



# Renewable Energy Solutions for SONJA, OWNER/OCCUPIER OF A HOUSE



## Smart Energy Future

### SONJA WANTS TO:

- Lower her electricity bills
- Use clean energy
- Have more control over her energy use and supply

### CURRENT OPPORTUNITIES:

- Install solar PV on the roof – it is cost effective and adds value to the home. Even when half of the energy produced is exported to the grid, the payback is under five years.
- Have information ready for a solar PV installation, such as photographs of the switchboard and electricity meter, as well as a copy of the electricity bill.
- Install solar hot water or a heat pump to heat water and consider switching away from off-peak hot water to allow water to be heated by solar PV during the day.
- Invest in community renewables
- Install a heat pump (reverse cycle air conditioner) for heating, which also works in the shade.
- Purchase renewable energy
- Switch to carbon neutral electricity
- Purchase an electric vehicle and charge it using renewable energy
- Fully electrify the house and power through solar PV (refer to the [MyEfficientElectricHome](#) Facebook page)
- According to 'Your Green Guide Residential Real Estate 2018' by PRDnationwide and QUT, the median house price of properties with sustainability features like solar panels is at least 10% higher than houses without recorded sustainability features.

### NEAR FUTURE OPPORTUNITIES:

- Increase the size of the solar array and install battery storage – more than 400 new batteries are being installed in Australia every week with numbers increasing exponentially. Innovative solutions are improving the business case even further.
- Sell surplus renewable energy (e.g. via peer-to-peer energy trading or solar energy aggregators operating in the national electricity market)

### OTHER COST SAVING OPPORTUNITIES:

- Change old lights to LED with smart controls
- Always improve efficiency of building before installing solar electricity
- Adopt energy efficient practices when operating appliances and equipment
- North Sydney Council will pay for energy audit to

determine best options (for local LGA)

- Undertake passive energy saving measures like insulation, shading, window coverings, and draught proofing

### WHO CAN HELP SONJA?

- Solar PV:  
Reputable solar PV installer (e.g. approved by the [Clean Energy Council](#))
- Financing: Most major retailers offer \$0 upfront under a power purchase agreement (PPA) with savings compared with standard rates, plus feed-in tariff benefits belong to the home owner
- Community renewables:  
Contact groups such as [Community Power Australia](#), [ClearSky Solar Investments](#), [Enova](#) or [Solar Cloud](#)
- Incentivising renewable energy on an international scale: Solutions like [SolarCoin](#), [NRGcoin](#)
- Purchasing renewables: Community renewables are explained in this [article](#). [GreenPower](#) can be purchased through electricity retailers or other providers such as [Climate Chest](#) (GreenPower® is tax deductible if purchased through a community organisation such as [Climate Chest](#))
- Carbon neutral electricity suppliers such as [Energy Australia](#), [Powershop](#), [Energy Locals](#)
- Energy efficiency measures:  
Reputable products and installers, [energy ratings of appliances](#)
- Independent assistance:  
Our Energy Future helpline: 1300 339 915  
Council's sustainability team: 9936 8100, Council's [Green Events](#) program, [Renew Energy Consult](#)
- Compare energy offers at [EnergyMadeEasy.gov.au](#)
- Compare the environmental performance of electricity retailers at [www.greenelectricityguide.org.au](#)

Download these fact sheets on the "Smart Energy Future" homepage to be able to click on links directly.

### HELPFUL ONLINE INFORMATION:

- [Renew](#)
- [Guide to comfortable and sustainable homes](#)
- [Renew Economy](#) online publication
- 'Your Green Guide Residential Real Estate 2018' [www.prd.com.au/research-hub/your-green-guide-residential-real-estate-2018/](#)



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Electricity from solar and wind farms is now cheaper than from new gas and coal-fired power plants.



Solar and Batteries reward their users and provide benefits to the national electricity network. Distributed generation increases grid resilience and reduces the need for network investment.



Roof space is best dedicated to solar electric panels in preference to hot water systems, as the benefits will be greater.



Both reverse cycle air conditioning on heating mode and hot water heat pumps produce renewable energy from the outside air, both at night or in the shade.



If there is both gas and reverse cycle air conditioning available, using the air conditioner on heating mode will reduce heating costs by around one third, and reduce emissions.



Typically, over 10 years, solar PV costs are between half or a third of grid-supplied energy costs.



100% renewable energy can be achieved by disconnecting from gas and switching all appliances to electricity powered from renewables.



Renewable energy can be bought from any address.



Typically, in combination, rooftop solar electricity and hot water heat pumps deliver one of the cheapest hot water solutions. Storing solar energy in hot water systems is the cheapest method of energy storage.



In most cases, investing in renewable energy adds value to property.



Electric cars can be charged and fuelled by solar electric panels, which uses local renewable energy rather than importing fossil fuels.



If the building is overshadowed, heat pumps for hot water and heating can be an option.

### Did you know?

- North Sydney Council uses renewable energy in many of its buildings because of the cost benefits, including solar electricity, solar hot water and heat pumps for space heating and hot water.
- North Sydney Council purchases 50% GreenPower for its six largest sites.
- North Sydney Olympic Pool has heat pumps which deliver 750kW of renewable energy, costing half as much to run as gas boilers, and a 100kW solar hot water system for pool heating.



[www.northsydney.nsw.gov.au](http://www.northsydney.nsw.gov.au)