



SOLAR CLASSIC

USER MANUAL (MICRO-INVERTER)

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Rev.	Description	Date	Issued by
1.0	Released for approval	April 2015	NM
1.1	Approved	June 2015	NS
1.2	Released for approval	July 2016	KWF
1.2	Approved	July 2016	PA

1.0 CONTACT INFORMATION

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2.0 IMPORTANT SAFETY INFORMATION



Solar power systems are safe when operating correctly, however, there are potentially dangerous hazards associated with some system components.

Please read the following warnings before operating the system.

2.1 Warnings

DC Electrical	The solar array can contain potentially lethal voltages and should not be altered by anyone other than a registered electrician. At all times during daylight hours, the solar panels and all wiring between the panels and the DC disconnect, cannot be de-energised. <u>It is important to note that the solar panel plug and socket connectors should not be disconnected under load (when light is shining on the panels).</u>
Electrical Wiring	This installation has been installed in accordance with AS/NZS wiring standards by a registered electrician. Any unauthorised altering of the wiring presents the risk of high voltages being exposed, and the risk of death or serious injury being presented to users of the property where the system is installed.
Heights	The solar panels on the roof of your property are situated at a height where serious injury could occur if a fall happens. If you wish to access the system for maintenance purposes, please use appropriate access arrangements, e.g ladders with the necessary reach and fall arrest systems. Roofing material may also be slippery after rain, so please take care.
Glass	The solar panels are fragile to handling and high impact. Please do not stand on the panels, for any reason. If any damage occurs, please contact solarcity at the earliest opportunity.

3.0 ACTIONS IN CASE OF SYSTEM FAILURE

In an emergency, shut down the system as outlined in Section 4.0 if it is safe to do so. For other issues, please refer to Section 8.0 on 'System Issues'.

4.0 START-UP AND SHUT-DOWN PROCEDURES

Under normal circumstances, the system should not need any intervention. In an emergency, or should your electrician need to work on wiring in the house, the system may need to be shut-down. The following procedures should be followed.

4.1 System Shut-Down Procedure

1. Turn OFF the AC SOLAR SUPPLY MAIN SWITCH which is labelled and located in the switchboard.



Do not open plug and socket connectors or PV string isolators under load.

4.2 System Start-Up Procedure

1. Turn ON the AC SOLAR SUPPLY MAIN SWITCH which is labelled and located in the switchboard.



The inverters will take at least 60 seconds to reconnect to the grid following a shut-down or grid outage.

5.0 INTRODUCTION TO THE SOLAR SYSTEM

5.1 The environmental benefits

Electricity from the grid (unless sourced from a certified renewable source) will release carbon dioxide and other pollutants into the atmosphere.

By installing a solar system, you can reduce the amount of grid-sourced energy used in your home and therefore your CO2 emissions, by collecting the sun's energy, which is a 100% renewable energy resource.

By producing electricity where the electricity demand is, you are also reducing the load on the national grid contributing to lower operating costs of the electricity infrastructure for everybody. Six per cent of all electricity in New Zealand is lost in the distribution lines as it is being transmitted from generator to consumer, whereas the electricity produced on your roof has negligible losses.

5.2 Why solarcity?

solarcity is in business for a purpose: to help create a cleaner world and a sustainable energy future for New Zealand. Our aim is to revolutionise the energy market and make a big difference in the fight against climate change.

solarcity is the only solar company in New Zealand to have achieved carboNZero accreditation. Being carboNZero certified means we measure all greenhouse gases we generate, and have written programmes in place to measure and minimise all greenhouse gas emissions. Any remaining emissions that can't be avoided are offset by purchasing verified carbon credits making solarcity and our installations carbon neutral. solarcity's carboNZero accreditation is independently audited annually by Landcare Research.

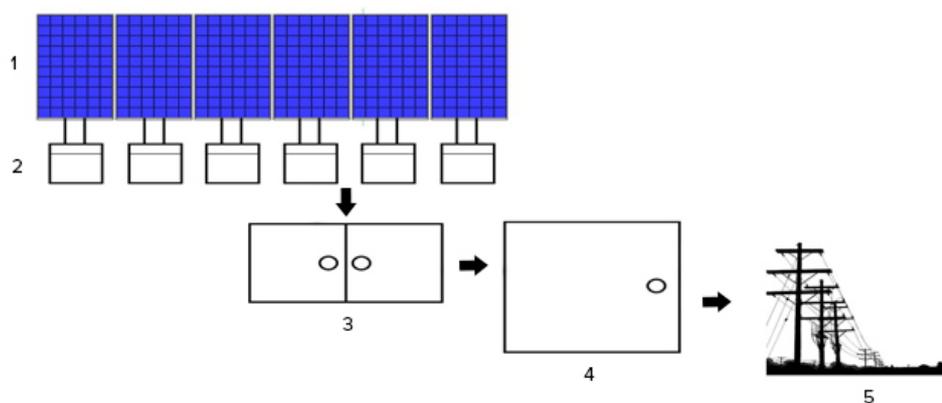
Thirty years ago, working with few resources in an apple shed in the heartland of New Zealand, our team designed and built the world's first solar heat pipe panel. Today, our world-class Design and Innovation Team give our customers a wide choice of the most cost-effective, innovative and well-engineered solar solutions.

5.3 How it works

The grid-connected solar power system generates electricity directly from the sun's energy for use in your home. The electricity which is generated is used to power appliances, lights, the hot water cylinder and anything else that is drawing power at the time. When the solar system is not generating enough to supply all of the requirements of your home, at any particular moment in time, additional electricity is drawn from the grid, supplementing the solar electricity. When the solar system is generating surplus electricity, the excess electricity is exported to the grid. This energy is metered and is purchased by your electricity retailer at an agreed tariff.

The grid-connected solar power system includes:

- Solar panels
- Micro-inverters
- Roof mounting hardware
- Envoy monitoring unit



Legend:

1. Solar panels and mounting hardware
2. Micro-inverters
3. Distribution board
4. Utility meter
5. Utility grid

Figure 1: How a grid-tied micro-inverter solar system works

5.3.1 Solar panels

Solar panels are made up of interconnected photovoltaic cells, which convert sunlight to direct current electricity. The solar panels are linked together to make up an array. Optimal performance is obtained with direct sunlight; however, the panels still generate electricity on cloudy days. Full or partial shading of the solar panels by trees, other structures, or a build-up directly on the panels will lead to a reduction in performance and should be avoided. If no light is shining on the panel (for example at night, or under shaded conditions) then no power will be produced.

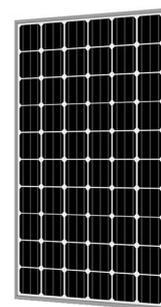


Figure 2: Solar panel

5.3.2 Micro-inverters

The micro-inverter converts the direct current (DC) electricity generated by the solar panels to 230V alternating current (AC) electricity for use in your building.

Australian and New Zealand standards require the inverter to automatically shut-down in the event of a grid power outage, or when the grid operates outside of normal parameters, in order to protect utility workers from harm when they believe the grid to be de-energised. Once the grid returns to normal operating conditions, the inverters will automatically start-up and reconnect to the grid.



Figure 3: Enphase micro-inverter

Special components are required to enable the solar system to provide backup power in the event of a grid failure. solarcity's standard grid-tied systems do not include backup.

5.3.3 Monitoring

The Envoy, shown in Figure 4, or the Envoy S Metered, shown in Figure 5, communicate with the micro-inverters and transmit the performance data to the Enphase server. The monitoring portal, MyEnlighten, connects system users to their solar experience through an engaging interface that displays energy production, system health and environmental benefits. The Envoy S Metered has the additional benefit of displaying household consumption alongside energy production. Refer to Section 5.5 for more information on system monitoring.



Figure 4: Enphase Envoy



Figure 5: Enphase Envoy S Metered

5.3.4 Framing

The solar panels are fixed to your roof using top of the range framing components manufactured by Clenergy. Clenergy is the market leader in innovative, high quality renewable energy mounting systems. The Clenergy mounting system uses clear anodized aluminium that is designed to withstand harsh wind and marine conditions. The mounting system is compliant with AS/NZ 1170.2:2012 and the New Zealand Building Code. Refer to your Framing Data Sheet in APPENDIX C for more information.

5.4 Design statement

Your solar system has been designed and installed in accordance with AS/NZS 5033 (Installation and safety requirements for photovoltaic arrays) clause 2.2 which covers Mechanical Design.

5.5 System monitoring using MyEnlighten

5.5.1 Introduction

MyEnlighten provides a simple representation of a system's energy production including overall system health, historical performance and energy equivalence. It is accessible on any web-enabled device. If you wish to access it on an iPhone, iPad or Android device, there is a MyEnlighten app available via the App Store or Play Store. Please note: You can upgrade to EnlightenManager view, which provides module level monitoring, for an additional cost. Please contact solarcity on 0800 11 66 55 if you are interested in this.

5.5.2 Registration

Once the solar system has been installed, solarcity will set the system up on the Enlighten portal. When the setup is complete, you will automatically receive an email from Enphase Energy inviting you to register and view your system. NOTE: If you have not received an email from Enphase Energy, please check your spam folder. The email is sent from donotreply@enphaseenergy.com.

5.5.3 Getting started

Before you get started, it may be helpful to watch the 'MyEnlighten Introduction' video available via YouTube. The link to this video is: https://www.youtube.com/watch?v=X_xO6mgYU (please note that the user interface has been updated since the video was made).

The link to the video for the Envoy S Metered unit is: <https://www.youtube.com/watch?v=BILCTnfWNo>.

More information can also be found on the Enphase website using the following link:

<http://www.enphase.com/enlighten>.

Once you have logged into MyEnlighten, you can get a quick overview of the system's performance for today at the top of the screen. The green tick tells you that everything is operating as expected.



Figure 6: Green tick showing normal operation

You will be able to see the total energy generated on that day in kilowatt-hours, the peak power in kilowatts and the latest power in kilowatts.

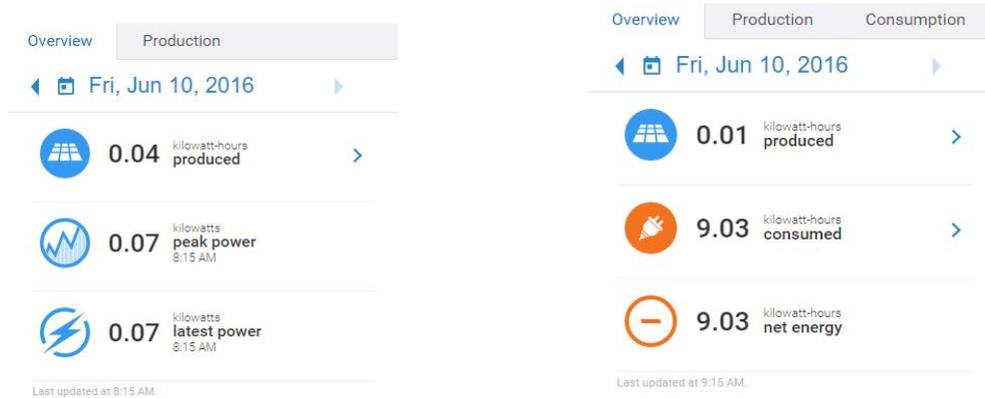


Figure 7: Today's performance on MyEnlighten for the Envoy (on left) and the Envoy S Metered (right)

In the pane to the right of the overview you will see a bird's-eye view of the array and, on the top right, you will see the current weather conditions.



Figure 8: Bird's-eye view of the arrays and display of current weather conditions

Below this you will see a graph showing production for 15-minute intervals for the selected day. You can change the selected day by clicking the arrow to the right, or left, of the date, or by clicking the date and selecting your desired date from the calendar. Historical dates will show the weather for that day but there will be no current power figure.

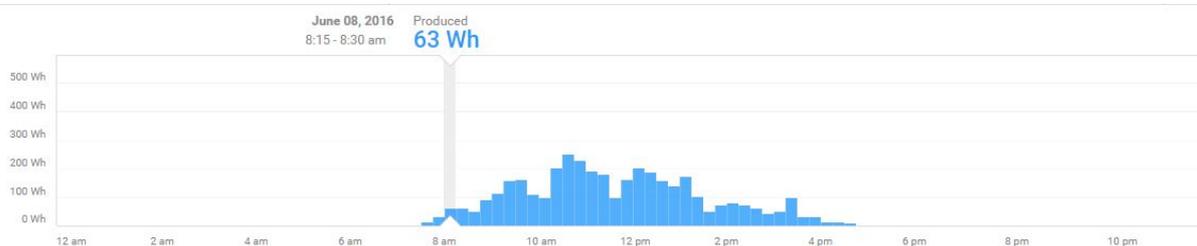


Figure 9: Graph of production throughout the day

With an Envoy S Metered you can see the household consumption as well as the production.

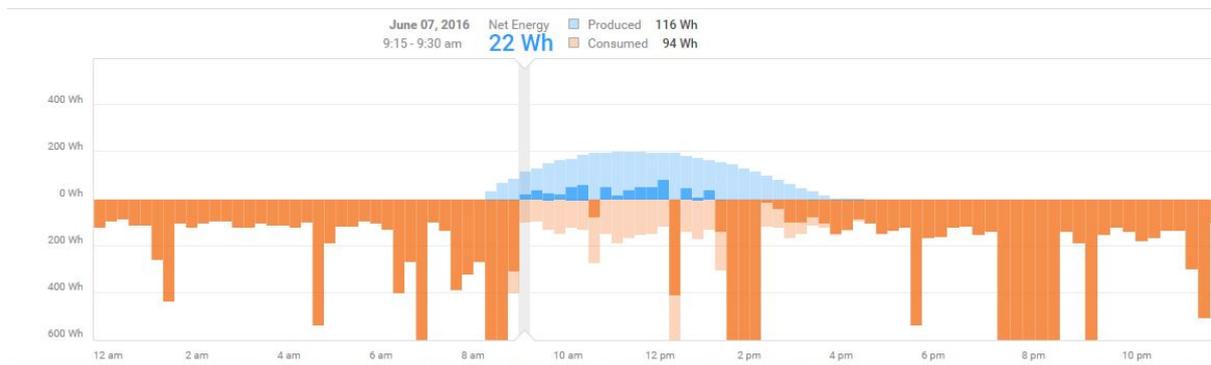


Figure 10: Graph of production and consumption throughout the day

The light blue on the graph represents energy produced by the panels which was consumed by the household. The dark blue shows solar energy that wasn't consumed by the household and was exported to the grid. The dark orange shows energy consumed by the household that was imported from the grid. The light orange shows solar energy consumed by the household.

If you click the 'System details' section below the graph, you will see the number of micro-inverters installed, some information about the array(s) and the site address. You can also personalise this section by adding a description and photos.

5.5.4 Sharing on social networking sites

Using MyEnlighten, you can easily share the system's performance on Facebook, Twitter and Google+. To do this, click on the relevant icon at the top left corner of the screen.

5.5.5 Evaluating system performance

The 'Production' section of MyEnlighten allows you to evaluate historical system performance and consumption (in the case of the Envoy S Metered) data. This data can be viewed in both grid and graph form and in months, days and hours. The time period can be changed by clicking on the relevant description, just below the production heading.

When in grid form, the colour coding shows you how well the system performed in the period. Light blue means higher production and dark blue indicates lower production. The time period can be changed by clicking on 'Months', 'Days' or 'Hours'. If you hover over a square, you will be able to see the actual kilowatt-hours of electricity produced in the time period at the bottom of the screen. There is also a graph showing the greater time period, with the specific square (currently being hovered over) highlighted.

In the case of the Envoy S Metered, instead of a grid there is a graph showing production and consumption, with the highlighted information that corresponds to the selected tab.

5.5.6 Energy reports

You can run a report to display solar production for a daily, monthly or specified time period. This can be done in the 'Reports' section towards the bottom of the screen. You can then download, print, or email the report.

5.5.7 Help

For more information, click on the 'Help' icon which is located at the top right corner of the screen. If you have a question, that is not answered here, you can contact solarcity on 0800 11 66 55, or <mailto:systemissue@solarcity.co.nz> or Enphase on 09 8870421, or mailto:support_au@enphaseenergy.com.

6.0 GETTING THE MOST OUT OF YOUR SOLAR SYSTEM

There are many ways to reduce the energy demand of your home and to maximise your use of solar power. Below are some basic suggestions, plus you should check out our website at <http://www.solarcity.co.nz> for more advice, user feedback, and frequently asked questions.

Here are a few tips to getting started:

- To reduce your energy demand, install energy efficient light bulbs and purchase energy efficient appliances. Look out for the Energy Rating label which has to be supplied for all new whiteware, heat pumps, televisions and computer monitors that are sold in New Zealand. Many of the top performing models will have four or five stars. Selecting energy efficient appliances can have a significant impact on how much electricity they consume and their lifetime running costs.
- The solar system will be generating the most electricity between 9am and 3pm so change your behaviour and turn appliances on during the day. Some appliances have timers which will allow you to set the time that they come on. Stagger the use of your high energy consuming appliances, like a washing machine or dishwasher, during these hours. This will help reduce the amount of power that you need to purchase from the grid.
- If possible, you should programme, or design, your hot water system to run during the day. Normal household cycles typically consume hot water during the morning and then heat it up during the day. If you have a timer on your hot water cylinder, it should be tuned to run from 12-3, when the most solar power will be produced.
- Shade on the solar system will reduce the amount of electricity that it produces, potentially significantly. To keep the system performing at its best, maintain any trees surrounding the house which may grow to shade the solar system. Any new additions to your roof, such as an aerial or antennae, should be installed well clear of the array.
- Ensure that the solar panels are kept clean. Build up of dirt on the panels causes shading and reduces the electricity generation. Most systems will self-clean with the rain, if they are installed at a pitch of 10 degrees, or steeper. However, it is good practice to check the panels every quarter. If you live in an area that has significant pollen, the pollen can stick to the panel surface and may not easily wash away with rain. See the maintenance section below for more information on cleaning.

7.0 MAINTENANCE OF THE SYSTEM

Your new solar system will, under normal circumstances, operate without any intervention. For ongoing optimal performance, a few simple actions can be taken to ensure that the system continues to perform safely, efficiently and has a long operating life.

You can easily perform the visual inspections outlined below, or we can recommend a suitably qualified and approved contractor to perform these services, at your cost, if required.

Regular rain is usually sufficient to keep the panels clean, although if more than a fine layer of dust is present, cleaning is advised to maintain optimum performance. Only clean panels when cool; in the morning, or in the evening. Use a soft brush and water to avoid scratching the panels.



The solar panels on the roof of your property are situated at a height where serious injury could occur if a fall happens. If you wish to access the system for maintenance purposes, please use appropriate access arrangements, e.g. ladders with the necessary reach and fall arrest systems.



The panels are fragile, do not stand on them.



The system **MUST** be shut down to perform the cleaning steps below.



Do not clean solar panels with cool water during hot, sunny days.

7.1 User Maintenance

Maintenance should be carried out by trained and competent persons only. You may feel competent to carry out some work yourself. If doing so, you must follow standard industry practice and appropriate safety guidelines. The solar system must be switched off before any cleaning is carried out.

Sub system or component	Maintenance	Period	Remarks
Site	Verify: a) Cleanliness (accumulation of debris around and/or under array) b) No shading of array	Quarterly	Clean site as required Trim trees, if required
Solar panels	Verify cleanliness (accumulation of dust or fungust, etc on array) a) If the array is less than 10° Check for visual defects, including: a) Fractures b) Browning/Discolouration c) Frame corrosion	Quarterly Quarterly (minimum) 1 year	Clean, if necessary Clean if necessary, subject to climatic conditions Panels with visual defects should be further inspected by a solarcity service agent for performance and safety (this is done at no charge)

7.2 Professional servicing



The following maintenance involves working on live and/or sensitive components, and should only be performed by a solarcity service agent or a registered electrician experienced with solar systems.

Sub system or component	Maintenance action	Period	Remarks
Mounting structures	Verify tightness and integrity of bolts and other fasteneing devices	5 years	Tighten any loose connections
	Inspect for corrosion	5 years	Refer any serious corrosion to a solarcity service agent
Solar panels	Inspect junction boxes for: <ul style="list-style-type: none"> a) Tightness of connection b) Water accumulation/build up c) Integrity of lid seals d) Integrity of cable entrance, glands and/or conduit sealing e) Integrity of clamping devices f) Verify bypass diodes 	3 years	Any defective seals, clamps and bypass diodes should be replaced
Wiring installation	Verify mechanical integrity of conduits	5 years	Any damaged conduit should be replaced
	Verify insulation integrity of cables installed without conduit	5 years	Any damaged cable should be replaced
	Verify: <ul style="list-style-type: none"> a) blocking diodes b) surge arresters for degradation 	3 years	Any defective blocking diodes and surge arresters should be replaced
	Check earthing connections for: <ul style="list-style-type: none"> a) tightness of connection b) corrosion 	3 years	Tighten any loose connections Replace clean any corroded terminals
Electrical characteristics	Measure open circuit voltages	5 years	
	Measure short circuit currents	5 years	

8.0 SYSTEM ISSUES

8.1 How will I know if there is a problem with my system?

If you want to check how the system is performing, please log in to MyEnlighten. See Section 5.4 for more information on MyEnlighten.

The numbers and graphics at the top of the MyEnlighten page give you a snapshot of how the system is performing. If you see a display like the one shown below in Figure 11, with a green tick, your system is operating with normal system production.



Figure 11: Overview of system's current performance

To receive an email notification if the system experiences a production issue, follow the steps below:

- Click the drop-down arrow next to 'Signed in as...' at the top right corner of the screen and choose 'Settings'.
- Next to 'Emails', check 'Notify me about system production issues'.
- Click 'Save Changes'.

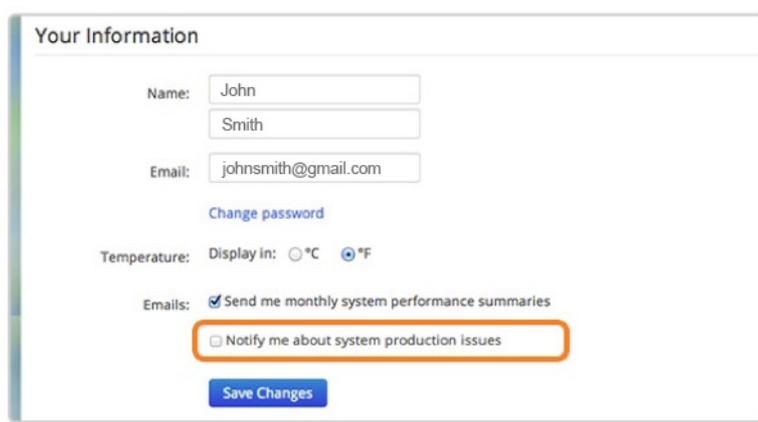


Figure 12: Amending setting to receive email notifications

8.2 Network Issues

If, rather than the green tick, you notice an orange wifi symbol, then your Envoy is having trouble connecting to the internet.



Figure 13: System reporting issue

You can try the following to help to resolve the issue. If they don't work you can contact solarcity on 0800 11 66 55, or <mailto:systemissue@solarcity.co.nz> or Enphase on 09 8870421, or mailto:support_au@enphaseenergy.com.

8.2.1 Envoy

The LCD screen on the Envoy displays whether the Envoy is connected to the internet, or not. If the display shows “- Web”, there is an internet connectivity issue.

Please perform the following tasks to restore the internet connection between the Envoy and Enlighten:



Figure 14: Enphase Envoy

- Check the power connections for the Envoy and the internet router. Verify that both have power. If they do, please switch the devices off and turn them back on in the following order: DSL/cable modem, router, then Envoy.
- If the Envoy is plugged into the router using an ethernet cable, please check that the cable is correctly plugged into both devices. To be sure, you may need to remove and reconnect the cable, making sure the plug locks into place (you should hear a click).
- Use the menu button (on the right hand side of the Envoy) to select “Get new IP address”, then allow about 60 seconds for the new IP address to display.

Once these checks have been carried out, please check the display on the Envoy. If “+Web” displays, then the Envoy has reconnected to the internet. If “-Web” still displays, you can contact solarcity on 0800 11 66 55, or <mailto:systemissue@solarcity.co.nz> or Enphase on 09 8870421, or mailto:support_au@enphaseenergy.com

8.2.2 Envoy S Metered

The Network Communications LED (the uppermost LED with a  symbol beside it) shows whether or not the Envoy is connected to the internet. If the light is solid green then there is an internet connection, if the light is anything other than solid green then please see below.



Figure 15: Enphase Envoy S Metered

LED is OFF:

- If the LED is off there is no network connection. Please check the power connections and verify that your router and the Envoy have power. Apply power again in the following order: Modem, Router, Envoy.
- If the Envoy uses a wifi connection, then check for any metal objects between the Envoy and the router. Also check that the router and internet connection are operational by testing other devices are working correctly. If neither of these seem to be the issue then try to initiate the connection between the devices again as follows:
 1. Find the WPS button on your router (usually shown as a wifi symbol with a lock ) and press and hold for 2 seconds or more. It usually begins to flash.
 2. Next move to your Envoy and press and hold the ‘AP Mode’ button on the Envoy (situated immediately below the second LED – the one with a picture of an arrow pointing into a rectangle) for at least 5 seconds. The Network Communications LED (the uppermost LED) should begin flashing green.
 3. Wait for three minutes and ensure that the LED becomes solid green.
 - If the Envoy is plugged into the router using an ethernet cable, please check that the cable is correctly plugged into both the router and the Envoy. To be sure, you may need to remove and reconnect the cable, making sure the plug locks into place (you should hear a click).
 - If the Envoy is plugged into the router using an ethernet bridge, then unplug at both power points and then plug them in again. Please ensure that both bridges are plugged directly in to the wall plug rather than in to any multi-boards. All of the LEDs on the bridges should be either on, or blinking.

LED is solid amber:

- If the LED is solid amber then the Envoy has a connection to the local network but not to the internet. Please complete all the steps above for the 'LED is OFF', especially checking that other devices connected to the same network have access to the internet.
- Also, if you have changed the password recently to your Router and your Envoy is connected by wifi you may need to repeat the wifi connection initiation steps above.

LED is flashing green:

- If the LED is flashing green then the Envoy is attempting a connection. Check back in a few minutes and the LED should now be solid green again.

If, after trying all of the above, you cannot get the Envoy to reconnect to the internet you can contact solarcity on 0800 11 66 55, or <mailto:systemissue@solarcity.co.nz> or Enphase on 09 8870421, or mailto:support_au@enphaseenergy.com

8.3 Communication Issues

If, rather than the green tick, you notice an orange plug symbol, then your Envoy is having trouble communicating with some, or all, of the inverters.



Figure 16: Micro-inverters not reporting

You can try the following steps to resolve the issue, or you can contact solarcity on 0800 11 66 55, or <mailto:systemissue@solarcity.co.nz> or Enphase on 09 8870421, or mailto:support_au@enphaseenergy.com

8.3.1 Envoy

The LCD screen shows the number of micro-inverters that are communicating with the Envoy. The number in the bottom right hand corner of the screen should match the number of panels you have on your roof. If this number is less than the number of panels you have on the roof then some, or all, of the micro-inverters are not communicating with the Envoy. Please see below for a few things that you can check.

Your Envoy should be plugged in as close as possible to your switchboard. If you have moved the Envoy to a different location, to where it was originally installed, then please move it back to its original location. If you have plugged the

Envoy in to a multi-plug or power-board then there may be too much interference on the line for the micro-inverters to communicate with the Envoy. Please make sure that the Envoy is plugged directly in to a wall socket. You will need to wait at least 15 minutes for any changes to be reflected on the MyEnlighten page.

If none of these things have fixed the problem, please check that the solar supply main switch (located at the switchboard) is on. In the event that you cannot locate the issue after trying all of the above, you can contact solarcity on 0800 11 66 55, or <mailto:systemissue@solarcity.co.nz> or Enphase on 09 8870421, or mailto:support_au@enphaseenergy.com.

8.3.2 Envoy S Metered

The fourth LED (with a lightning bolt symbol) shows the status of communications between the micro-inverters and the Envoy. If the LED is solid green then all of the micro-inverters are communicating with the Envoy. If the LED is solid amber then at least one of the micro-inverters is not communicating with the Envoy. If the LED is off, then the micro-inverters are not communicating with the Envoy due to low light conditions (e.g. at night). If the LED is solid amber then please ensure that the solar supply main switch is switched on, you can contact solarcity on 0800 11 66 55, or <mailto:systemissue@solarcity.co.nz> or Enphase on 09 8870421, or mailto:support_au@enphaseenergy.com

9.0 WARRANTY

9.1 Coverage

- 9.1.1 solarcity New Zealand Limited (solarcity) expressly warrants that, at the time of commissioning, the equipment it supplies will be in good working condition and will have been supplied as specified in our quote and accompanying documents, or as varied during the installation and agreed in writing with the Customer.
- 9.1.2 Subject to specific Warranty exclusions and conditions set out in this document, solarcity warrants that the components of the system shall be free of manufacturing defects from the original purchase date for the periods specified in the manufacturer’s warranty documentation extant at the time of installation. These periods are outlined in Table 1: Warranty Coverage. In the case of conflict or ambiguity between Table 1 and the manufacturer’s warranty documentation, the manufacturer’s documentation will govern. Refer to manufacturer’s warranty documents for specific details of warranties.
- 9.1.3 solarcity agrees to provide free labour services required for two years from the date of installation for any component manufactured by solarcity. Warranty for labour on the remaining system components vary based on manufacturer’s warranty policy as outlined below.
- 9.1.4 solarcity guarantees workmanship plus labour for two years from the date of installation. After two years, manufacturer’s warranty will apply. Note this may not cover costs for logistics and replacement installation of affected products.

Table 1: Warranty coverage

Refer to manufacturer’s warranty documents for specific details of warranties. In the case of conflict or ambiguity between Table 1 and the manufacturer’s warranty documentation, the manufacturer’s documentation will govern.

Component	Warranty Coverage
Enphase micro-inverter	10-year manufacturer’s, materials and workmanship warranty
Enphase Envoy / Envoy S Metered	2-year manufacturer’s, materials and workmanship warranty
Jinko / JA solar panel	10-year manufacturer’s, materials and workmanship warranty
Jinko / JA solar panel	25-year manufacturer’s power output warranty
Mounting frames	10-year manufacturer’s, materials and workmanship warranty
Electrical components	2-year manufacturer’s, materials and workmanship warranty

9.2 Warranty conditions

- 9.2.1 Upon installation of the Products, a copy of the Customer Installation Record Form containing the Customer’s contact details, product installation date, product serial numbers, licensed Installer contact details, summary of system format and contact phone number(s) of the merchant and/or group provided by the Installer must be lodged with solarcity.
- 9.2.2 The solar photovoltaic system must be installed in accordance with the manufacturer’s installation instructions, the local/national authority regulations and all relevant statutory requirements.
- 9.2.3 Installation may only be completed by registered Installers and electricians that are licensed in the area in which the installation is completed.
- 9.2.4 This Warranty applies only to those components provided as part of the solarcity solar photovoltaic system and not any electrical or general parts provided by the Installer or other components already existing in the installation.

- 9.2.5 The coverage period is valid from the date of installation. Should any part of the complete solar photovoltaic system be replaced during the warranty period, the balance of the original Warranty will continue to remain effective.
- 9.2.6 Prescribed electrical work must be completed by a person certified to undertake such work in accordance with current New Zealand Electrical Regulations.
- 9.2.7 Component manufacturers are at liberty to alter the design or construction for the products notwithstanding that the product may have been sold by description or sample, even though alterations may have been introduced before the date of Contract or the date of delivery, provided that the products are of the same or similar quality and are fit for the purposes for which they are purchased. Such alterations shall not constitute a defect in design or construction under this Warranty.
- 9.2.8 Dated proof of purchase is required prior to commencement of warranty work.
- 9.2.9 The Warranty shall be limited to the replacement or repair, at the option of solarcity of any defective products and of such parts as have been damaged in consequence of the defect. solarcity is not liable to the extent permitted by law for consequential loss including:
- injury to persons;
 - damage to property;
 - economic loss;
 - pain and suffering;
 - any legal or other damages resulting from any manufacturing fault or defect.
- 9.2.10 solarcity shall be under no obligation to return parts replaced to the Customer pursuant to this Warranty
- 9.2.11 All solarcity customers will submit Warranty claims to solarcity in accordance with the Warranty Claim Procedure.

9.3 Warranty exclusions

The following exclusions will cause the Warranty to become void, and any service charge and cost of parts that may be required will not be covered and will be payable by the Customer.

- 9.3.1 Accidental damage, acts of God, failure due to misuse, incorrect installation and/or attempts to repair the system other than by a solarcity approved registered Installer, damage resulting from accidental or intentional loss or out of tolerance fluctuation of electricity supply to the system.
- 9.3.2 Damage resulting from the removal or dislodgement of plant, plugs, sensors or any other parts and/or damage resulting from changes of settings in controllers or other equipment whether accidental or intentional.
- 9.3.3 Failure of the property's roof structure to comply with local codes and standards.
- 9.3.4 Damage to the photovoltaic modules from impact by any object.
- 9.3.5 Damage to the photovoltaic modules, wiring or other components from rodent or other animal activity
- 9.3.6 Where the solar photovoltaic system as a whole, or a system component, has failed directly or indirectly as a result of excessive temperature, corrosive atmosphere, faulty electrical wiring, or out of tolerance variations in electrical energy supply.
- 9.3.7 Any serial details on any of the components are removed or defaced.
- 9.3.8 The product is relocated from its original point of installation unless by solarcity or its approved agents operating under its express instructions so to do.
- 9.3.9 Subject to statutory provisions to the contrary, solarcity shall not be liable for consequential damage or any incidental expenses resulting from any breach of this Warranty.

9.4 Warranty claim procedure

- 9.4.1 For all Warranty Claims regarding solarcity Solar Photovoltaic Systems please call solarcity direct on 0800 11 66 55. Please ensure that you have all information regarding the Warranty Claim available including, Installer details, Customer details, system details and information regarding the faulty component.
- 9.4.2 A solarcity Installer will be allocated to your Warranty Claim.
- 9.4.3 In the case that the Warranty is not valid, the labour and parts will be charged by the agent/merchant/Installer based on the Non-Warranty Schedule of Rates.

If you have any doubts or questions around whether conditions may exist that threaten the cover of this Warranty, please contact solarcity to clarify before the condition arises. These exclusions do not limit any rights you may have under the Consumer Guarantees Act 1993.

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