ZERO EMISSIONS DEVELOPMENTS

Amp-el Energy®

Strata and Community Electricity Cost Solutions

Electricity Bills Solution

- Typical Charges (deconstruction of charges)

ZERO EMISSIONS DEVELOPMENTS

Energy charges - 1 Aug to 31 Aug 2018	Quantity	Units	Rate	Rate (inc Energy Losses)		Unit	Amount	
Peak	405,204.000	kWh	0.14013	0.15578335		$/kWh	$ 63,124.04	
Shoulder	845,856.000	kWh	0.14013	0.15578335		$/kWh	$ 131,770.28	
Off-Peak	1,532,352	kWh	0.0775	0.08615721		$/kWh	$ 132,023.17	$ 326,917.49
Network Charges	**Quantity**	**Units**	**Rate**			**Unit**	**Amount**	
Demand & Capacity								
Network Peak	4,034	kVA	8.2944			$/kVA	$ 33,459.61	
Network Shoulder	3,802	kVA	9.1675			$/kVA	$ 34,854.84	
Network Off Peak	4,317	kVA	2.482			$/kVA	$ 10,714.79	
Fixed								
Network Access Charge	31.000	Days	17.7154			$/Day	$ 549.18	
Volume								
Off-Peak	1,532,352.000	kWh	2.2524			c/kWh	$ 34,514.70	
Shoulder	1,005,528.000	kWh	2.7569			c/kWh	$ 27,721.40	
Peak	245,532.000	kWh	3.011			c/kWh	$ 7,392.97	$ 149,207.48
Regulated Charges	**Quantity**	**Units**	**Rate**			**DLF**	**Amount**	
AEMO Participant Charge	2,783,412.000	c/kWh	0.040			1.0328	$ 1,149.88	
AEMO Ancillary Charge	2,783,412.000	c/kWh	0.0271			1.0328	$ 779.05	$ 1,928.93
Renewable Energy Charges	**Quantity**	**Units**	**Rate**	**Unit**	**Published Certificate %**	**DLF**	**Amount**	
E&REC - LRET	2,783,412.000	kWh	1.630	c/kWh	8.00	1.0328	$ 3,748.62	
E&REC - SRES	2,783,412.000	kWh	4.000	c/kWh	17.08	1.0328	$ 19,640.00	
E&REC NSW Energy Saving Scheme	2,783,412.000	kWh	8.100	c/kWh	16.06	1.0328	$ 37,395.93	$ 60,784.55
Metering and Service Charges	**Quantity**	**Units**	**Rate**	**Unit**	**Quantity**	**Unit**	**Amount**	
Metering Charge	1	Meter	3.013699	$/meter	31	Days	$ 93.42	
Value Added Service Charge	31	Days	54.7945	c/Day			$ 16.99	
Supplementary Metering Charge	1	Meter	82.1918	c/meter	31	Days	$ 25.48	$ 135.89
Retail Service Charges	**Quantity**	**Units**	**Rate**	**Unit**			**Amount**	
Service Charge	1.000	Month	15.0000	$/Month			$ 15.00	$ 15.00
TOTAL (Exc GST)							**Exc GST**	**$ 538,989.34**
							Inc GST	**$ 592,888.27**

Actual Electricity Charges **61%**

Network Charges **28%**

Regulated Charges **0.4%**

Renewable Energy Charges **11%**

Other Charges **<1%**

Electricity Bills Solution

- Typical Charges (deconstruction of charges)

ZERO EMISSIONS DEVELOPMENTS

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Service Charge	1.000	Month	15.0000	$/Month			$ 15.00	$ 15.00
TOTAL (Exc GST)							**Exc GST**	**$ 538,989.34**
							Inc GST	**$ 592,888.27**

Actual Electricity Charges **61%**

PPA From Solar Farm

Network Charges **28%**

On-Site Energy Storage

Regulated Charges **0.4%**

Renewable Energy Charges **11%**

PPA From Solar Farm

Other Charges **<1%**

It is not always feasible to generate power on-site and therefore solar power needs to be generated off-site and transmitted to your building

Electricity Bills Solution

- How to control price rises

ZERO EMISSIONS DEVELOPMENTS

Power is generated off-site and transmitted via the Grid to your building

Electricity Bills Solution – What you need to do

- Power Purchase Agreement with Solar Farm

Solar Farm PPA Only	Quantity	Units	Rate	Rate (inc Energy Losses)		Unit	Amount	
Peak	405,204.000	kWh	0.095	0.095		$/kWh	$ 38,494.38	
Shoulder	845,856.000	kWh	0.095	0.095		$/kWh	$ 80,356.32	
Off-Peak	1,532,352.000	kWh	0.0775	0.086		$/kWh	$ 132,023.17	$ 250,873.87
Network Charges	**Quantity**	**Units**	**Rate**			**Unit**	**Amount**	
Demand & Capacity								
Network Peak	4,034	kVA	8.2944			$/kVA	$ 33,459.61	
Network Shoulder	3,802	kVA	9.1675			$/kVA	$ 34,854.84	
Network Off Peak	4,317	kVA	2.482			$/kVA	$ 10,714.79	
Fixed								
Network Access Charge	31.000	Days	17.7154			$/Day	$ 549.18	
Volume								
Off-Peak	1,532,352.000	kWh	2.2524			c/kWh	$ 34,514.70	
Shoulder	1,005,528.000	kWh	2.7569			c/kWh	$ 27,721.40	
Peak	245,532.000	kWh	3.011			c/kWh	$ 7,392.97	$ 149,207.48
Regulated Charges	**Quantity**	**Units**	**Rate**			**DLF**	**Amount**	
AEMO Participant Charge	2,783,412.000	c/kWh	0.040			1.0328	$ 1,149.88	
AEMO Ancillary Charge	2,783,412.000	c/kWh	0.029			1.0328	$ 833.67	$ 1,983.55
Renewable Energy Charges	**Quantity**	**Units**	**Rate**	**Unit**	**Published Certificate %**	**DLF**	**Amount**	
E&REC - LRET	1,532,352.000	kWh	1.630	c/kWh	8.00	1.0328	$ 2,063.73	
E&REC - SRES	1,532,352.000	kWh	4.000	c/kWh	17.08	1.0328	$ 10,812.41	
E&REC NSW Energy Saving Scheme	1,532,352.000	kWh	8.100	c/kWh	16.06	1.0328	$ 20,587.58	$ 33,463.72
Metering and Service Charges	**Quantity**	**Units**	**Rate**	**Unit**	**Quantity**	**Unit**	**Amount**	
Metering Charge	1	Meter	3.013699	$/meter	31	Days	$ 93.42	
Value Added Service Charge	31	Days	54.7945	c/Day			$ 16.99	
Supplementary Metering Charge	1	Meter	82.1918	c/meter	31	Days	$ 25.48	$ 135.89
Retail Service Charges	**Quantity**	**Units**	**Rate**	**Unit**			**Amount**	
Service Charge	1.000	Month	15.0000	$/Month			$ 15.00	$ 15.00
TOTAL (Exc GST)							**Exc GST**	**$ 435,679.51**
							Inc GST	**$ 479,247.47**

Result: 19.4% Savings in Year 1

Electricity Bills Solution

- Power Purchase Agreement with Solar Farm Only

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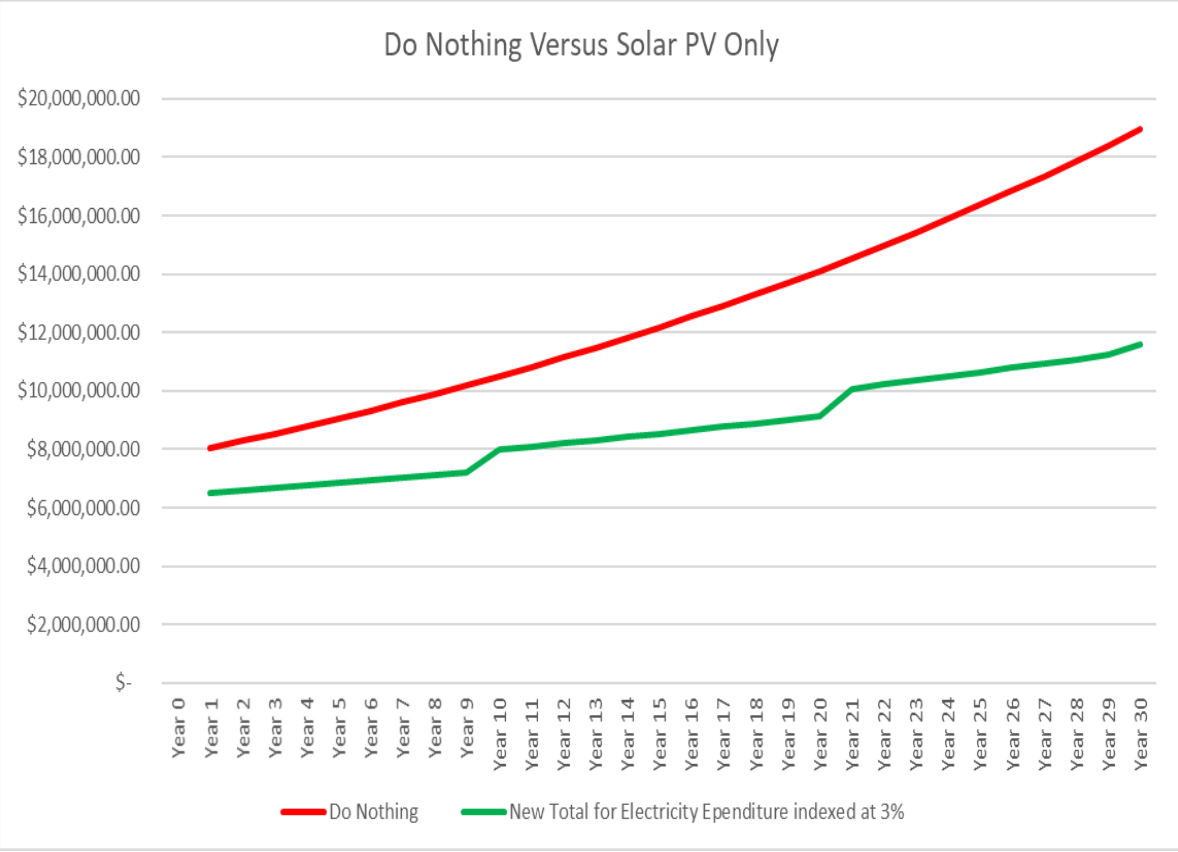

Feasibility Summary	
Year 1 Savings, typically	19.4%
NPV of Savings (Disc 7%) est.	$25.4 million
Undiscounted 30 year savings est.	$120 million

Benefits
Risk Mitigation for Increasing Electricity Price Rises
Blackout Protection
Electric Vehicle Docking Stations
High Energy Security

Electricity Bills Solution – What you need to do

- Power Purchase Agreement with Solar Farm
- Energy Storage on-site

After PPA and Energy Storage	Quantity	Units	Rate	Rate (inc Energy Losses)		Unit	Amount	
Peak	405,204	kWh	0.135	0.135		$/kWh	$ 54,702.54	
Shoulder	845,856	kWh	0.135	0.135		$/kWh	$ 114,190.56	
Off-Peak	1,532,352	kWh	0.135	0.135		$/kWh	$ 206,867.52	$ 375,760.62
Network Charges	**Quantity**	**Units**	**Rate**			**Unit**	**Amount**	
Demand & Capacity								
Network Peak	4,034	kVA	0			$/kVA	$ -	
Network Shoulder	3,802	kVA	0			$/kVA	$ -	
Network Off Peak	4,317	kVA	0			$/kVA	$ -	
Fixed								
Network Access Charge	31	Days	17.7154			$/Day	$ 549.18	
Volume								
Off-Peak	1,532,352	kWh	0			c/kWh	$ -	
Shoulder	1,005,528	kWh	0			c/kWh	$ -	
Peak	245,532	kWh	0			c/kWh	$ -	$ 549.18
Regulated Charges	**Quantity**	**Units**	**Rate**			**DLF**	**Amount**	
AEMO Participant Charge	2,783,412	c/kWh	0.040			1.0328	$ 1,149.88	
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Renewable Energy Charges	**Quantity**	**Units**	**Rate**	**Unit**	**Published Certificate %**	**DLF**	**Amount**	
E&REC - LRET	2,783,412	kWh	$ -	c/kWh	8.00	1.0328	$ -	
E&REC - SRES	2,783,412	kWh	$ -	c/kWh	17.08	1.0328	$ -	
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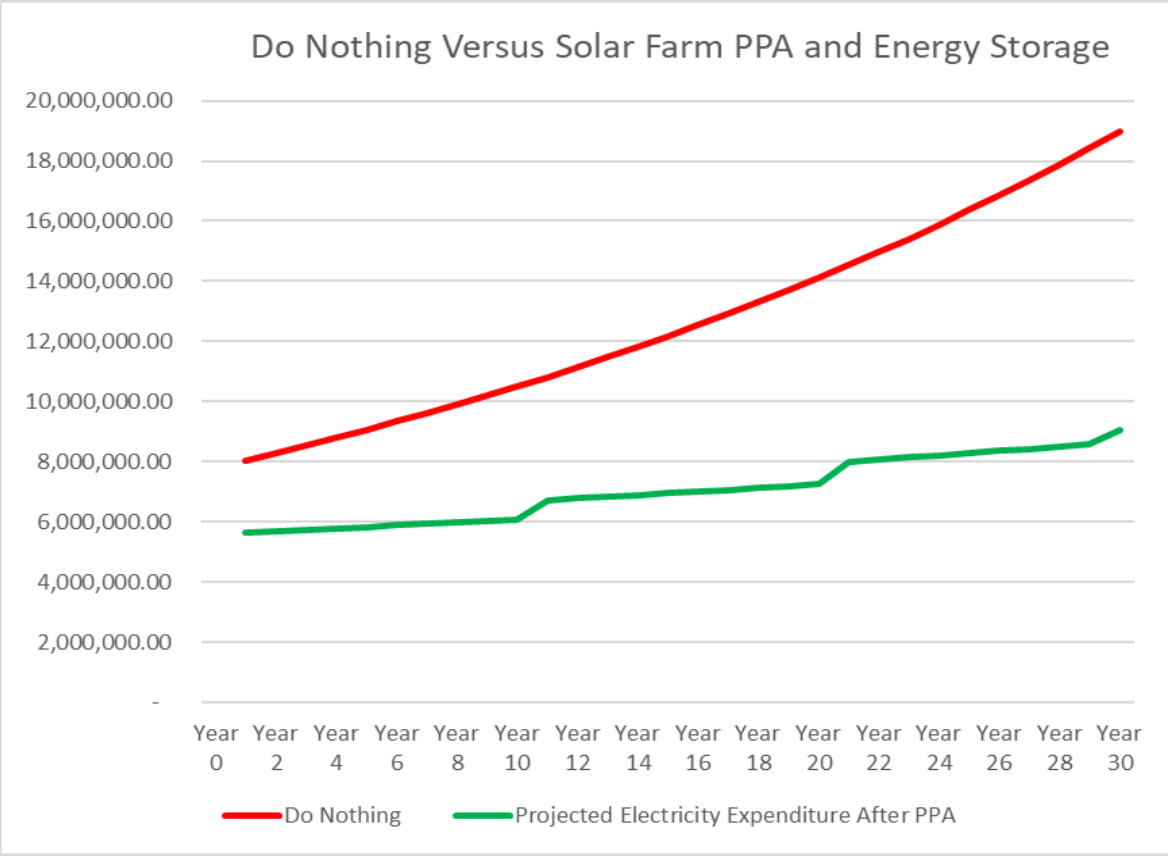
Retail Service Charges	**Quantity**	**Units**	**Rate**	**Unit**			**Amount**	
Service Charge	1.000	Month	15.0000	$/Month			$ 15.00	$ 15.00
TOTAL (Exc GST)							**Exc GST**	**$ 378,444.24**
							Inc GST	**$ 416,288.66**

Result: 30.0% Savings in Year 1

Electricity Bills Solution

- Power Purchase Agreement with Solar Farm
- Energy Storage on-site

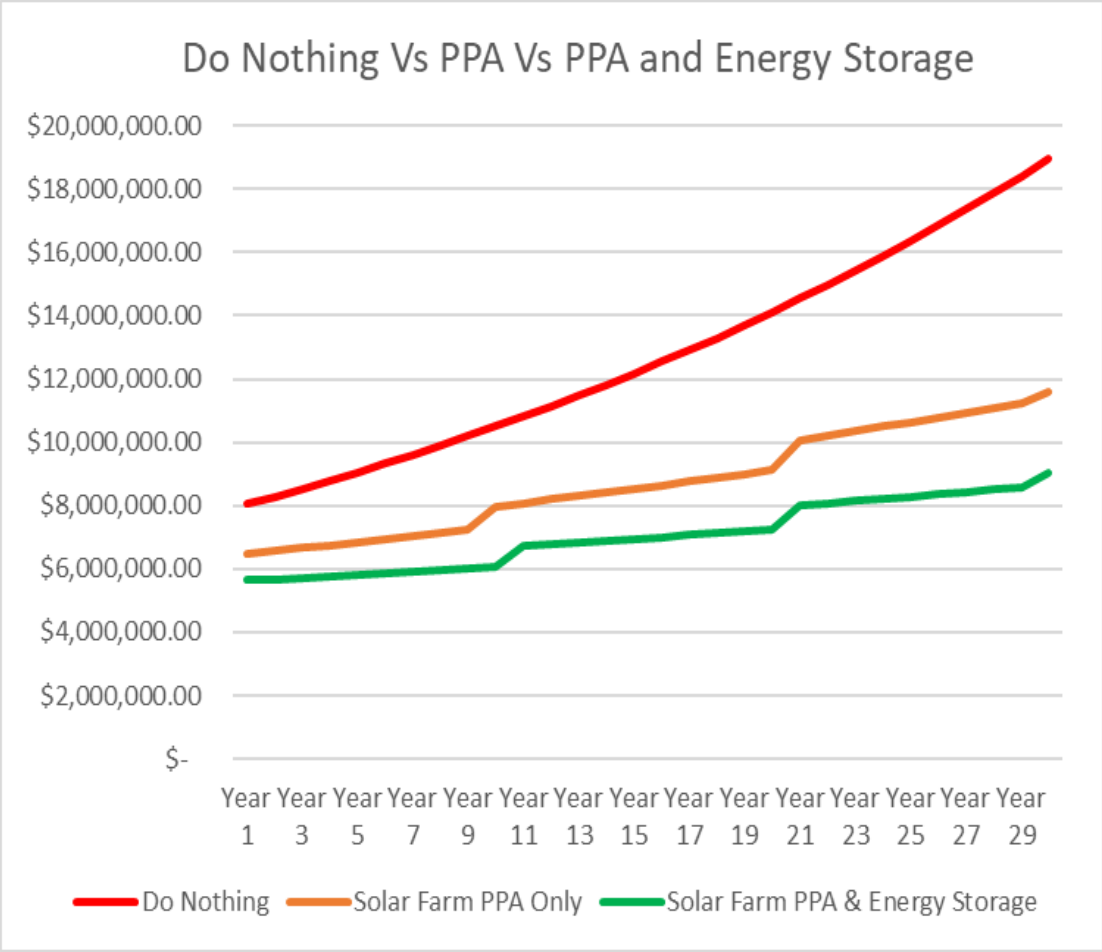


Feasibility Summary	
Year 1 Savings, typically	30%
NPV of Savings (Disc 7%) est.	$52.6 million
Undiscounted 30 year savings est.	$171 million

Benefits
Risk Mitigation for Increasing Electricity Price Rises
Blackout Protection
Electric Vehicle Docking Stations
High Energy Security

Electricity Bills Solution

- On versus off site options



Feasibility Solar Farm PPA only	
Year 1 Savings, typically	19.4%
NPV of Savings (Disc 7%) est.	$25.4 million
Undiscounted 30 year savings est.	$120 million
Benefits	
Risk Mitigation for Increasing Electricity Price Rises	
Blackout Protection	
Electric Vehicle Docking Stations	
High Energy Security	

Feasibility Solar Farm PPA with Energy Storage	
Year 1 Savings, typically	30%
NPV of Savings (Disc 7%) est.	$52.6 million
Undiscounted 30 year savings est.	$171 million
Benefits	
Risk Mitigation for Increasing Electricity Price Rises	
Blackout Protection	
Electric Vehicle Docking Stations	
High Energy Security	

Electricity Bills Solution – Frequently Asked Questions

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- How do you get the electricity from the Solar Farm to my building?
  - Just like all power producers the electricity is transmitted through the Grid.
- Who pays for the Transmission from the Solar Farm to my building?
  - The Transmission and Distribution Costs will remain the same as what you have now and typically the costs represent a small part of the electricity bills (with the exception of “Peak Demand” charges, which are countered by the installation of an Energy Storage System (that does not contain batteries)).
- How do I know which electricity is which?
  - Power generated from the solar farm is metered into the electricity “Pool” known as the grid. The amount of power put into the Grid will match the amount of power that is consumed by your building with the slight adjustment for transmission losses.
- What happens when the Solar Farm stops producing power at night and cloudy days and how will this affect my building?
  - There will be no affect on your building. Because you are still connected to the Grid, you will always have a constant and secure supply of power. The Solar Farm will incorporate an energy storage system to ensure constant supply to the Grid.
- Why do I need Energy Storage at my building?
  - Energy storage is used to counter the “Peak Demand” charge as described earlier. Peak demand charges generally range between 25% to 50% of the total electricity bill and by storing energy during Off-Peak Times and using it during Peak Times you save a considerable amount of money and the energy storage system also provide secure energy back-up in the event of Grid failure (Blackouts).
- What is the typical size of an Energy Storage?
  - Typically, the average size is that of a 40 foot container.
- Why is this cheaper than the normal Grid?
  - Coal and Gas fired power production facilities are susceptible to commodity price fluctuations and historically fossil fuel has been increasing at a rapid rate, which is passed onto you the consumer. Renewable energy power plants generally utilise near-inexhaustible sources of energy such as the sun, wind, tide, geothermal etc. etc. Therefore, the cost to operate a renewable energy power plant is significantly cheaper than fossil fuel powered electricity generation power plants because you do not have to pay for a constant feed-stock of energy.
- When will this be available?
  - Typically within 18 months of signing a PPA with the Solar/Wind Farm.
- Can I sell the power to my tenants?
  - Community title and landlords are exempt from having to obtain an Electricity Retailers Licence and therefore can resell power to their tenants.

Electricity Bills Solution

- **Please contact us on 07 5577 1113 or info@zed-au.com and one of our experienced Sales Engineers will be happy to help you through this process.**
- **Thank you for taking the time to read this presentation.**

Kind regards

Ahmed El Safty *BE(Chem), CEng, RPEQ, PDG Fin Mgt, MIChemE, MEIANZ, MIEAust*

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