PURPOSE:
To provide direction to co-operatives, tenant members and tenants on the implementation of green initiatives, energy savings and sustainable energy solutions.

POLICY STATEMENT:
Common Equity has an ongoing commitment to sharing information, resources and tools with housing co-operatives and tenants about environmental sustainability in line with the 7th International Principle of Co-operation: Concern for Community.

Common Equity continues to review opportunities for energy efficiency in the dwellings it operates, and to identify opportunities for individuals to contribute to a greener community and environment sustainability. At this time, some technologies are unsuitable to rental housing models or do not provide reliable returns to tenants, but we continue to review technology and initiatives as they develop.

1. SCOPE

1.1. Applies to all staff
1.2. Applies to co-operatives

2. EXCEPTIONS:

NA

3. DEFINITIONS

3.1 Solar PV system: Solar Panels (Solar Photovoltaic (PV) systems)

4. RESPONSIBILITIES

4.1. Chief Executive Officer (CEO)

4.1.1. Providing resources
4.1.2. Oversight of process etc

4.2. Manager

4.2.1. Staff competency

4.2.2. Monitoring and implementation

4.3. Board

4.3.1. Setting policy direction

4.4. Quality Coordinator (QC)

4.4.1. Review the policy with relevant staff as per schedule or when required

5. CONTENT

5.1 This policy identifies i) a number of activities which can be initiated to reduce the costs of electricity and support a "green" approach to our dwellings and ii) those that, at present, do not provide an adequate case for investment or implementation.

Our Approach to sustainability

5.2 Technologies

5.2.1 Solar panels

Common Equity does not support the use of company or co-operative funds for the retro –fit of solar energy panels on existing dwellings. Solar panels may need to be installed on new dwellings if required to meet NABERS ratings.

Retro-fit of panels is not supported at present due to three key elements that do not support the business case: i) co-operatives cannot establish a strong case for fiduciary responsibility for the installation; ii) the benefit to individual households from the panels is highly variable; iii) ongoing maintenance costs are considerably higher when solar panels are installed.

Fiduciary responsibility

When co-operatives invest in the dwellings they operate under the Common Equity head lease, they are required to use all funds gained from tenant rentals in the framework of fiduciary responsibility.

At present, solar panel installation does not provide any return to the landlord (Co-operative and Common Equity). Savings that might be achieved on electricity usage are returned to the individual household and not the co-operative despite the co-operative providing the capital funds for installation. Expenditure of funds raised by the co-operative that do not yield an overall maintenance benefit to the housing stock are currently not endorsed by the NSW Affordable Housing Guidelines. Sect 4.4 notes that *"Retained earnings from the operation of affordable housing programs will be reinvested in affordable housing supply. Retained earnings are funds that are in excess of all operational costs and provision for contingent risks."* This requirement implies that excess funds should not be reinvested back into the co-operative

unless there is a specific maintenance initiative that can be demonstrated.

It should be noted that NSW Housing (Dept.of Family and Community Services) Alterations to a Home Policy Supplement, only supports the installation of solar panels by individual tenants, in specific circumstances (see 5.2.2)

At this time, schemes providing long term contracts with capital costs covered by the contractor, do not apply to community rental housing. Where a co-operative does purchase the electricity for all tenants in composite buildings, with a charge back to tenants, there are potential opportunities for examining the benefit of solar installation. For the majority of our co-operatives, this arrangement does not apply.

Variability of Tenant benefit from buy back

The current status of solar panel use in Australia provides a mixed result for the potential savings for households. Data available regarding use of solar panels for household energy indicates that not all households benefit equally from their installation. Larger households where people are home through the day demonstrate a benefit whereas households that are not in occupation during daylight hours often yield little or no benefit. If energy generated by the panels during daylight hours is not utilised at the time, the energy generated is returned to the grid with no resulting benefit to the household.

The recent introduction of TESLA storage batteries to the Australian market will be monitored by Common Equity as they do provide an opportunity for storage rather than return of unused power to the grid. However, at the moment, the battery purchase and installation increases the capital cost of installation by several thousand dollars.

Recurrent maintenance costs

Installation of solar panels impact substantially on the recurrent costs of replacement of household items such as hot water services.

5.2.2 Tenant purchase and installation of solar panels

Approval for an individual tenant to install a solar PV system will be allowed under the following conditions.

- The system will be installed on a cottage, townhouse or villa that has its own dedicated roof space.
- The roof is large enough to accommodate the installation and the panels do not touch or cover adjoining roof spaces of other tenancies.
- There is no significant shading on the roof, for example from trees or other buildings.

- The tenant agrees to pay all costs associated with the installation and ongoing maintenance of the system.
- The tenant agrees to restore the property to its original condition if they elect to take the system with them when they move out.
- The installer meets the current Australian guidelines and standards

All of the conditions set out elsewhere in this policy must be followed when installing a solar PV system, including having the work carried out by a licensed electrician and complying with any local council requirements. Installers of solar PV systems must also hold a Clean Energy Council Solar PV accreditation and the system components and installation must meet the relevant Australian Standards. Refer to the Clean Energy Council and NSW Fair Trading websites for further information.

If the installed solar PV system is to be connected to the electricity distribution network, this work must be undertaken by a person accredited under the Level 2 Accredited Service Provider Scheme (ASP); refer to the NSW Department of Trade and Investment website for a list of Level 2 ASPs.

In accordance with Clause 38 of the Residential Tenancy Agreement, the tenant will be entitled to all rights and interests in any certificate that may be issued under any renewable energy schemes for solar PV systems installed by the tenant with the approved written consent of the housing provider.

An authority to pay letter can be issued to assist the tenant in obtaining renewable energy certificates or other rebates that may apply to the installation of solar PV systems to enable these rebates to be paid directly to the tenant. The tenant is responsible for claiming renewable energy certificates or other rebates that may apply to the installation of solar PV systems.

5.2.3 Heat Pumps

Common Equity is currently investigating the capacity and the potential value of heat pumps for individual households. There are capital costs associated with this technology as well, so the fiduciary responsibility issues raised under point 5.2.1 are relevant.
A heat pump is a device that provides heat energy from a source of heat to a destination called a "heat sink". Heat pumps are designed to move thermal energy opposite to the direction of spontaneous heat flow by absorbing heat from a cold space and releasing it to a warmer one. A heat pump uses some amount of external power to accomplish the work of transferring energy from the heat source to the heat sink. Heat pumps are typically used to pull heat out of the air or ground to heat a home or office building, but they can be reversed to cool a building.

5.2.4 Insulation

Common Equity is interested in working with co-operatives regarding insulation at various properties. A cost benefit case will need to be established but insulation is often a cost effective way of improving household energy performance and comfort.

5.2.5 Cooling options

Other cooling options for properties regarding co-ordinated planting of shrubs and trees and fitting of heat barriers such as awnings should be considered at properties, especially those affected by western sun.

5.3 Rainwater tanks

Rainwater Tanks will generally be approved where the tank is not connected to the internal plumbing of the property. All work must be carried out by a licensed plumber and comply with council or water authority requirements.

Some councils and water authorities offer rebates for the installation of rainwater tanks. Where an approved rainwater tank has been installed by a tenant and rebates are being offered, an 'Authority to Pay' can be issued to the tenant which asks the rebate provider to pay the rebate directly to the tenant. Ultimately though, this is a matter for the rebate provider whether they are prepared to agree to the request to pay the rebate directly to the tenant. Authority to pay would only apply if the tenant is responsible for water rates.

5.4 Tenant and co-operative initiatives

Co-operatives and households can initiate a number of actions that assist with both energy savings and sustainability. For those individuals who are passionate about sustainable solutions and who have available spare funds from their energy savings, they also have the choice of supporting green energy supply options with their energy supplier.

The recommended initiatives are available on the CENSW website as tool kits for individuals and co-operatives.

6. REFERENCES

6.1. June 18, 2014 Alterations to a Home Policy Supplement
6.2. August 2012 NSW Family and Community Services Affordable Housing Guidelines.

7. ASSOCIATED DOCUMENTS

7.1 What you can do- toolkit
7.2 What co-ops can do- toolkit

8. FORMS

8.1. Nil

Signature	*James Brown*
Name and Designation	**James Brown, CEO**
Date	**15 June 2016**
Board Approved	**Yes**

TOOLKIT 1 – WHAT YOU CAN DO

As individuals, we can all help create a better society by making simple changes to our everyday lifestyles.

To help us get started, we have a proposed list of actions that everyone can participate in. They are mainly things you can do around the house and garden, but also ways we can reduce our environmental impact when we are 'out and about'.

Refer Tool Kit 2 for things the Co-Op can do.

In the Kitchen

The fridge

It runs 24/7, so it's important to make sure it's energy efficient.

- Set your fridge temperature to 5°C and set the freezer temperature to -18°C.
- Each year, defrost chest freezers once or twice and upright models twice or three times, to keep them running at peak efficiency.
- Choose a fridge with a top star energy rating label. This could save up to 4.5 tonnes of greenhouse gas and a whopping $450 over its lifetime.
- Open the fridge door only when necessary. Take out or put back several items at a time to preserve the cold air inside and save energy.
- An old fridge could be using three times the energy of a new one.
- Is a 'beer fridge' really necessary? A rarely-used second fridge can cost more than $200 a year in energy bills.
- Fridges operate at peak efficiency when full.
- Locate your fridge in a cool place away from the oven (and the sun).
- If your fridge has coils at the back, make sure there's enough space for ventilation.
- Fridge door seals should be completely air tight. Test them by closing the door over a piece of paper so that it's half in and half out of the refrigerator. If you can pull the paper out easily, the hinge may need adjustment or the seal may need replacing.

The dishwasher

It may get things squeaky clean, but how much energy is it using to do so?

- Choose a dishwasher with a top star energy rating label.
- A half-filled dishwasher uses the same energy as a full one, so make sure you have a full load before running the next cycle.
- Turn your dishwasher off before the drying cycle. Open the door, and allow the dishes to air dry.
- Always follow manufacturer instructions to obtain peak efficiency. Pack dishes correctly and be sure there are no large items preventing the wash arms from rotating.
- Use small load or half load options, short wash cycles or rinse-only cycles for maximum energy efficiency.

The oven and cook top

Here's how to whip up an energy-efficient feast in the kitchen!

- Microwaves, electric fry pans and pressure cookers are more energy efficient than the oven.
- Thaw frozen foods thoroughly to save energy and cooking time.
- Keep the oven door completely closed until food is cooked. Try not to open the oven door while baking.
- Fan forced ovens use less energy than conventional ovens, reducing baking times significantly.
- Cook vegies in just enough water to create steam, saving the energy required to boil more water than is necessary. More nutritionally valuable, too!
- Pressure cookers save approximately 25% of energy used in a standard convection oven.
- Always use the right pot or pan size for your hotplates, and cook with the lids on.
- Use a small amount of water in pots and bring liquid to boil quickly on a high setting, then turn the heat down so food simmers while cooking.
- Use your jug or kettle to boil water, rather than the stove.

In the Laundry

The washing machine.

It's time to clean up your act when it comes to the weekly wash!

- Use cold water whenever possible.
- Front-loading machines use less energy and water than top-loaders.

- Washing machines use the same amount of electricity for a full load as they do for a single item. If you can't delay until you have a full load, adjust the clothes washing cycle to match the load size.
- Never overload your washing machine, or it will not clean effectively.
- Take advantage of energy (and money) saving features on your machine. Soak cycles remove stubborn stains on a one-wash cycle and a suds-saver allows you to recycle soapy water if required. Buy a washing machine with at least 3.5 star energy rating. Washers are also rated for water efficiency - go for at least 4 stars. Every extra star rating can cut 25% off the lifetime running costs of washers.

The dryer

Is it really necessary? How's the weather out there?

- If it's a sunny day, ditch the dryer. Hang your washing outside instead.
- Spin dry clothes before putting them in your dryer.
- Clean the lint filter on your dryer regularly to maintain full air flow. Do this little job frequently, and you maximise drying efficiency and minimise fire risk.
- Buy a dryer with at least 2 stars. Every extra star rating can cut 15% off the lifetime running costs of dryers.

The iron

The best way to save energy here would be not to iron at all! But seeing as the crumpled look is not for everyone, here are some energy saving tips for ironing.

- Iron large batches of clothing at one time to avoid wasting energy reheating the iron.
- Steam ironing uses more energy, so use a dry iron wherever possible.
- Sort ironing by fabric type and iron lighter fabrics on lower settings first.
- Turn the iron off and use residual heat for delicate items.

Heating and Cooling

Heating

- Don't overheat. The temperature of a heated room in winter should be 18-21 degrees.
- Your gas heater will work more efficiently if you stick to the manufacturer's

recommended clearance spaces.

- Gas heaters are cheaper to run and generate lower greenhouse gas emissions than electric heaters.
- Seek advice to help you choose the right size gas heater for the area you want to heat.
- Close vents and doors in unused rooms. No need to cool or warm areas that people are not in.
- Warm up with a jumper or rug (or cuddles) instead of turning up your heater.
- Window coverings halve winter heat loss.
- Draft excluders across the bottom of doors really work.
- If your home has adjustable louvres, tilt them to draw warmth towards the floor (hot air rises).

Cooling

- The temperature of a cooled room in summer should be about 23-26 degrees. (Humidity indoors will be low, so it will actually feel cooler.) The air-conditioner will run most efficiently if you set your thermostat to around 26 degrees in summer. For every 1 degree you increase your thermostat by, you can save around 10% on running costs.
- Frequent changes in thermostat settings will increase operating costs.
- Set air-conditioning to recirculate cool air instead of pulling warmer air in from outside.
- Clean the filter on your air-conditioning unit every three months.
- If the unit has adjustable louvers, adjust them towards the ceiling when cooling (cool air sinks).
- Choose an air-conditioner with an inverter drive. It will be more energy efficient, and therefore more cost effective.
- Ceiling fans are the most energy efficient form of cooling. They are relatively cheap to buy, cheap to run, quiet to operate and suitable for every room.
- Close curtains and blinds over glass areas. This keeps the warmth out and the cool in - and the reverse in winter.
- External sun blinds will prevent summer heat through windows.
- Let the night air in. Open your windows, and allow the cool breeze to assist in cooling your house down and making it easier to sleep.

Insulation

- Wall and ceiling insulation will keep the heat in and the cold out in winter - and works just as effectively in reverse in summer.
- Good insulation can make your home up to seven degrees warmer in winter and ten degrees cooler in summer.
- Draughts can increase heating by up to 25%. Weather strip doors and windows! Weather stripping is an inexpensive alternative to replacing windows and will save you hundreds of dollars
- Minimise heat loss in winter and help trap cool air in summer by repairing faulty door seals, hanging heavy curtains that fit close to the window frames and laying rugs on bare floors

Lighting

- Light up your life and reduce your bills at the same time.
- Turn off lights whenever you can.
- Choose energy-efficient compact fluorescent globes - they last 6-10 times longer and use 80% less energy than standard globes.
- Just one 15 watt compact fluorescent globe saves around $10 per year on your energy bill.
- Use energy-efficient fluorescent lamps in rooms where light is required for longer periods, such as kitchens and living areas.
- Install a timer/sensor instead of leaving security lights on all night.
- Use separate switches for each light, rather than having several lights activated by one switch.
- Make the most of natural light, particularly from north facing windows.
- Skylights are a great idea in the kitchen and bathroom.
- Keep lights clean. Dust makes them less efficient.

Types of lighting

- Cheapest isn't always best.
- Choose the light to suit the environment and make the most of natural light.
- Incandescent lights are cheaper to buy but more expensive to run.
- Halogen lights are more expensive, but twice as energy efficient.
- Fluoro lights are the most energy efficient. They're easy to install and use 80% less energy than a standard light globe to produce the same level of light.

(Staying out of) Hot water

In the average home, hot water usage accounts for one third of total household energy consumption. To reduce this figure and your bill, follow these tips:

Fit an AAA-rated low flow shower head. It'll save you up to $100 per year on your energy and water bills - and save precious water.

A high efficiency natural gas water heater produces around two-thirds the greenhouse emissions generated by an electric heater. It will also save you hundreds of dollars in energy bills over the lifetime of the system.

The eco-friendly sun heats water beautifully. A solar hot water system can reduce your household hot water bill by up to 70%.

Take 3 minute showers. Baths not only use twice as much water as showers, they require twice as much energy to heat.

Going away? Turn the power off on your hot water system.

Fix any leaking taps to avoid water wastage. Remember that even a small leak wastes large amounts of water.

Check the pressure relief valve on the side of your hot water tank to avoid wasting water you're paying to heat.

Use cold water in the laundry whenever you can.

When installing a new hot water system, try to locate it close to your bathroom, kitchen and laundry. Less heat will be lost travelling through the pipes. Insulate the pipes to further minimize heat loss.

Appliances

Always switch off the TV, VCR, microwave and stereo at the power point instead of leaving them in stand-by power mode.

Reduce demand on peak power supply. Power use is generally at its greatest in the early evening. Power stations have to generate enough power to meet this peak demand. Even if we do not reduce our total power use but just avoid using power in the early evening, we reduce the amount of brown coal burnt to fuel our power stations.

Switch your computer, monitor, printer and speakers off whenever they are not in use. Standby energy consumption can be considerable and contributes to increased greenhouse gas emissions. Try to buy appliances that use no more than one watt of electricity when in standby mode.

GreenPower is renewable energy sourced from the sun, wind, water and waste. By choosing to run your home on 100% GreenPower you can lower your greenhouse gas emissions by up to 80%. Purchase accredited GreenPower from your electricity supplier.

Reduce, Reuse, Recycle

- Buy products that have minimal packaging
- Buy products that have recycled material in their packaging
- Buy recycled products such as toilet paper and printing paper

- Don't use plastic bags to hold your recyclables – simply put your recyclables straight in the appropriate recycling bin.
- Open up the bottom of a used milk carton and plant a tree seedling inside it. The carton will protect your seedling from weather and pests, and when planted it will degrade as the tree grows.
- Clear plastic lids can be placed under oil jars in the cupboard or aerosols in the bathroom to prevent oil or rust marks on your shelves.
- Old wet-wipe containers make great string dispensers - try it out!
- Has your pillow gone flat? Then why not fold it over and put it inside a new cushion cover?

In the garden

Reduce the amount of rubbish going to landfill, reduce greenhouse gas emissions and keep your garden healthy - with compost. Composting occurs when food and garden waste collected in a container or heap breaks down into rich soil-like material that your plants will love. Consider solar lighting for your porch and garden. Decorative solar garden lights are now available in inexpensive kits.

Mulch is a layer of material such as straw, gravel or wood chips spread on your garden bed. Mulching conserves water, reducing the need for watering, and discourages weeds. There are different types of mulch, but using organic mulch will provide extra nutrients to the soil as the mulch breaks down.

Reuse materials in landscaping, use recycled or reclaimed timbers, use materials which are long lasting

Worm farms turn your organic kitchen scraps into fantastic fertilisers for your garden. Maintaining your worm farm is easy and you'll see the benefits in how much less rubbish you are putting in your bin and how much better your garden is looking.

Out and about

Check your tyre pressure. Under inflated tyres increase fuel use.

Try to accelerate slowly and evenly as this improves fuel economy.

Victorians use around 1 billion plastic checkout bags each year. Taking your own bag when you go shopping and returning plastic bags to the supermarket for recycling will reduce the number of plastic bags that end up as litter, polluting our waterways and harming wildlife.

There are lots of ways to travel sustainably, why not walk or cycle when you can? It is

simple, healthy and flexible. Or take public transport to save money on fuel, skip parking fees and avoid the stress of driving in peak-hour. Joining a car pool to cut fuel costs and personal greenhouse gas emissions.

TOOLKIT 2 – WHAT MY CO-OP CAN DO

The purpose of this toolkit is to help Co-Ops reduce their overall environmental impact. You may feel you have less control over the Co-Op than you do over your own home – however, any member can make suggestions and make a difference. The Co-Op could look at having a subcommittee which comes up with ideas and suggestions to implement pro-environmental change in the Co-Op. Hopefully the following will give you some useful ideas be a more sustainable Co-Op, and save money!

Maintenance

- When maintaining Co-Op homes or replacing appliances, think about using products that are environmentally friendly and have a high energy rating.
- Energy Efficient Hot Water systems – refer Fact Sheet.
- An energy-efficient heating system will cost less to run and produce less greenhouse gas emissions. Look for the energy star rating on central heating systems and reverse cycle air conditioners - the higher the rating, the more efficient the system is. Go for 4 to 6 stars if you can.
- Gas appliances can be more efficient than electric appliances, so switch if you can
- Air conditioners - Look for models with at least a 4.5 star energy rating - every extra star can reduce running costs by 10%.
- Single flush toilets use up to 11 litres of water, while dual flush toilets use 6 or 3 litres. Newer dual flush models use only 4.5 and 3 litres. If you replace a single flush with a dual flush toilet, or replace a dual flush with a more efficient system, you'll be eligible for a rebate.

Co-Op Office

- Power down appliances when not in use.
- Look at purchasing and using 100% post-consumer recycled paper
- Switch to green power – contact you electricity provider and ask about renewable energy options. This might cost a bit more, but can help make a difference.