GIPPY BULK BUY 2018-2019

Yarra Energy Foundation

Final Findings Report 2019

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Gippy Bulk Buy - Final Report

Summary

The Latrobe Valley Community Power Hub entered into an agreement with the Yarra Energy Foundation in early 2018 to assist the Power Hub with a Solar PV Bulk Buy scheme for residents across Latrobe City Council, Wellington Shire, and Baw Baw Shire. Through this agreement, Yarra Energy Foundation released an Expression of Interest (EoI) to solar companies wanting to take part in the Program. Part of the EoI ensured that Bulk Buy Program included and delivered high quality product, admirable customer service, insurances and warranties at a fair and reasonable price, while also providing the community with a donated Solar PV system to a nominated community building.

Yarra Energy Foundation coordinated a meeting with smaller, local installers that are Clean Energy Council accredited to also take part in the Program. From these sessions and follow-up meetings, two local installers were used throughout the Program that met occupational health and safety and workmanship criteria required by the supplier to de-risk the Program. The local installers used were A. Mills Electrical located in Warragul and A1 Solar located in Bairnsdale.

The Yarra Energy Foundation presented at 17 community information sessions in different regional centres throughout Gippsland along with a stall coordinated by Baw Baw Shire, LVCPH and YEF to engage residents with the Program. These sessions and the Program were promoted by the Latrobe Valley Community Power Hub through council websites, social media, as well as advertisements in local newspapers and distributed flyers. Roughly 300 people attended these information sessions with favourable reviews and feedback.

This report details the final findings of the Program to inform all stakeholders of potential opportunities or improvements in future council-led, community driven sustainability Programs.

Community Profiles

The Gippy Bulk Buy extends across three council regions: Baw Baw Shire, Latrobe City Council, and Wellington Shire. The following snapshot of their community profiles provides context to inform the findings of the Program and the financial capacity of residents to purchase solar products. All statistics have been sourced from the Australian Bureau of Statistics Census data of 2016.

Baw Baw Shire:

Baw Baw Shire is located a little over an hour's drive east of Melbourne and is home to roughly 52,000 people. Of that, 20.3% are under the age of 15 and 20.2% are Seniors over the age of 65. Of the 52,000 people in the region, Baw Baw has 20,872 total private dwellings, with 18,747 occupied and 2,135 unoccupied. This data illustrates the opportunity that 18,747 homes could install Solar PV; however, 5,077, or roughly 23.6% according to the Australian PV Institute already have Solar PV further limiting available households.

The unemployment rate is lower than the State average at 3.9%. Of the 52,000 residents, 47,300 were counted on Census Night in 2016, and of that, 26.74% (12,648 residents) had a weekly income range of $2,500 - $2,999, 47.55% (22,491 residents) between $1,000 and $2,499, and 27.72% (13,111 residents) of residents had the income range of $0 to $999.

Of that, 98.55% of residents owned their own home outright or are paying a mortgage. These data points are crucial in understanding the financial ability of Baw Baw residents who can afford Solar PV irrespective of whether they want to install Solar PV.

Latrobe City Council:

Latrobe City Council is located roughly two hour's drive east of Melbourne and is home to about 75,000 people. Of that, 20.3% are under the age of 15 residents and 20.2% are Seniors over the age of 65. Of the 70,033 people of the region that responded to home ownership, Latrobe City Council has 47,125 total private dwellings and 22,908 rental dwellings.

These data illustrate the opportunity that 67% of homes in the region could install Solar PV; however, 6,403, or roughly 18.7% according to the Australian PV Institute already have Solar PV limiting available households.

The unemployment rate is higher than the State average at 7.9%. Of the 75,000 residents, 71,998 were counted on Census Night in 2016, and of that, 6.07% (4,370 residents) had a weekly income range of $2,500 - $2,999, 35.61% (25,638 residents) of weekly income range $1,000 and $2,499, and 29.98% (21,585 residents) of residents had the income range of $0 to $999. 28.34% or 20,404 residents were not applicable.

Of that, 67% of residents owned their own home outright or are paying a mortgage. These data points are crucial in understanding the financial ability of Latrobe City Council residents that can afford Solar PV irrespective of whether they want to install Solar PV.

Wellington Shire:

Wellington Shire is located roughly three hour's drive east of Melbourne and is home to about 44,000 people. Of that, 18.9% are under the age of 15 residents and 20.2% are Seniors over the age of 65. Of

the 40,260 people of the region that responded to home ownership, Wellington Shire has 29,225 total private dwellings and 8,646 rental dwellings.

These data illustrate the opportunity that 69% of homes in the region could install Solar PV; however, 4,898, or roughly 21.1% according to the Australian PV Institute already have Solar PV limiting available households.

The unemployment rate is higher than the State average at 5.4%. Of the 44,000 residents, 42,093 were counted on Census Night in 2016, and of that, 5.61% (2,361 residents) had a weekly income range of $2,500 - $2,999, 36.76% (15,473 residents) of weekly income range $1,000 and $2,499, and 28.2% (11,870 residents) of residents had the income range of $0 to $999. 30.05% or 12,649 residents were not applicable. These data points are crucial in understanding the financial ability of Wellington Shire residents that can afford Solar PV irrespective of whether they want to install Solar PV.

Program Results

After review of the community profiles that make-up the Gippy Bulk Buy zone, it can be presumed that residents of Baw Baw Shire and Wellington Shire have a greater financial capacity to install Solar PV and a lower unemployment rate than Latrobe City Council. As illustrated by Chart 1 the Census Data breakdown supports the number of purchased Solar PV by region throughout the Program.

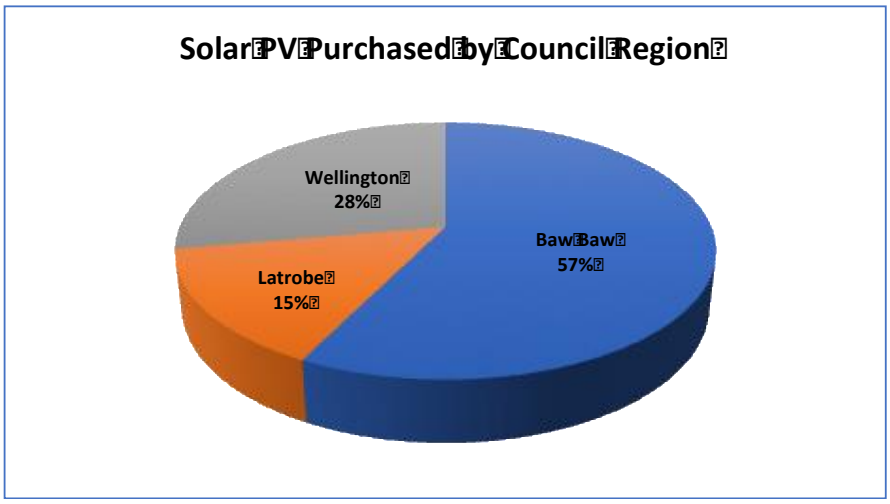

Chart 1. Purchased PV by Council Region

To further understand the region contextually, the Department of Environment, Land, Water and Planning, has invested a significant financial sum into their Home Energy Assist program and the Latrobe Valley Home Energy Upgrade program. This State Government Program offers solar installations and energy upgrades to up to 1,000 households across the Gippsland region. This State Government program, although welcomed, limits the Programs reach to a large segment of the populace.

Table 1 illustrates the total number of people who registered throughout the Program to receive a no-obligation, free Solar PV quote. One of the key data points of significance in *Table 1* is the percentage conversion of registering their interest online, phone or via information sessions and being provided a free, no obligation quote to signing contracts and installing solar. The approximate market average is 20%. The Gippy Bulk Buy resulted in a higher conversion of 23.5% indicating that despite the State Government election in November 2018 and the rebate offering instilling uncertainty in the market the conversion rate is favourable.

In Summary - Residential	
Total Registrations & Quotes	212
Total Contracts Signed	50
Percentage Conversion (Registration to Sale)	23.5
Did Not Sign	134
Quotations Under Review (Customer Requires Further Follow-Up)	28
Total Residential kW Sold	241

Table 1. Program Summary Key Data Points - Residential

Table 2 illustrates the number of installs completed and installs that are scheduled. Further the below table shows the average kWs installed throughout the Program indicating that the industry average for residential Solar PV of approximately 4kW has been achieved. The number of battery/inverter hybrid systems sold throughout the Program stands at 1, which assumes that the cost of battery systems is either cost prohibitive or residents preferred other battery systems available on the market.

Solar Installed/Future Installs - Residential	
Total Contracts Signed	50
Total Installs to Date	42
Highest kW Install	6.6
Lowest kW Install	2.16
Average kW Install	4.9

No. of Hybrid Battery/Inverter Systems Sold	1
Total Residential kW Installed	213.8
Total kW Sold	241

Table 2. Solar Installed and Future Installs – Residential

Table 3 provides reasons as to why residents decided against Solar PV through the Gippy Bulk Buy Program. These data points are significant in helping guide, instruct, and inform future Solar PV Programs at the local Government level.

Why haven't residents participated in the Program	
Total Registrations	212
Did Not Sign	134
Not Interested Any Longer	35
Phone or Email Not Responded to by Resident	20
Preferred Competitor Solar Offerings	16
Price Prohibitive	15
Load Consumption	9
Already Have Solar	9
Preferred Other Product Options	8
Roof Type Inadequate	6
Moving to A New House	5
No Reason Provided	5
Off-Grid Inquiry	4
Commercial Inquiry	2

Table 3. Why haven't residents not participated in the Program

Of these reason categories some fall outside the Program's control accounting for 67% or 90 Registrants of non-participation total.

- Already have Solar (9 Registrants or 7% of non-participation total)
- Commercial Properties – inadequate leases/roof space (2 Registrants or 1% of non-participation total)
- Load Consumption – does not use enough electricity to justify solar investment (9 Registrants or 7% of non-participation total)
- Moving to A New House (5 Registrants or 4% of non-participation total)
- Not Interested – Generally, not interested in Solar or personal change in circumstances after registering (35 Registrants or 26% of non-participation total)
- Off Grid Inquiry – All Off-Grid Inquiries sent to our Local Off Grid Specialists (4 Registrants or 6% of non-participation total)
- Inadequate Roof Type/Excessive Shading (6 Registrants or 6% of non-participation total)
- Phone/Email Not Responded To (20 Registrants or 15% of non-participation total)

The remaining 33%, or 44 Registrants, are categories that can be reviewed to seek further in-roads into Program improvement and development for the future.

- Competitor – Although the Registrant determined a Competitor was more appropriate for their situation; the Program can be perceived as the driver for Solar PV installation (10 registrants or 12% of non-participation total)
- Price – Price deemed too expensive to justify install (15 Registrants or 11% of non-participation total)
- Product – Registrants preferred other product on the market not available through the Program (8 Registrants or 6% of non-participation total)
- No Reason – Registrants who did not provide a reason for their non-participation (5 registrants or 4% of non-participation total.

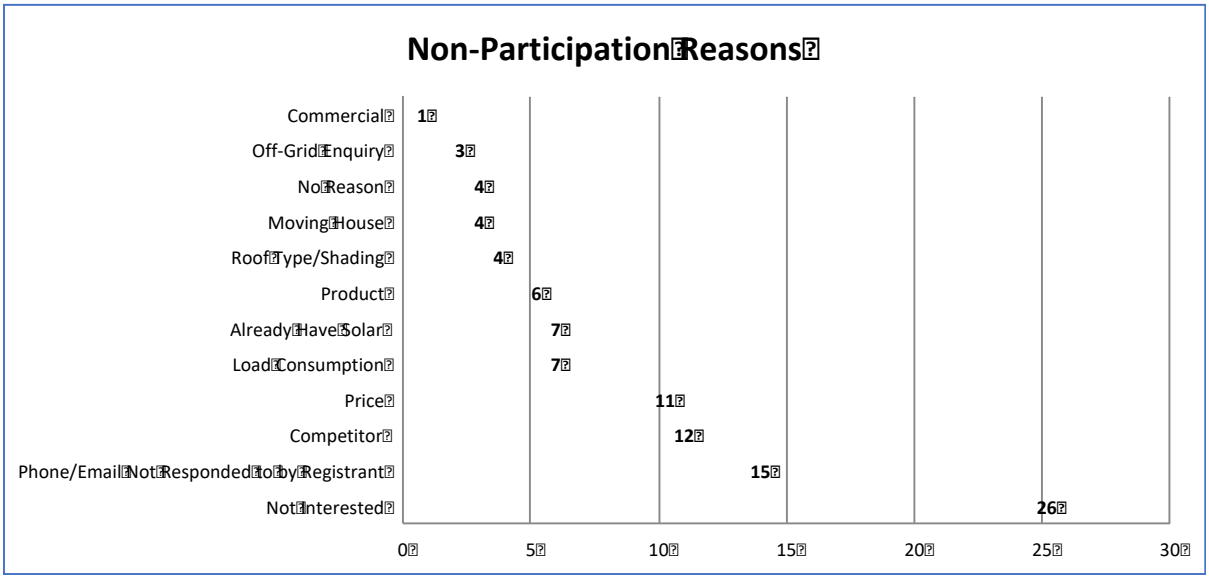

Chart 2. Percentage Breakdown of Why Participants did not purchase Solar through the Program

In Summary - Commercial	
Total Registrations & Quotes	14
Total Contracts Signed	4
Percentage Conversion (Registration to Sale)	25%
Did Not Sign	9
Accepted - Quotation Remains Under Review	1
Total Commercial kW Installed	84.54
Total Commercial kW Sold	84.54
Total kW - Commercial & Residential	326.07

Table 3. Solar Installed and Future Installs – Commercial

Of the four contracts signed, one contract covers three separate properties totalling 63.75 kW of Solar PV. Of the one quote still under review, the contract and terms of sale has been accepted, however, the registrant wishes to hold-off on the deposit for the foreseeable future.

Capital Investment

Bulk Buy participants invested $502,607.00 totalling 326.07 kWs of installed Solar PV systems. This equates to 1173.85 kW of energy generated per day and 428,455.98 kWs generated per annum.

At the current market retail value per kilowatt hour is 30 cents equating to $128,536.79 saved by residents per annum. Over the lifetime of each system, about 25 years, residents can now inject $3,213,419.85 into the local economy.

Conclusion

Although the Program has come to a close, the Yarra Energy Foundation will continue to follow-up with residents who are currently reviewing their free, no obligation Solar PV quote. The Yarra Energy Foundation will also seek to re-contact registrants who chose not to participate in the Program to gauge if their interest has changed. Furthermore, the Yarra Energy Foundation referred approximately 15 Solar Hot Water leads to Earthworker, with no sales reported to YEF by Earthworker. However, YEF will continue to forward leads to the Earthworker team.

The uncertainty of the Victorian Election result significantly slowed Program registrations from the end of August to the end of November, including other YEF solar programs. As a by-product of the election, Solar Victoria has been developing products that may permit greater access to the Solar market with the rebate offering of up to $2,225 for eligible homes. The Yarra Energy Foundation continue to field calls form Gippsland residents to assist them with accurate information about this scheme and will continue to do so.

After the conclusion of the Program, the small, local installer utilised for the majority of installs was contacted to gauge their thoughts and reflections of the Program. Overall, the installer was significantly favourable of the Program and is eager to continue installing under this scheme. The installer determined that the Program considerably improved the burgeoning business' gain in the competitive Gippsland market and reduced overhead costs, such as marketing, paying lead generators and the purchasing of stock. The installer earned roughly 20%-25% of the overall cost per system.

For YEF, the region posed a number of challenges that were known and unknown prior to the launch of the Program. YEF, prior to our Solar Programs, makes known to participating Councils that their engagement and participation with the Program strongly correlates to the success of the Program overall. YEF's previous experience has shown the greater level of promotion and ownership of the Program made by council translates to strong registration and installation outcomes. With three

participating Councils, the ownership over the Program by Council was moderate, most likely due to this shared model. YEF strongly recommends in the future that this form of Program is directed by each Council individually and positively promoted internally and to external stakeholders to maximise the benefits of the Program.

In the past, YEF has coordinated a local installer information session, which was again facilitated for the Gippy Bulk Buy. To improve this process in the future, YEF would take the further steps and organise another information session to quell any concerns local installers may have with the Program. Although YEF understands the importance of local jobs in an economically depressed region of Victoria, YEF can provide a more comprehensive cost saving estimates to local installers when participating in the Program as evidenced by the local installers favourable view of the Program.

Now that the Program has reached its conclusion, the community donation available stands at a 3 kW Solar PV system. Council Officers are encouraged to promote the community donation to the community through their website and other media means, with the Yarra Energy Foundation available to review community groups' needs and suitability for this donation.

The Program has resulted in 326.07 kW of installed Solar PV across the Gippsland region. The calculation for avoided CO_2 ton equivalent is:

kW Hours p/Year for Total Systems = (Total Solar PV kW * Avg. Hours p/Sunlight Hours) * 365

Avoided Ton CO_2-e/kWh Over 30 Years = (kW Hours p/Year for Total Systems * 1.07 {National Greenhouse Accounts Factors: Emissions Factor} *30 Years) / 1000

Using an industry average of 4 hours per sunlight hour, this equates to 509.387 CO_2 ton equivalent avoided per annum or 15,281.596 avoided CO_2 ton equivalent avoided over 30 years.