With great data comes great opportunity

Real examples and future possibilities of consumer energy data

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Smart meters

A great consumer benefit?
Or a false promise that never delivered?

How is energy data being used right now to benefit energy consumers?

HISTORIC DATA

Understand, choose, and compare…

Understand usage patterns and make decisions about changes

Energy offer comparisons or solar/battery system sizing based on actual usage

Third parties with authorisation to access customer data add significant value in most cases

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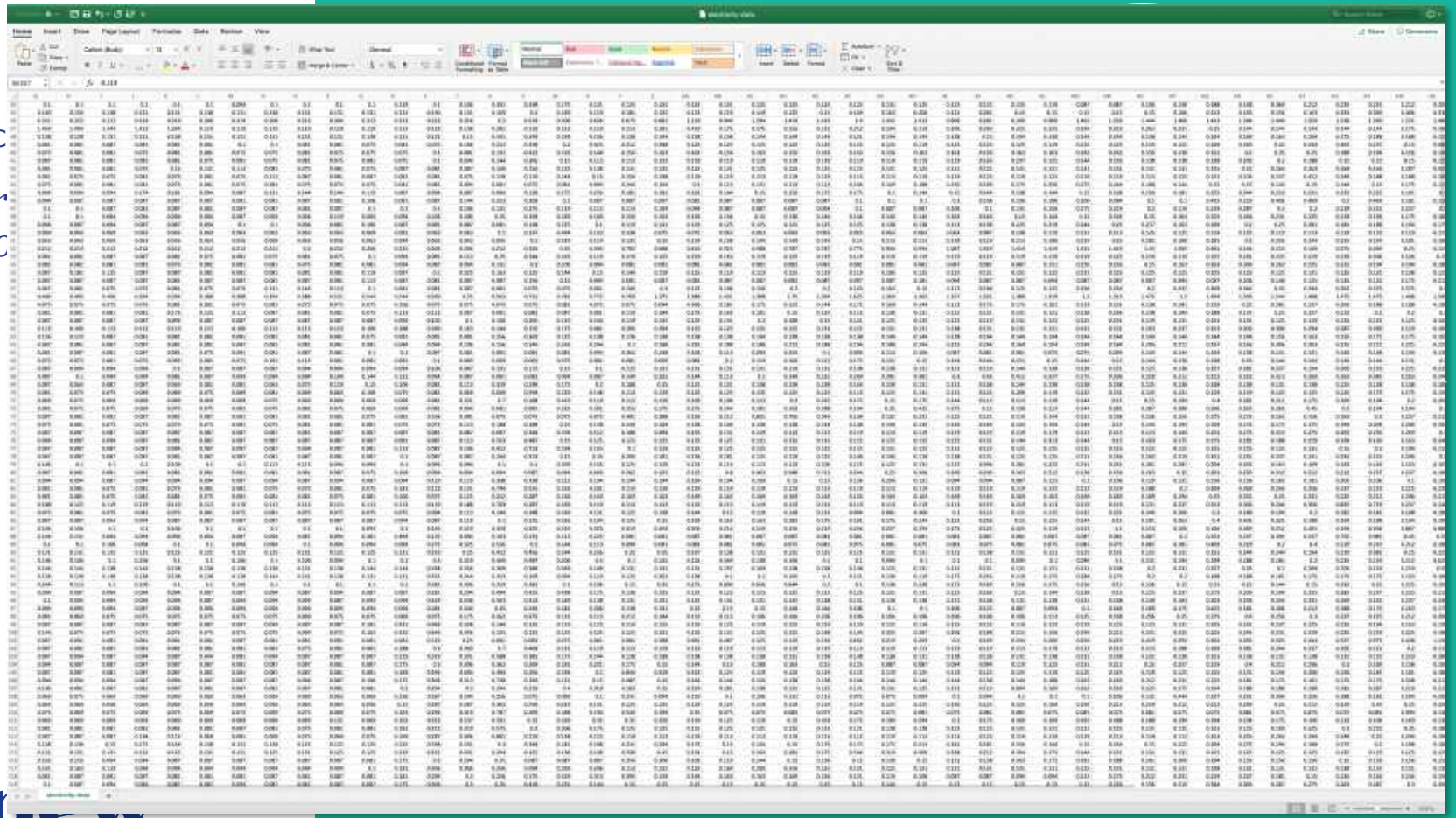
HISTORIC

Under
and cc



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HISTORIC DATA

Understand, choose, and compare…

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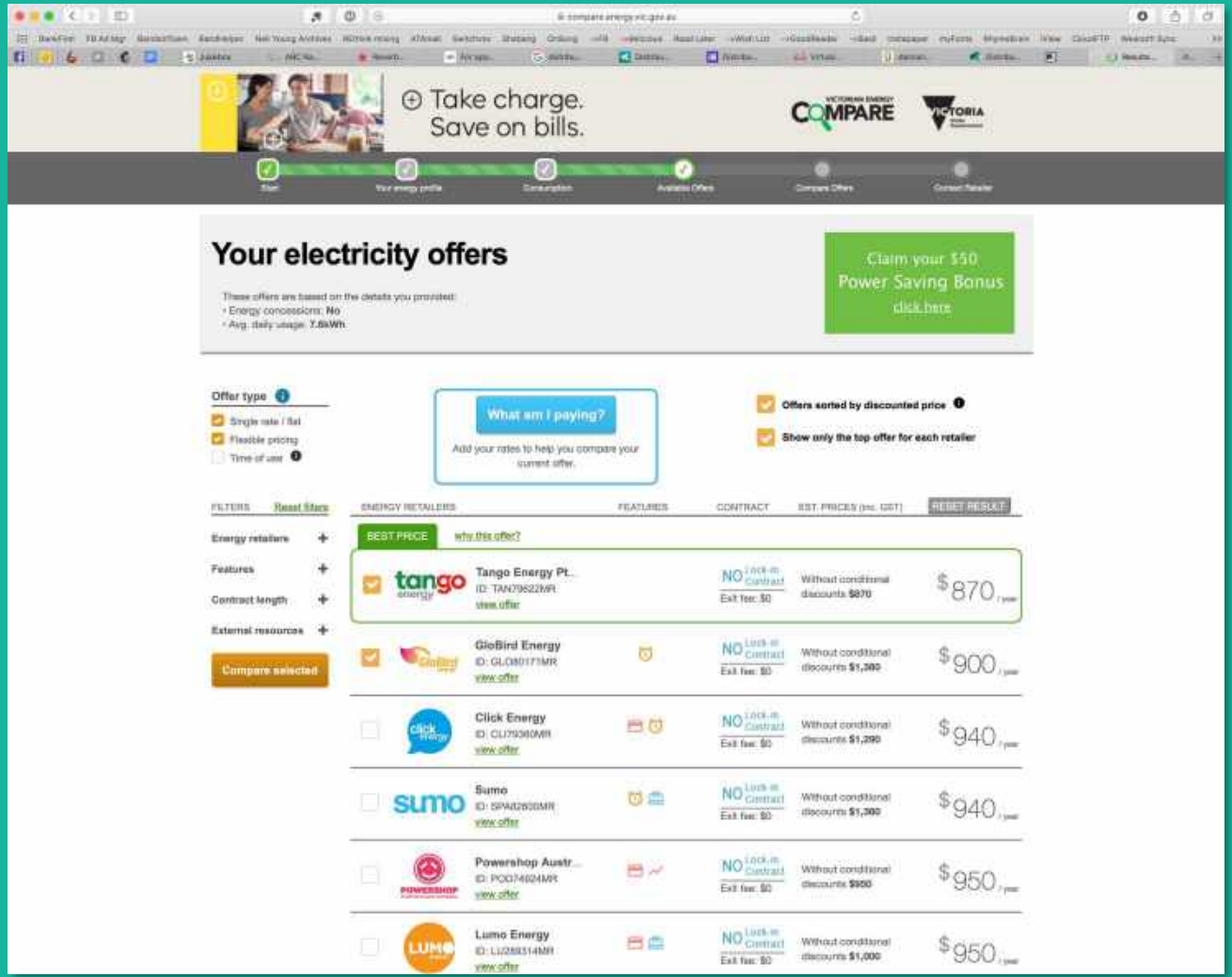
HISTORIC DATA

Understand, choose, and compare…



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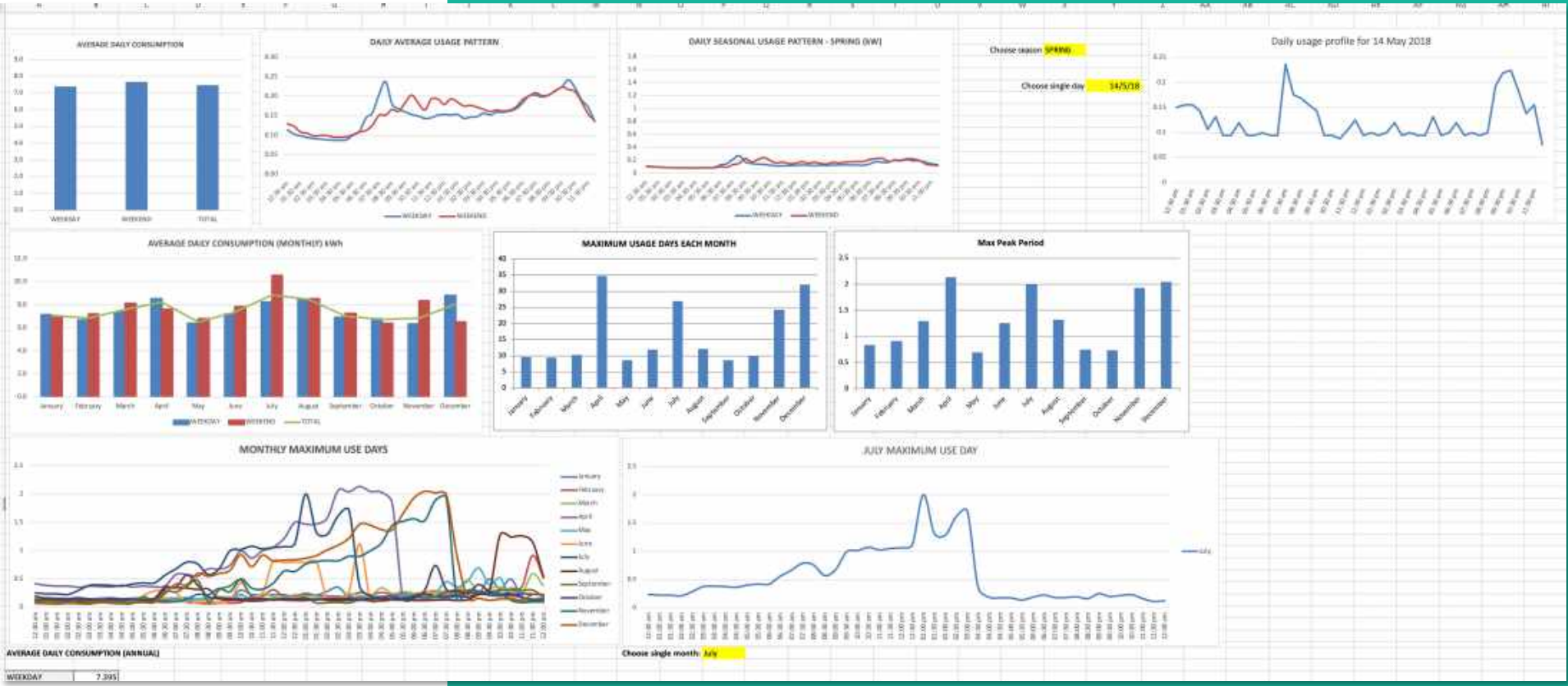
AVERAGE DAILY CONSUMPTION
DAILY AVERAGE USAGE PATTERN
DAILY SEASONAL USAGE PATTERN - SPRING (kW)
Choose season SPRING
Choose single day 14/5/18
Daily usage profile for 14 May 2018
AVERAGE DAILY CONSUMPTION (MONTHLY) kWh
MAXIMUM USAGE DAYS EACH MONTH
Max Peak Period
MONTHLY MAXIMUM USE DAYS
JULY MAXIMUM USE DAY
AVERAGE DAILY CONSUMPTION (ANNUAL)
WEEKDAY 7.395
Choose single month July

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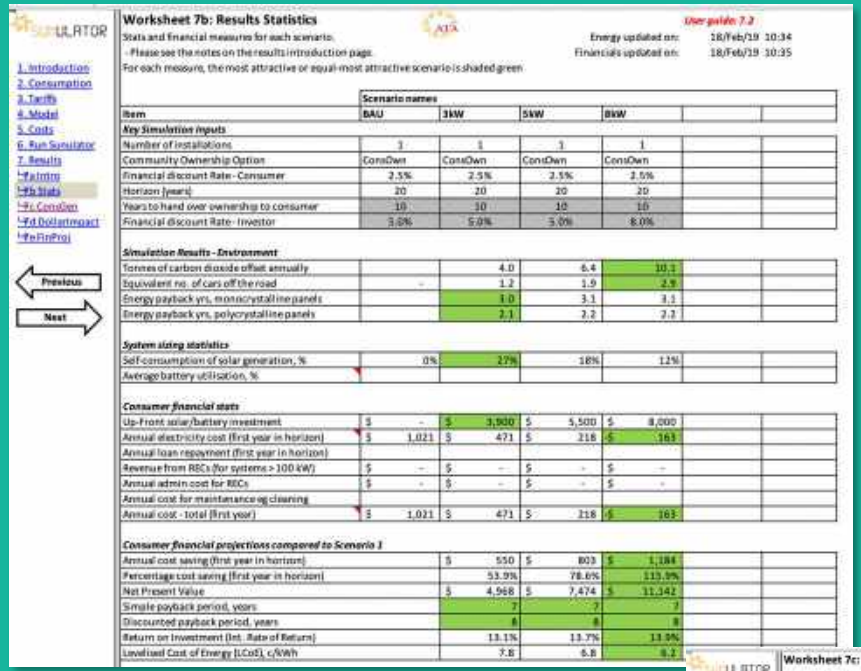
HISTORIC DATA

Understand, choose, and compare…



Worksheet 7b: Results Statistics

Stats and financial measures for each scenario.
- Please see the notes on the results introduction page.

For each measure, the most attractive or equal-most attractive scenario is shaded green.

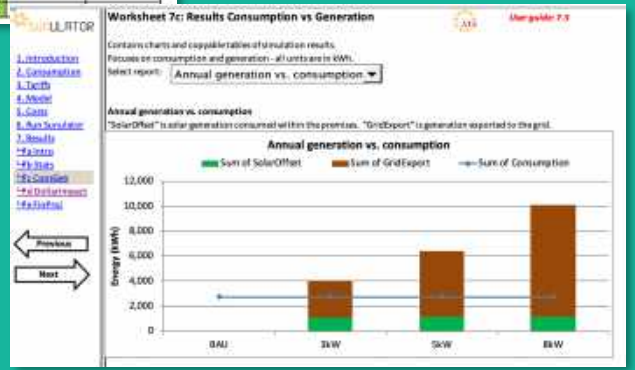
User guide: 7.2

Energy updated on: 18/Feb/19 10:34
Financials updated on: 18/Feb/19 10:35

1. Introduction
2. Consumption
3. Tariffs
4. Model
5. Costs
6. Run Simulator
7. Results
7a Intro
7b Stats
7c ConsOwn
7d DollarImpact
7e FinProj

Previous
Next

Item	Scenario names: BAU	3kW	5kW	8kW
Key Simulation inputs				
Number of installations	1	1	1	1
Community Ownership Option	ConsOwn	ConsOwn	ConsOwn	ConsOwn
Financial discount Rate - Consumer	2.5%	2.5%	2.5%	2.5%
Horizon (years)	20	20	20	20
Years to hand over ownership to consumer	10	10	10	10
Financial discount Rate - Investor	5.0%	5.0%	5.0%	8.0%
Simulation Results - Environment				
Tonnes of carbon dioxide offset annually		4.0	6.4	10.1
Equivalent no. of cars off the road	-	1.2	1.9	2.9
Energy payback yrs, monocrystalline panels		1.0	1.1	1.1
Energy payback yrs, polycrystalline panels		2.1	2.2	2.2
System sizing statistics				
Self-consumption of solar generation, %	0%	27%	18%	12%
Average battery utilisation, %				
Consumer financial stats				
Up-Front solar/battery investment	$ -	$ 3,500	$ 5,500	$ 8,000
Annual electricity cost (first year in horizon)	$ 1,021	$ 471	$ 218	-$ 163
Annual loan repayment (first year in horizon)				
Revenue from RECs (for systems > 100 kW)	$ -	$ -	$ -	$ -
Annual admin cost for RECs	$ -	$ -	$ -	$ -
Annual cost for maintenance eg cleaning				
Annual cost - total (first year)	$ 1,021	$ 471	$ 218	-$ 163
Consumer financial projections compared to Scenario 1				
Annual cost saving (first year in horizon)		$ 550	$ 803	$ 1,184
Percentage cost saving (first year in horizon)		53.9%	78.6%	115.9%
Net Present Value		$ 4,968	$ 7,474	$ 11,142
Simple payback period, years		7	7	7
Discounted payback period, years		8	8	8
Return on Investment (Int. Rate of Return)		13.1%	13.7%	13.9%
Levelised Cost of Energy (LCoE), c/kWh		7.8	6.8	6.2



Worksheet 7c: Results Consumption vs Generation

User guide: 7.2

Contains charts and copyable tables of simulation results.
Focuses on consumption and generation - all units are in kWh.

Select report: Annual generation vs. consumption

Annual generation vs. consumption

"SolarOffset" is solar generation consumed within the premises. "GridExport" is generation exported to the grid.

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REAL TIME DATA

React and respond...

Help consumers understand their consumption in the moment and identify inefficient appliances and practices

Enhance energy audits with demonstrations of appliance usage and consumption

Add value to demand response, load control, responsive energy management services

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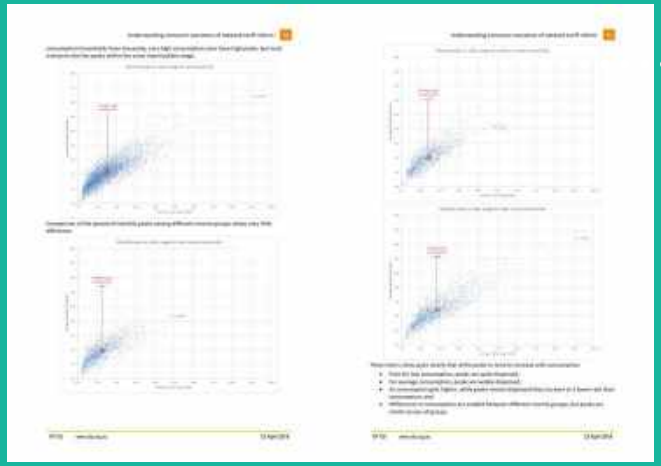
AGGREGATED DATA

Plan and analyse…

Individual and aggregated granular localised data can guide energy businesses' and governments' planning and decision-making



Deidentified rich energy datasets can help researchers and advocates understand the impact of tariffs, energy technology, concessions, etc.

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Making it happen

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Risks need to be managed and measures put in place to make it work for everyone

PRIVACY & SECURITY

- Privacy Act coverage
- Informed consent
- Security standards

ACCESS

- Data standards
- Interoperabiity
- Access rights (incl. third party access)

COSTS

- Centralisation?
- Contestablility?
- Regulatory oversight

CUSTOMER PROTECTIONS

- Regulation?
- Voluntary code?
- Dispute resolution

Thanks

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