

OPERATING MANUAL

# Energy Storage System

Please read this manual carefully before operating your set and retain it for future reference.

MODEL  
ED05K000E00



# Safety Information

**IMPORTANT : THIS PRODUCT SHOULD NOT BE USED FOR ANY PURPOSE OTHER THAN THE PURPOSE DESCRIBED IN THIS INSTALLATION MANUAL.**



## WARNING

**Indicates a potentially dangerous situation. Death or serious injury may result if appropriate precautions are not taken.**

- There is high possibility of electric shock or serious burns due to the high voltages in power conditioning circuits.
- High voltages on AC and DC cables. Risk of death or serious injury due to electric shock.
- A potentially hazardous circumstance such as excessive heat or electrolyte mist may occur due to improper operating conditions, damage, misuse and/or abuse.
- This product have potential danger such as death or serious injury by fire, high voltages or explosion if appropriate precautions are not read or fully understood.
- Do not place flammable or potentially explosive objects near the product.
- Do not place any kind of objects on top of the product during operation.
- All work on the PV modules, power conditioning system, and battery system must be carried out by qualified personnel only.
- Electrical installations must be done in accordance with the local and national electrical safety standards.
- Wear rubber gloves and protective clothing (protective glasses and boots) when working on high voltage/ high current systems such as PCS and battery systems.
- There is a risk of electric shock. Do not remove cover. There is no user serviceable parts inside. Refer servicing to qualified and accredited service technician.
- Electrical shock hazard. Do not touch uninsulated wires when the product cover is removed.
- In the event of fault, the system must not be restarted. Product maintenance of repairs must be performed by qualified personnel, or personnel from an authorized support center.



## CAUTION

**Indicates a situation where damage or injury could occur. If it is not avoided, minor injury and/or damage to property may result.**

- This product is intended for residential use only and should not be used for commercial or industrial.
- Before testing electrical parts inside the system, it takes at least 10-minute standby period of time to complete discharging the system.
- The contents included in this box are power conditioning system and its accessories, and the entire weight amounts to over 34 kg. Serious injury may occur due to the heavy weight of the product. Therefore, special care must be taken in handling. Make sure to have at least two persons deliver and remove the package.
- Do not use the damaged, cracked or frayed electrical cables and connectors. Protect the electrical cables from physical or mechanical abuse, such as being twisted, kinked, pinched, closed in a door or walked upon. Periodically examine the electrical cables of your product, and if its appearance indicates damage or deterioration, discontinue use of this product, and have the cables replaced with an exact replacement part by a qualified personnel.

**CAUTION**

**Indicates a situation where damage or injury could occur. If it is not avoided, minor injury and/or damage to property may result.**

- Ensure that you connect the earth ground wire to prevent possible electric shock. Do not try to ground the product by connecting it to telephone wires, lightning rods or gas pipes.
- The product should not be exposed to water (dripping or splashing) and no objects filled with liquids, such as vases, should be placed on the product.
- To prevent fire or electric shock hazard, do not expose this production to rain or moisture.
- Do not block any ventilation openings. Ensure reliable operation of the product and to protect it from over heating. The openings shall never be blocked by placing any object on this product.
- The temperature of metal enclosure may be high during operation.
- In order to avoid radio-interference, all accessories (like a smart meter) intended for connection to the product shall be suitable for use in residential, commercial and light-industry areas. Usually this requirement is fulfilled if the equipment complies with the class B limits of EN55022.
- The product must be disposed of according to local regulations.
- The electrical installation of this unit must only be performed by electricians or technicians, qualified to install PCS.
- Danger of damaging the PCS by overload. Only connect the proper wire to DC terminal block. Refer to the installation wiring diagram for details.
- Connect the DC+ and DC- cables to the correct DC+ and DC- terminals on the product.
- Do not step on the product or the product package. The product may be damaged.
- Do not dispose of batteries in a fire. The batteries may explode.
- Do not open or damage batteries. Released electrolyte is harmful to the skin and eyes. It may be toxic.
- A battery can present a risk of electrical shock and high short-circuit current. The following precautions should be observed when working on batteries.
  - a) Remove watches, ring, or other metal objects.
  - b) Use tools with insulated handles.
  - c) Wear rubber gloves and boots.
  - d) Do not lay tools or metal parts on top of battery.

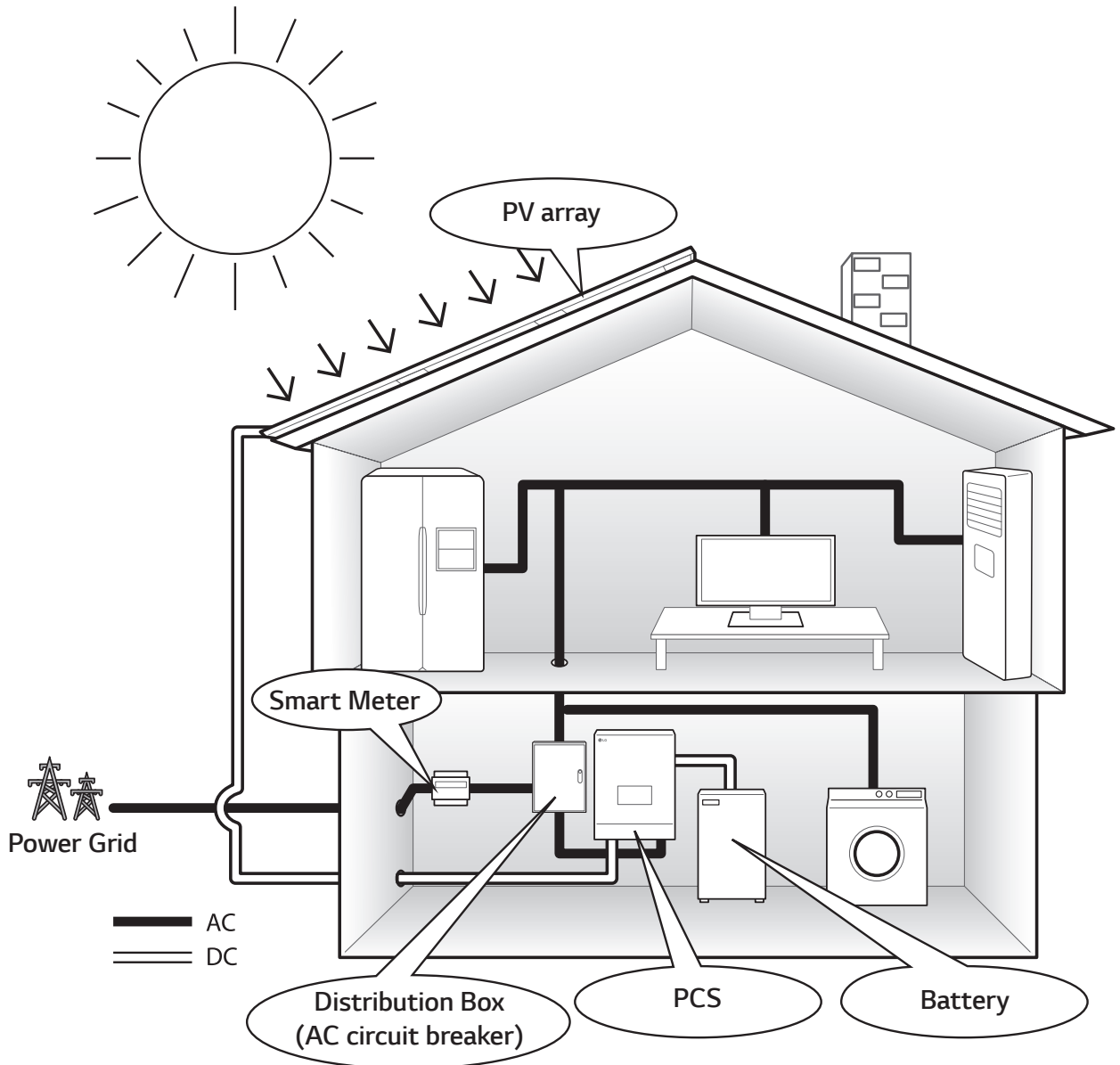
**NOTE**

**Indicates a risk of possible damage to the product.**

- Before making connections, please make sure the PV array open circuit voltage is within 800 V. Otherwise the product could be damaged.
- Never use any solvents, abrasives or corrosive materials to clean this product.
- Do not store on or place against any objects to the product. It may cause serious defects or malfunction.
- Before making a connection, make sure the PV switch on this product is switched off.
- This unit is designed to feed power to the public power grid only. Do not connect this unit to an AC source or generator. Connecting the product to external devices could result in serious damage to your equipment.
- Serving of batteries should be performed or supervised by personnel knowledgeable about batteries and the required precautions.

# Product Features

This product is intended to store direct current (DC) electricity generated from photovoltaic (PV) to the connected Lithium-Ion Battery, and convert direct current (DC) electricity from the connected battery to alternating current (AC) electricity and feed this into the power grid.



The electricity generated from a PV array can be stored to the connected battery or sold to energy supply companies.

- **DC-Coupled ESS**

LG ESS can achieve higher system efficiency due to simpler power conversion process.

- **Three-Phase Connection**

3-phase connection secures phase balancing.

- **Smart Management**

With built-in Smart PMS, it analyses PV generation and load consumption and implements to charge and discharge immediately. Also it monitors main system & battery conditions to maintain its stable condition always.

- **Web-monitoring Service**

Customers and installers can monitor their ESS with various devices such as PC, tablet or smart phones.

- **Easy System Setup**

With 7" touch-screen, installer does not need a PC for system installation. Touch screen UI allows installer to set-up, pre-test and monitor system.

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## Abbreviations on this manual

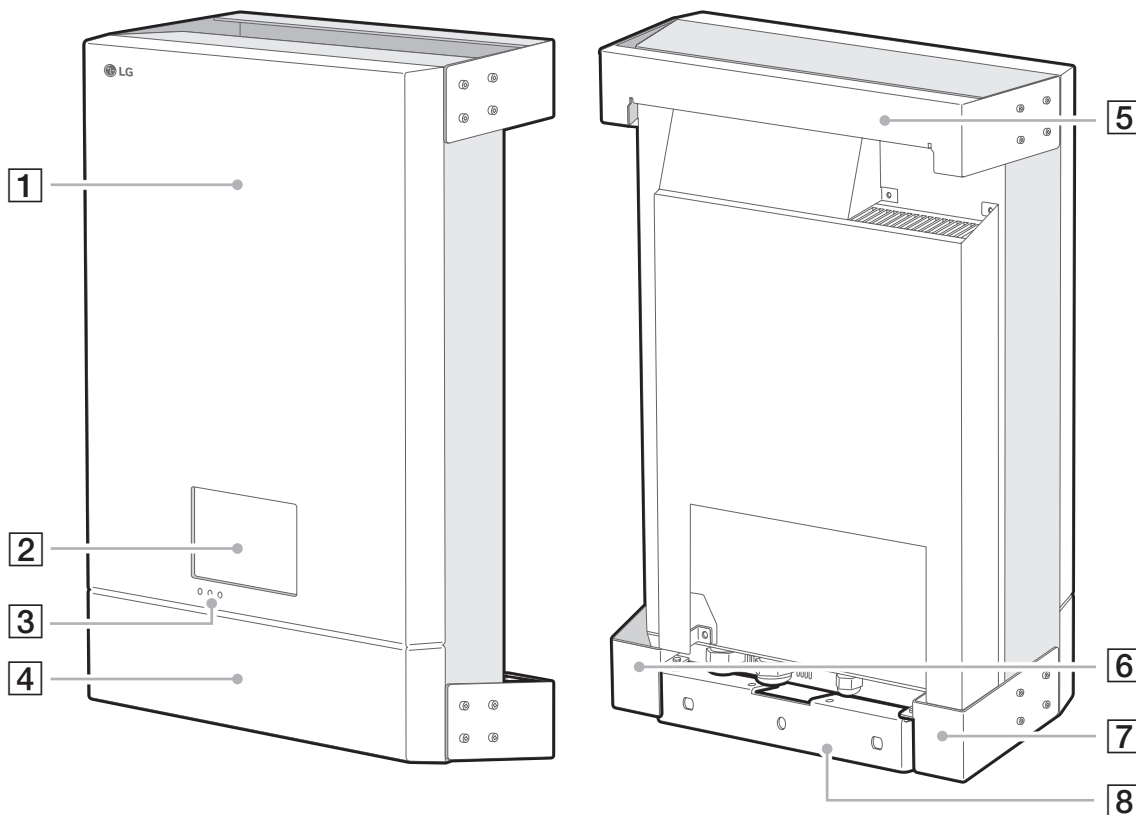
Abbreviation	Designation	Explanation
ESS	Energy Storage System	Inverter system that stores energy into a battery and uses it.
PCS	Power Conditioning System	A device intended to convert DC electricity generated from PV system to AC electricity and feed it to household appliances.
PV	Photovoltaic	Solar panel system that converts solar energy into direct current electricity
SOC	State of charge	Current state of a battery
BMS	Battery Management System	Electronic system that manages a rechargeable battery.
DC	Direct Current	-
AC	Alternating Current	-
DHCP	Dynamic Host Configuration Protocol	Standardized network protocol used on Internet Protocol (IP) networks for automatic distributing network configuration parameters, such as IP addresses for interfaces and services.
LAN	Local Area Network	Network that interconnects computers within a limited area.
IP	Internet Protocol	A set of rules for sending data across a network

## Glossary

Terms	Explanation
Azimuth	In the Northern hemisphere, the azimuth angle indicates by how much degrees the module surface deviates from a full south aspect. In the southern hemisphere, it indicates the deviation from a full north aspect. The azimuth angle is counted with positive values within the range from south (0°) to west (90°) and it counted with negative values within the range from south (0°) to east (-90°).
Tilt angle	The tilt angle indicates by how much degrees the tilt of the module surface deviates from the horizontal.
PV module	The PV module refers to a panel designed to absorb the sun's rays as a source of energy for generating electricity.
PV array	Technical device for the conversion of solar energy into electrical energy. All serial and parallel installed and connected to PV modules of a PV system are referred to as a PV array.

# Name of each part

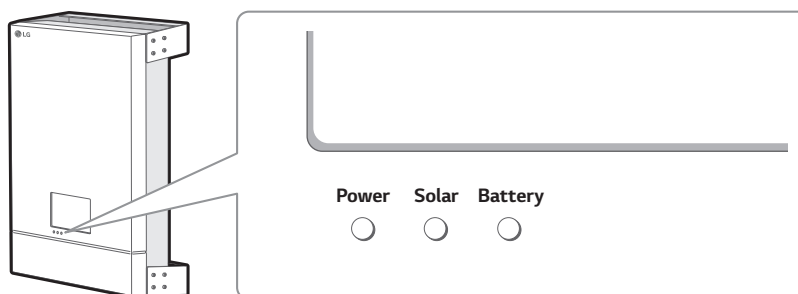
## Front and Rear



- 1** Front Cover
- 2** LCD touch panel
- 3** LED Indications
- 4** Lower Cover

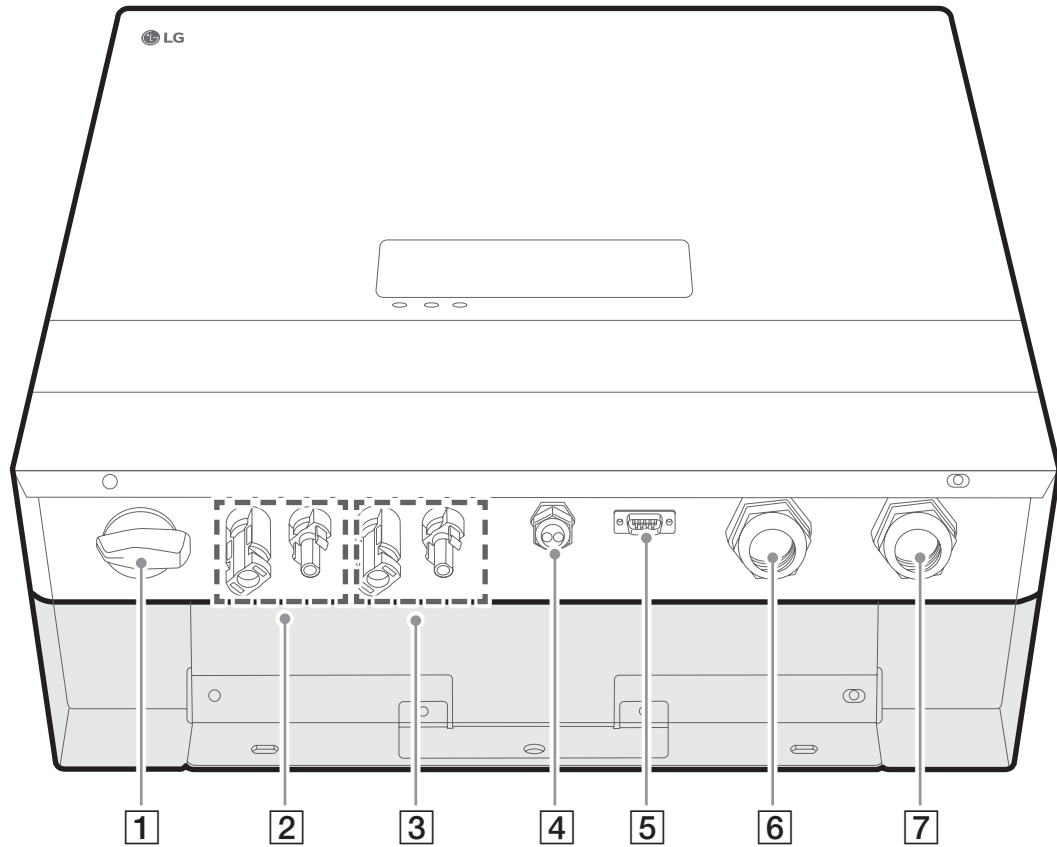
- 5** Upper bracket connected part
- 6** Lower bracket connected part (Left)
- 7** Lower bracket connected part (Right)
- 8** Lower wall bracket

## LED indications



	Power	Solar	Battery
<b>Off</b>	Power grid is not connected.	Energy is not being generated.	Battery is in stop mode
<b>Green</b>	Power grid is connected.	Energy is being generated.	Battery is in charging
<b>Red (Blink)</b>	-	Fault	Fault
<b>Blue</b>	-	-	Battery is in discharging

## Lower parts

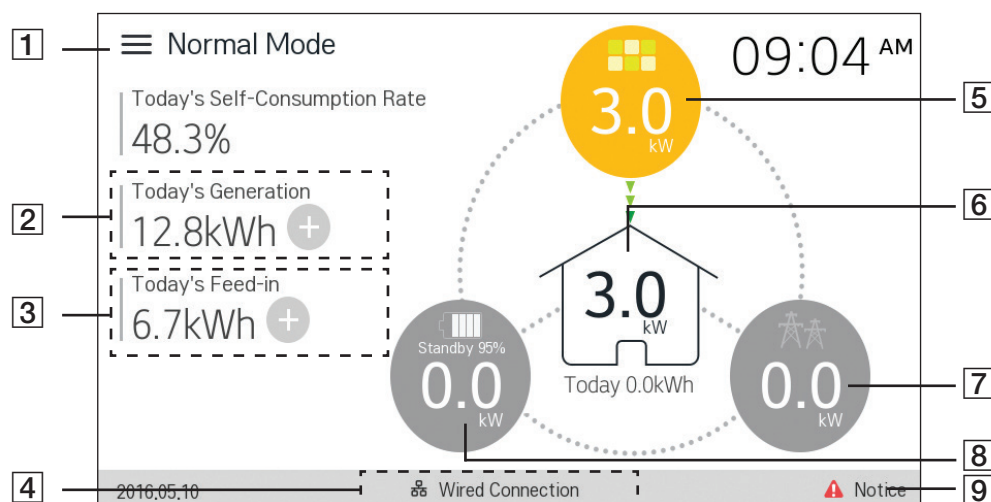


- 1** PV switch (DC Disconnect)
- 2** PV1(+ and -) connectors
- 3** PV2 (+ and -) connectors
- 4** Battery DC cable gland

- 5** BMS control connector
- 6** Meter/LAN cable gland
- 7** AC grid cable gland



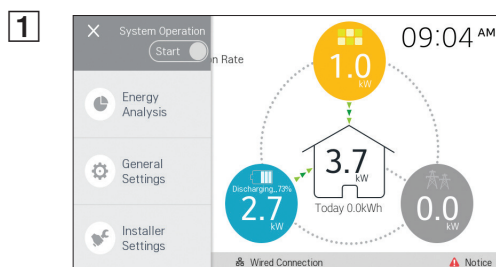
# About main screen



The main screen displays and indicates current ESS status briefly. When you tap an area indicated above, it displays detailed information.

## NOTE

- The displayed values on the LCD touch panel are not exact values. The values may differ from actual values.
- Please turn on the AP again, if there is a problem at connection with AP.



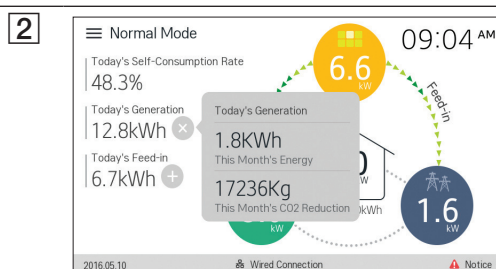
Tap [≡]. The menu option is displayed on the screen.

### [System Operation]

Tap [Start] or [Stop] to switch the operation.

### [Energy Analysis] [General Settings] [Installer Settings]

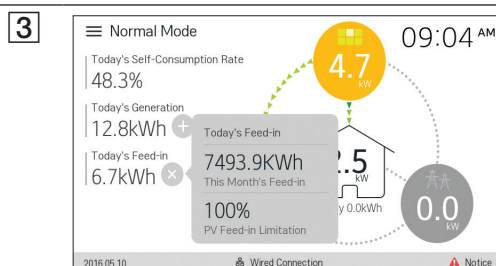
Tap [Energy Analysis], [General Settings] or [Installer Settings] to display each menu screen.



Displays the daily amount of energy generated from PV.

Tap [+] button to displays monthly amount of energy generated from PV and monthly amount of reduced CO<sub>2</sub>.

To close the window, tap [×].



Displays the daily amount of energy sold from PV.

Tap [+] button to displays monthly amount of energy sold from PV and the ratio of selling limitation.

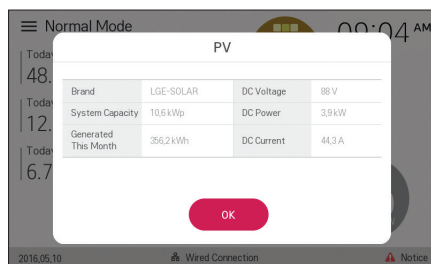
To close the window, tap [×].

**4** Indicates the network connection status.

**Wired Connection** : LAN cable is connected.

**No Connection** : LAN cable is not connected.

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Displays generating status of the connected PV briefly.

Tap [ ] to display detailed generating status of the connected PV.

The status values are the sum of PV1 and PV2.

**Brand** : PV Manufacturer (Default : LGE-SOLAR)

**System Capacity** : PV capability

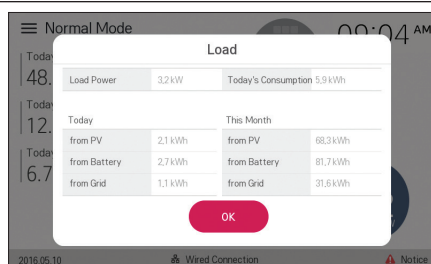
**Generated This Month**: Generated PV energy in this month

**DC Voltage** : Current PV voltage

**DC Power** : Current PV power

**DC Current** : Current PV electric current

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Displays current status of energy consumed in household.

Tap [ ] to displays detailed status of energy consumption of each supplies.

**Load Power** : Current power consumed in household

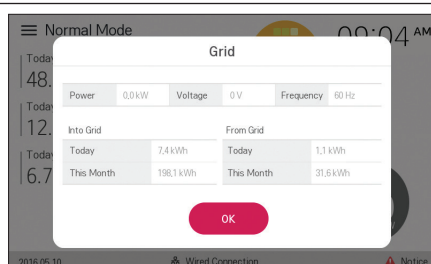
**Today's Consumption** : Amount of consumed energy today

**From PV** : Amount of energy from PV to household today and this month

**From Battery** : Amount of energy from the battery to household today and this month

**From Grid** : Amount of energy from the power grid to household today and this month

7



Displays current status of power grid.

Tap [ ] to displays detailed status of sold and purchased energy from power grid.

**Power**: Current grid power

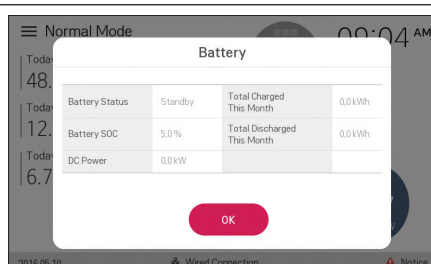
**Voltage**: Current grid voltage

**Frequency** : Current grid frequency

**Into Grid** : Amount of sold energy today and this month

**From Grid** : Amount of purchased energy today and this month

8



Displays charging and discharging status of the battery briefly.

Tap [ ] to display detailed status of the connected battery.

**Battery Status** : Charging/Discharging/Standby

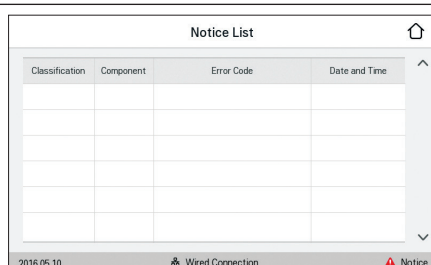
**Battery SOC**: Current SOC (state of charge) level

**DC Power** : Current output power from battery

**Total Charged This Month** : Amount of charged energy to the battery in this month

**Total Discharged This Month** : Amount of discharged energy from the battery in this month

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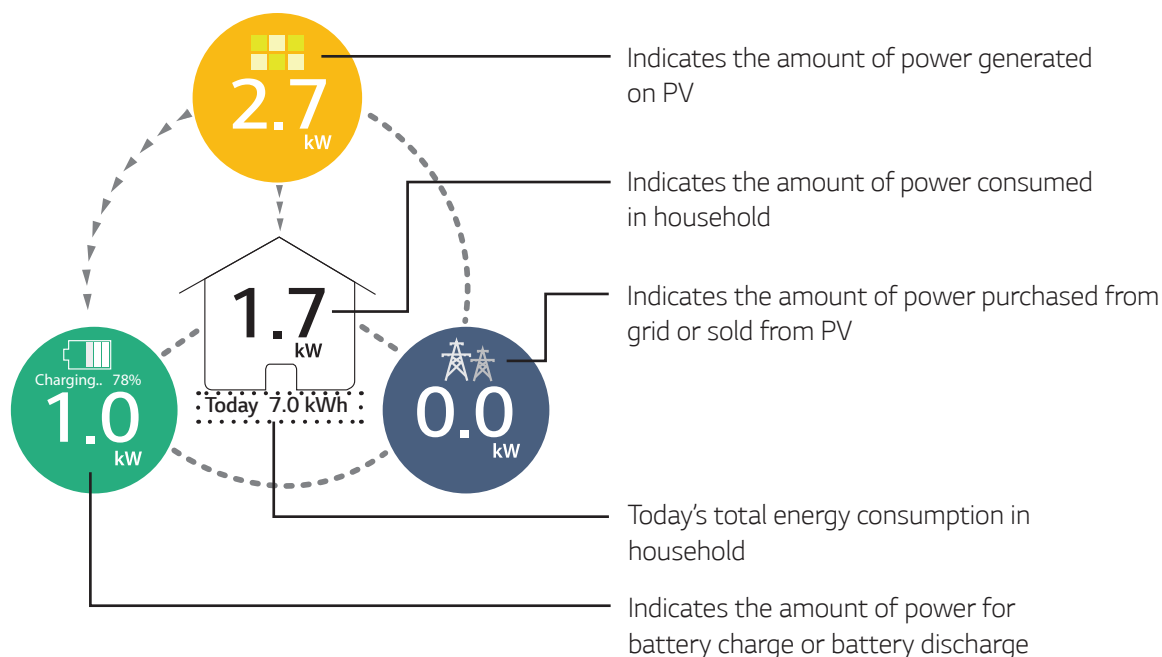
Displays a notice list of system status.

When there is an error occurred, error code, time and date are displayed on the list.

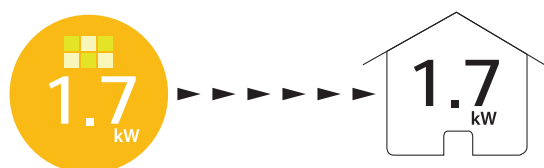
Refer to installation manual for more information of messages.

## Checking the system status

On the main screen, you can check the current status of the system.

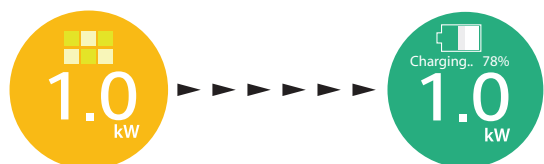


### Status description



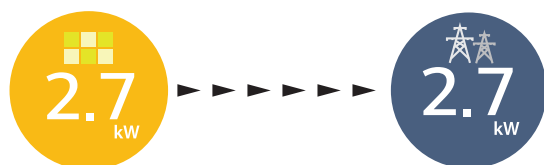
#### [PV to Load]

Power generated from PV is being consumed in household appliances.



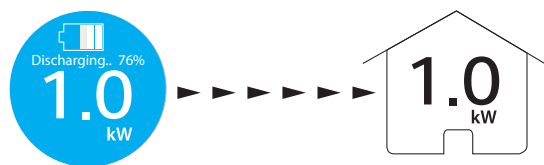
#### [PV to Battery]

Power generated from PV is being charged in the connected battery.



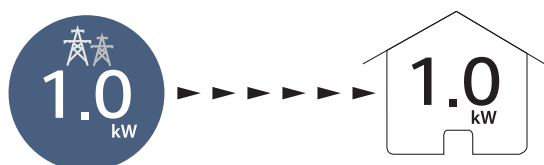
#### [PV to Grid]

Power generated from PV is being fed into the grid.



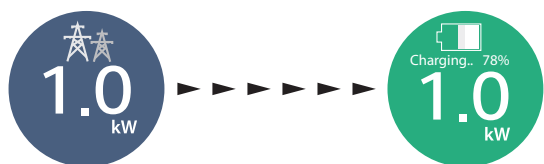
#### [Battery to Load]

Power of the battery is being consumed in household appliances.



#### [Grid to Load]

Power is purchased from grid is being consumed in household appliances.

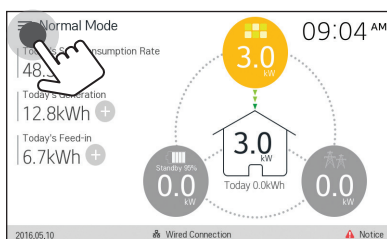


#### [Grid to Battery]

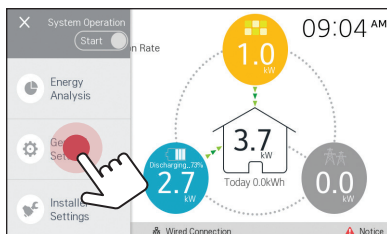
Power generated from grid is being charged in the battery when SOC level of the battery is in emergency level.

## Basic menu operation

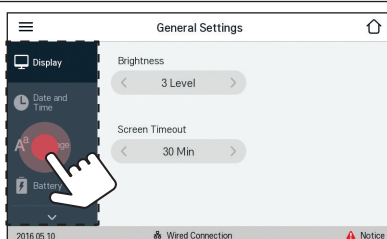
- 1 Tap [≡] on the main screen.



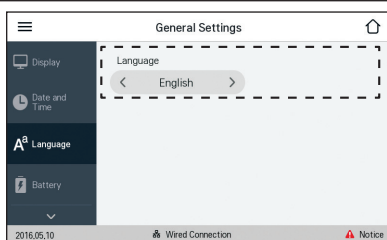
- 2 Tap a desired option.



- 3 Tap a desired menu option on the left side.



- 4 Tap a desired setting option and set the appropriate value.



### NOTE

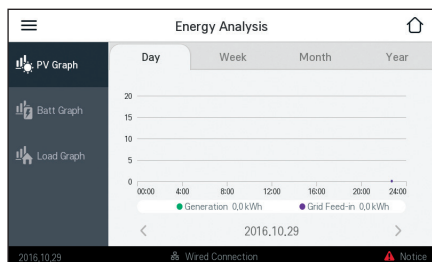
When this product is turned on for the first time, settings in [Installer settings] menu must be set by authorized service personnel. Refer to the Installation manual for more information of installer settings.

# Energy Analysis menu

On [Energy Analysis] menu, you can check the statistical information of this system.  
You can review the amount of energy generated, consumed, sold and purchased on this system.  
The statistical data of the day, week, month and year are supported.

## PV Graph

Analyzes the energy generated and sold from PV within selected period and displays as a graph.



Select [PV Graph] on [Energy Analysis].

Generated energy is marked with green and sold energy is marked with purple on the line graph.

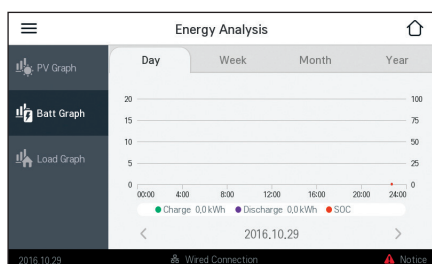
You can change the period by tapping [Day], [Week], [Month] and [Year].

< : Goes to previous [Day], [Week], [Month] or [Year].

> : Goes to next [Day], [Week], [Month] or [Year].

## Batt Graph

Analyzes the energy charged and discharged on the battery within selected period and displays as a graph.



Select [Batt Graph] on [Energy Analysis].

Charged energy is marked with green, discharged energy is marked with purple, and current status of the battery is marked with yellow on the line graph.

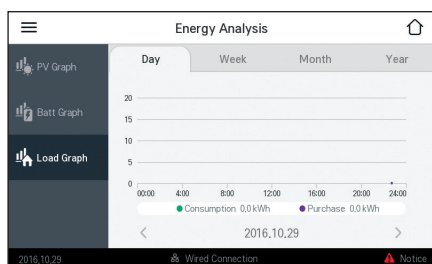
You can change the period by tapping [Day], [Week], [Month] and [Year].

< : Goes to previous [Day], [Week], [Month] or [Year].

> : Goes to next [Day], [Week], [Month] or [Year].

## Load Graph

Analyzes the energy consumed and purchased from grid within selected period and displays as a graph.



Select [Load Graph] on [Energy Analysis].

Consumed energy is marked with green, and purchased energy is marked with purple.

You can change the period by tapping [Day], [Week], [Month] and [Year].

< : Goes to previous [Day], [Week], [Month] or [Year].

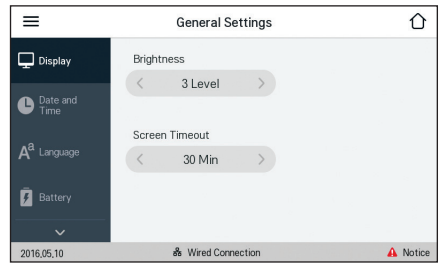
> : Goes to next [Day], [Week], [Month] or [Year].

# General Settings menu

You can adjust general setting values of the LCD touch panel.

## Display

You can adjust brightness of the screen or screen timeout setting on [Display].



### [Brightness]

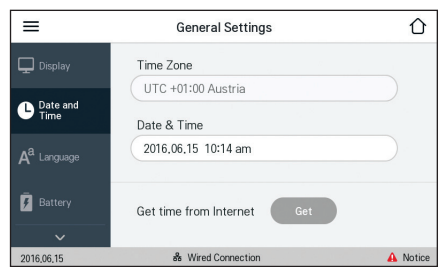
Tap [Display] on [General Settings]. Display setting menu is displayed. Tap < or > to adjust the brightness of LCD touch panel. You can adjust from [1 Level] to [5 Level]. The screen darkens when selecting < brightens when selecting >.

### [Screen Timeout]

Tap < or > to adjust the desired time. If there is no operation within selected time, the LCD touch panel will turned off automatically.

## Date and Time

You can adjust current time and date on [Date and Time].



### [Time Zone]

Displays time zone where you installed this product.

### [Date & Time]

Select current date and time. If the date and time already have been set by the [Get time from Internet] function, the [Date & Time] option will be disabled.

1. Select the currently selected value. Date setting menu is displayed.
2. Adjust [Year], [Month], and [Day] using **V** or **Λ**.
3. Select [NEXT] to complete the date setting and then time setting menu is displayed.
4. Adjust [Hour], [Minute] and [pm/am] using **V** or **Λ**.
5. Select [ACCEPT] to complete the setting.

### [Get time from Internet]

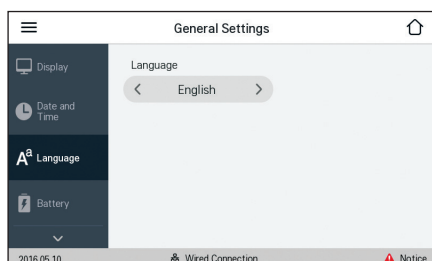
Select the [Get] to set the time and date via internet automatically. Internet connection is required to use this function.

### NOTE

- When there is a power failure while operating, you do not have to re-setting the [Date & Time] settings within 15 hours. If there is no power back within 15 hours, [Date & Time] settings should be set again.
- If the system is re-operated, the [Date & Time] settings may not correct. Check the [Date & Time] settings in such condition and set them correct.
- When you set the [Date & Time] to the past, the Energy Analysis data may differ from Web monitoring data.

## Language

You can select language on [Language].



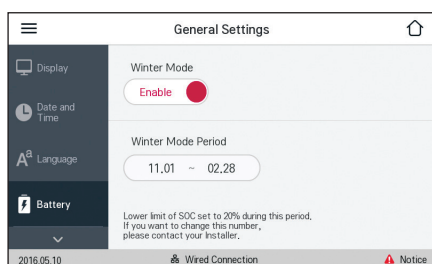
Tap [Language] on [General Settings]. Display setting menu is displayed.

### [Language]

Select the desired language using < or >. You can select the one between [German] and [English].

## Battery

You can set winter mode setting on [Battery].



### [Winter mode]

Tap this switch to select [Enable] or [Disable].

If you set this option to [Enable], the minimum SOC level of the battery is maintained a level of 20%.

The minimum SOC level of winter mode can be changed by the installer only.

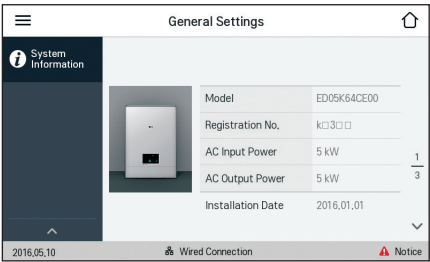
### [Winter Mode Period]

Tap current value to display the setting menu. You can change the period

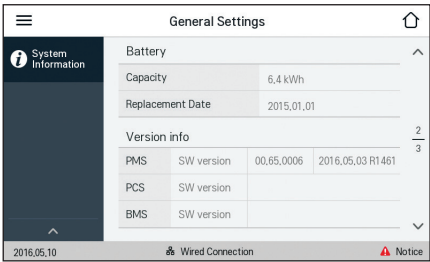
1. Select the currently selected value. Period setting menu is displayed.
2. Adjust [Month] and [Day] using **V** or **Λ**.
3. Select [ACCEPT] to complete the setting.

## System Information

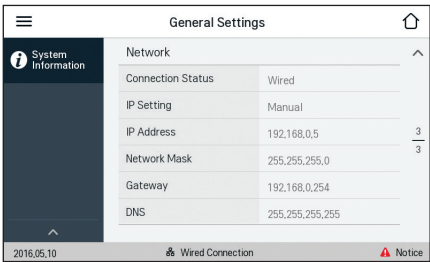
Displays system information of this ESS. You can check information on PCS, battery and network status. Tap **V** or **^** to display next or previous information.



PCS information



Battery and software information



Network status information



# Using EnerVu system

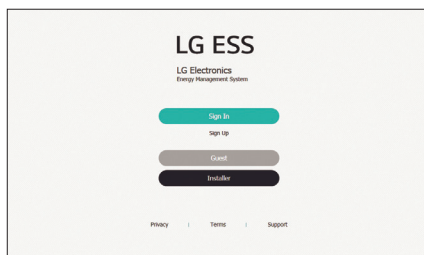
When this product is connected to the internet, you can check variety of information such as system status, information, report using LG EnerVu web monitoring system.

## Preparation

- An internet browser installed computer, tablet or mobile with internet access are needed to access LG ESS web monitoring system.
- This product must be connected to internet. The [Network] setting menu in the LCD touch panel must be set by the installer.

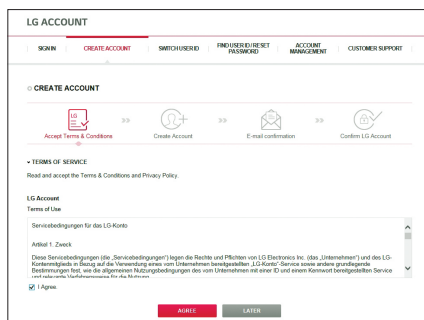
## Creating a new account

1



On your browser, visit LG EnerVu page at <http://enervu.lg-ess.com>.

2



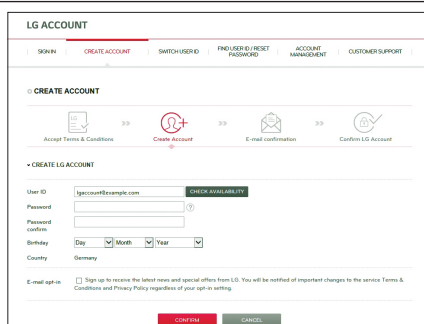
Select [Sign Up]. The service agreement page appears.

Read the terms, conditions and privacy policy carefully.

If you agree with every term and condition, click the [I Agree] check box and select [AGREE].

The account creation page appears.

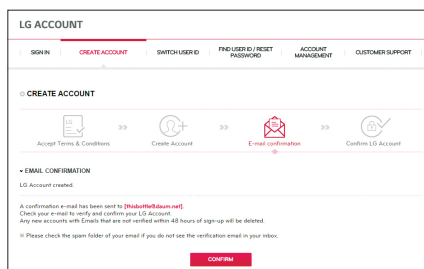
3



Fill your mail address in [User ID] field and select [CHECK AVAILABILITY].

Fill in [Password], [Password confirm] and [Birthday] fields and select [CONFIRM].

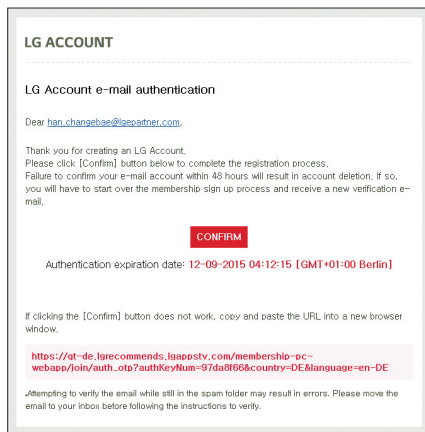
The e-mail confirmation page appears.



3

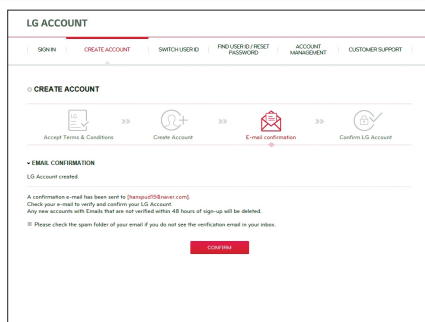
Using EnerVu

4



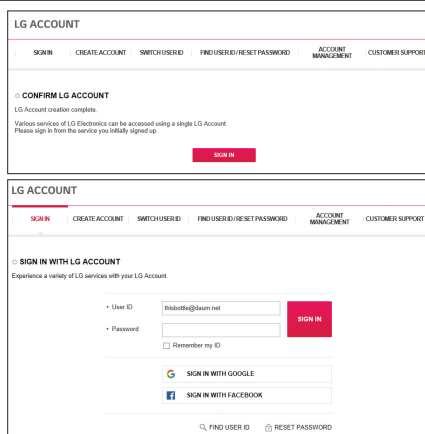
A confirmation e-mail will be sent to your e-mail address. On your e-mail, select [CONFIRM] to complete the e-mail confirmation.

5



On the account creation page, select [CONFIRM] to complete creating your account.

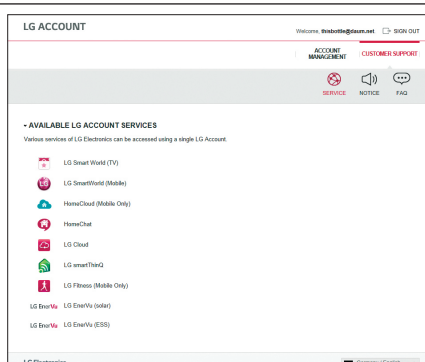
6



Select [SIGN IN] to go to the [SIGN IN WITH LG ACCOUNT] page.

Input your [User ID] and [Password] and select [SIGN IN].

7

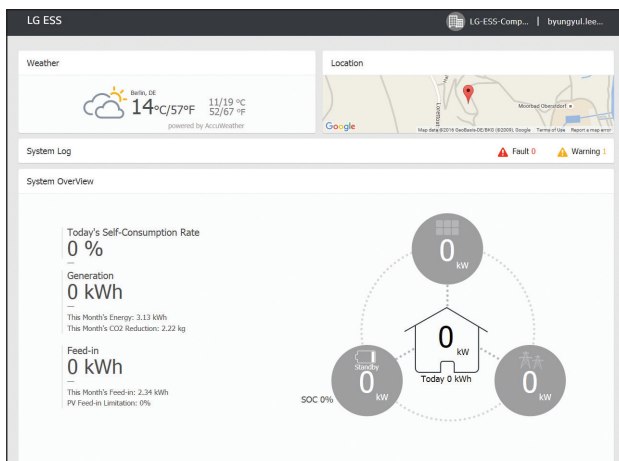


Available LG account services are displayed on the screen.

3

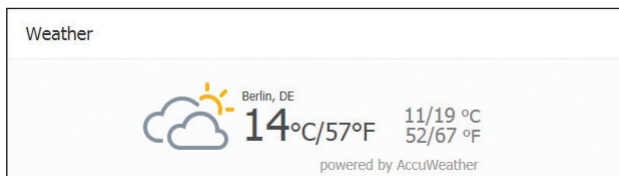
Using EnerVu

## Overview of my EnerVu page



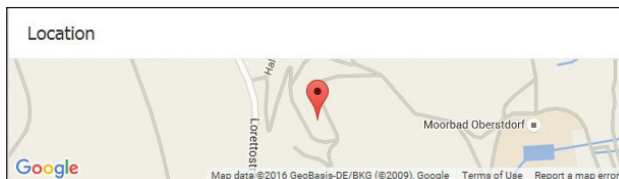
When you enter the main page of your EnerVu, you can find and check various information related to your system.

### Weather



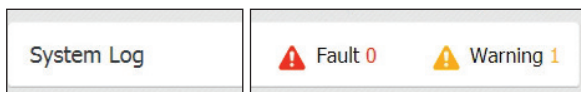
Displays the weather of the location the system has been installed. This page provides you

### Location



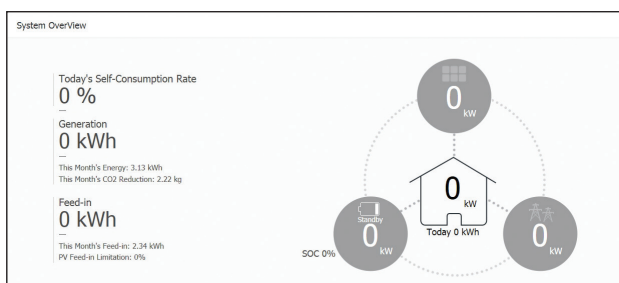
Displays the location the system has been installed on the map.

### System Log



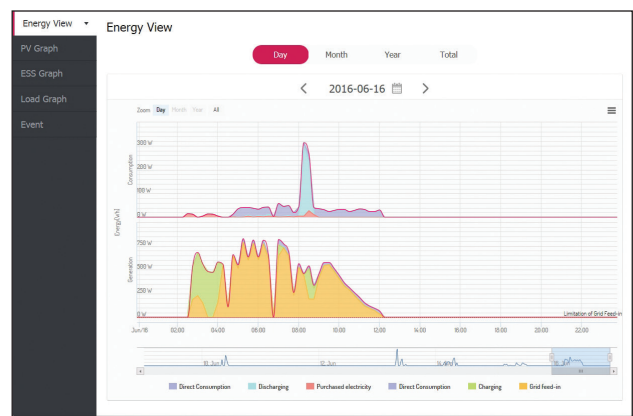
Displays the system fault.

### System Overview



Displays the status of the system in real time. This page provides you with system information such as current power generated from PV, power purchased from grid, power charged/discharged from the battery. ALL the information is renewed every 15 minutes.

## Analysis



On this page, you can make a statistical graph of the energy analysis.

You can review the amount of energy generated, consumed, sold and purchased on the system. The variety of statistical charts are supported on the page.

On the [Event] tab, you can check the issues occurred on the system.

## System Info

System Info			
System name	new living room	Registration No.	DE151280Y00012
Type	Residential	Install date	2015-01-01
PCS Ver.		H/W: Rev1.0	S/W: 00.65.0011

Displays information on your system.

## Report

Report

PV Report

ESS Report

Load Report

Balance Report

Total Report

Monthly Report

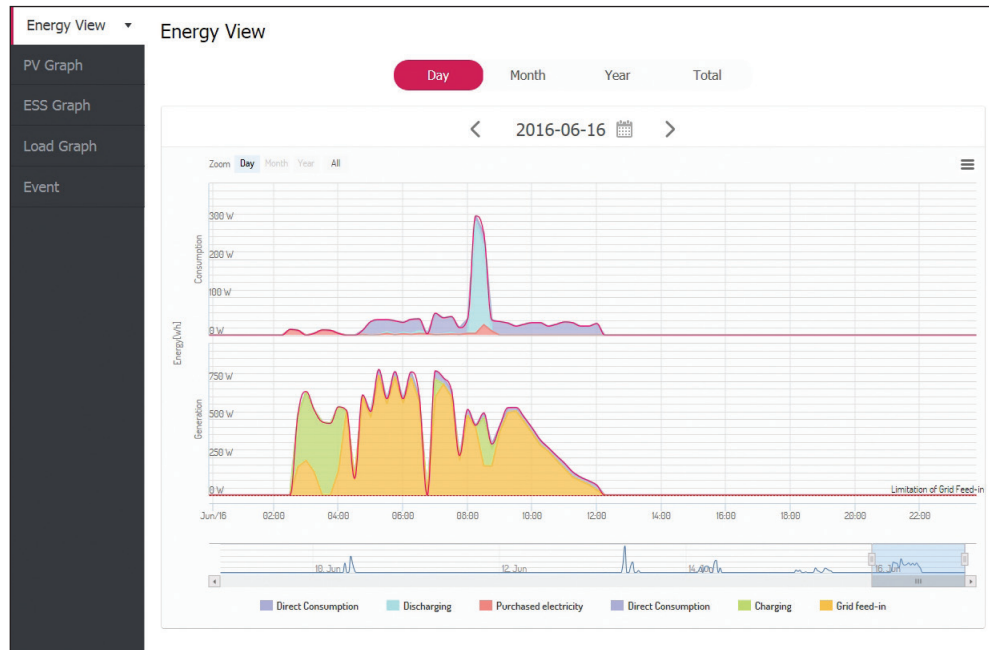
< 2016 07 >

Run Report

You can make a monthly or an yearly report of statistical data for energy management on your system.

## Making a statistical graph

You can make a daily, monthly or an yearly graph of statistical data for energy management on your system. Select the [Day], [Month], [Year] or [Total] option to make a graph of statistical data.



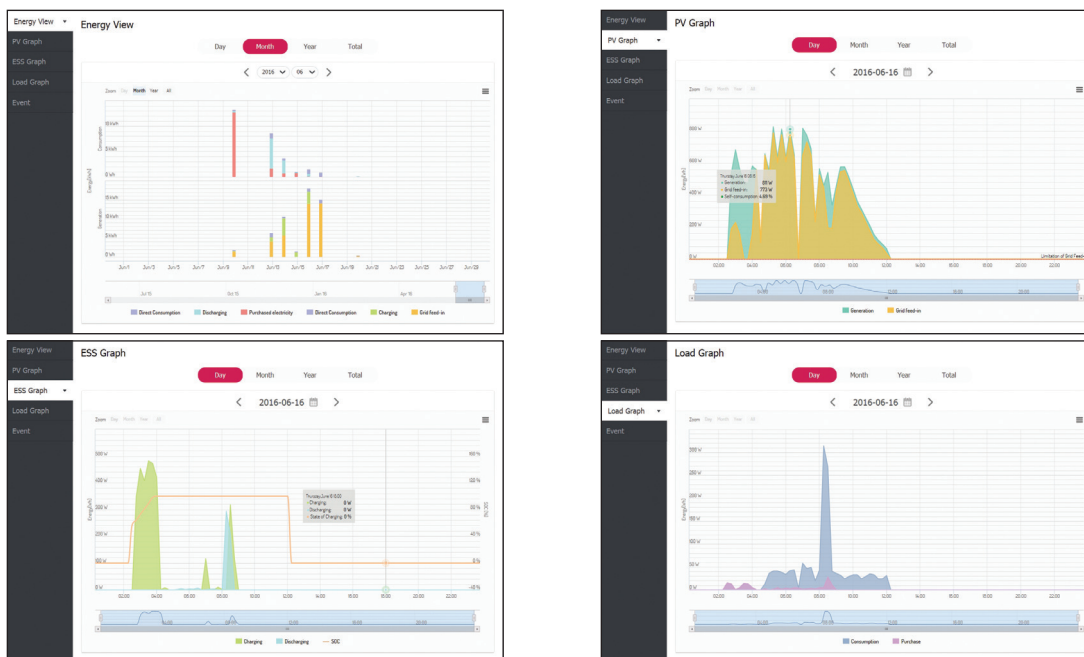
1. Select a tab on the left side of the screen.

3

Using EnerVu

<b>Energy View</b>	Makes an overall graph of statistical data.
<b>PV Graph</b>	Makes a graph of statistical data on PV. (Generation and Grid feed-in)
<b>ESS Graph</b>	Makes a graph of statistical data on ESS (Charging, Discharging and SOC)
<b>Load Graph</b>	Makes a graph of statistical data on household load. (Consumption and Purchase)

2. Select a duration option among [Day], [Month], [Year] or [Total].
3. Select a date, month or year to make a statistical graph.  
After the selection, the graph will be displayed in a short time.



4. There are several options at the bottom of a graph, click each option to show or hide the statistical information on the graph.



Available options differ depending on the graph. Refer to table described below for more information of graph options.

Tab	Graph	Options	Description
Energy View	CONSUMPTION	Direct Consumption	Amount of directly used energy from PV.
		Discharging	Amount of energy that used from the battery.
		Purchased electricity	Purchased energy through the power grid.
	GENERATION	Direct Consumption	Amount of directly used energy from PV
		Charging	Amount of energy that charged to the battery.
		Grid feed-in	Amount of sold energy to the power grid.
PV Graph	Energy	Generation	Amount of generated energy from PV.
		Grid feed-in	Amount of sold energy to the power grid.
ESS Graph	Energy	Charging	Amount of energy that charged to the battery.
		Discharging	Amount of used energy from the battery.
		SOC	State of charge
Load Graph	Energy	Consumption	Amount of used energy from ESS.
		Purchase	Amount of purchased energy from the power grid.

5. Select [ ≡ ] to print a graph or download as an image file.

## Checking system event

When you select the [Event] tab, the page shows a list of issues occurred such as system fault, warning.

Type	Event Code	Name	Component	Start Time	Alarm Off
Warning	ESS_NOT_RPT	ESS Not Reporting	PMS	2016-06-24 00:19:59	

1. Select the [Event] tab on the left side of the screen. A list of issues such as system faults, warnings appears on the screen.
2. Select the [Type] option among [All], [Fault] and [Warning]. The event list will be filtered by selected type option.

## Making a statistical report

You can make a monthly or an yearly report of statistical data for energy on your system.

1. Select a report option among [PV Report], [ESS Report], [Load Report], [Balance Report] or [Total Report].
2. Select a reporting period option between [Yearly report] or [Monthly report].
3. Select desired month or year.
4. Select [Run Report]. A statistical report will be displayed.

**PV Report** byungyul lee

new living room  
Deutschland Niedersachsen Berlin On: 2016

Date	Generation	Grid Feed-in	Self-Consumption
2015/01	520 kWh	145 kWh	72 %
2015/02	444 kWh	167 kWh	62 %
2015/03	488 kWh	184 kWh	62 %
2015/04	492 kWh	186 kWh	62 %
2015/05	531 kWh	197 kWh	63 %
2015/06	467 kWh	164 kWh	65 %
2015/07	812 kWh	204 kWh	75 %
2015/08	1.01 MWh	253 kWh	75 %
2015/09	932 kWh	236 kWh	75 %
2015/10	856 kWh	221 kWh	74 %
2015/11	883 kWh	224 kWh	75 %
2015/12	856 kWh	221 kWh	74 %

PV Generation: 8.30 MWh  
Grid Feed-in: 2.40 MWh  
Self-Consumption: 71.06%

Select to download the statistical data as Excel.

Select to print the statistical data.

## Transferring your system to other owner

You can transfer your system to other owner. Once your system is transferred, the system can not be monitored with your account.

### Preparation

- Note the email address of recipient.
- The email address of recipient must be registered as a LG member. If the recipient is still not a LG member, an automatic email requesting to become a member will be sent to the recipient.

1

On your browser, visit LG EnerVu page at <http://enervu.lg-ess.com>.

Select [Sign In]. The [SIGN IN WITH LG ACCOUNT] page appears.

Enter your [User ID] and [Password] then select [SIGN IN] to enter the EnerVu web monitoring system.

2

Select your [User ID] on top of the screen. A menu appears on the screen.

Select [System transfer]. The system transfer page appears on the screen.

3

Enter the email address of the recipient in the [ID] field and select [Check].

If the recipient is not a LG member, a pop-up message appears for sending mail to make a LG account.

4

Enter the recipient information in the [First Name] and [Last Name] fields and select [Done] to complete the system transferring.

The system will automatically log off.



# Maintenance

## Cleaning the product

To clean this product, use a soft, dry cloth. If the surfaces are extremely dirty, use a soft cloth lightly moistened with a mild detergent solution. Do not use strong solvents such as alcohol, benzene, or thinner, as these might damage the surface of the product.

Do not use volatile liquids such as insecticide spray near this product. Wiping with strong pressure may damage the surface. Do not leave rubber or plastic products in contact with the product for a long period of time.

When cleaning the air duct, shut off all the systems including PCS, PV module, battery, AC circuit breaker. After that, open the lower cover of the PCS and remove dust on the air duct using a soft brush.

## Inspecting regularly

It is recommended to check the operating status and connection status once a year. Contact authorized dealer or where you purchased.

## Contact

If you have technical problems or questions, contact installation company or LGE.

1. Installation Company

Address :

Tel :

2. LGE

Address : LG Electronics Deutschland GmbH  
Berliner Straße 93  
40880 Ratingen  
Germany

Tel. : + 0049 18 06 807 020

E-Mail: b2b.service@lge.de

## Disposing the product

When the product reached to the end of its service life or defect beyond repair, dispose the product according to the disposal regulations for electronic waste in your area. Disposing the product must be carried out by qualified personnel only. Contact authorized dealer or where you purchased.



1. This crossed-out wheeled bin symbol indicates that waste electrical and electronic products (WEEE) should be disposed of separately from the municipal waste stream.
2. Old electrical products can contain hazardous substances so correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.

Your old appliance may contain reusable parts that could be used to repair other products, and other valuable materials that can be recycled to conserve limited resources.

3. You can take your appliance either to the shop where you purchased the product, or contact your local government waste office for details of your nearest authorised WEEE collection point. For the most up to date information for your country please see [www.lg.com/global/recycling](http://www.lg.com/global/recycling)

### Removal of waste batteries and accumulators

#### (Product with embedded battery ONLY)

In case this product contains a battery incorporated within the product which cannot be readily removed by end-users, LG recommends that only qualified professionals remove the battery, either for replacement or for recycling at the end of this product's working life. To prevent damage to the product, and for their own safety, users should not attempt to remove the battery and should contact LG Service Helpline, or other independent service providers for advice.

Removal of the battery will involve dismantling of the product case, disconnection of the electrical cables/ contacts, and careful extraction of the battery cell using specialized tools. If you need the instructions for qualified professionals on how to remove the battery safely, please visit <http://www.lge.com/global/sustainability/environment/take-back-recycling>

# Specifications

## General

Dimensions (W x H x D)	493 mm x 670 mm x 185 mm
Net weight (approx.)	34 kg
Operating temperature	0 °C to 40 °C
Operating humidity	60 %
Max. efficiency (PV to grid)	95.7 %

## AC input/output

Rated grid voltage	3-NPE 400 V / 230 V
Power factor range	-0.95 – +0.95
AC voltage range (L-N)	184 – 264.5 V
AC voltage range (L-L)	319 – 458 V
Short circuit current (Isc)	12 A
Current Inrush	73 Aac-peak / 0.05 ms
Max. fault current	83 Aac-peak / 20 ms
Max. output overcurrent protection	12 A
Frequency (frequency range)	50 Hz (47.5 - 51.5 Hz)
Max. AC power (from PV)	5,000 W
Max. AC power (from battery)	3,000 W
Max. output current	8.5 A
Total harmonic distortion	5%
Phases	3

## DC input/output

Max. input voltage	800 V
Min. input voltage	210 V
Max. DC power	6,600 W (3,300 W per MPPT)
Input voltage range MPPT at rated AC output power	210-680 V
Number of MPPT	2
Number of string per MPPT	1
Max. input current per MPPT	12 A
Backfeed current	0 A
Short circuit current (Isc) per MPPT	13 A

**Battery input / output**

Battery manufacturer		LG Chem
Battery model name		ED00064CN00.ADG3TUH
Battery capacity		6.4 kWh
Rated voltage		207.2 V
Operating voltage range		168 V to 232.4 V
Standard charging condition		Constant current / constant voltage 0.3 C (9.45 A) current, charging voltage 232.4 V (at 25 °C)
Max. charging/discharging current		19 A
Standard charging conditions (CC-CV)	Charging current	0.3C (9.45A)
	Condition for termination	232.4 V
Standard discharging conditions (CC)	Discharging current	0.3C (9.45A)
	Condition for termination	168 V

**Feature & function**

Noise emission	40 dB
Cooling	Forced Convection
Topology	Transformerless
Degree of protection	IP21
Max. permissible value of relative humidity (non-condensing)	85 % (Climate class 3K5)
Display	7" Touch LCD
Certification	IEC/EN 62109-1/-2, VDE-AR-N 4105, VDE 0126-1-1
Web monitoring service	Available

- Design and specifications are subject to change without notice.

# Open Source Software Notice Information

To obtain the source code under GPL, LGPL, MPL, and other open source licenses, that is contained in this product, please visit <http://opensource.lge.com>. In addition to the source code, all referred license terms, warranty disclaimers and copyright notices are available for download. LG Electronics will also provide open source code to you on CD-ROM for a charge covering the cost of performing such distribution (such as the cost of media, shipping, and handling) upon email request to [opensource@lge.com](mailto:opensource@lge.com). This offer is valid for three (3) years from the date on which you purchased the product.





