solar analytics

**Investor Summary** 

#### Solar Analytics Vision



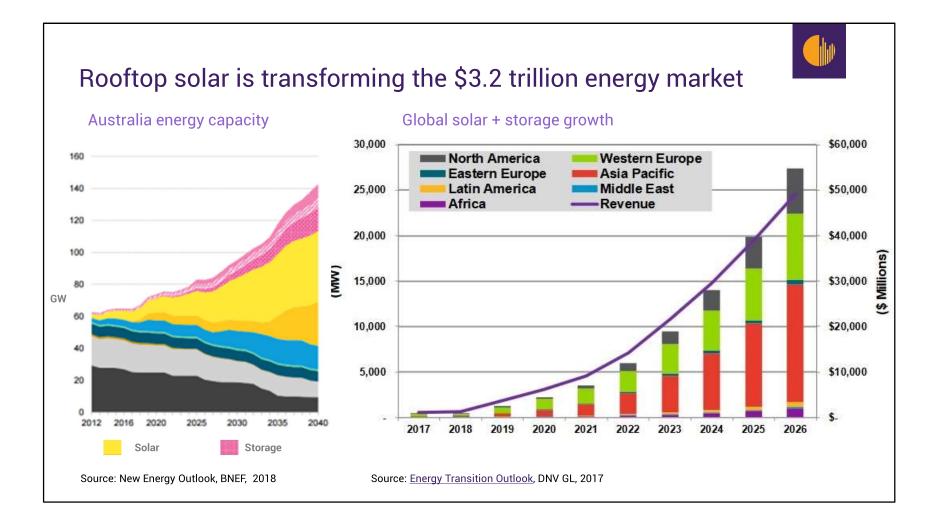
We believe in a world where everyone has access to sustainable, abundant, affordable energy

We believe the prosperity of our world depends on achieving this vision

We believe that rooftop solar is the fastest and lowest cost way to help achieve this vision

We will deliver on this vision by providing the world's leading rooftop solar management software

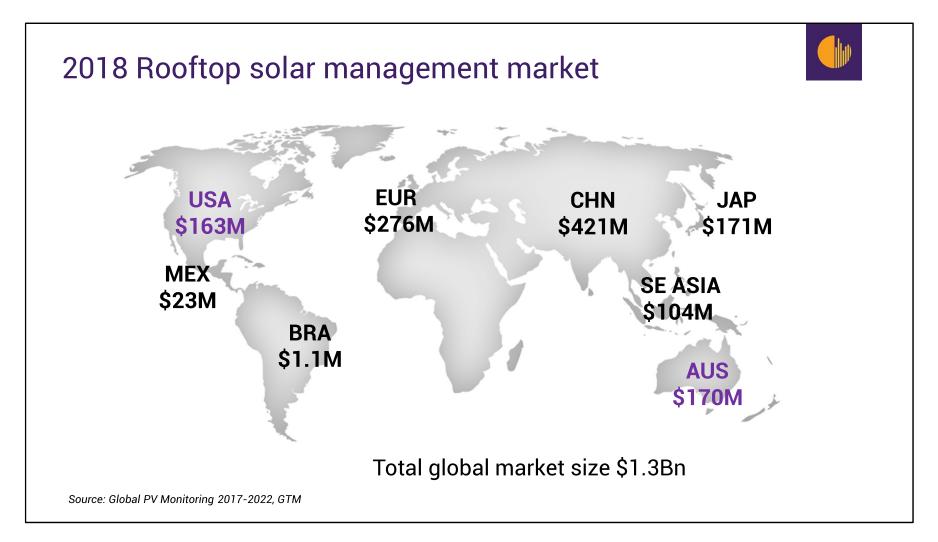
- Electricity generation is one of the world's most polluting industries
- 9 million people die each year from pollution, and energy generation is the single largest source of pollution world wide Commission on Pollution and Health, Lancet, 20 Oct 2017
- Our century old electricity generation and distribution system is ripe for disruption.
- We are a certified B corp and will disrupt the electricity industry



"The world has passed a tipping point, solar will become the main source of electricity" Goldman Sachs, 2017. In Australia and USA, rooftop solar is now the cheapest form of daytime electricity generation at 7.7c/kWh (NREL), and it is generated locally thereby saving on transmission and distribution costs (46% of delivered electricity cost).

Driven by rapid changes in technology, the electricity industry is undergoing a fundamental transformation to distributed generation:

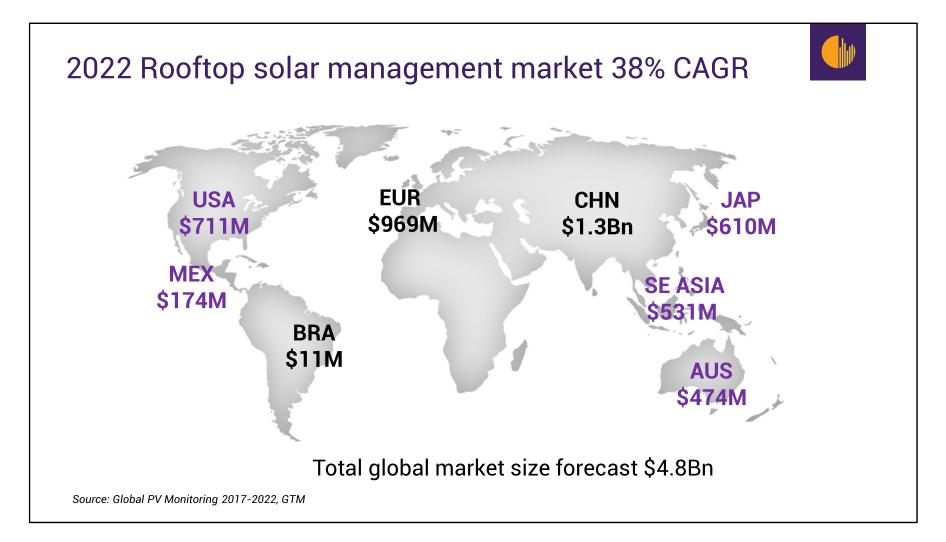
- solar and storage costs are decreasing at 18% for every 2x in capacity
- energy utilities are being deregulated and disintermediated by distributed energy providers
- low cost data transmission and data analysis tools have made real time distributed energy management achievable
- · rise of EVs, storage, and smart homes is making energy ever more complex



Solar Analytics market in 2018 is the provision of solar monitoring and management services for new and existing rooftop solar installations. Total Addressable Market (TAM) includes hardware for 2018 installations and an annual revenue per site (AUD\$).

- \$250 hardware revenue for each of the 2.2M new sites installed globally in 2018
- \$60 software revenue for each of the existing 9.7M sites with monitoring, plus the new sites in 2018

Number of rooftop rooftop installations in each country from GTM report: Global PV Monitoring 2017-2022.



By 2022 the TAM increases due to both overall market growth and an increase in annual revenue per site due to the uptake of HEMS including storage and DER control.

- \$250 hardware revenue for each of the 2.3M new sites installed globally in 2022
- \$198 software revenue for each of the existing 18.2M sites with monitoring, plus the new sites in 2022



## A typical solar story

Electricity Usage and Service Calculation

> 81% consumers rate electricity as their #1 cost of living concern<sup>1</sup>

| Electricity osage and our            |                        |                 |                      |                 |                        |                    |                  |               |  |               |                  |   |                   |   |
|--------------------------------------|------------------------|-----------------|----------------------|-----------------|------------------------|--------------------|------------------|---------------|--|---------------|------------------|---|-------------------|---|
| Next Scheduled Read: 09 Sep 13 (+    | - 2 business days) La  | st Meter F      | Read: 10 Mar 13      |                 |                        |                    |                  |               |  |               |                  |   |                   |   |
| Description:                         | Billing Period: 10 Mar | 13 to 06 Ju     | ın 13                |                 |                        |                    |                  |               |  |               |                  |   |                   |   |
| General Domestic ToU                 | (89 Days) (A = Actual, | E=Estimat       | ted)                 |                 |                        |                    |                  |               |  |               |                  |   |                   |   |
| Usage:                               |                        |                 |                      |                 |                        |                    |                  |               | Site Deta  | ls            |                  |   |                   |   |
| Meter                                |                        | sage            | Total                | Bill            | NMI                    | Supply A           | ddress           |               |  |               | tart Date        | Bill End D                              | ite Days          | Total Co                                |
| No.                                  |                        | Vh              | kWh                  | Days            | 41030708670            |                    | RENCE Street, AL | EXANDRIA      |  |               | ep-2016          | 13-Nov-20                               |                   | (\$309.                                 |
| 001414                               |                        | 003<br>5.476    | 0.003<br>855.476     | 89<br>89        |                        | 1000               |                  |               | Meter Det  |               |                  |   |                   | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| 117079                               | 83                     | 5.476           | 833.476              | 89              |                        |                    |                  |               | September 2010 Control of the Contro | 316663        |                  |   |                   | Total Usa                               |
| Charges:<br>Peak - 5 Days (Mon -Fri) |                        | sage<br>Vh      | Charge/Rate<br>c/kWh | Amount<br>\$    | Meter Number<br>001414 | Tariff<br>Off Peak | 08-Sep-2016      | 0.000 A       | 13-Nov-2016  |               | Mul<br>98 A 1.00 | _                                       | ad Date<br>c-2016 | 0.298 kV                                |
| Energy Use                           |                        | 6.307           | 47.77                | 103.33          | 117079                 | Off Peak           | 08-Sep-2016      | 0.000 A       | 13-Nov-2016  |               |                  | 08-D                                    | c-2016            | 330.812 kV                              |
| Off-Peak All Other Times             | 7.0                    |                 |                      |                 | 001414                 | Peak               | 08-Sep-2016      | 0.000 A       | 11-Nov-2016  |               |                  | 27.42                                   | c-2016            | 0.063 kV                                |
| Energy Use                           | 23                     | 7.272           | 11.90                | 28.24           | 117079                 | Peak               | 08-Sep-2016      | 0.000 A       | 11-Nov-2016  |               |                  | 3.253.57                                | c-2016            | 116.709 kV                              |
| Shoulder - 5 Days (Mon-Fri)          |                        |                 |                      |                 | 001414                 | Shoulder           | 08-Sep-2016      | 0.000 A       | 13-Nov-2016  |               |                  | 0.0000000000000000000000000000000000000 | ec-2016           | 0.111 kV                                |
| Energy Use<br>Service to Property    | 40                     | 2.119           | 19.40                | 78.01<br>74.23  | 117079                 | Shoulder           | 08-Sep-2016      | 0.000 A       | 13-Nov-2016  |               |                  |   | c-2016            | 282.081 kV                              |
| Sub-Total                            |                        |                 |                      | 74.23<br>283.81 | 001414                 | Solar              | 08-Sep-2016      |               |  |               | 84 A 1.00        | 08-D                                    | rc-2016           | 814.784 kV                              |
| Plus Green Product Charges           |                        |                 |                      | 203.01          |                        |                    |                  |               | Supply Cha   | rges          |                  |   |                   |   |
| 100% GreenPower                      | 85                     |                 | 2.80                 | 23.96           | Description            |                    |                  | Start         | Date   | End Date      | U                | sage                                    | <b>Unit Price</b> | Total Pri                               |
| Sub-Total                            | 63                     |                 | 2.00                 | 23.96           | Daily Charge           |                    |                  | 09-S          | ep-2016 1  | 3-Nov-2016    |                  | 66                                      | 0.874000          | \$57.                                   |
| Less Discounts & Rebates             |                        |                 |                      | 25.50           | Off Peak               |                    |                  | 09-S          | ep-2016  | 3-Nov-2016    | 331              | .110                                    | 0.100800          | \$33.                                   |
| Direct Debit Usage Discount (1%)     |                        |                 |                      | 2.10 CR         | Peak - step 1          |                    |                  | 09-S          | ep-2016 1  | 1-Nov-2016    | 116              | .772                                    | 0.399400          | \$46.                                   |
| Sub-Total                            |                        |                 |                      | 2.10 CR         | Shoulder               |                    |                  | 09-S          | ep-2016  | 3-Nov-2016    | 282              | .192                                    | 0.147800          | \$41.                                   |
| Sub Total Electricity Charges        |                        |                 |                      | \$305,67        | Solar                  |                    |                  | 09-S          | ep-2016 1  | 3-Nov-2016    | 814              | 784                                     | -0.600000         | (\$488.8                                |
| GST                                  |                        |                 |                      | \$30.57         | A = Actual, S = S      | ubstitute, E       | = Estimate       | *             |  |               |                  |   | Total Cost        | (\$309.4                                |
| Total Electricity Charges            |                        |                 |                      | \$336.24        |                        |                    |                  |               |  |               | -                |   |                   |   |
| Solar Contribution                   | Billing Period: 10 Mar |                 |                      |                 |                        |                    |                  |               |  | Household     |                  | 1                                       | 2                 | 3 4                                     |
|                                      | (89 Days) (A = Actual, | E=Estima        | ted)                 |                 | Average usage co       |                    | \$1.84           |               |  |               | Spring 8.1       | kWh 12.                                 | 3kWh 15.9         | kWh 16.4kW                              |
| Usage:                               |                        |                 |                      |                 | Average usage pe       |                    | 11.06kWh         |               |  |               |                  |   |                   |   |
| Meter<br>No.                         |                        | eneration<br>Vh |                      | Bill            | For more informa       |                    |                  | ciency, visit |  | The table abo |                  |   |                   | age usage per                           |
|                                      |                        |                 |                      | Days            | www.energymad          | eeasy.gov.au       |                  |               |  |               | with ot          | ner househ                              | olds of simila    | r size in your ar                       |
| 001414                               |                        | 14.119          |                      | 89              |                        |                    |                  |               |  |               |                  |   |                   |   |
| Charges:                             |                        | eneration<br>Vh | Rate<br>c/kWh        | Amount<br>\$    |                        |                    |                  |               |  |               |                  |   |                   |   |
| Solar Feed-in-Tariff                 | 79                     | 4.119           | 60.00 CR             | 476.47 CR       |                        |                    |                  |               |  |               |                  |   |                   |   |
| Sub Total                            |                        |                 |                      | 476.47 CR       | <sup>1</sup> Source    | Choic              | e survey         | . July 20     | 116  |               |                  |   |                   |   |
| Total Solar Contribution             |                        |                 |                      | \$476.47 CR     | oource                 | . 511510           | our ve           | , July 20     |  |               |                  |   |                   |   |

| Supply addre<br>Supply period<br>NMI:<br>Energy Plan:<br>12 Sep 17 to<br>14 Nov 17 to  | <b>d:</b><br>13 Nov 13                                 | 7 (63 days)                                       |                             |  | ec 20          | IA NSW 2019<br>017 (90 days<br>1030708670<br>Saver<br>Saver |  |  |
|--|--|---|-----------------------------|--|----------------|---|--|--|
| Meter  | Read   | Start   | En.                         | d<br>ference <sup>1</sup>                                | k!             | Wh  |  |  |
| no.<br>700246757   | type<br>Actual   | 362   |                             | 143  | 6              | 86.065  |  |  |
| 700246757  | Actual   | 1,130   |                             | 903  |                | 54.462  |  |  |
| 700246757 Actual   |  | 1.130   |                             | 1,903  |                | 159.121   |  |  |
| 700246757 Actual   |  | 1,130   |                             | 1,903  |                | 366.706   |  |  |
| Previous bala<br>Previous balar<br>9 Oct 17 pays<br>Balance brou   | nce<br>ment  | • 61 • 61 • 61 • 61                               |                             | \$379.18<br>\$379.18cr                                   |                | \$0.00  |  |  |
| New charge   | s and cre  | dits.   |                             |  |                |   |  |  |
|  | ipply char   |   | Price                       | Amount   |                |   |  |  |
| Usage and su   |  | 159.121kWh  | \$0.54                      | \$85.93  |                |   |  |  |
| Peak   |  |   |                             |  |                |   |  |  |
| Peak<br>Off peak   |  | 366.706kWh  | \$0.15                      | \$55.01  |                |   |  |  |
| Peak<br>Off peak<br>Shoulder   |  | 366.706kWh<br>254.462kWh                          | \$0.23                      | \$58.52  |                |   |  |  |
| Peak<br>Off peak   |  | 366.706kWh  |                             |  | +              | \$285.86  |  |  |
| Peak<br>Off peak<br>Shoulder<br>Supply charge  |  | 366.706kWh<br>254.462kWh                          | \$0.23                      | \$58.52  | +              | \$285.86  |  |  |
| Peak<br>Off peak<br>Shoulder<br>Supply charge<br>Total charges   |  | 366.706kWh<br>254.462kWh                          | \$0.23                      | \$58.52  | +              | \$285.86  |  |  |
| Peak Off peak Shoulder Supply charge Total charges Credits Feed-in Tariff Pay On Time I  | ·<br>Discount  | 366.706kWh<br>254.462kWh<br>90 days               | \$0.23<br>\$0.96            | \$58.52<br>\$86.40<br>\$76.15cr<br>\$39.50cr             |                | \$285.86  |  |  |
| Peak Off peak Shoulder Supply charge Total charges Credits Feed-in Tariff Pay On Time I 4% Double Up   | ·<br>Discount  | 366.706kWh<br>254.462kWh<br>90 days               | \$0.23<br>\$0.96            | \$58.52<br>\$86.40<br>\$76.15cr                          |                |   |  |  |
| Peak Off peak Shoulder Supply charge Total charges Credits Feed-in Tariff Pay On Time I 4% Double Up Total credits   | Discount Discount                                      | 366.706kWh<br>254.462kWh<br>90 days               | \$0.23<br>\$0.96            | \$58.52<br>\$86.40<br>\$76.15cr<br>\$39.50cr             |                | \$285.86<br>\$121.51c                                       |  |  |
| Peak Off peak Shoulder Supply charge Total charges Credits Feed-in Tariff Pay On Time I 4% Double Up Total credits Account adju                            | Discount Discount                                      | 366.706kWh<br>254.462kWh<br>90 days<br>686.065kWh | \$0.23<br>\$0.96<br>\$0.111 | \$58.52<br>\$86.40<br>\$76.15cr<br>\$39.50cr             |                |   |  |  |
| Peak Off peak Shoulder Supply charge Total charges Credits Feed-in Tariff Pay On Time I 4% Double Up Total credits Account adju Debit adjustm              | Discount Discount Street Discount                      | 366.706kWh<br>254.462kWh<br>90 days<br>686.065kWh | \$0.23<br>\$0.96<br>\$0.111 | \$58.52<br>\$86.40<br>\$76.15cr<br>\$39.50cr<br>\$5.86cr |                |   |  |  |
| Peak Off peak Shoulder Supply charge Total charges Credits Feed-in Tariff Pay On Time I 4% Double Up Total credits Account adju Debit adjustm 14 Jun 17 to | Discount Discount Discount Ustments Discount 11 June   | 366.706kWh<br>254.462kWh<br>90 days<br>686.065kWh | \$0.23<br>\$0.96<br>\$0.111 | \$58.52<br>\$86.40<br>\$76.15cr<br>\$39.50cr<br>\$5.86cr | 61<br>61<br>63 |   |  |  |
| Peak Off peak Shoulder Supply charge Total charges Credits Feed-in Tariff Pay On Time I 4% Double Up Total credits Account adju Debit adjustm              | Discount Discount Ustments Discount 11 Sep 17 Discount | 366.706kWh<br>254.462kWh<br>90 days<br>686.065kWh | \$0.23<br>\$0.96<br>\$0.111 | \$58.52<br>\$86.40<br>\$76.15cr<br>\$39.50cr<br>\$5.86cr | 61<br>61<br>63 |   |  |  |

SOLUTION: Electricity is the biggest cost of living concern (with 81% people rating it as a major cost of living concern, Choice, July 2016). We pro-actively provide our customers with everything needed to make the most of their solar investment, and enable them to navigate the changing energy landscape and maximize what matters to them.

Bills are confusing, and utilities are not trusted to give best value.

We receive great customer feedback, have an NPS of +41, and the majority of our solar owners log into their dashboard multiple times each month.



## So they get mad, then they get solar

- USA 1.5 million homes
- Japan 1.6 million homes
- Australia 1.8 million homes + 210,000 new solar in 2018



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Save money: "Less than a month in, Solar Analytics has already saved us money. Thanks!" Jason, NSW

**Peace of mind**: "I really like being able to monitor my solar array in real time and appreciate the variety of information available." Pete, ACT

New Energy: "I love this Platform and the data it shows and reports. Will look into batteries in 4 years." Colin, QLD



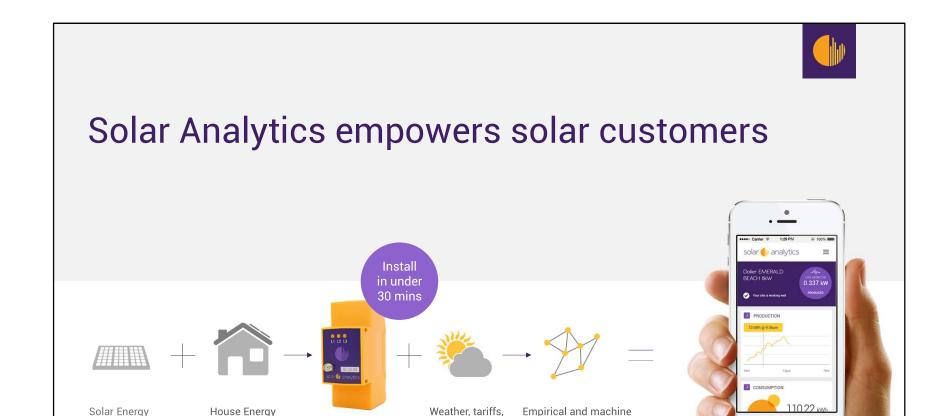
# But energy is complicated

# Solar owners lack visibility and are losing money



- Faults. Half of Australian solar systems are underperforming, on average systems lose 18% of their electricity generation each year (SunWiz analysis of 8000 AusGrid PV systems). And each year 14% of solar systems will have a major failure.
   The rectification of these faults costs a typical solar home owner \$270 pa.
- **Tariffs**. For a solar home owner determining their optimal electricity tariff is complicated. The cost of being on a suboptimal tariff is estimated at over \$150 pa for a typical Australian unregulated solar.
- New Energy. No access to new energy innovations such as energy storage, load control and peer to peer energy trading.
   These new energy innovations can increase grid independence and leverage the home owners solar to reduce the cost of electricity

With the growth in battery storage and Electric Vehicles (Evs) their need for better visibility and opportunity to save money through automated control is becoming even greater.



SOLUTION: The Solar Smart Monitor is the fastest, easiest and most versatile monitoring solution on the market. Communicating in real time via 3G network, we gather energy consumption and production data, nearby solar system data, site data and local weather data.

nearby systems

Solar Smart Monitor (or Utility Smart Meter)

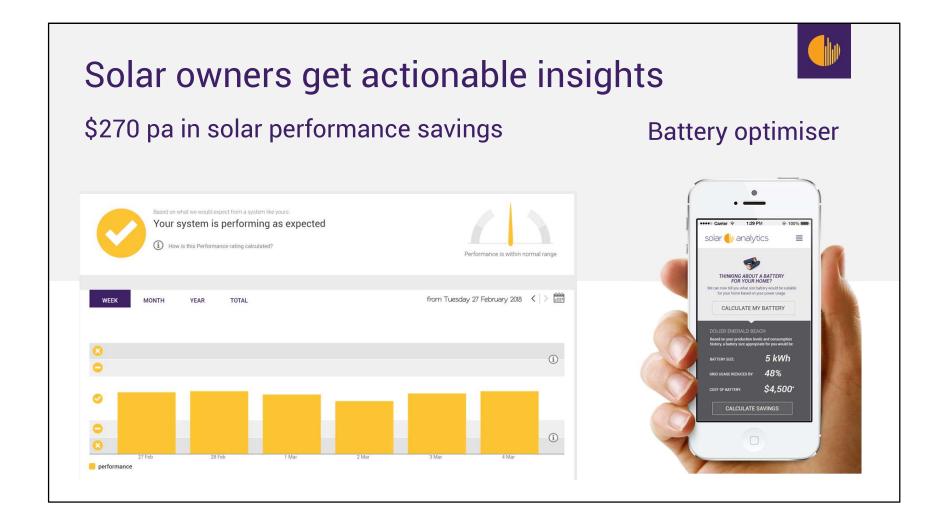
learning algorithms

Production

Consumption

We utilise patented algorithms and advanced machine learning to analyse the data to provide active alerts and notifications to our solar owners via their dashboard.

This low cost device along with our solar monitoring is what gets us in the home profitably with a low CAC with new solar system installations, solving the biggest challenge home energy monitoring companies face.



We pro-actively provide our customers with everything needed to make the most of their solar investment, and enable them to navigate the changing energy landscape and maximize what matters to them.

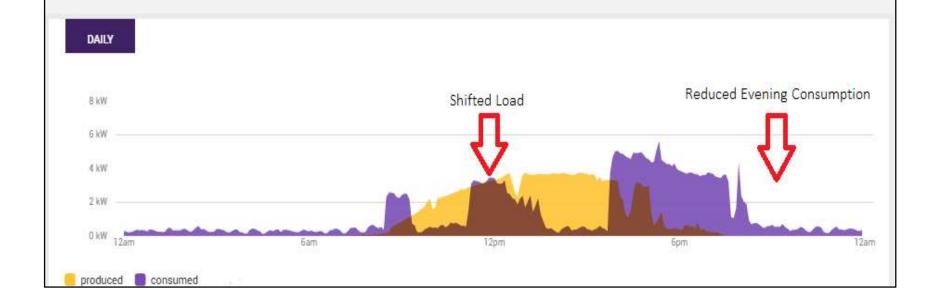
Save money: "Less than a month in, Solar Analytics has already saved us money. Thanks!" Jason, NSW

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#### Solar owners increase their solar return

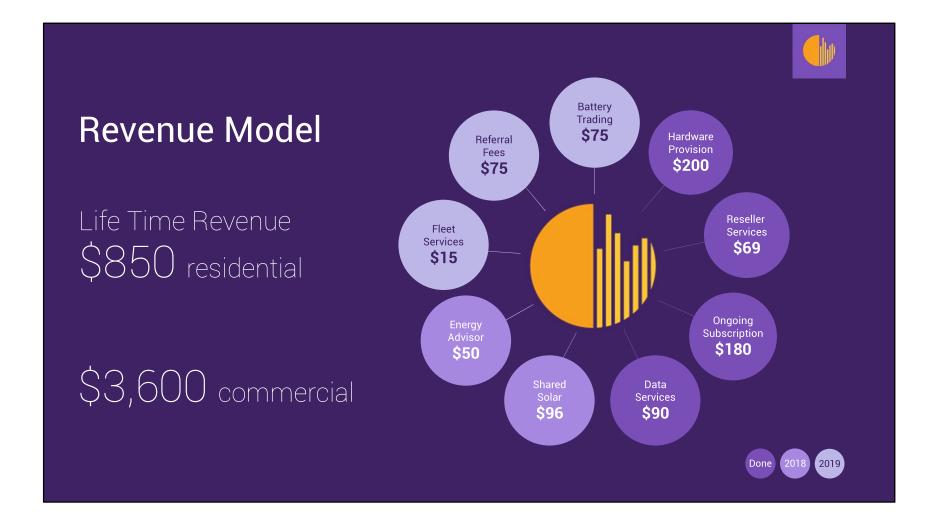
#### Energy usage optimisation



We engage with our customers to help them optimise their electricity usage patterns

We receive great customer feedback, have an NPS of +41, and the majority of our solar owners log into their dashboard multiple times each month.

**Peace of mind**: "I really like being able to monitor my solar array in real time and appreciate the variety of information available." Pete, ACT

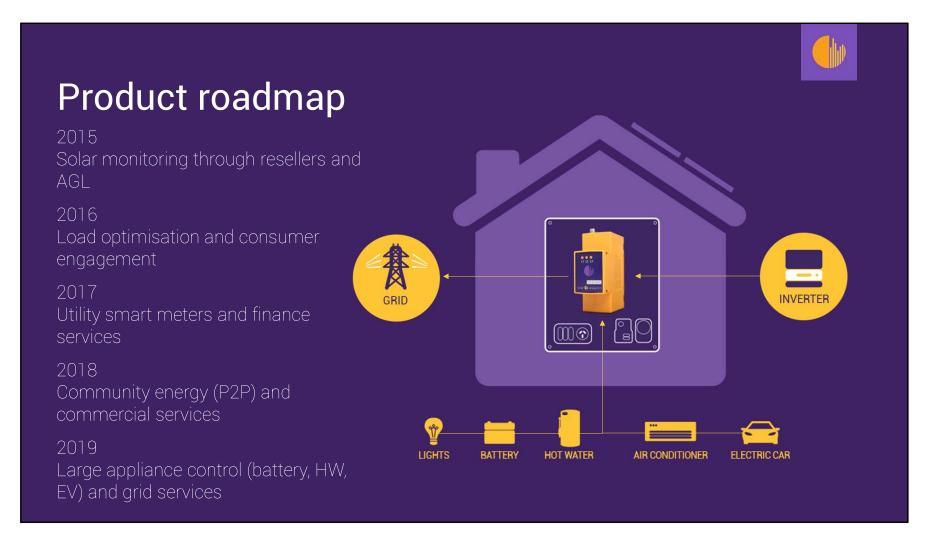


We are a B2B2C business where our business partners (solar resellers and utilities) benefit by selling our product to their customers.

These B2B customers are extremely sticky because we drive long term value for them from their customer base, and the cost of switching to an alternative provider is high.

With the advance of smart meter rollout, we will be able to capture the retrofit market.

Our market leading source of rich energy data provides us with the unique ability to monetise this data for the benefits of our different customer segments.



We will be the data and analytics platform that all other smart energy applications run on.

By winning the solar vertical and dominating the solar reseller channel, we are ideally positioned to provide this broad home energy management platform as energy storage, energy services and electric vehicles become mainstream.



SOLUTION: Our comprehensive solar and energy analysis algorithms, combined with market leading source of rich energy data, provides us with the unique ability to provide services to the three core solar customer segments (refer to separate product information decks).

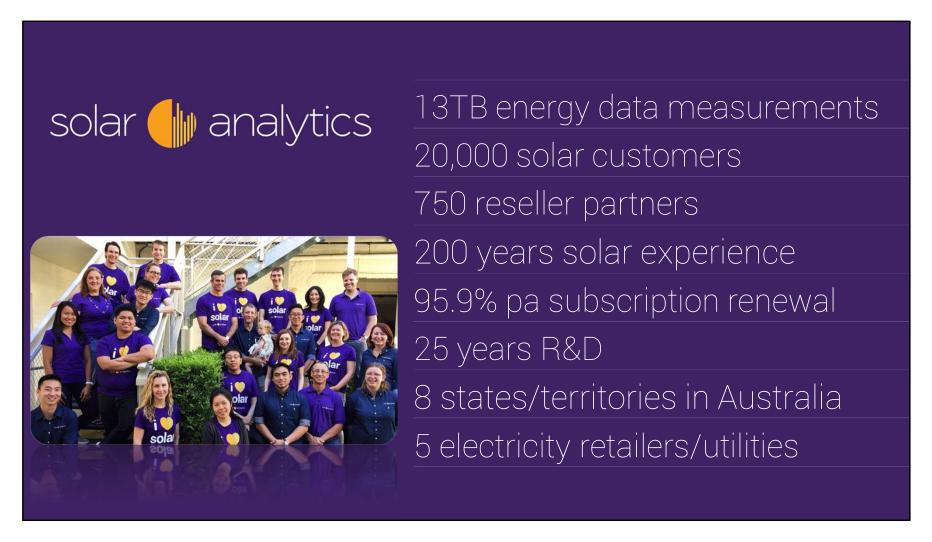
**Solar Owner** – maximise their benefit from solar, saving on average \$312 per customer last year. 52% of solar systems are underperforming, on average losing 18% of their electricity generation each year (SunWiz analysis of 8000 AusGrid PV systems). And each year 14% of solar systems will have a major failure.

Solar Reseller (installers) - our services help them generate more sales, reduce costs and increase life time customer value.

**Energy Retailers** - increase value added services and customer retention.



We are the dominant solar energy management platform in Australia with over 750 solar reseller partners nationally. Our resellers include most of the leading solar installers nationally, and we are starting to gain traction in international markets through strategic reseller partnerships..



We have the most advanced solar specific software solution, and market leading traction in the world's largest market.



We have been pioneers and leaders in a number of solar enterprises over 20 years. Together we have:

- Developed and launched the world's first fully integrated modular residential solar system Plug&Power
- Developed a revolutionary thin film technology Crystalline Silicon Glass (CGS)
- Designed, built and operated a cutting edge 20MW thin film solar panel manufacturing facility in Germany
- Developed and built some of the first large scale solar power plants in Australia
- Founded and operated solar system retailer and installer
- Throughout it all we have negotiated the difficult transitions and successfully managed the expansion of a rapidly growing solar business

We have repeatedly proven our ability to work together effectively to deliver our shared vision

#### Co-Founders

# Stefan Jarnason

Solar industry pioneer for over two decades, internationally recognised reliability expert and holder of 3 patents

# Dr John Laird

Multiple NICTA and UNSW academic award winner for coding and development of real time database applications

#### Valantis Vais

Strategic Director

Founder of 3 successful solar ventures, 3 years at BCG, Haas MBA

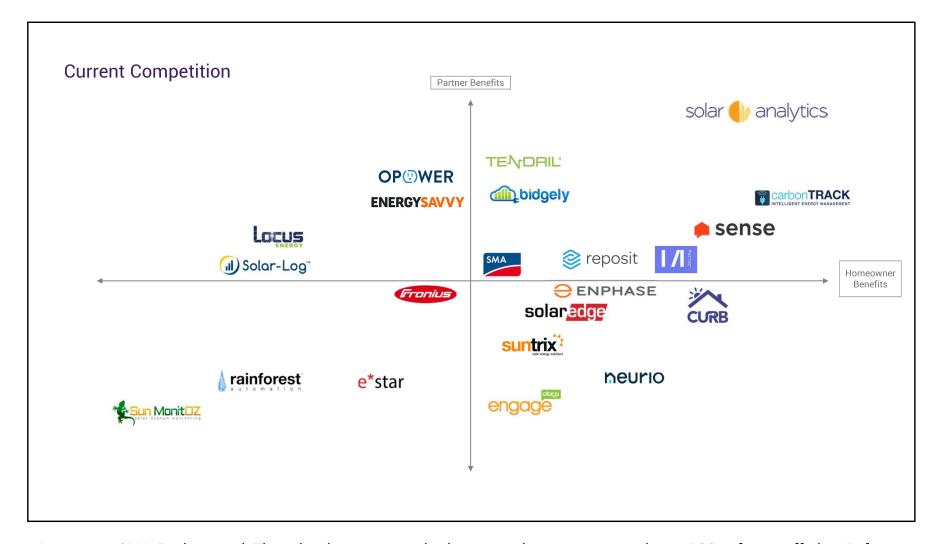
### Dr Renate Egan

Commercial Director

Led one of world's largest PV R&D teams for 10+ years, globally recognised PV leader and Chair APVI

Our unique strength is the enormous trust and respect for each other we have developed through working together over the past two decades.

Understanding each others individually outstanding skills and capabilities, we know how to work effectively together to execute our shared vision and strategy.

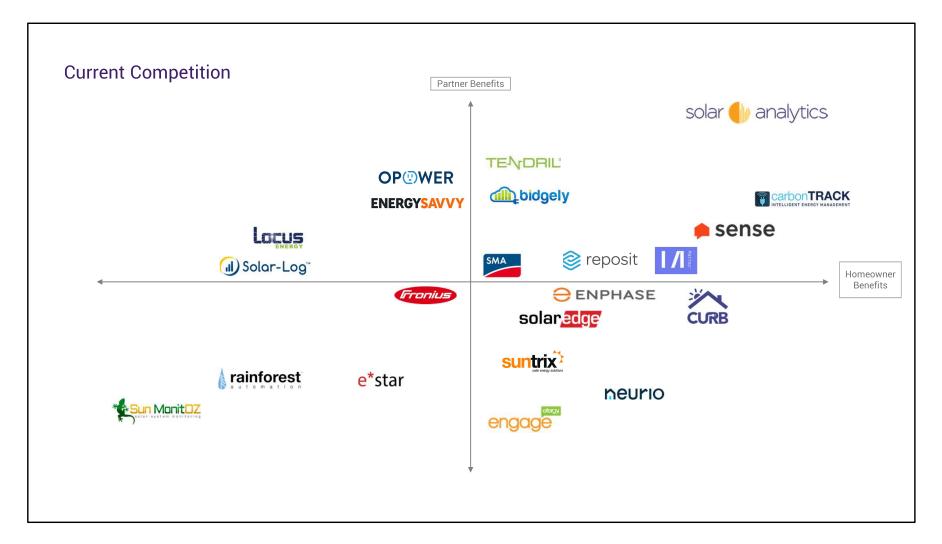


<u>Inverters</u> – SMA, Enphase etal. These hardware companies have no solar owner connection or B2C software offering. Refer to inverter opportunity presentation for details on how we are partnering to be their software partner.

<u>Energy monitoring</u> – CarbonTrack, Sense etal. These startups are focused on the broader energy market and do not have a solar specific offer, hence struggle with traction. They are taking your customers.

<u>Solar monitoring</u> – SolarLog, Locus etal. Focused on larger scale solar they do not provide energy consumption or real time and do not offer any solar owner benefits. Matter and Reposit are local direct solar competitors, but have far less traction and capability.

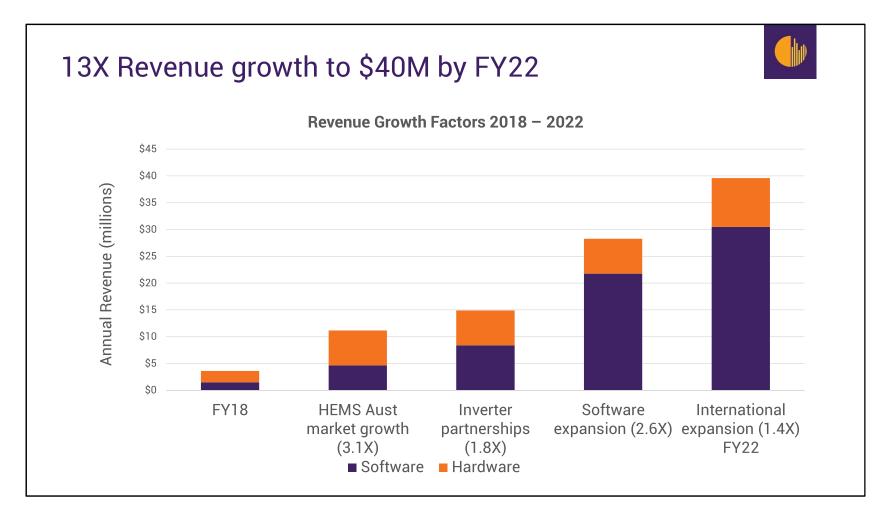
<u>Utility Meter</u> – Bidgely, Opower. Use smart meter data to provide basic appliance dissaggreagtion and better customer info. No solar focus or ability to provide in depth solar insights.



#### Our advantages:

- Lowest cost, highest value solution
- Small scale solar focused the only entry point that works for this market
- Hardware agnostic our hardware, inverters, or utility meters
- Leverage full value suite and customer segments
- Traction for real time Solar+Consumption we are #3 globally and #1 in Australia

Refer to energy market presentation for more details on the evolution of the solar energy management and HEMS market over the next 5 years



- HEMS Market Growth: in 2018 there will be 210,000 new solar systems installed, of which 84,000 will get HEMS capability. In 2022 BNEF project 250,000 new solar systems all with HEMS
- Inverter Partnerships: we expect to capture 25% of the HEMS inverter market share through our partnerships with inverter manufacturers (refer to Inverter Product Opportunity slide deck for details)
- Software Expansion: in 2018 our average software revenue per residential site is \$75 pa, and by 2022 it will be \$198 pa
- International Expansion: by FY22 international expansion will bring in an additional \$10M in revenue (refer to Financial Model)

# solar analytics

We are seeking up to \$4.75m new funding. Along with \$3.5m of secured grants this will be used to deliver the following within two years:

- · Cash flow positive with no additional fund raising
- Increase revenue from \$3.8M to \$11.7M, and ARR from \$770k to \$4.6M
- Grow total sites under monitoring to 150,000+
- Secure three global inverter partners
- Double revenue per site through new features including fleet management, storage control
- Peer to peer trading platform with 10,000+ customers