

Lisa's Perpetual Motion Machine



Lisa! Get in here. In this house, we obey the laws of thermodynamics!

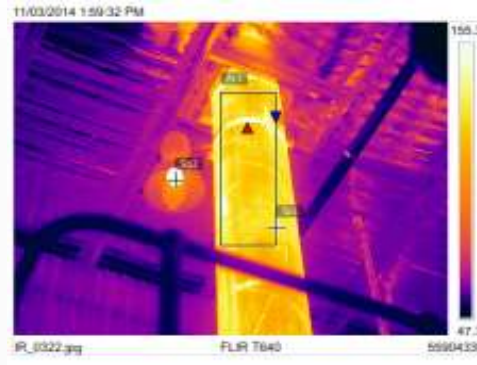
Cost Benefits of Greening Chicken Farming

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Principal Engineer & CEO
Sustainable Energy Equities Holding Limited
Trading As Zero Emission Developments

*Professional Engineering Company, Specialising in
Renewable Energy Systems Design and Construction*

Past Experiences

- CSR – R&D Synthetic Fuel, Aus
- Caltex Oil, Aus
- Chevron, USA
- Texaco, USA
- Shell
- European Space Agency, EU
- Boeing and Airbus, EU
- Qld Alumina, Aus
- BHP Steel, Aus
- BHP Coal, Aus
- Santos Petroleum, Aus
- Rocklea Cold Storage, Aus
- Thermal Resources, USA
- Inghams Chickens Contract Grower, Aus
- SPI Fibreglass, Saudi Arabia
- Royal Commission, Saudi Arabia



Work to date

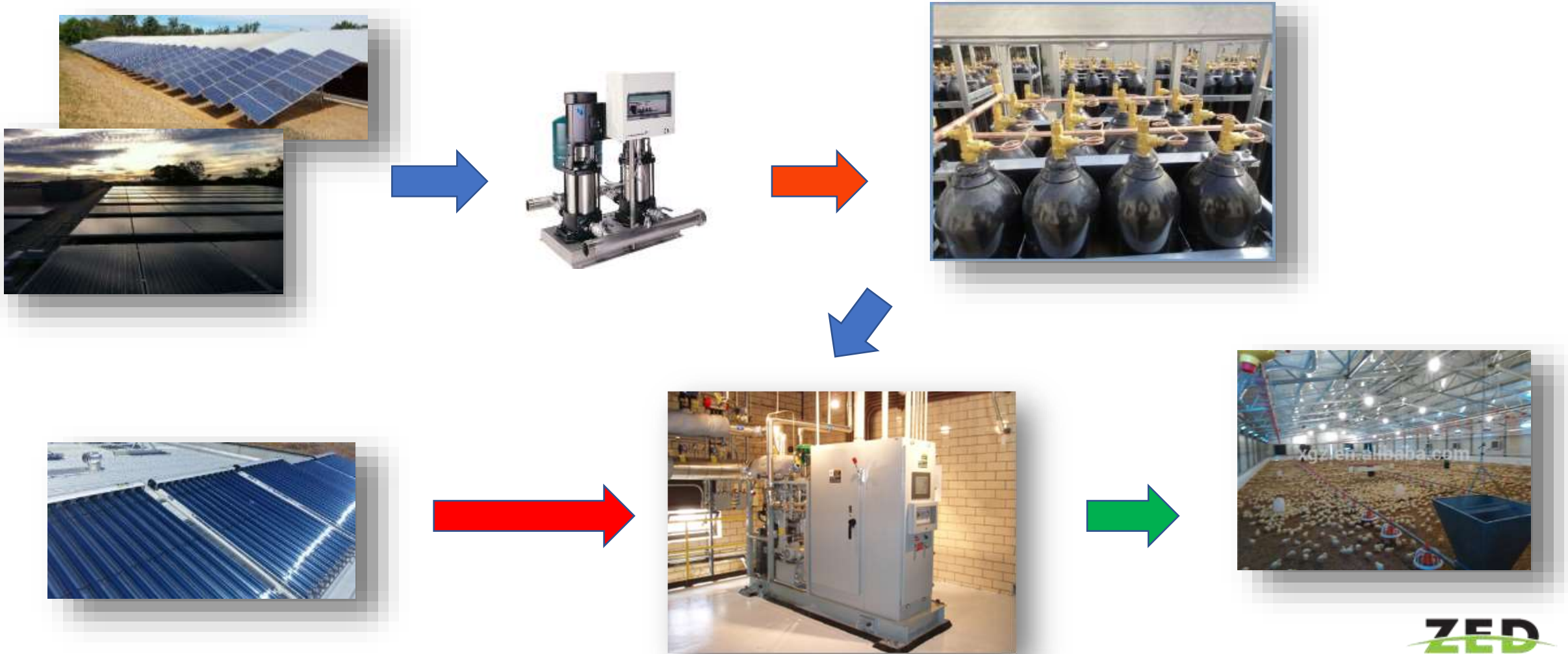
Investigated the application of

- bio-digesters;
- Solar PV;
- Solar PV and Batteries;
- Solar Thermal Electric, Cogeneration and Trigeneration;
- Solar PV Tracking;
- Solar PV Tracking and Thermo-Pneumatic Bulk Energy Storage

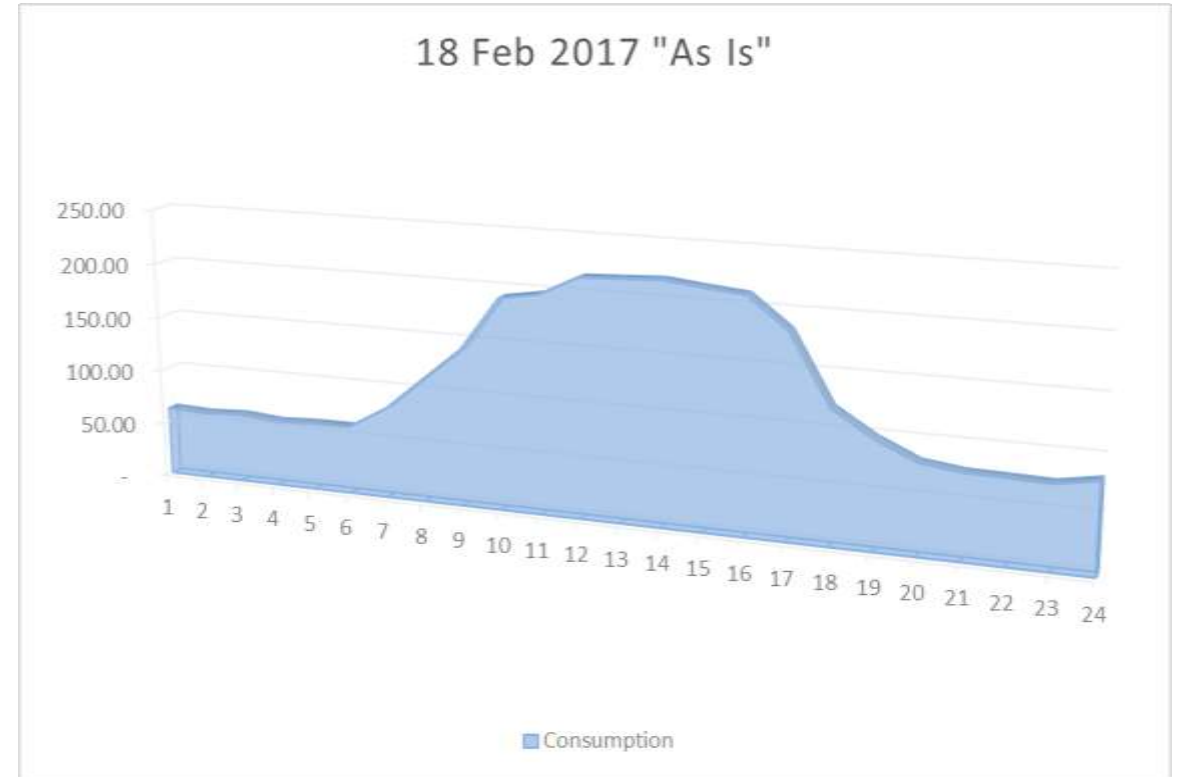
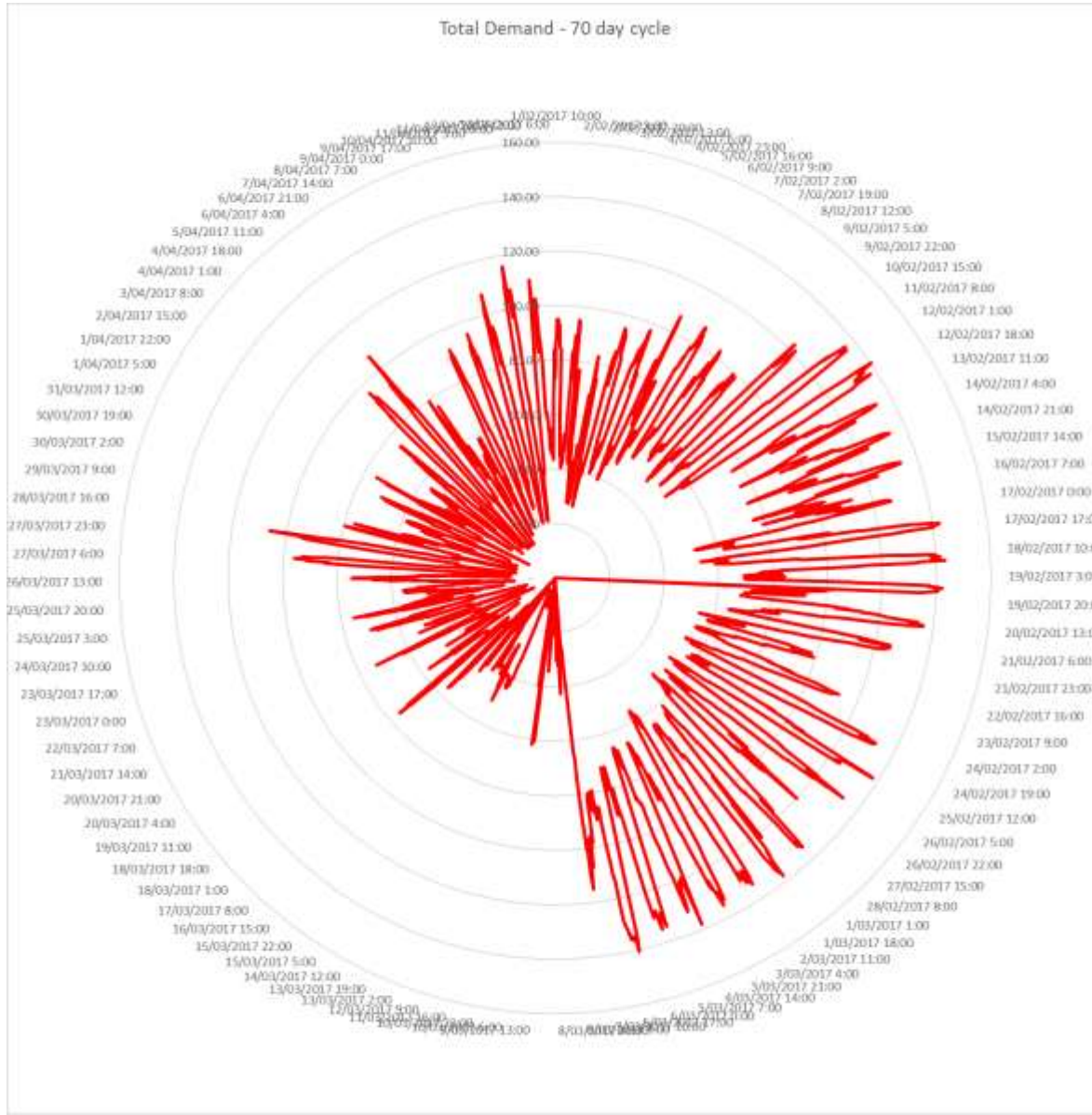


Work to date

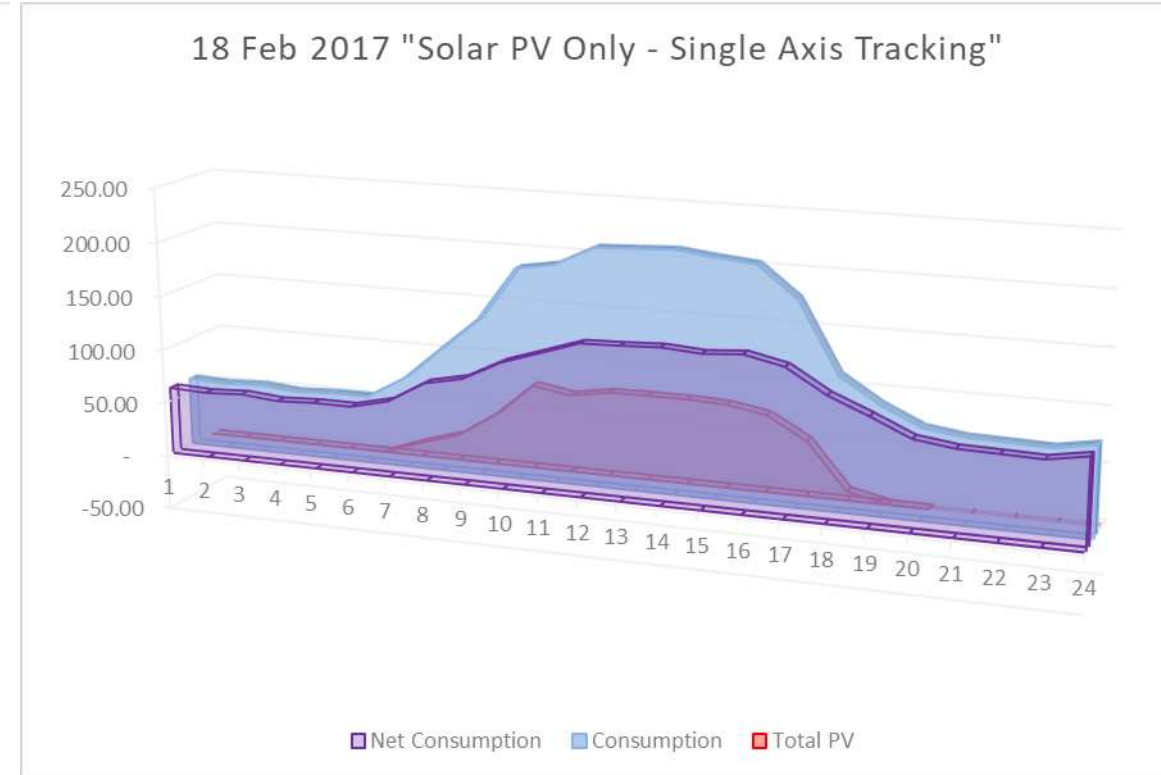
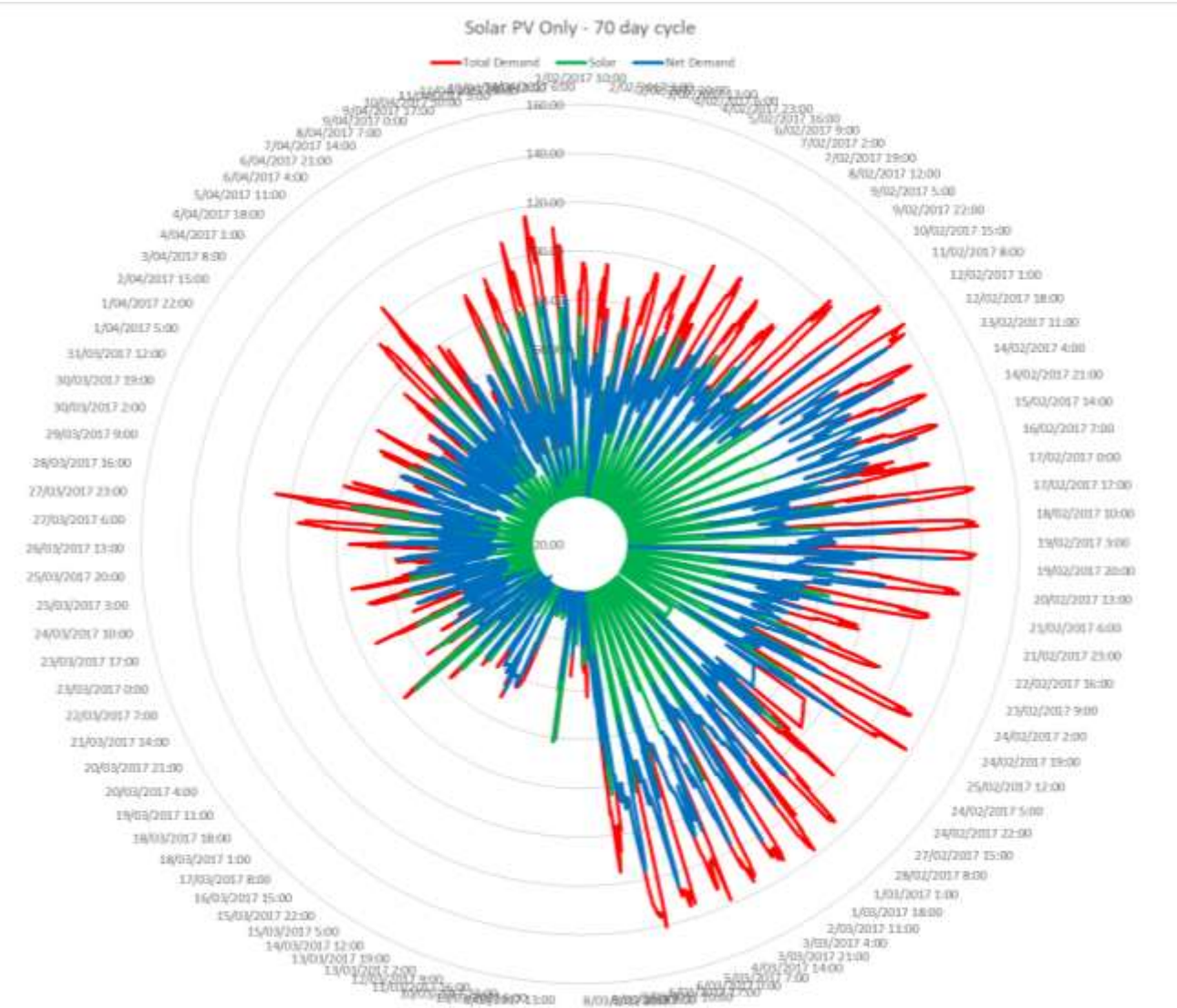
Solar PV Tracking and Thermo-Pneumatic Bulk Energy Storage



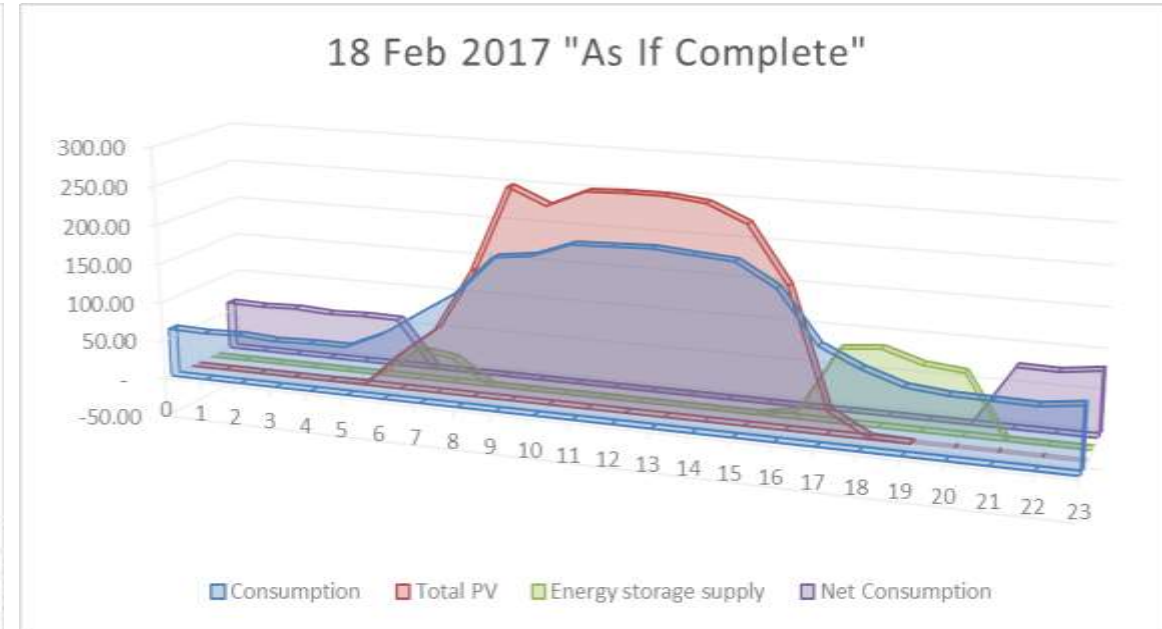
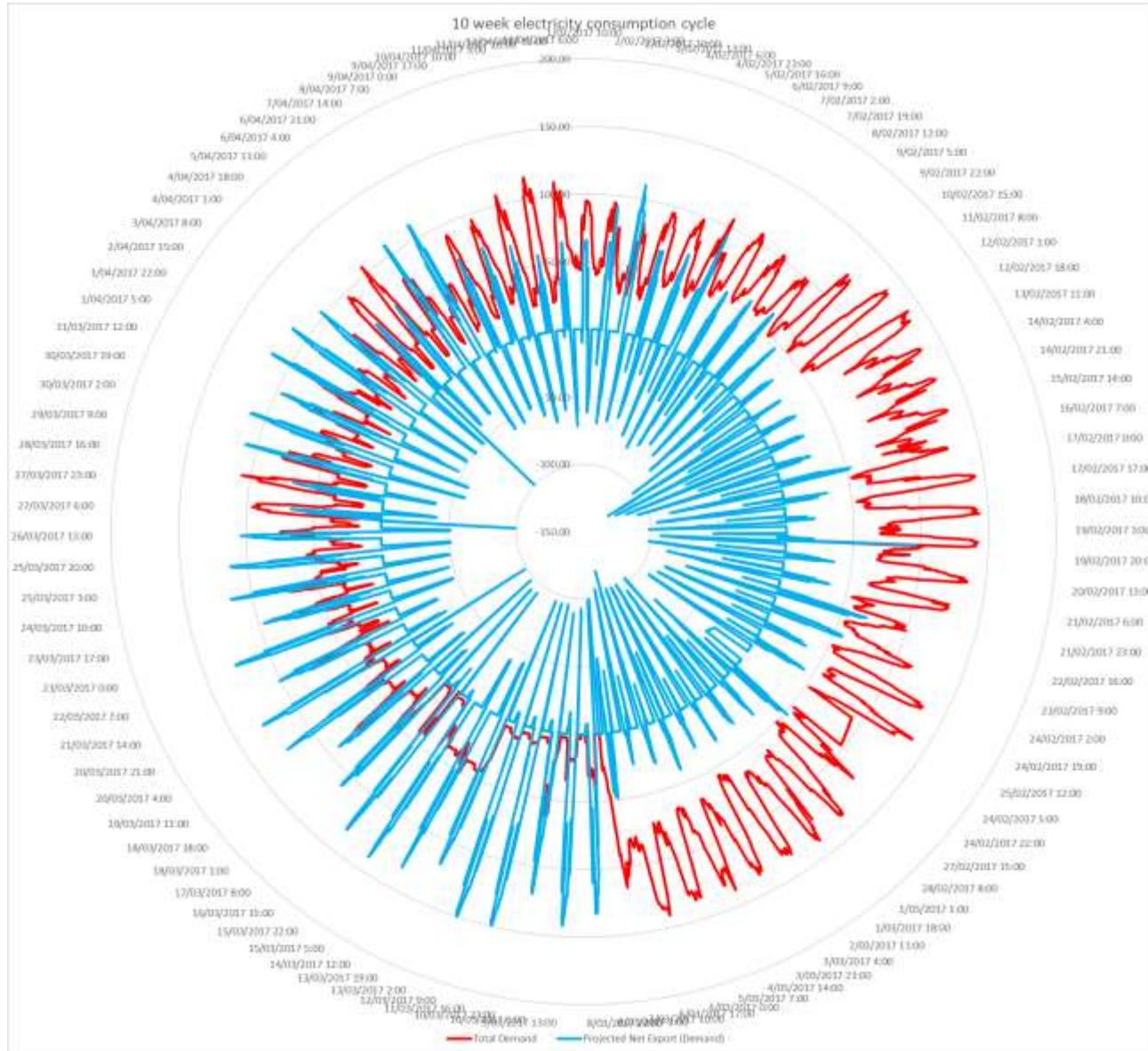
Work to date – Understanding the design issues



Work to date – Understanding the design issues



Work to date – Understanding the design issues

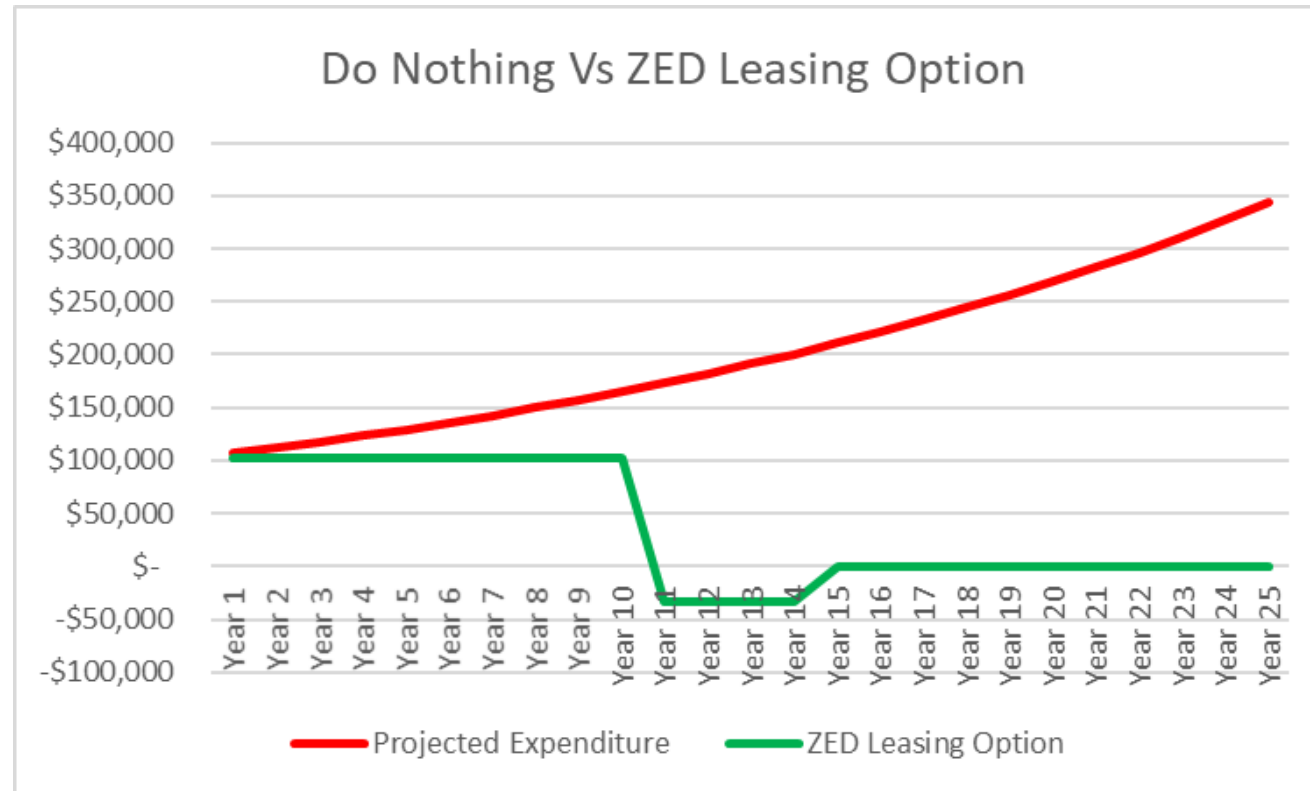


Work to date – The Net Result

	Total Consumption	100 kW TPV Production - Zero Export	Net Consumption After Solar	100 kW TPV Production - Unrestricted	Proposed Solar Production 220kW Single Axis Tracking	Energy Balance Stored	Energy Stored (Used On-Site)	Projected Net Export (Demand)	Projected Net Net Export	LGC Revenue
Total	97,178	24,307	72,871	39,768	99,421	47,312	24,611	22,368	2,243	99,421
Daily Average	1,388	347	1,041	568	1,420	676	352	320	32	1,420
Number of Cycles per Year	5 3/14								5 3/14	5 3/14
Average Cost (\$/kWh)	0.21								\$0.15	\$0.065
Annual Projected	\$ 106,409.96				\$ 106,409.96				-\$ 1,754.34	\$ 33,696.63
TOTAL SAVINGS	\$ 141,860.93									
Cap Ex	\$ 986,000.00									
Return on Investment	14.4%									
Payback Period	6.95									

Work to date – The Net Result

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25
Projected Expenditure	\$ 106,410	\$ 111,730	\$ 117,317	\$ 123,183	\$ 129,342	\$ 135,809	\$ 142,600	\$ 149,730	\$ 157,216	\$ 165,077	\$ 173,331	\$ 181,997	\$ 191,097	\$ 200,652	\$ 210,684	\$ 221,219	\$ 232,280	\$ 243,894	\$ 256,088	\$ 268,893	\$ 282,337	\$ 296,454	\$ 311,277	\$ 326,841	\$ 343,183
ZED Leasing Option	\$ 101,706	\$ 101,706	\$ 101,706	\$ 101,706	\$ 101,706	\$ 101,706	\$ 101,706	\$ 101,706	\$ 101,706	\$ 101,706	-\$ 33,697	-\$ 33,697	-\$ 33,697	-\$ 33,697	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0



Other Research

- More efficient cooling systems;
- Litter formulation to suppress the formation of acidic environment;
- Waste to energy opportunities;
- Solar farming – co-farming;
- Etc.

The Challenges

- Keeping the technology in Australia;
- Funding the manufacturing facility for mass production;
- Global Distribution.

Thank you for your time