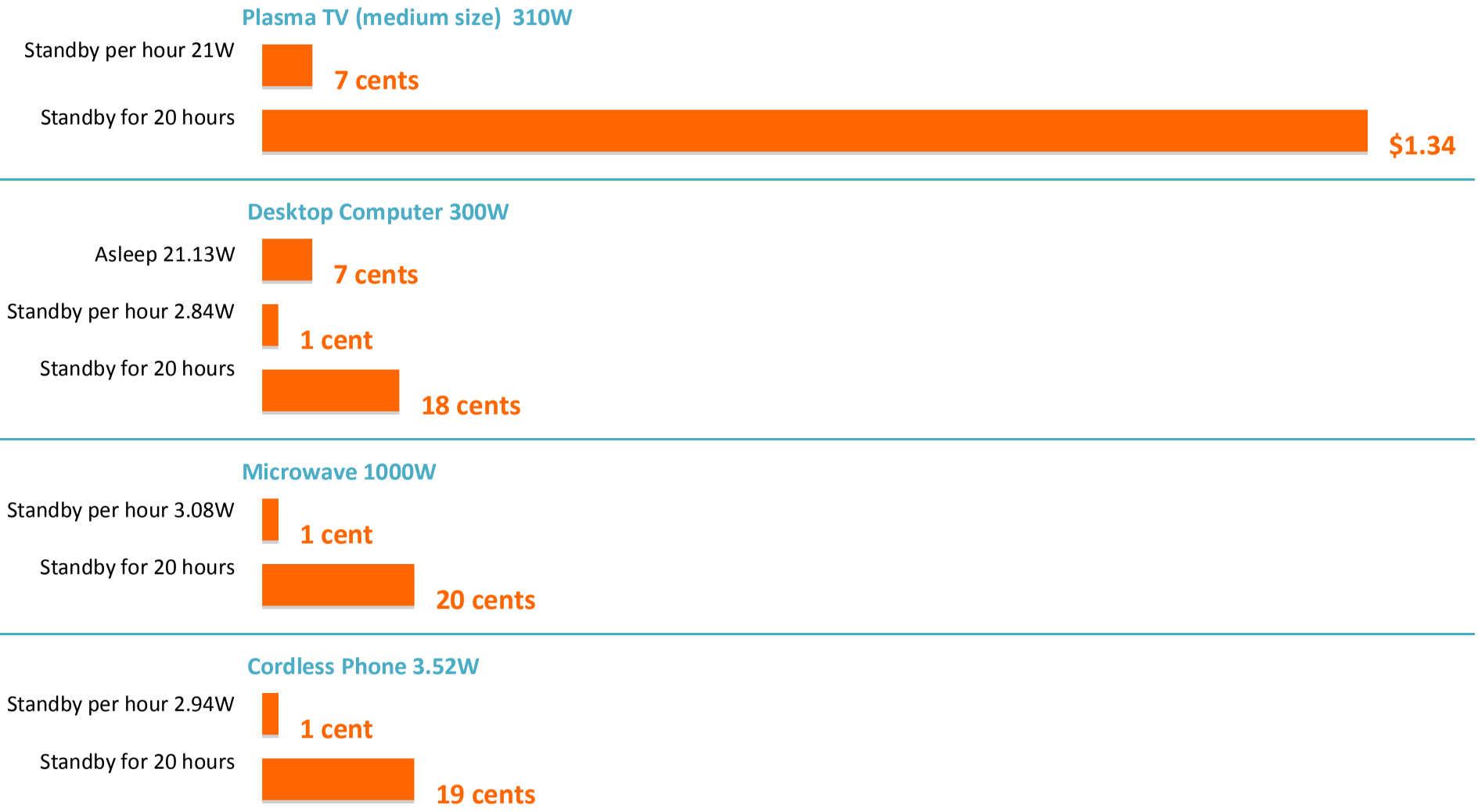
The more energy a TV uses and the longer it runs the more it costs. Plasma TV’s may be cheaper to buy but most LCD machines are much cheaper to run.

Check the star rating on the front of the TV

Check the wattage on the back or the bottom of the TV

Standby Costs

If not turned off at the wall, standby just for these four appliances could cost over $200 per year



Handout 10: Energy Saving Tips For Appliances

Tick the ones you already do or want to do

Appliance		Tips To Save Money	✔
Electric hot water		Shorter showers. Easy if you use a timer	
		Wash clothes in cold water	
		Reduce running water (washing-up, brushing teeth or washing hands)	
4 Burner cook top	$2.10 / hr	Pots with lids boil faster	
		A pressure cooker shortens cooking time	
		If boiling stew or soup, turn off before done. It continues to cook so reduces cost	
Dishwasher if heats water	77 cents / hr	Use setting that doesn't heat water	
		Run only when full	
		If you buy one, get at least a 5 Star rating	
Refrigerator		A full fridge is cheaper to run. If not full, use plastic containers of water to fill freezer	
		Let food cool before putting in fridge	
		Don't hold door open while you think	
		Check seals are working	
		When replacing look for energy efficiency	
Large plasma TV	39 cents / hr	Turn off at wall when not watching, saves stand-by costs	
		Ask, am I really watching this, if 'no' then turn off	
		If I want noise, a radio is cheaper to run.	
Smaller LCD TV	8.4 cents / hr	Same as above	
Oven	9.4 cents / hr	Cook several things at once	
		Substitute microwave when possible to save energy. Note: there is debate about whether this is a healthy, nutritious way to cook food	
		Turn off before done; food will continue to cook	
		If buying a new one consider efficiency, eg a convection oven or fan forced	
Clothes dryer	9.4 cents / hr	Dry clothes on a line outside or on racks	
		Only use for emergencies	
		Turn off at wall when not using to save energy	
Cordless phone	0.1 cents / hr	Turn off if away on holiday. (If your phone is also an answer machine that you want on, then don't turn off)	

Small computer	5.25 cents / hr	Turn off at the wall when not using	
		Set to go to sleep if not used for 10-15 minutes (or whatever limit suits you).	
Electric kettle	35 cents / hr	Just heat the amount of water you need.	
		Fill a thermos with any extra hot water.	
Clothes washer	35 cents / hr	Wash in cold water	
		Do full loads	
		Only wash clothes when they are dirty	
		Turn off at power point	
Microwave	3.2 cents / hr	Reduce cooking time and cost by using a microwave	
Electric blanket	6 cents/ hr	Inexpensive to run. Much cheaper than a room heater. Can be used as a wrap	
		Reduce running time and use a timer	
		Perhaps turn on half an hour before getting into bed; then turn off when going to sleep	
Iron	35 cents / hr	Irons use lots of energy to heat up so it is cheapest to do all your ironing at once	
		Shaking clothes before hanging up to dry avoids need to iron. Using hangers helps, too	
Hair dryer	35 cents / hr	Ask yourself if you need to use it. If you do, minimize length of time it's used	
Toaster	35 cents / hr	Fill toaster when using it	.
		Buy toaster that suits family size	
Vacuum	42 cents / hr	Uses minimal electricity so okay to use efficiently.	
		In some areas, a broom works just as well.	
Curtains & Pelmets		Winter: Open when sun is well up to let in heat and light; close when temperature drops.	
		Summer: close curtains and windows to block out heat before it gets hot; open curtains and windows when the temperature outside is lower than inside	

Costs were calculated on August 2013 prices of 35 cents per kilowatt hour. Items with a thermostat are difficult to calculate as a cost per hour because they turn on and off, e.g. an electric hot water system, a refrigerator and some heaters and coolers.

Handout 11: Before You Rent - Checklist For Tenants

To help compare energy costs of different properties

Some things are the responsibility of the landlord: for example, leaky taps, broken windows, faulty locks on outside doors, and faulty heaters.
A responsible, active landlord is very valuable. So is a good tenant.

What To Check	Yes/No	Can It Be Fixed Easily? Cost?	Importance
Is the location convenient?			If the dwelling is far from the places you like to go—family, shops, schools—transport may be expensive or difficult
Does it feel like a place you could live?			Comfort is influenced by how we feel about a place.
Is there ceiling **insulation?**			Ceiling insulation helps to keep your house warmer in winter and cooler in summer. Roof insulation makes the biggest difference. (Insulation in walls and under floors is also valuable)
Are there **carpets**?			Carpets and mats can help insulate floors and keep heat from escaping
If the **hot water** system is electric, is there an off-peak meter (a second, separate meter) or maybe a 'time of use' meter?			Off-peak, or 'controlled load' electricity is much cheaper but it is only for electric hot water and doesn't lower the electricity used. It usually heats the water during the night There are new 'time-of-use' meters. At present, the rates are usually the same for all the electricity used. If you have electric hot water, you will save money by asking the company for different rates at different times of day.

What To Check	Yes/No	Can It Be Fixed Easily? Cost?	Importance
Does it have a **solar hot water**? If so, does it have an automatic or a manual booster?			If you have an automatic, off-peak solar system that uses electricity to heat the water at night, it is cheaper to shower in the morning so the sun heats up the water during the day. If you shower at night, the tank will be cool and will use electricity to heat the water instead of the sun. If you have an automatic booster but do not have off-peak service, electricity will be used whenever the water temperature falls below the set thermostat level. A manual booster means you can choose when to heat water.
Are there **heaters**? What kind?			Heating is expensive. See chart on different types of heaters in the *Light Bulb Moments* document.
Are there energy efficient **light bulbs** throughout?			The wiggly ones are much cheaper to run and last much longer. Some may take a minute to get to maximum brightness. There are newer bulbs called LEDs that use even less electricity and last even longer, but they cost more upfront.
Is there **cross ventilation**			Allowing breezes to flow through the house will help your house be cooler and more comfortable in summer. It is healthy to open windows at least once or twice a week in winter.
Do **windows** open easily?			Fresh air in the house provides ventilation, but also reduces condensation and helps to prevent mould that can be toxic.

What To Check	Yes/No	Can It Be Fixed Easily? Cost?	Importance
Is there **natural light**, particularly north light? Will there be shade in summer?			Sunlight is pleasant and saves money because you don't need to turn on lights in the daytime. Unshaded north facing windows let in the sun's heat in winter. But if there is no shade or roof overhang, they can be too hot in summer. You can pull curtains and/or hang shades or shade cloth outside the windows.
Are there **curtains** or **blinds**?			If properly used curtains and blinds help moderate the temperature—in winter close in late afternoon and through the night to prevent heat loss; in summer, close during the day and open when it is cooler outside than inside. If no curtains, are there fittings? Curtains can often be bought at Op shops or made of simple materials. The thicker and the more layers the better. Any curtains are better than none.
Are there **pelmets?**			Pelmets help prevent heat loss or gain from windows. They sit above curtains at right angles and keep air from being drawn down across cold window panes at night. They can be cheaply made. Even from cardboard.
Are there **ceiling fans**?			Fans are inexpensive to run. Most ceiling fans have a winter and a summer setting. Heat naturally rises so it is hot near the ceiling. A fan can send the heat down along the walls towards the floor spreading the heat more evenly. In dry climates like Armidale, summer fans help to make us feel cool by increasing skin evaporation, which cools the body. A fan can also increase evaporation from anything wet. Evaporation helps cool a room.

What To Check	Yes/No	Can It Be Fixed Easily? Cost?	Importance
Are there any obvious **drafts** around doors and windows?			Drafts are uncomfortable and decrease the efficiency of heating. Drafts can often be fixed with insulation strips and door snakes.
Does the **oven door seal** properly?			A bad seal lets heat escape so more electricity, or gas, is used when cooking.
If a **fridge** is provided, does the **door seal** properly?			You can test the seal by closing the door seal onto a piece of paper. If you can pull out the paper easily, the seal is poor. A poor fridge seal can cost a lot because the fridge will run almost continually.
Do **taps** leak?			Leaky taps can be expensive, particularly hot taps because they waste water. And increasing the amount of water used raises the water bill. NOTE: Water usage can only be charged to tenants if the tap fittings are high WELS rated and not leaking.
Are there water saving **shower heads**?			Less water flow saves cost of heating water and lowers water usage.
Have **flow restrictions or aerators** been installed on water taps?			They save lots of water and are usually on showers and sinks, but not on the bath or laundry tub.
Do any of the **toilets leak**? Are the toilets dual flush?			Leaky toilets use a lot of water so they, too, increase your water bill. You can reduce water usage by placing a brick or filled drink bottle in the cistern if it is not dual flush.

Video 1: Reading Your Electrical Bill

Video 2: Darren Was Horrified! A Couple Making Change to their Electrical Bill

Additional Support and Information

Sustainable Living

The Renters Guide to Sustainable Living found at: http://www.ata.org.au/wp-content/sustainability/ata_renters_guide_sustainability.pdf

Armidale Dumaresq Council's (ADC) Sustainable Living Resources found at http://www.armidale.nsw.gov.au/index.php?option=com_content&view=category&id=688&Itemid=1875

Sustainable Living Armidale (SLA), a local non-government organisation that works with the community to provide information on sustainable living found at http://slaati.org/

Electrical Energy Rebates found at http://www.energy.nsw.gov.au/customers/rebates

Wright, J., Osman, P. & Ashworth, P. 2009. The CSIRO Home Energy Saving Handbook: How to save energy, save money and reduce your carbon footprint. Armidale Library.

NABERS: The National Australian Built Environment Rating Scheme is a national rating system that measures the environmental performance of Australian buildings and tenancies. They have an Energy Management Guide for Tenants found at http://www.nabers.gov.au/public/WebPages/ContentStandard.aspx?module=10&id=121&template=2&newsItemId=12&caller=100

Helping Skills

Training for Active Listening Skills found at: http://pdtraining.com.au/courses/active-listening-training

Learning videos on Motivational Interviewing at 3rd International Symposium in Motivational Interviewing, 2013, Melbourne, found at: http://www.ismi2013.com/

Miller, W. & Rollnick, S. 2012 (3rd Ed) Motivational Interviewing: Helping People Change. Guilford Press.

Department of Health and Ageing, Learning Module: Understanding Change, found at http://www.health.gov.au/internet/publications/publishing.nsf/Content/drugtreat-pubs-front9-wk-toc~drugtreat-pubs-front9-wk-secb~drugtreat-pubs-front9-wk-secb-3~drugtreat-pubs-front9-wk-secb-3-3

Energy Issues

Energy Efficiency Council is the peak body for energy efficiency and cogeneration services and products, focusing on the non-residential sector found at http://www.eec.org.au/

IPART - Independent Pricing and Regulatory Tribunal, whose role is to review and advise on pricing for water, electricity, gas, public transport and taxi services in NSW and decide how they can increase over the next few years. Found at http://www.ipart.nsw.gov.au/Home

Australian Bureau of Statistics, Energy Account Australia 2011-12 found at http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/4604.0main+features42011-12#USE%20OF%20ENERGY

Hoch, L. 2012. Policy options for maximising downward pressure on electricity prices, Final Report prepared by Oakley Greenwood for The Australian Industry Group, Brotherhood St Laurence, CHOICE and the Energy Efficiency Council, found at http://www.aigroup.com.au/link/dU

CSIRO is Australia's national science agency and one of the largest and most diverse research agencies in the world. It provides insights into the future of energy in Australia found here http://www.csiro.au/Organisation-Structure/Flagships/Energy-Flagship/Future-Grid-Forum-brochure.aspx

Your Home, A Technical Manual. http://yourhome.gov.au/

Impact of CO2 Emissions

Intergovernmental Panel on Climate Change Report. Climate Change 2013: The Physical Science Basis. Found at: http://www.ipcc.ch/

Global Humanitarian Forum, Geneva, 2009. Climate Change: Human Impact Report. Found at http://www.ghf-ge.org/human-impact-report.pdf

CSIRO is Australia's national science agency and one of the largest and most diverse research agencies in the world. It provides information about the impact of Climate issues here: http://www.csiro.au/Outcomes/Climate/CSIRO-and-the-IPCC.aspx