

Frequently Asked Questions

What is PVz?

PVz is a spreadsheet based tool that analyses half hourly interval data downloaded from electronic billing meters and third party power analysers such as HT Italia, Fluke, Yokogawa, Elog and many others. Statistically generated PV curves can then be overlaid to assist in PV system sizing with respect to on-site power consumption. It presents this data in a summary table and a bar graph.

How does it work?

Run the tool, load the interval data, choose the date range, choose a PV size and press 'Calculate'

How can I use PVz?

PVz can be used for pre-sales analysis for sites in which you have access to half hourly interval data. You can use the graphs to show your client your reasoning behind selecting a certain PV system size in terms of PV generated, import and exported energy. This method is more accurate than analysing electricity bills which only provides the energy consumed for the billing period.

PVz can also aid in the network connection process for commercial PV systems particularly for networks that have stringent processes.

What value does it bring?

We hope PVz adds to your overall sales pitch and strategy by providing a very quick and easy method of identifying PV system sizes specific for your customer. The graphs can be easily understood by your customer to assist them in making investment decisions. The graphs can also be added to proposals and other marketing collateral.

What file types does it support?

PVz accepts all types of half hourly interval data downloaded from electronic billing meters. This data is usually supplied in CSV or XLS format.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	AMI	Day	Interval	Period	EndTime	Meters	Kwh	Generated Kwh	Net Kwh	Kvarh	Generated Kvarh	Net Kvarh	KVA	KW	Quality Status	DayStatus	Val	Validation	Span	DayType	TimeSlice	Peak	OffPeak	Shoulder	Other	Product
2		7/10/2012	30	1	7/10/2012 0:30	2	16.68	0	16.68	8.72	0.04	8.68	37.607	33.36	A	A	0		NWK	OP		0	16.68	0	0	NSW Default 3 Part
3		7/10/2012	30	2	7/10/2012 1:00	2	14.32	0	14.32	7.6	0.08	7.52	33.249	28.64	A	A	0		NWK	OP		0	14.32	0	0	NSW Default 3 Part
4		7/10/2012	30	3	7/10/2012 1:30	2	12.04	0	12.04	6.68	0	6.68	27.538	24.08	A	A	0		NWK	OP		0	12.04	0	0	NSW Default 3 Part
5		7/10/2012	30	4	7/10/2012 2:00	2	11.8	0	11.8	6.32	0	6.32	26.772	23.6	A	A	0		NWK	OP		0	11.8	0	0	NSW Default 3 Part
6		7/10/2012	30	5	7/10/2012 2:30	2	12.32	0	12.32	7.16	0	7.16	28.499	24.64	A	A	0		NWK	OP		0	12.32	0	0	NSW Default 3 Part
7		7/10/2012	30	6	7/10/2012 3:00	2	22.08	0	22.08	8.24	0	8.24	47.135	44.16	A	A	0		NWK	OP		0	22.08	0	0	NSW Default 3 Part
8		7/10/2012	30	7	7/10/2012 3:30	2	27.2	0	27.2	9.16	0	9.16	57.402	54.8	A	A	0		NWK	OP		0	27.2	0	0	NSW Default 3 Part
9		7/10/2012	30	8	7/10/2012 4:00	2	27.28	0	27.28	9.56	0	9.56	57.813	54.96	A	A	0		NWK	OP		0	27.28	0	0	NSW Default 3 Part
10		7/10/2012	30	9	7/10/2012 4:30	2	24.6	0	24.6	8.84	0	8.84	52.328	49.2	A	A	0		NWK	OP		0	24.6	0	0	NSW Default 3 Part
11		7/10/2012	30	10	7/10/2012 5:00	2	18.68	0	18.68	7.68	0	7.68	40.394	37.36	A	A	0		NWK	OP		0	18.68	0	0	NSW Default 3 Part

Figure 1 - Ausgrid NMI File

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	Install	Meter	Register	Stream															
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9		1/01/2012	2/01/2012	3/01/2012	4/01/2012	5/01/2012	6/01/2012	7/01/2012	8/01/2012	9/01/2012	10/01/2012	11/01/2012	12/01/2012	13/01/2012	14/01/2012	15/01/2012	16/01/2012	17/01/2012	18/01/2012
10	0:30	78.15	78.3	74.79	73.08	77.85	79.77	78.66	74.37	75.72	77.73	77.19	75.93	77.49	79.02	78.12	82.35	86.7	79.44
11	1:00	78.75	75.51	75.09	75.72	79.02	81.81	78.18	73.26	72.75	72.81	74.94	77.28	77.7	78.06	79.2	82.38	83.76	70.5
12	1:30	83.58	78.63	76.26	75.48	79.05	80.85	79.08	74.49	74.7	76.65	76.2	74.07	75.87	76.06	76.17	78.24	82.89	69.75
13	2:00	78.87	79.8	77.49	76.68	79.11	82.38	78.69	73.44	74.82	75.36	74.07	74.7	77.91	76.26	74.88	82.32	85.53	71.28
14	2:30	83.61	79.53	75.24	76.2	80.07	83.16	77.64	71.28	74.55	76.05	75.72	76.62	77.07	79.71	75.81	81.96	86.7	71.34
15	3:00	82.65	77.79	73.65	72.51	75.42	79.74	76.47	71.64	73.62	75.15	75.12	75.09	76.5	77.58	75.57	80.37	84.42	70.26
16	3:30	79.41	76.62	73.8	74.01	77.22	80.16	77.31	70.17	72.57	73.47	75.33	75.33	76.66	77.37	75.87	79.74	84.48	69.06

Figure 2 Synergy NMI File

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1	100	NEM12	2.01E+11	WPNTKS	WPNTKS																							
2	200	8E+09	11Q111	1	11		2.14E+08	KWH	30																			
3	300	20110902	5.284	5.288	6.104	5.628	4.764	4.532	7.004	5.092	5.192	5.052	5.16	5.12	5.192	6.464	6.672	7	6.688	7.688	20.784	6.488	5.736	5.924	8.452	8.724	7.652	7.08
4	300	20110906	5.088	5.88	5.716	5.172	4.82	4.984	5.904	6.152	4.892	4.744	5.528	6.092	25.992	31.98	13.748	5.06	6.788	6.332	5.744	6.508	8.152	7.128	7.132	9.248	9.692	8.112
5	300	20110907	3.672	4.6	4.76	3.968	4.056	4.14	4.056	4.3	4.704	4.928	4.984	4.5	34.352	46.9	7.508	4.84	5.84	4.496	8.524	8.544	7.524	6.176	7.572	7.112	8.888	8.76
6	300	20110908	6.008	5.408	5.884	5.736	5.448	5.032	5.848	5.304	5.176	5.116	6.192	11.776	5.488	5.428	5.712	6.2	4.976	5.424	5.48	10.244	8.024	8.136	9.572	11.372	11.4	11.612
7	300	20110909	5.416	5.624	5.748	5.948	5.44	5.268	5.528	6.624	5.476	5.232	6.184	12.52	48.82	11.992	10.88	10.676	10.012	10.356	12	13.416	8.932	7.992	6.312	7.312	18.056	16.48
8	300	20110910	5.564	5.304	5.792	5.864	4.696	4.42	5.288	4.948	5.8	5.736	5.512	5.776	5.548	16.788	4.448	4.72	4.16	4.628	5.856	7.06	6.212	6.276	7.264	10.6	8.676	8.232
9	300	20110911	5.14	4.36	5.146	5.124	5.14	4.972	5.748	4.144	4.96	4.616	4.644	5.748	4.772	16.148	4.44	4.768	4.544	5.712	4.66	5.116	7.72	6.908	6.908	18.448	8.556	5.712

Figure 3 - Western Power NMI File

Where can I get this data?

Electronic meter data can be supplied to you by your customer's electricity retailer. Have your customer sign a consent form (we can supply you with a template) and send to your retailer. You may be supplied with up to two years' worth of data.

Is the meter data available for all electronic billing meters?

Not all electronic billing meters are configured for interval metering. Some meters are still manually read therefore you won't be able to obtain the interval data.

Is the meter data available for all types of customers – residential and/or commercial?

Interval data is usually only available for commercial customers. If a residential customer has an electronic meter which is remotely read then there is likelihood of interval data available.

What can I do if there is no interval data available from the retailer?

The alternative is to log the point of common coupling with a data logger from manufacturers such as HT Italia, Fluke, Yokogawa, Elog. These data loggers can log other parameters such as reactive power, power factor, THD, current, voltage etc.

Are there any obvious disadvantages to using a third party data logger?

The only disadvantage is the period of logging. It would be impractical to log the site for a year when you could potentially log other sites. 5 to 7 days logging should be sufficient to give you an idea of your customer's consumption profile.

Is PVz an online monitoring system?

PVz is not a real-time online monitoring system. There are however some great products in the market place such as Solar Analytics and Sunny Portal and others. However PVz could potentially read the interval data that is captured by these online monitoring systems.

Where is the climate data derived from?

Our climate data is sourced from the Bureau of Meteorology (BOM) and other satellite derived sources. We combine the datasets to produce what we believe are accurate climate profiles. We have provided energy modelling for a number of local and international large scale PV developers therefore you will be receiving high quality datasets.

Where are the PV generation curves derived from?

Our PV generation curves are created using PVSyst! energy modelling software using our statistically generated climate data.

What are the limitations?

PVz is designed to be simple therefore there are a number of limitations. These limitations will provide scope for us to continually add functionality such that it becomes a reliable and flexible tool. Some limitations:-

- Selection of location and PV system relevant for a site is not possible – just advise us the location and we will provide you with PVz with the relevant climate and PV generation that can be scaled for that site e.g. If you are based in Sydney, we will provide you with PVz climate data for Sydney and a typical output based on that data;
- Adjusting PV output for tilt and orientation is not possible at the moment – as above we can quickly generate generation curves for the desired tilts and orientation;
- Different versions of PVz required for different file formats – we will supply you with the correct PVz version.

Our aim is to overcome these current limitations based on your feedback, a lot of the functionality that is required may be too exhausting for the tool to handle in its current form and we will look to make PVz web based. Tariffs vary from state to state therefore we envisage providing you with a version of PVz that is unique to your business.

Can you provide a free trial of the software?

Yes of course! Email your data file to us at k.silva@ener-sky.com and advise us of the location and we will send you a preloaded version of PVz to try out. We welcome all types of feedback.

Example of how to use PVz

XYZ solar loads the data file, selects a date range and chooses a 50 kW PV system as a starting point. Seeing that a 50 kW is far too big for this load with 45.1% of PV energy exported XYZ decides to choose a 20 kW PV system which looks to be a good fit for his client with only 6.7% of PV energy exported.

