



## Franklin Home Power User Manual

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Please visit [FranklinWH Support](#) for the latest Franklin Home Power documents.

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Please read this document carefully to ensure the best reliability of the product and your warranty eligibility. For further information about the warranty, please refer to the **FranklinWH Limited Warranty**.

Information or recommendations in this document constitute any express or implied warranty.

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Please read this document carefully before installing or using the Franklin Home Power equipment. Failure to follow any instructions or warnings in this document may result in damage to the equipment, personal electric shock, severe injury, or even death.

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## Product Information

Franklin Home Power (FHP) is composed of aPower, aGate and other electrical components, and this document applies only to the following products: aPower X and aGate X.

FranklinWH Energy Storage Inc. ("FranklinWH") reserves the right to make any improvements to the product, and the contents in this document shall be subject to updates without further notification.

All images and pictures provided in this Manual are only for demonstration purposes and may differ in detail from the product, based on the product version.

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## FCC Compliance

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

MPE caution (if an FCC certified RF module is inserted in and the separation distance is indicated in the FCC grant of RF module)

To satisfy FCC / IC RF exposure requirements, a separation distance of 8in. (20 cm) or more should be maintained between the antenna of this device and persons during device operation.

To ensure compliance, operations at closer than this distance is not recommended.

## Feedback

If you have any questions or comments, please send us an email at: [service@franklinwh.com](mailto:service@franklinwh.com)

## Disposal of Scrapped Products

Scrapped products (including their internal chemicals and electrical materials) should not be disposed of with household wastes. Please refer to your local laws and regulations regarding disposal.



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## Safety Statements

### Important Information

Both aGate and aPower are electrical devices. Please read this entire document to ensure the proper use of the Franklin Home Power (FHP) system. Failure to follow this may void the warranty. Please strictly follow the safety instructions in this Manual during operation, otherwise it may result in equipment malfunction, electrical shock, serious injury or death.

### Safety Symbols










This Manual contains the following safety symbols, as shown below.

	<b>DANGER:</b> This indicates a hazardous situation which if not avoided, may result in death or serious injury.
	<b>WARNING:</b> This indicates a situation where failure to follow instructions may be a safety hazard or cause equipment malfunction. Use extreme caution and follow instructions carefully.
	<b>NOTE:</b> This indicates information that is important for optimal system operation. Closely follow instructions.
	<b>ELECTRONIC DEVICE: DO NOT THROW AWAY!</b> All scrapped products (including their internal chemicals and electrical materials) should not be disposed of with household wastes. Please refer to your local laws and regulations regarding disposal.

\* The DANGER, WARNING, and NOTE alerts are supplemental to the safety instructions and are not exhaustive.

## Safety Instructions

### General Information

	aGate and aPower are electrical equipment that, when used improperly, can present a risk of electrical shock and fire, and misuse may void the warranty. Only FranklinWH Certified Installers should install, maintain or replace aGate and aPower equipment or wiring. They must wear personal protective equipment (PPE) during operation.
	If the aPower battery is leaking electrolyte, smoking, or on fire, if it is safe to do so, disconnect the AC power from the FHP system and turn off the aPower switch on the side of the aPower to stop the aPower from charging and discharging.
	It is strictly forbidden to install, maintain or handle FHP equipment outdoors during bad weather such as thunder, rain, snow and high winds.
	It is strictly forbidden to work on or operate the FHP equipment alone. For safety, make sure that there is someone around you who can help.
	During use, storage, and transport, ensure that the ambient temperature of an aPower does not exceed 122 °F (50 °C), that it is not near flammables, and that the cooling system and vents are not blocked.
	During the transport and handling of aGate and aPower units, extreme care is required to avoid dropping, bumping, stomping, or inverting the equipment.
	Only use parts or accessories purchased from FranklinWH or a FranklinWH-certified party.
	Do not paint any part of an aPower or aGate unless the paint surface of the equipment housing is accidentally damaged during transport, installation or maintenance. The damaged part can be repaired with paint or topcoat of the same color.
	If any equipment failure occurs, please contact your installer or after-sales service provider for support. Do not attempt to take apart, repair and/or modify an aGate or aPower without the authorization of FranklinWH. Otherwise, it may lead to safety hazards and void your warranty.



Do not use the aPower or aGate if there is functional or cosmetic damage noticed after unboxing (except for slight paint damage). Contact after-sales service for support.



The operation of an FHP requires an internet connection. Extended offline operation may result in a voided warranty. Please refer to [FranklinWH Support](#) for information.








Add lightning protection measures to the FHP equipment according to NFPA 780, UL96A, and LPI-175.



The installation, wiring, maintenance, transportation, and handling of each aGate and aPower should follow local laws, regulations and standards, and the Safety Instructions in this Guide serve as supplementation to the laws, regulations and standards.

**During the use, storage, and transport of FHP equipment:**

	<b>DANGER:</b> Keep away from flammable and explosive materials.
	<b>DANGER:</b> Additional protective measures should be taken to protect equipment from access by children.
	<b>WARNING:</b> Keep away from dust and smoke.
	<b>WARNING:</b> Keep way from water sources including downspouts, sprinklers, faucets and liquid containers.
	<b>WARNING:</b> This product can expose you to lead, which is known to the State of California to cause cancer and birth defects or reproductive harm. (For more information go to <a href="http://www.p65warnings.ca.gov">www.p65warnings.ca.gov</a> ).

## Warranty Statement

To meet warranty requirements, the FHP system must be installed and operated properly according to the instructions in related FranklinWH documents.

To secure the full 12-year warranty, the FHP system must be reliably connected to the internet to access remote services provided by FranklinWH. If an internet connection is not established or is interrupted for an extended period, and FranklinWH is unable to contact you, the warranty may be limited to less than 5 years.

Please visit us at [FranklinWH Support](#) to learn more about the warranty.

## Service and Maintenance

### Service

- Keep leaves and other foreign materials away from the aPower batteries. Especially keep them from the top and between the units and the back wall.
- Keep the aPower away from direct sunlight.
- Keep all FHP equipment in an environment with acceptable temperature and humidity.
- Clean the equipment surface using a soft cloth. If water is needed, please make sure the cloth is slightly damp (water only) and the equipment is completely de-energized.
- Don't block the vents.
- Keep all units away from flammable, explosive, and/or poisonous materials.
- Keep the equipment operating within the allowed power range and avoid overloading.
- Make sure all cables are wired reliably and all connectors are free of stress.
- Keep the equipment away from hazardous zones and potential risks.
- A nearby smoke detector is recommended if the equipment is installed indoors.

### Maintenance

- Please check the running status of your equipment on your mobile app. If any alarm is found, please contact the qualified service group.
- Please regularly check that the aPower button status is consistent with the FranklinWH App setting.
- Never attempt to repair the system by yourself. Contact the professionals qualified by FranklinWH.

## System Overview

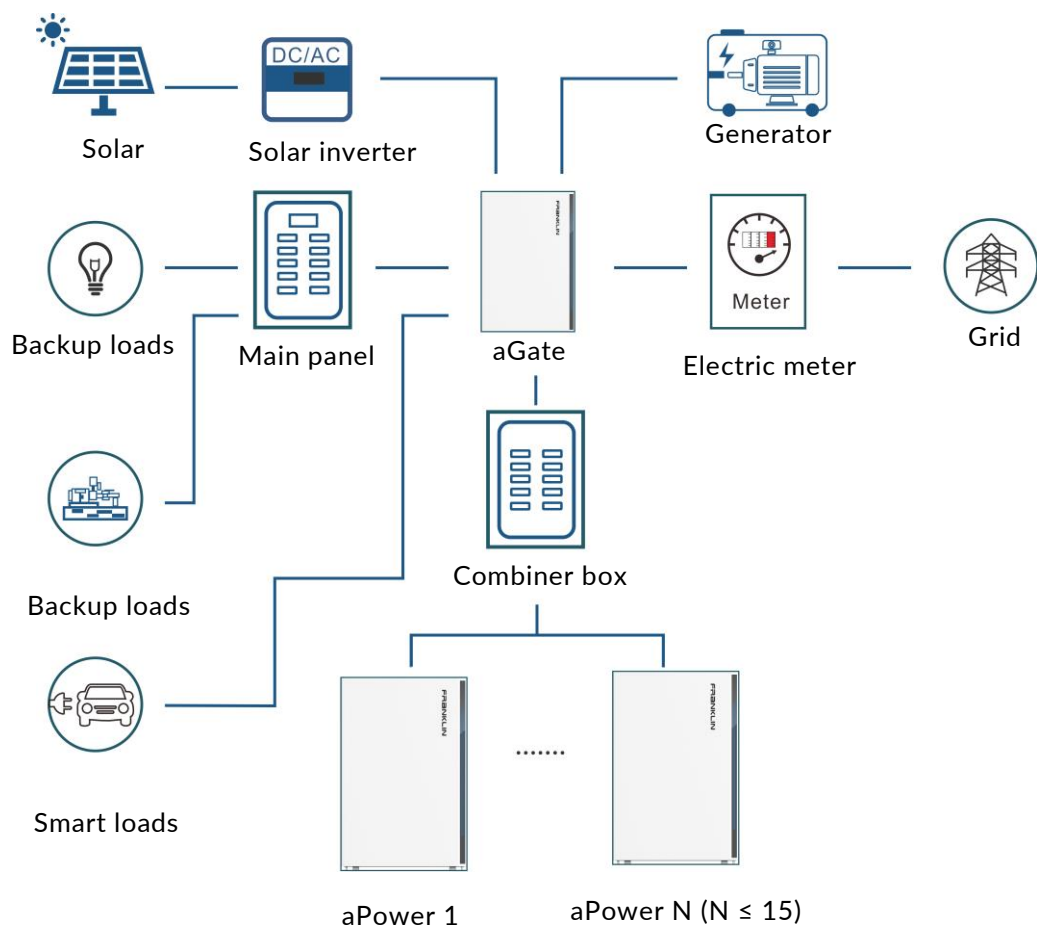
The Franklin Home Power (FHP) system is a whole home energy solution for residential users. The two key components are the aGate, an energy management unit for whole-home power control, and the aPower, an energy storage battery with a built-in inverter. Users can monitor and operate their FHP systems remotely via the FranklinWH mobile phone app.

## System Design

The FHP system backup options include whole-home backup and partial backup. Load selection for different options must be completed during the system design phase.

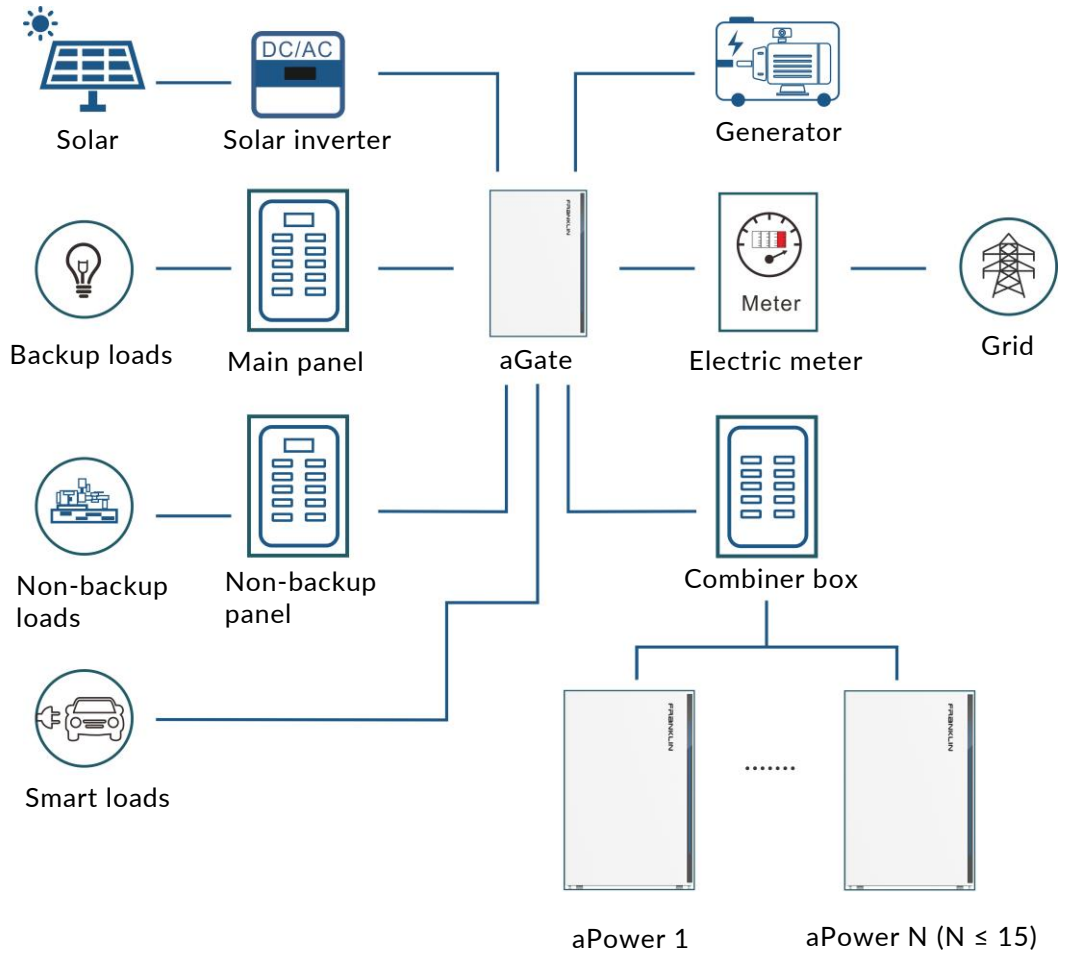
### Whole-home Backup

In the whole-home backup option, all household loads, except for Smart Circuit loads, are connected via the Main Panel to the backup port of the aGate. If the grid fails, the FHP system power can support all household energy loads.



### Partial Backup

If you select a partial backup configuration, you need to identify backup loads during system configuration. Connect the backup loads (except for the Smart Circuit loads) to the backup port of the aGate, and connect the non-backup loads (non-essential loads) to the non-backup ports of the aGate. If the grid fails, the FHP system will only power the backup loads during the outage.



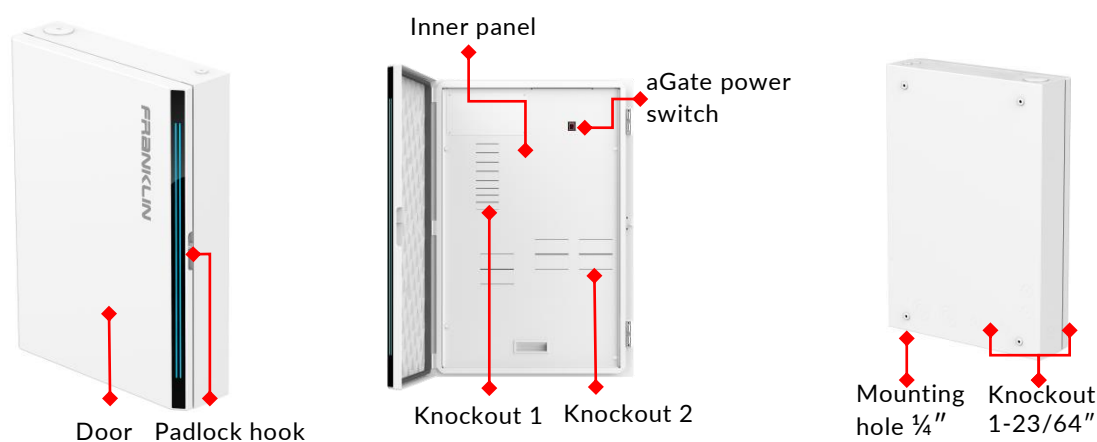


## System Components

### aGate

The aGate controls system operations with a built-in Energy Management System (EMS), power distribution and communications modules, and optional Smart Circuits and generator modules, providing power management and backup power for household loads.

**aGate external components are described below.**



- Door: External decoration and protection panel.
- Padlock hook: The hole where a lock may be used.
- Inner panel: Internal protection panel.
- aGate power switch: aGate power switch.
- Knockout 1 and 2: After the plugs are removed, the knockouts allow for the mounting of the breakers for solar, aPower, Smart Circuits, grid, and generator.
- Mounting hole 1/4": The mounting holes for 1/4" screws.
- Knockout 1-23/64": A 1" electrical conduit may be passed through after the plug is removed.

<b>Environmental Specifications</b>	
Operation Temperature Range	-4 °F-122 °F (-20 °C-50 °C)
Storage Temperature Range	-22 °F-140 °F (-30 °C-60 °C)
<b>Altitude maximum</b>	
9843 feet (3000 m)	
<b>Installation Environment</b>	
Indoor and Outdoor Shielded	
<b>Physical parameters</b>	
Dimensions (W x H x D)	21.7 in. x 31.5 in. x 6.3 in. (550 mm x 800 mm x 160 mm)
Weight	50 lbs. (23 kg)

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### Smart Circuits Module (aGate, optional)



The Franklin Home Power (FHP) system can use the Smart Circuits Module to provide homeowners with direct control of three unique circuits. The Smart Circuits Module is an optional component of the aGate.

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#### DANGER:



- Shutting down or disconnecting a device remotely, via the FranklinWH App, does NOT mean it has been physically powered off. Therefore, any maintenance and before connecting any new load to the system, the circuit breaker on the Smart Circuits Module needs to be disconnected in advance.
- Do not touch the output ports of Smart Circuits Module directly or indirectly through conductive material, before disconnecting the circuit breakers.

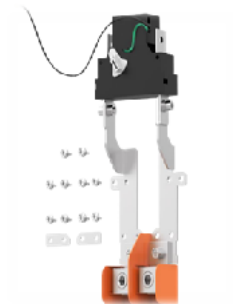
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#### NOTE:



If the FHP system is likely to work off the grid for a long time (e.g., due to any adverse weather condition, inspection, or intentional shutting down the grid power supply when the house is idle), it is necessary to connect the high-power devices that may automatically start up, such as an EV charger, to the Smart Circuits.

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**Generator Module (aGate, optional)**

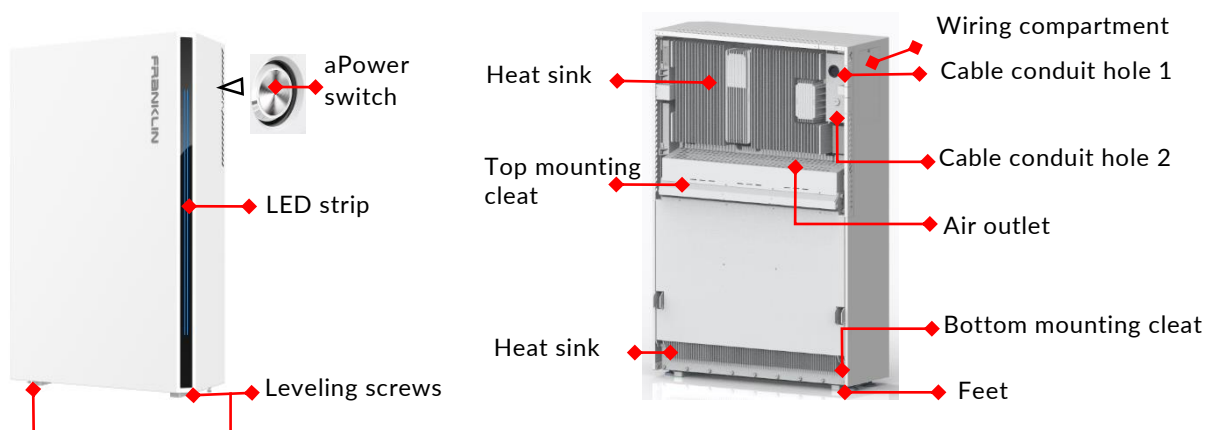
The Franklin Home Power (FHP) system can connect to a household backup power generator (generator). This connection is an optional component of the aGate.

When the FHP system is working off-grid, the generator may serve as a backup power source for the household load and to recharge the aPower. The combination of a generator and the FHP system can provide uninterrupted power to homes for a long time period, lowering the fuel consumption over time of the generator.

## aPower

The aPower batteries store a charge provided by photovoltaic systems, the grid, or generators. They use an integrated inverter to convert AC power into stored DC, then convert the energy back to AC for use in a two-way energy flow. aPower batteries are modular, and can be scaled from a single battery to fifteen batteries controlled by a single aGate.

aPower external components are described below.




- aPower switch: Starts up or shuts off aPower power transfer.
- LED strip: Turns on when the aPower is started, indicates the battery power level.
- Leveling screws: Keeps the equipment leveled when the floor is not level.
- Heat sink: Used to cool the aPower components.
- Top/Bottom mounting cleat: Must be snapped onto the mounting bracket to support the body of aPower.
- Wiring compartment: The compartment where all electric terminals and communication cable terminals are installed.
- Cable conduit hole 1: Used to keep the power cables in position. A 1" electrical conduit may be used if the hole-plug 1 is removed.
- Cable conduit hole 2: Used to keep the signal cables in position. A ½" electrical conduit may be used if the hole-plug 2 is removed (If a signal cable hole is needed).
- Air outlet: Outlet where heat is taken away and must NOT be blocked.
- Wiring compartment: The compartment where all electric terminals and communication cable terminals are installed.
- Feet: Support the aPower.

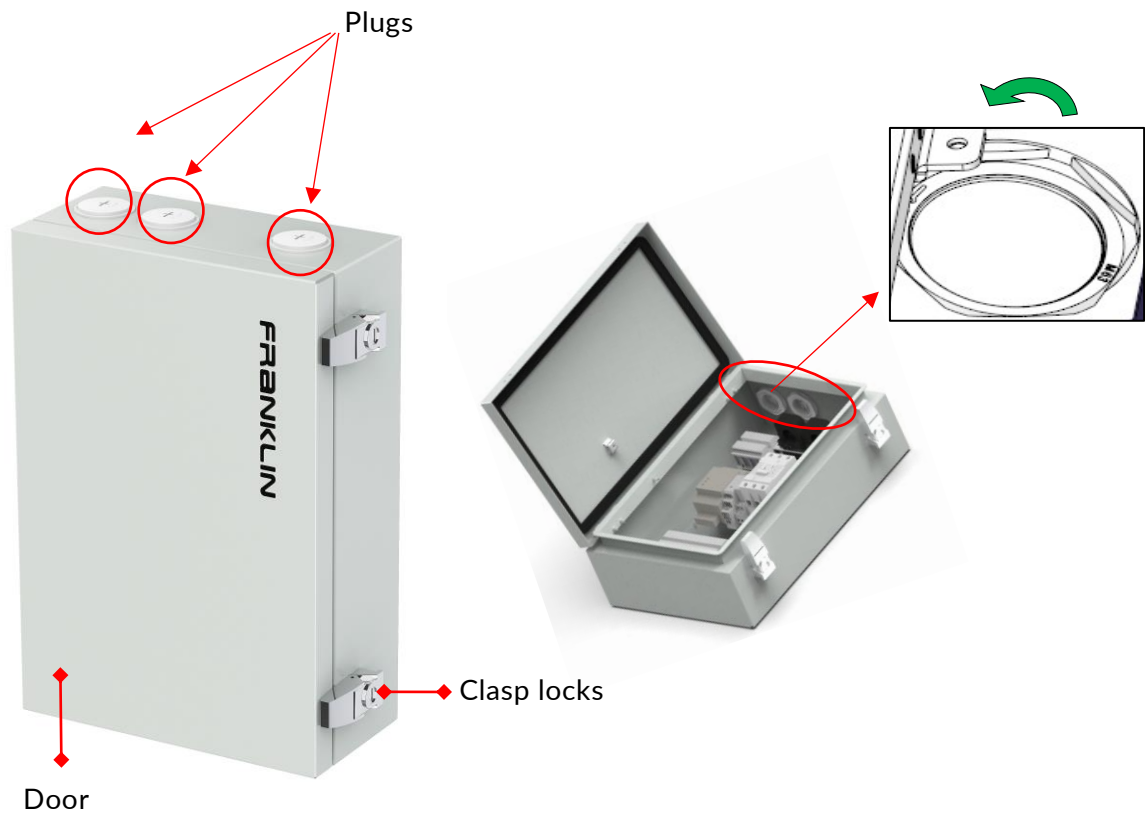
Environmental Specifications		
Operation Temperature Range		-4 °F-122 °F (-20 °C-50 °C)
Derated Temperature Range		113 °F-122 °F (45 °C-50 °C)
Recommended Temperature		32 °F-86 °F (0 °C-30 °C)
Storage Duration		
Allowable Temperature Range	-22 °F-14 °F (-30 °C- -10 °C) 113 °F-140 °F (45°C-60°C)	≤ 24 hours
	14 °F-113 °F (-10 °C-45 °C)	≤ 9 months
Installation Environment		
Indoor and Outdoor Shielded		
Altitude (maximum)		
9843 feet (3000 m)		
Physical parameters		
Dimensions (W x H x D)		29.5 in. x 45.3 in. x 11.4 in. (750 mm x 1150 mm x 290 mm)
Weight		395 lb (179 kg)

## Optional Components

### aPbox

The aPbox can be used to measure the amount of electricity generated by a PV system, and can also be used as a disconnect to sever the connection to the PV system when the photovoltaic over-generation is triggered. It supports access of up to two PV systems with a total current of no more than 65A.

<b>Electrical Specifications</b>	
Nominal Voltage	120/240 VAC, split
Frequency	60 Hz
Rated Output Current	1 circuit, max 65 A
Rated Input Current	2 circuits, max 65 A total
<b>Mechanical Specifications</b>	
Dimensions (W x H x D)	11.8 in. x 17.7 in. x 5.9 in. (300 mm x 450 mm x 150 mm)
Weight	21.2 lbs. (9.6 kg)
Mounting Options	Wall mount (Indoors/Outdoors)
<b>Environmental Specifications</b>	
Operating Temperature Range	-4 °F-122 °F (-20 °C-50 °C)
Storage Temperature Range	-22 °F-140 °F (-30 °C-60 °C)
Operating Humidity (RH)	0-100 %
Maximum Altitude	9843 feet (3000 meters)
Type of Enclosure	NEMA 3R
<b>Compliance Information</b>	
Compliance	FCC 



- Door: Protection cover.
- Clasp locks: To open or close the door.
- Plugs: Cable access.



## Operating Modes

The FHP system supports several operating modes, including Emergency Backup, Self-Consumption, and Time of Use.

### Emergency Backup Mode

When the FHP system operating mode is set to the Emergency Backup, the FHP system will prioritize charging the aPower battery to 100 % State of Charge (SOC) from solar and the utility grid.

In the event of a grid failure, the aPower battery will automatically power the household loads. As soon as the grid is restored, the system will automatically return to charging the aPower battery.

### Self-Consumption Mode

When the FHP system operating mode is set to the Self-Consumption, the FHP system stores the excess electricity generated by the solar system after powering for the household loads in real-time. If the solar production is insufficient to power all the household loads, the FHP system will discharge as a supportive power source, thus reducing the amount of electricity imported from the grid.

If the SOC value of the backup reserve is set 100 %, the FHP system will start charging to full power (aPower battery actual SOC value = 100 %) from solar and does not discharge. In the event of a grid failure, the FHP system will power the household loads.

### Time of Use Mode

If the electricity rate in the homeowner's area changes throughout the day, based on demand, the homeowner can select the Time of Use mode to customize the on-peak and off-peak times according to the electricity rate. The FHP system will select solar and aPower battery power during peak rate periods. During the off-peak periods, the system will use power from the grid, the PV system, and the batteries in balance according to household loads.

If the SOC value of the backup reserve is set 100 %, the FHP system will start charging to full power (aPower battery actual SOC value = 100 %) from solar on off-peak period and does not discharge. In the event of a grid failure, the FHP system will power the household loads.

## Key Functions

### Storm Hedge

When the Storm Hedge function is enabled, the FranklinWH App will receive a weather forecast from the local authority about a serious weather event, send a warning message via the app. Then the Franklin Home Power system will automatically enter emergency backup mode to power household loads during the weather event. When the extreme weather passes, the Franklin Home Power system will automatically revert to the previous settings.

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**NOTE:**

The Storm Hedge function may be enabled under both the Self-Consumption and Time of Use modes.

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### Emergency Stop

In an emergency, manually turn off the external Emergency Power Off (EPO) switch, if installed. Otherwise remove the EPO plug. The Franklin Home Power system shuts down after the EPO is triggered.

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**NOTE:**

After the emergency shutdown, the home will lose power. When the emergency issue has passed, reset the EPO switch/plug to restore home power supply.

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### On-grid to Off-grid

When the grid fails or is abnormal (for example, under-voltage “brownout,” overvoltage, or abnormal frequency), the Franklin Home Power system automatically switches to the off-grid mode. When off-grid, the solar, generator (if connected) and Franklin Home Power system will power the household loads.

### Off-grid to On-grid

The Franklin Home Power system automatically switches to the on-grid mode when the grid is restored. The grid, solar system, generator (if connected) and Franklin Home Power system will power the household loads.

### Photovoltaic Over-Generation Protection

If the Franklin Home Power system is connected to the grid but is not allowed to export solar production to the grid, or when the home is off-grid, the photovoltaic over-generation protection function will be enabled when the photovoltaic output power is greater than the sum of the absorbable and load power of the Franklin Home Power system. The photovoltaic system will automatically be disconnected. When the photovoltaic output power is lower than the sum of the recharging power and load power of the Franklin Home Power system, the photovoltaic system will automatically be reconnected to the Franklin Home Power system.

### Full Charge Protection

When the Franklin Home Power system is off-grid, the solar system will automatically disconnect as soon as one aPower battery in series is full (SOC = 100 %). After the Franklin Home Power system meets the recovery conditions, the solar system automatically connects to it and outputs power.

### Black Start

When solar power is insufficient, the grid power is unavailable, and the aPower battery available power is exhausted, the Smart Circuits will be automatically disconnected and the system enters sleep mode, waiting for a black start attempt.

#### Automatic Black Startup

The system will automatically start at specified times every day. If the solar energy supply is sufficient, the electricity generated by the photovoltaic system will charge the aPower battery. If the solar power is insufficient, the system will re-enter sleep mode, waiting for the next automatic startup.

#### Manual Black Startup

When the solar energy supply is sufficient, you can manually start the system instead of waiting for the automatic black startup. Manually turn off the round button switch on the side of the aPower, turn it back on 20 seconds later, and the system will be started.



#### NOTE:

- Repeated startup attempts may result in system lockdown. In order to increase the success rate of black startup, please make sure that the heavy electrical loads have been turned off, until the aPower is charged to 20 % SOC or higher.
  - If the grid is restored when the system is in sleep mode, the system will start immediately.
-

## Smart Circuits

Franklin Home Power system provides three Smart Circuits which can be controlled with the FranklinWH App based on their personalized needs. This helps minimize household expenses while on-grid and saves battery consumption while off-grid.

### On-grid

Based on local peak-valley settings and personal habits (such as pumping water into the swimming pool or charging the EVs), users may set a time plan for economical power usage through the FranklinWH App. One or two time periods may be set for every 24 hours, to achieve the most economical use of electricity for Smart Circuits.

### Off-grid

Users may control the on/off status of Smart Circuits by creating a time plan and setting a State of Charge (SOC) threshold. Users may set a SOC threshold (between 6 % and 100 %) based on the backup sustainability of the Smart Circuits on the FranklinWH App, where a lower SOC value means a longer backup period for the Smart Circuit. When the actual SOC falls below the set threshold, or the time is outside the time period set in the time plan, the Smart Circuit will be turned OFF. When the aPower actual SOC rises above the threshold, the aGate will reconnect the Smart Circuit.

The Smart Circuits will not be reconnected until the aPower actual SOC is 5 % higher than the SOC threshold. For example, if the SOC threshold is set to 25 %, regular backup loads will be connected when the SOC reaches 25 %, but the Smart Circuits will not be reconnected until the SOC reaches 30 %.

### Manual Control

Users may control the on/off status of the Smart Circuits through the FranklinWH App. The manual control of the Smart Circuits on/off status has higher operation priority, so that the current time schedule can be overridden, disabled, and reactivated in the next time period.

The Smart Circuits Module can remotely control the on/off status of three Smart Circuits, which may be set and controlled separately. Smart Circuit 1 and Smart Circuit 2 may be set flexibly based on user needs and the configuration on the FranklinWH App, choosing two 1-pole breakers or one 2-pole breaker, while Smart Circuit 3 must work with one 2-pole breaker. Smart Circuit 3 is only used for 240V loads without a neutral wire. No device requiring a neutral wire should be connected to Smart Circuit 3.

## Generator compatibility

The aGate connects the generator module with the FranklinWH App to provide an intelligent generator-based power backup system. The Franklin Home Power system supports Manual and Auto mode configuration parameters.

### Auto Mode

In Auto Mode, generator access and disconnection can be controlled by a preset state of charge (SOC) value or can be controlled intelligently by setting up the time periods.

#### *SOC Control*

The generator will be activated automatically when the Franklin Home Power system is working in off-grid mode and after battery SOC falls below the set level (20 % default. Adjustable between 10 % and 80 %). The system will activate the generator to power the load, with the surplus power generated sent to charge the aPower.

When there is power supply from the grid or the FHP system battery level reaches the upper SOC (80 % default, adjustable 20-100 %), the generator will be automatically shut off and other sources will power the loads.

#### *Charging Schedule*

Based on their own habits, users may set up a charging schedule through the FranklinWH App for the time periods when power supply from the grid is interrupted. The settings allow up to three non-overlapping time periods in a single calendar day. Once the charging schedule is enabled, when the generator is activated to power the loads, it also charges the aPower. When the charging periods ends, the generator will be shut off.

### Manual Mode

When the power supply from the grid is interrupted, users may manually start/shutdown the generator. For example, when a power outage occurs, the user may start the generator manually before leaving, to charge the Franklin Home Power system in advance, and may shut off the generator via the app before they return home, so that the Franklin Home Power system will take over as the power source. This helps to manage the noise produced by the generator, so that customers may enjoy a quieter home environment.

## aPbox Application

While the aGate has a PV breaker as an optional component, there are some situations in which the PV system cannot be connected through the breaker or where there are multiple PV connections needed. In those instances, an aPbox can be used to connect the solar source to the aGate or the grid.

There are two scenarios that define how the external connections with an aPbox are connected.

### PV on the load side of the FHP

Installation of an aPbox is required to meter the production of and cutoff the connection to an individual PV system installed on the load side of the FHP system due to:

- Existing constraints, such as the location of the PV system and the aGate, preventing the PV system connection to the aGate internal PV interface.
- Multiple PV systems on-site prevent a distinct PV system from being connected to the aGate.
- The total PV system output power exceeding the power rating of the aGate internal PV interface.
- The total amount of the PV production exceeds the aPower energy capacity.

One aGate supports up to two aPbox connections on the load side. The FHP system controls the PV system connection according to whether the photovoltaic over-generation in the off-grid mode.

### PV on the line side of the FHP

The installation of an aPbox is to monitor the generation of the PV system and provide data to the FHP system.

In this scenario, one aGate only supports one aPbox connection.



#### NOTE:

When there is a grid outage, the line side separated PV system will disconnect from the grid and shut down.

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## Heating film functionality

FHP system can operate normally in low temperatures with built-in heating film in the aPower battery pack.

### **How to maintain normal battery performances in low-temperatures?**

There are 16 temperature sensors employed in the Franklin battery pack to monitor the temperature of each battery cell in real time, while heating film is attached to each battery surface. aGate decides whether to turn on the heating film function when the battery temperature is lower than the starting threshold, depending on the battery capacity as well as charge/discharge requirements. The heating film function will be turned off once the battery temperature reaches the set value. Thus the battery can operate normally within the specified temperature range.

### **How does heating film function in low-temperatures?**

There are 4 pieces of heating film attached in the battery pack, each of which is rated at 100 W, powered by the DC side of the battery. Heating film can work at either heating mode or keep-warm mode. The heating film starts heating the battery when the battery temperature is below 6 °C until the battery temperature rises to 10 °C, then stops heating and turns to keep-warm mode, maintaining the battery temperature within 6 °C -10 °C. The power consumption of the heating film is directly related to ambient temperature i.e., the colder the environment, the faster the battery dissipates heat, resulting in longer heating time and more power loss.

### **What impact will the low temperatures bring?**

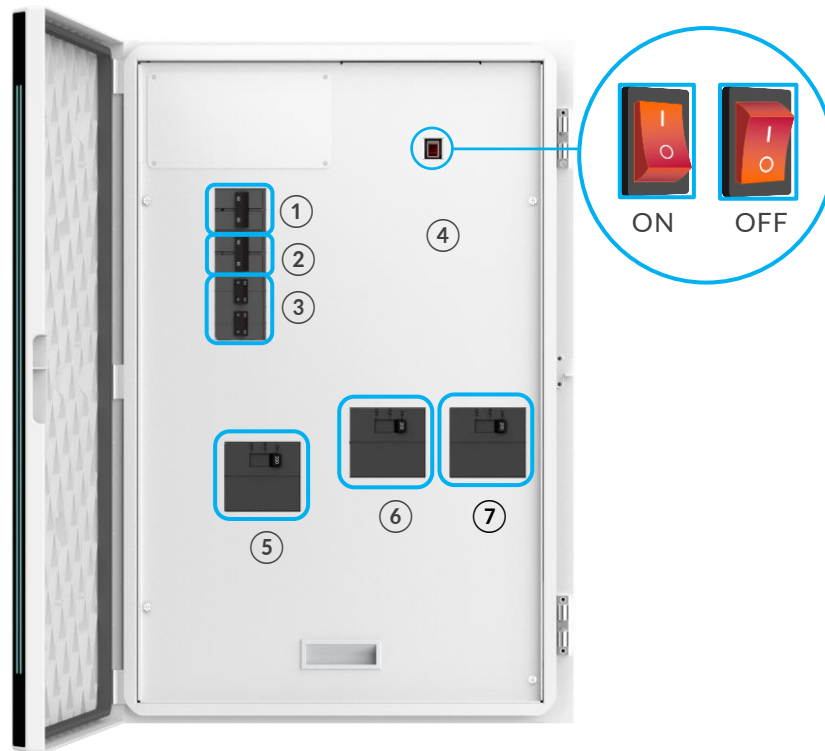
The battery Round Trip Efficiency (RTE) becomes lower as the battery available capacity is reduced in low temperatures due to the natural chemical characteristics of lithium-ion batteries, as well as the power loss caused by the heating film. When the ambient temperature drops too low, such as -20 °C, the heating function of the battery may fail to maintain the required operation temperatures, resulting in battery shutdown or failure.

## System Operation

The Franklin Home Power system can be operated locally or remotely, but local operation is preferred for maintenance and inspection. It is recommended that the Franklin Home Power system be restarted and maintained locally. During maintenance or inspection, local operation must be used to ensure circuit safety.

### Startup and Shutdown Steps

#### Switch/breakers on aGate

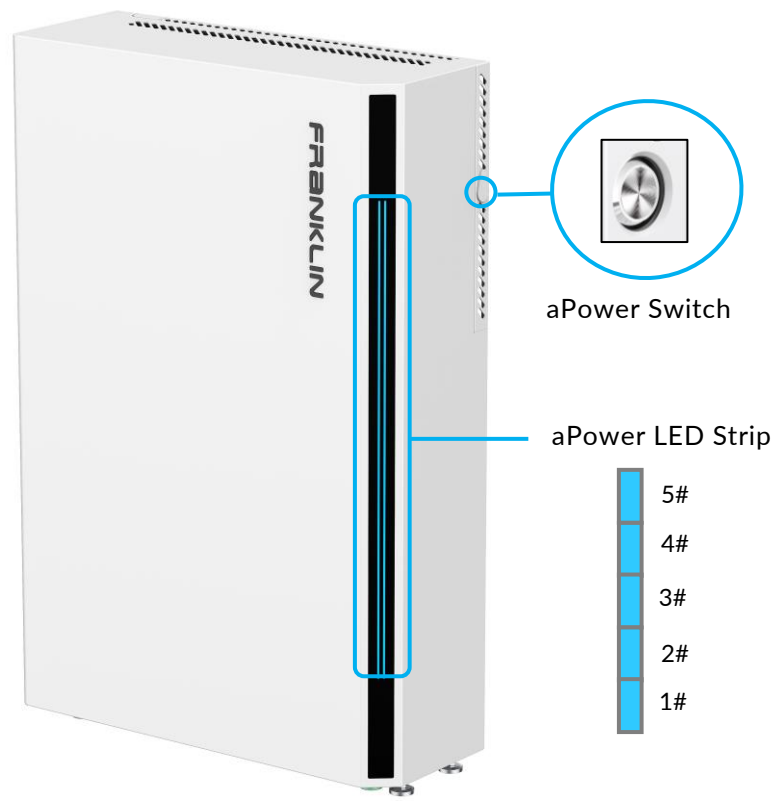


- ① Solar Breaker
- ② aPower Breaker
- ③ Smart Circuit Breakers
- ④ aGate Power Switch
- ⑤ Backup Breaker
- ⑥ Grid Breaker
- ⑦ Generator Breaker

**\*Note:** The circuit breaker are optional parts and must be provided by the installer.



The aPower power switch and LED strip

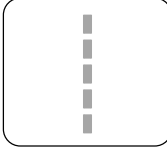
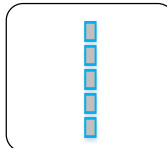
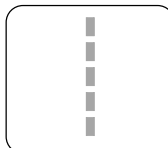


aPower LED Strip lighting descriptions

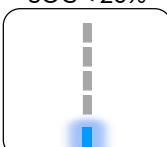


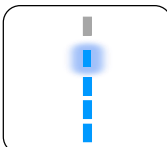
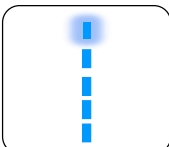
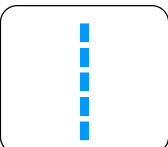
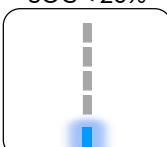


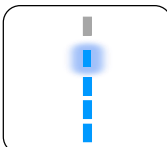
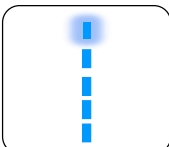
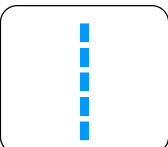
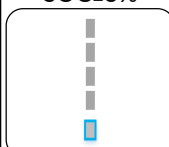
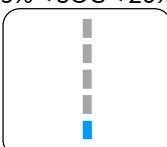
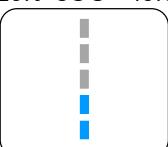
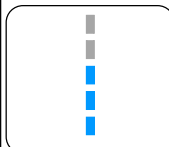
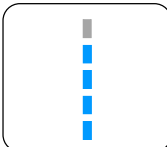
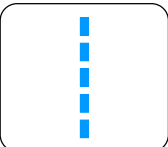
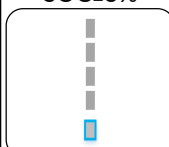
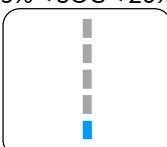
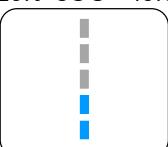
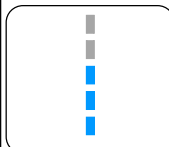
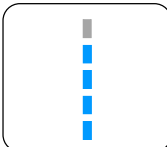
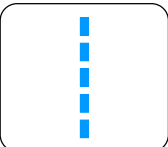
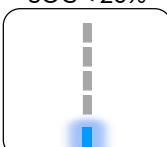


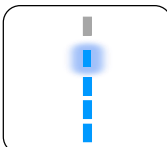
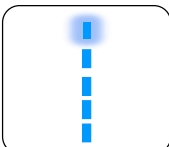
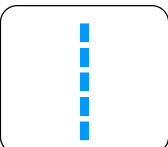
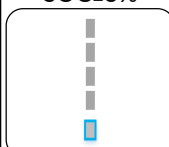
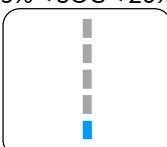
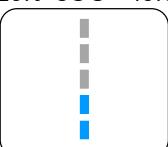
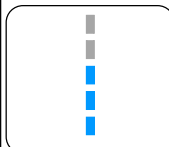
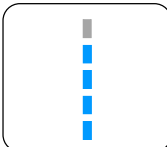
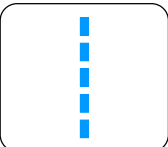
### LED state

<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: gray; margin-right: 5px;"></span> OFF</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: blue; margin-right: 5px;"></span> Solid</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid blue; background-color: blue; margin-right: 5px;"></span> Pulsing</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid blue; margin-right: 5px;"></span> Flash</li> </ul>	<p>Pulsing: 10 second cycle from off, brightening to fully lit.</p> <p>Flash: Alternating ON/OFF, once per second for aPower X failure, ON for 400ms and OFF for 2100ms during discharging, standby and on-grid shut-down.</p>
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------


  

<p><b>Booting</b></p>  <p>After the aPower X is powered on for five seconds, the five strips flash every second. After one minute, the aPower X is initialized and enters the standby mode.</p>	<p><b>aPower X failure</b></p>  <p>All five strips flash synchronously once per second, indicating an aPower X failure.</p>	<p><b>Off-grid shut-down</b></p>  <p>When the aPower X is turned off while disconnected from the grid, all five strips will go out.</p>
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<p><b>Charging</b></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center;"> <p>SOC &lt; 20%</p>  </td> <td style="width: 33%; text-align: center;"> <p>20% ≤ SOC &lt; 40%</p>  </td> <td style="width: 33%; text-align: center;"> <p>40% ≤ SOC &lt; 60%</p>  </td> </tr> <tr> <td style="width: 33%; text-align: center;"> <p>60% ≤ SOC &lt; 80%</p>  </td> <td style="width: 33%; text-align: center;"> <p>80% ≤ SOC &lt; 100%</p>  </td> <td style="width: 33%; text-align: center;"> <p>SOC = 100%</p>  </td> </tr> </table>	<p>SOC &lt; 20%</p> 	<p>20% ≤ SOC &lt; 40%</p> 	<p>40% ≤ SOC &lt; 60%</p> 	<p>60% ≤ SOC &lt; 80%</p> 	<p>80% ≤ SOC &lt; 100%</p> 	<p>SOC = 100%</p> 	<p><b>Discharging/Standby/On-grid shut-down</b></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center;"> <p>SOC ≤ 5%</p>  </td> <td style="width: 33%; text-align: center;"> <p>5% &lt; SOC &lt; 20%</p>  </td> <td style="width: 33%; text-align: center;"> <p>20% ≤ SOC &lt; 40%</p>  </td> </tr> <tr> <td style="width: 33%; text-align: center;"> <p>40% ≤ SOC &lt; 60%</p>  </td> <td style="width: 33%; text-align: center;"> <p>60% ≤ SOC &lt; 80%</p>  </td> <td style="width: 33%; text-align: center;"> <p>80% ≤ SOC ≤ 100%</p>  </td> </tr> </table>	<p>SOC ≤ 5%</p> 	<p>5% &lt; SOC &lt; 20%</p> 	<p>20% ≤ SOC &lt; 40%</p> 	<p>40% ≤ SOC &lt; 60%</p> 	<p>60% ≤ SOC &lt; 80%</p> 	<p>80% ≤ SOC ≤ 100%</p> 
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## Startup Steps

1. Ensure that the grid breaker, the generator breaker, the backup breaker, and the solar breaker are all in the OFF position (for initial use).
  2. Ensure that the aGate power switch on aGate is in the ON position.
  3. Turn on the aPower breaker.
  4. Press the aPower switch to ensure that the switch is on. When the aGate power switch indicator on the aGate lights up, wait until the bottom of the LED strip on the aPower lights up, which indicates that the aGate is successfully powered without connecting to the grid.
  5. After about 60 seconds, the photovoltaic relay turns on automatically. If the aPower has power output, that indicates that the aPower has successfully started without connecting to the grid.
  6. If the grid is normal, turn on the aGate grid breaker. After the grid relay is turned on, the grid icon on  the FranklinWH App homeowner home screen will light up, indicating that the aPower is successfully connected to the grid.
  7. Turn the generator breaker (if the Generator Module is installed) and solar breaker to the ON position.
  8. Turn on the Smart Circuit breakers (if the Smart Circuits Module is installed), the backup breaker and the breakers in the load panel.
- 

**NOTE:**

The initial startup process includes steps 1 to 8, while the general restart process is as follows: turn off the aGate power switch and the aPower switch, wait for 5 seconds after the LED strip on the aPower go out, then turn on the aGate power switch, and follow the instructions in steps 3 to 8.

---

### Shutdown Steps

1. Turn off the grid breaker if connected to the grid.
  2. Press the aPower switch on all aPower batteries to the OFF position (extended, flush with the case), and each LED strip will go out.
  3. Turn off the aPower breaker.
  4. Turn off the solar breaker.
  5. Turn off the generator breaker if connected to a generator.
  6. Turn off the Smart Circuits and backup breakers if applicable.
  7. Turn off the aGate power switch inside the aGate.
- 

**NOTE:**

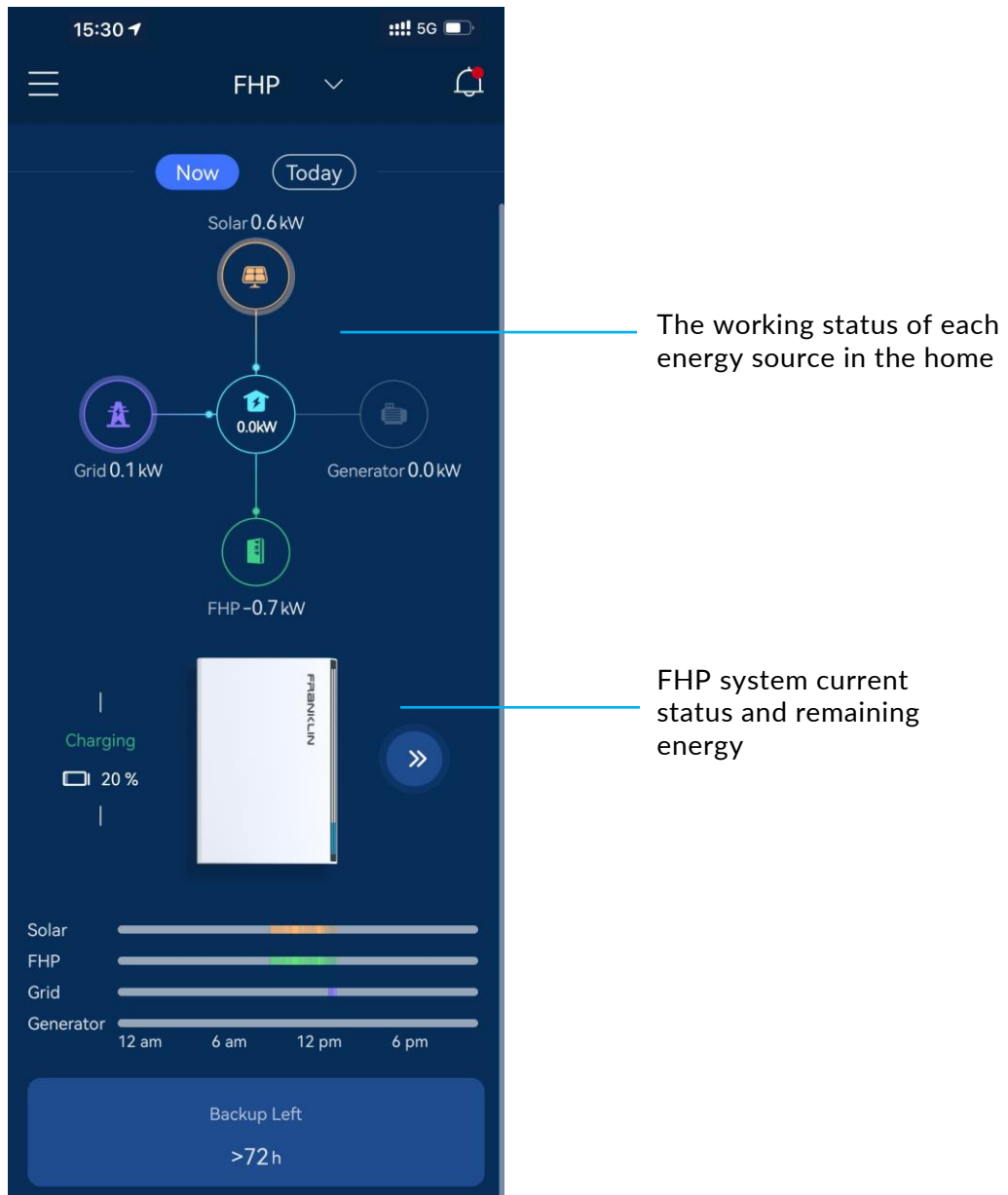
If the family plans to be gone for a long time, please keep the grid or solar power, aPower breaker, aPower switch and aGate power switch on. Otherwise, the energy stored in aPower will eventually be depleted, resulting in a startup failure.

---

## FHP Remote Operation and Monitoring

The FranklinWH App provides remote operation and monitoring of the whole house energy system at anytime from anywhere. It allows personalized household electricity plans to make your life easier.

The home screen of the FranklinWH App displays real-time data from the Franklin Home Power system to help you understand the working status of your home power system. Please refer to the *FranklinWH App User Manual* for more information.



*\*Note: If the generator is disabled, the generator icon will not appear.*

## Common Problems and Solutions

No.	Problems	Solutions
1	aPower LED on the aPower keeps flashing once per second.	<p>Check if the aGate EMS module is working normally:</p> <ul style="list-style-type: none"> <li>i. Check that the aGate power switch is ON (closed) and the indicator is lit.</li> <li>ii. Check if the aGate is connected to an external EPO (Emergency Power Off) switch. If yes, check that the EPO switch is closed.</li> <li>iii. Check that the aPower breaker on the aGate is in the ON position.</li> </ul>
2	aPower starts off-grid and fails to discharge.	<p>Check whether the aPower breaker on the aGate is in the ON position. If not, flip it on and then check the aPower status after 1 minute. If aPower discharges properly, the equipment is back to normal.</p>
3	After startup, the aGate failed to activate the Wi-Fi access point (AP).	<p>Turn off the aGate power switch and turn it on after 30 seconds. Scan for network broadcast by the aGate on your mobile phone. If your mobile phone is connected to it, the Wi-Fi access point has returned to normal.</p>
4	"Device offline" is displayed on mobile app.	<p>Check whether the aGate communication network is normal:</p> <ul style="list-style-type: none"> <li>i. If the aGate is communicating via hard-wired ethernet, please check the network connectivity.</li> <li>ii. If the aGate is communicating via Wi-Fi, please check the signal strength. The aGate does not currently support 5GHz Wi-Fi network connection. Please ensure that a 2.4GHz Wi-Fi network is available.</li> <li>iii. If a 4G cellular network is used, please check the network conditions at the aGate location. If the signal strength is poor, contact your installer to purchase a 4G cellular network enhancement option.</li> </ul>

No.	Problems	Solutions
5	A prompt of “Low battery, black start attempts” is displayed on the mobile app.	<p>Check whether the grid power is down and whether the solar system is out of operation or there is insufficient sunlight.</p> <ul style="list-style-type: none"> <li>i. Low battery and black start indicate that the battery capacity is very low, the backup power and auxiliary power will be disconnected, and the system will enter sleep mode. Once the system enters sleep mode, it will automatically recover and charge the batteries the next day if there is sufficient sunlight.</li> <li>ii. By default, the system black start times are approximate 10:00, 12:00 and 14:00. There may be some deviations in time in sleep mode.</li> <li>iii. During black start, please turn off all household loads to ensure that Franklin Home Power system can be started normally.</li> <li>iv. Manual black start is also an alternative to automatic.  Manual Start: Turn off the aPower switch on the side of aPower (extended, flush with case), and turn it back on (depressed) 20 seconds later. The system will start up.</li> <li>v. Black start will consume the reserve capacity, it is recommended to attempt a manual start only when there is enough solar production. Otherwise, the system may lock.</li> </ul>
6	A prompt message of “Black start failed” is displayed on the mobile app.	<ul style="list-style-type: none"> <li>i. Check if there are household electrical devices running when the system attempts to start. Ensure that all the household electrical devices are shut down, to help the system successfully start.</li> <li>ii. Check whether the solar system is operating normally and whether there is sufficient sunlight.</li> </ul>

No.	Problems	Solutions
7	<p>“Off-grid overload” is displayed on the mobile app.</p>	<ul style="list-style-type: none"> <li>i. Check if the grid is available.</li> <li>ii. Check if there are large electrical devices running. If yes, shut down the unessential devices to allow the system to operate normally.</li> <li>iii. Due to the special characteristics of the battery, the system power is slightly reduced at temperatures below 50 °F (10 °C) to guarantee the service life of the battery. If an off-grid overload occurs in this case, shut down the large electrical devices to allow the system to operate normally.</li> <li>iv. If the system experienced an off-grid overload during multiple aPower units starting, turn off all electrical devices and turn them back on in sequence after the aPower units have been successfully started.</li> </ul>
8	<p>The system shuts down after an air conditioner or a pump is started.</p>	<ul style="list-style-type: none"> <li>i. Check if the grid is available.</li> <li>ii. During a grid outage, due to the power required to start the air conditioner or pump, the system may shut down while other large electrical devices are running when trying to start the air conditioner or pump. Because of this, it is recommended that you shut off other large electrical devices and restart them after the air conditioner or pump has been successfully started.</li> </ul>



## Technical Support

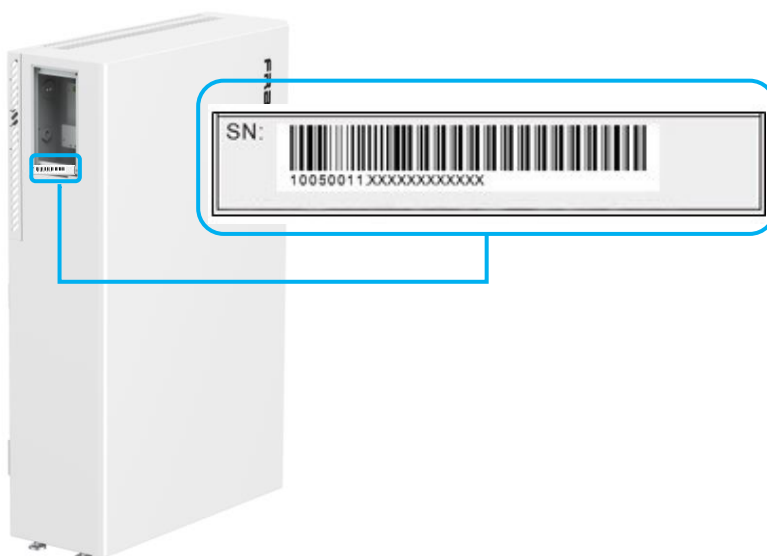
For further support, please contact the installer or FranklinWH service team at: [FranklinWH Support](#). Please be prepared to provide the following information before you contact FranklinWH:

- Owner name
- Your preferred desired contact method (name, phone number, email)
- The serial number of your aGate and aPower (as shown in the figure below)
- A brief description of your problem

### aGate serial number



### aPower serial number



## Emergency Response

In any hazardous situation that may damage health and cause serious injury, follow the recommended actions:

- Evacuate to safe area.
- Contact the 911 as soon as it is safe to do so.

### In case of fire

- Shut off the aPower breaker on the aGate, when it is safe to do so.
- Evacuate to safe area.
- Contact the 911 as soon as it is safe to do so.
- Use approved fire extinguishing devices, if it is safe to do so.

### In case of flooding

- If the wiring sections of an aGate or aPower is submerged, please keep away from the water. It is an electrocution hazard.
- Drain the water to protect your FHP equipment, if it is safe and possible.
- If water reaches the battery, please call your installers for inspection. If the water level is below the battery, please completely dry the site and your FHP equipment before use.

### In case of abnormal noise, odor or smoke

- Check to ensure the air vent of the aPower is not blocked.
- Keep the installation site well ventilated.
- Call your installer for support.



## FranklinWH App User Manual

Version 1.9.0

Issued on: October 30, 2023

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For Australia users please visit [www.franklinwh.com/au/support](http://www.franklinwh.com/au/support) for the latest FranklinWH documents.

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Please read this document carefully to ensure the best reliability of the product and your warranty eligibility. For further information about warranty, please refer to the **FranklinWH Limited Warranty**.

This document is intended for use by professional installation and maintenance service providers only and no statements, information or recommendations in this document constitute any express or implied warranty.

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Please read this document carefully before installing or using the Franklin Home Power equipment. Failure to follow any instructions or warnings in this document may result in damage to the equipment, personal electric shock, severe injury, or even death.

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## Product Information

The Franklin Home Power (FHP) is composed of aPower, aGate and other electrical components. This document applies only to the following products: aPower, aGate and the FranklinWH App.

FranklinWH Energy Storage Inc. (FranklinWH) reserves the right to make any improvements to the product, and the contents in this document shall be subject to updates without further notification.

All images and pictures provided in this Manual are only for demonstration purposes and may differ in detail from the product, based on the product version.

## Feedback

If you have any questions or comments,

For US users please send us an email at: [service@franklinwh.com](mailto:service@franklinwh.com)

For Australia user please send us an email at: [service-au@franklinwh.com](mailto:service-au@franklinwh.com)

## Disposal of Scrapped Products

Scrapped products (including their internal chemicals and electrical materials) should not be disposed of with household wastes. Please refer to your local laws and regulations regarding disposal.



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## FranklinWH App Introduction

The FranklinWH App allows remote management of your Franklin Home Power (FHP) whole-house power management system at any time, from anywhere. You can set and choose personalized energy-saving strategies for your family and enjoy your life with the help of our special features.

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**NOTE:**

Local, physical settings always override app settings. Remote operation via the mobile application cannot be used as evidence of circuit safety, which must be checked and confirmed through on-site inspection. Not performing on-site inspection before work may lead to personal injury or even death.

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To download the FranklinWH App, visit the [App Store](#) or [Google Play](#):

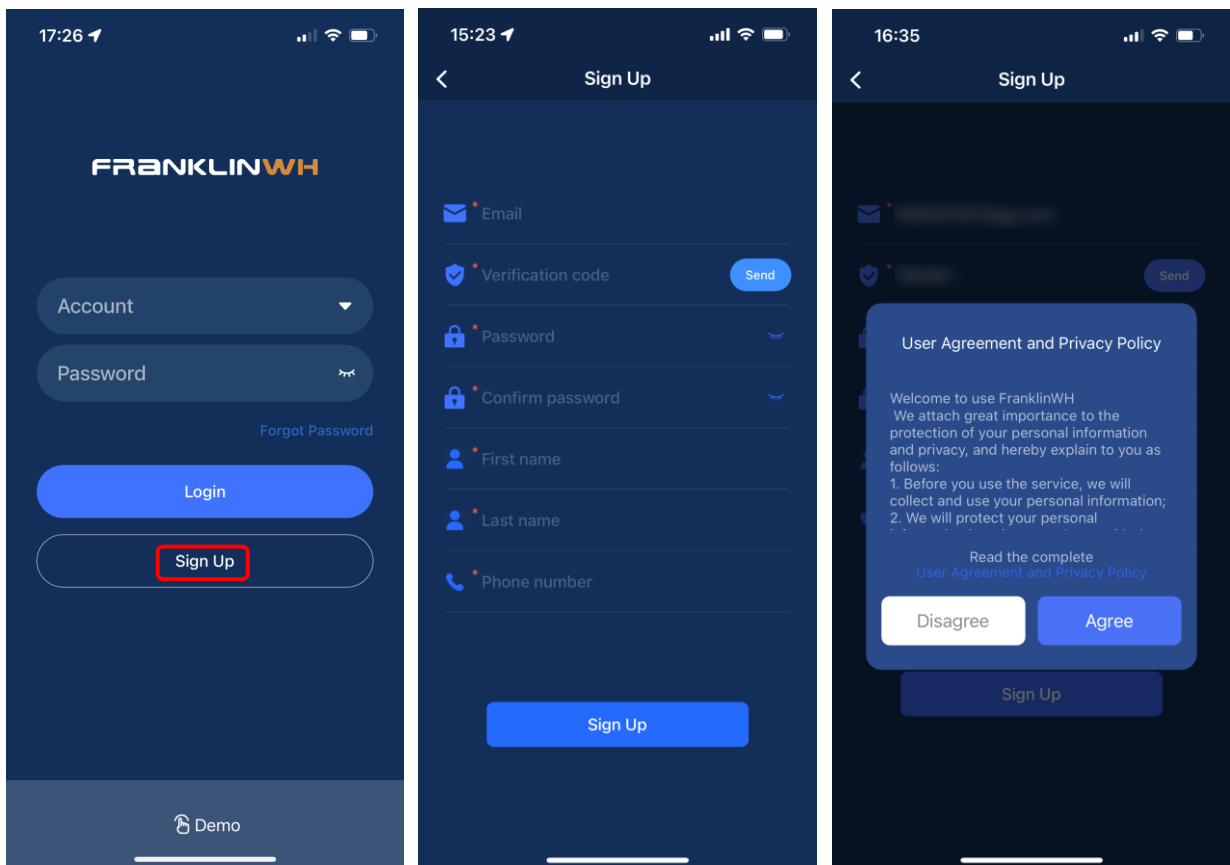


The following operation applies to the FranklinWH App, Version. 1.9.0.

## Login Page

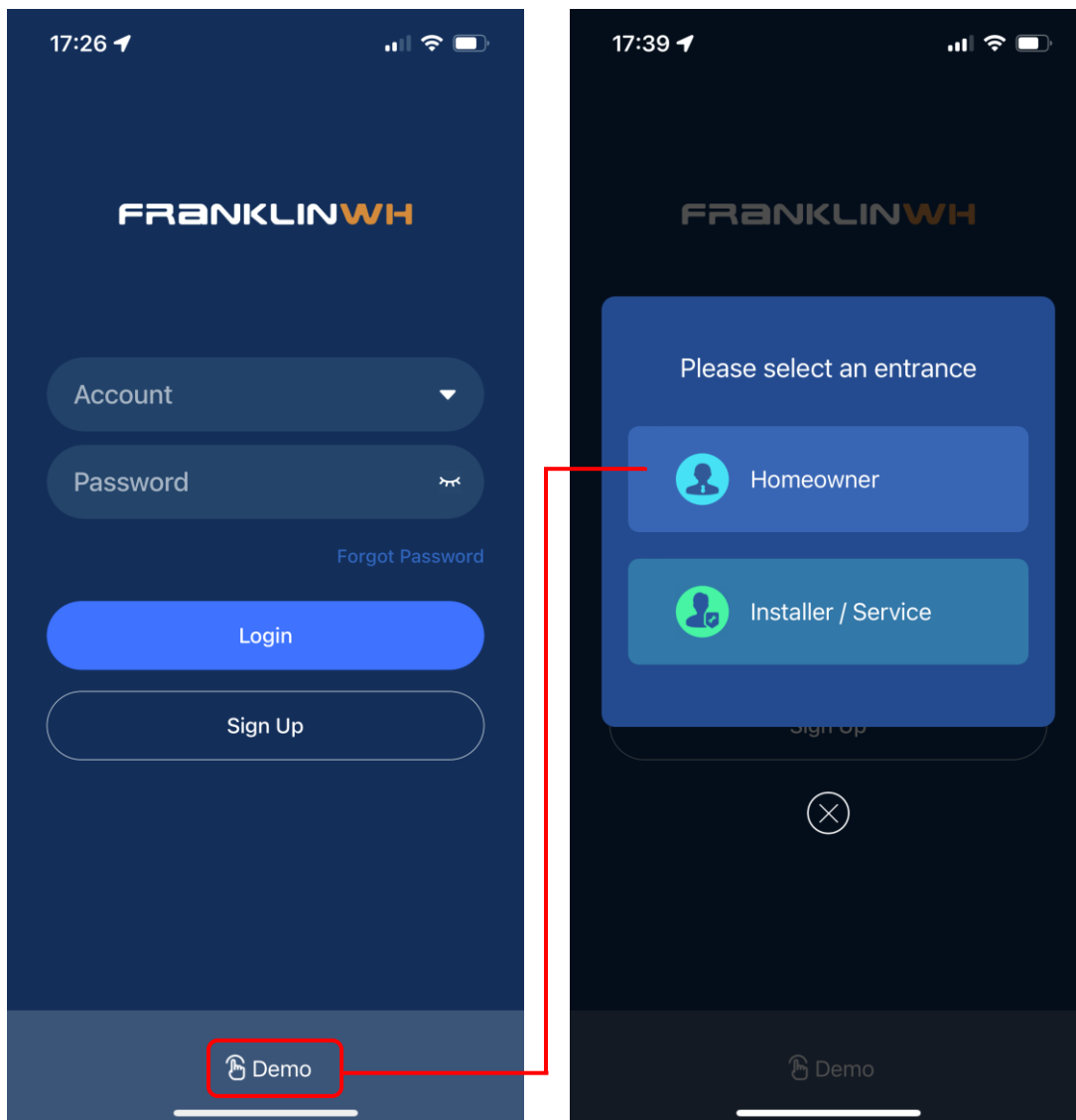
### Sign up

You must sign up before using the FranklinWH App. Open the app and click the **Sign up** toggle button to reach the **Sign up** screen. Input your information and then click **Sign up** to complete the registration process. You need to agree to our **User Agreement and Privacy Policy** before using the app. After signing up, you need to bind your FHP equipment to your account with the assistance of your installation service provider. After the binding operation, you will be able to monitor and operate your FHP remotely with the FranklinWH App.



## Demo

If you wish to see a demonstration system, rather than your own home's FHP performance, click **Demo**, then select **Homeowner** in the option box to view homeowner energy usage data.





## Home Screen

There are two versions of the app home screen, depending on how many aGates are installed in the home. Most homes will only have a single aGate, while some homes will have multiple aGates installed. Refer to the Home Screen section appropriate for your installation.

### Single aGate bound to a household account

#### Home - Now

The home page of the FranklinWH App displays the real-time data of your FHP system under the **Now** option, where you can view the running status of various energy devices in your household.

The screenshot shows the 'Now' view of the FranklinWH app. At the top, there is a status bar with the time 18:05 and signal strength. Below that, the app title 'FHP' is centered. There are two tabs: 'Now' (selected) and 'Today'. A central energy flow chart shows a central house icon with '0.0kW' connected to four sources: Solar (0.0kW) at the top, Grid (5.0kW) on the left, Generator (0.0kW) on the right, and FHP (-5.0kW) at the bottom. Below the chart, a battery icon shows 'Charging' and '45%' SOC. At the bottom, there are four horizontal bars for Solar, FHP, Grid, and Generator, with a time axis from 12am to 6pm. A 'Backup Left >72h' indicator is at the very bottom.

Click the side menu in the upper left corner to access additional options

Click the message icon to enter the notifications page

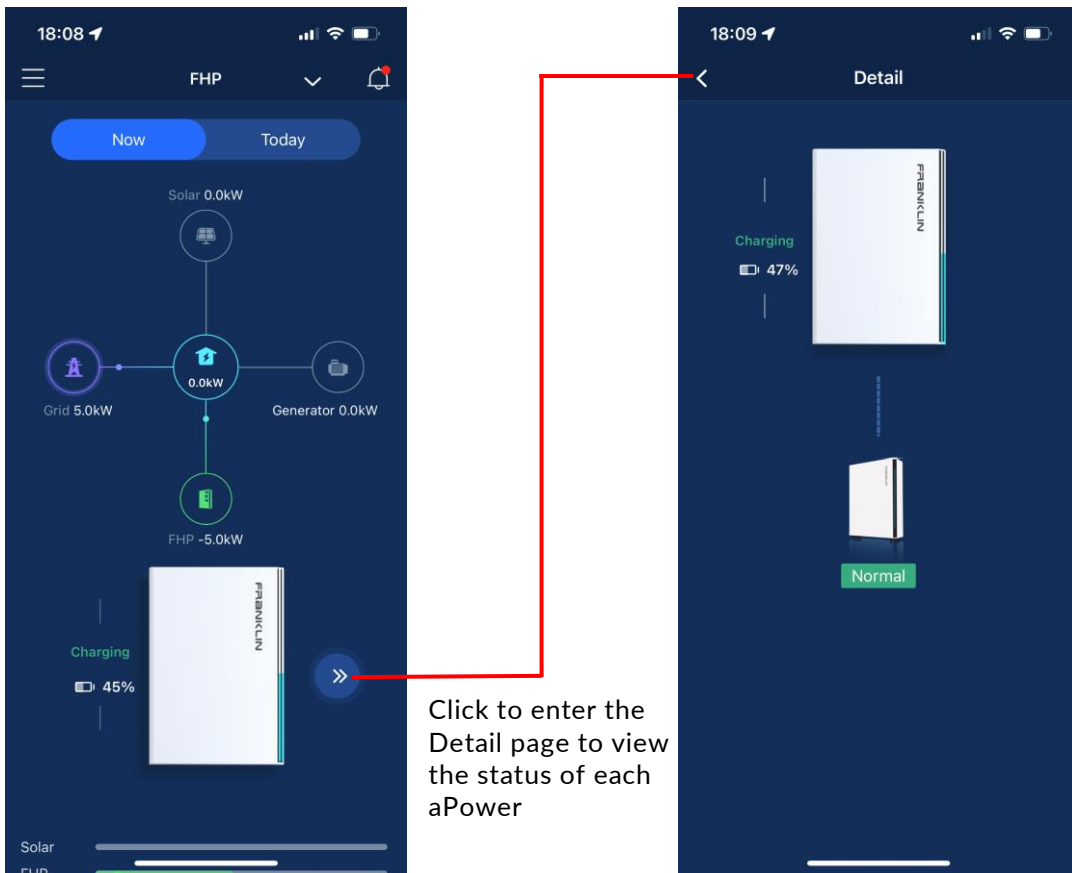
Click here to switch to the **Today** option, which displays load, power and kWh data for various power sources

System energy flow chart shows the status of various power sources

FHP current status and SOC

The maximum period of time for which the FHP reserved power will be able to support the current loads in backup mode, purely through battery power

Shows the work hours and status of various energy sources. Each bar is displayed in color when the FHP, grid, generator and solar systems are active. Each gets darker as the power increases



	Icon	Meaning	Colored	Colorless	Positive value	Negative value
<b>Power Flow interface</b>		Family Load	Online	Offline	Power consumed by loads	-
		FHP	Online	Offline	Discharging	Charging
		Solar	Running	Idle/Power meter failed	Solar power supply	-
		Grid	Running	Idle/Power meter failed	Grid power supply	Feed to grid
		Generator	Running	Idle/Power meter failed	Generator power supply	-

### Home - Today

Click **Today** on the home screen to view the current day's electricity and energy consumption data for your home.

Click the side menu in the upper left corner to access additional options

Click **Now** to view the real-time data of FHP

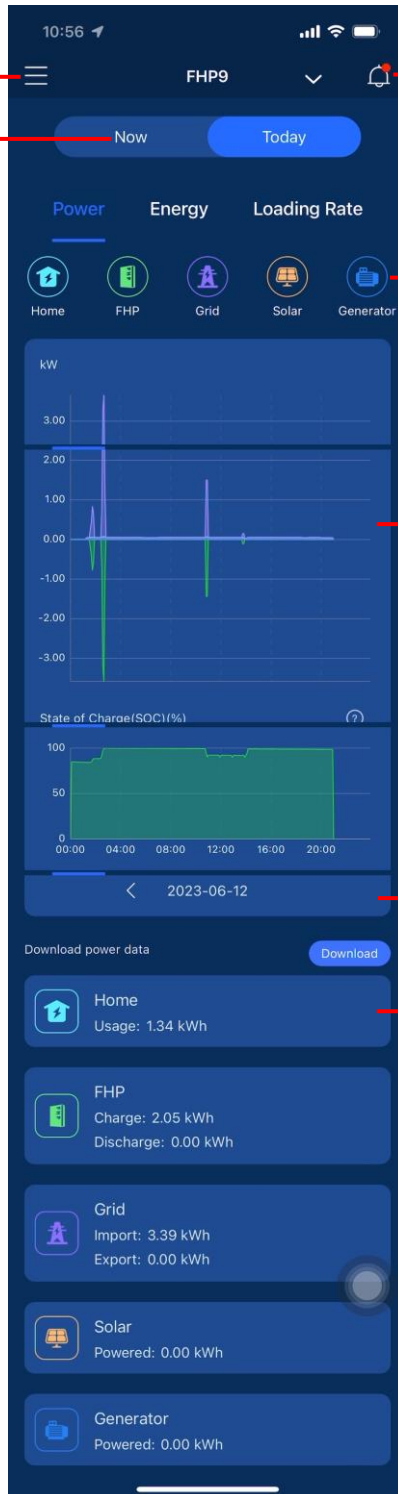
Click the message icon to access the message and notifications page

Click the icons of **Home, FHP, Grid, Solar, and generator** to check the power curve diagram for the corresponding source

Power curve for the day

Click here to view the historical power use data

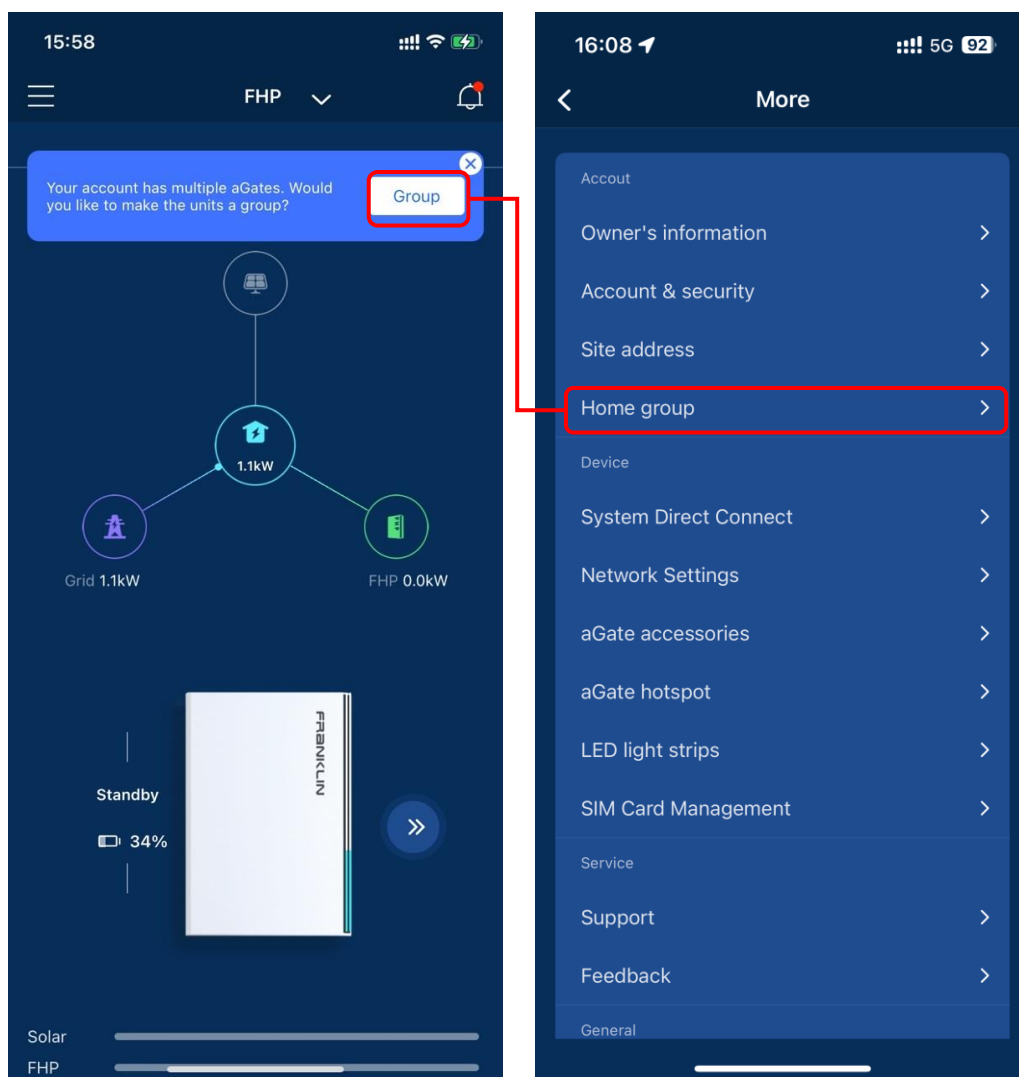
Power used by house loads



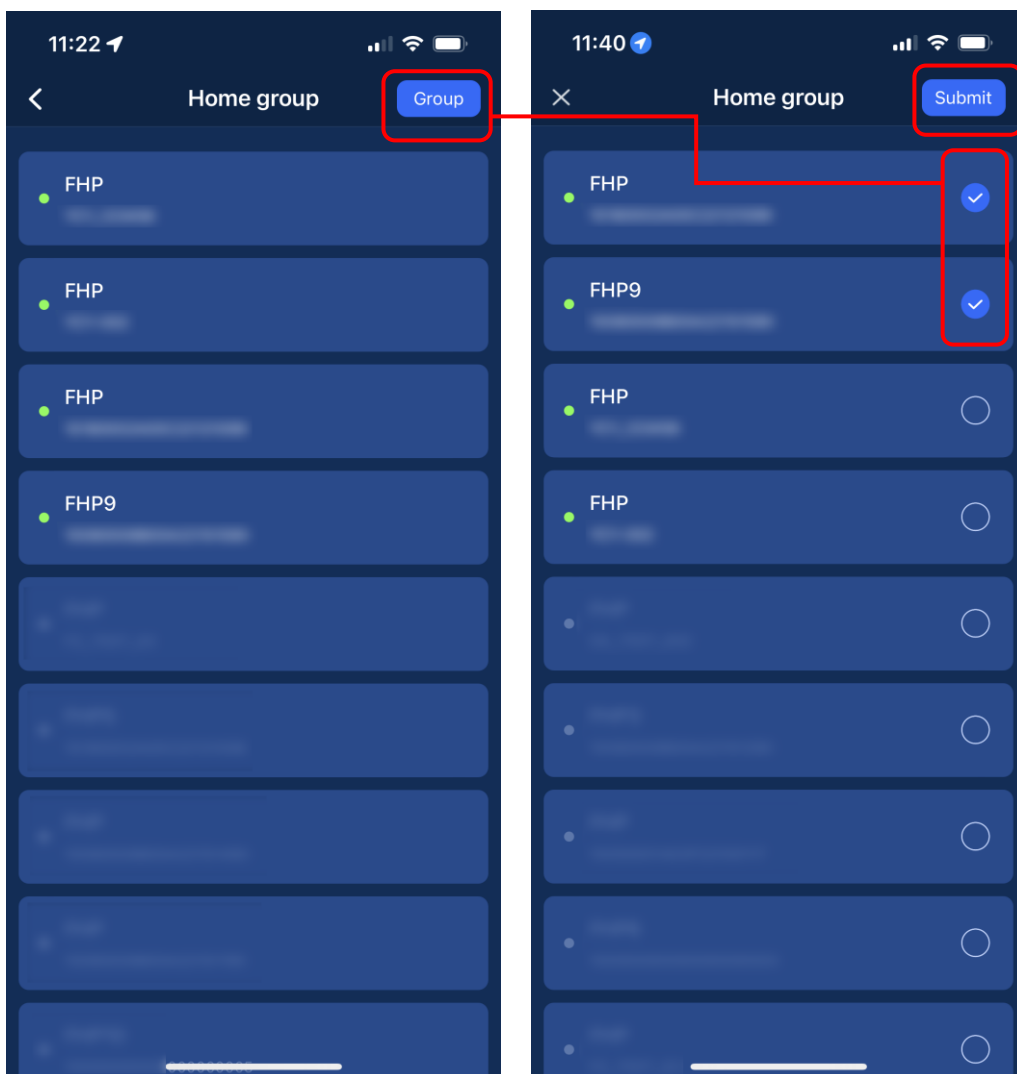
## Multiple aGates bound to a household account

When multiple aGates are bound to the customer account, there will be a prompt box on the home page “Your account has multiple aGates, would you like to make the units a group?”

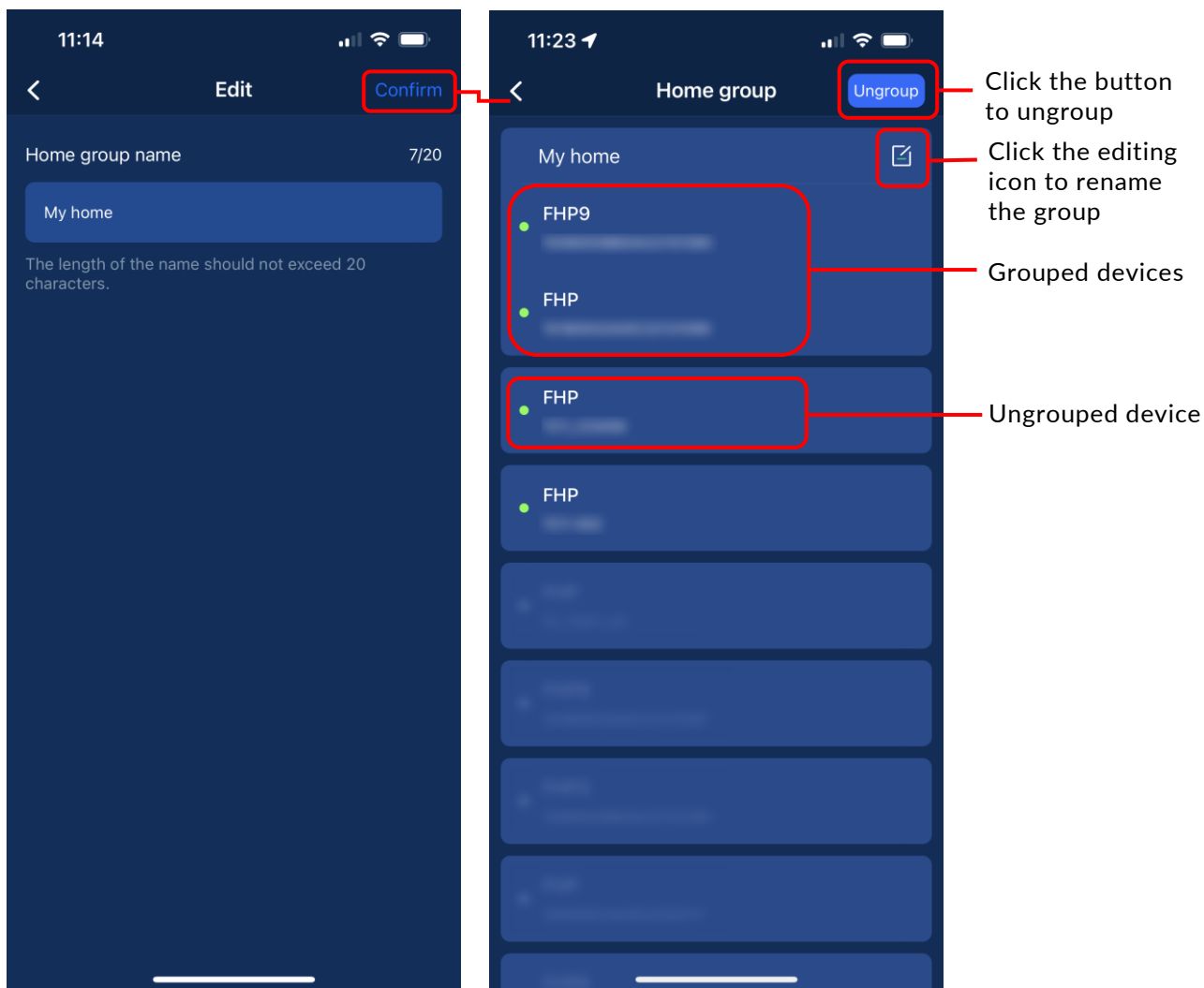
Click **Group** button to the **More** page. Select Home Group to view the aGate list under the user account (shown in the next page).



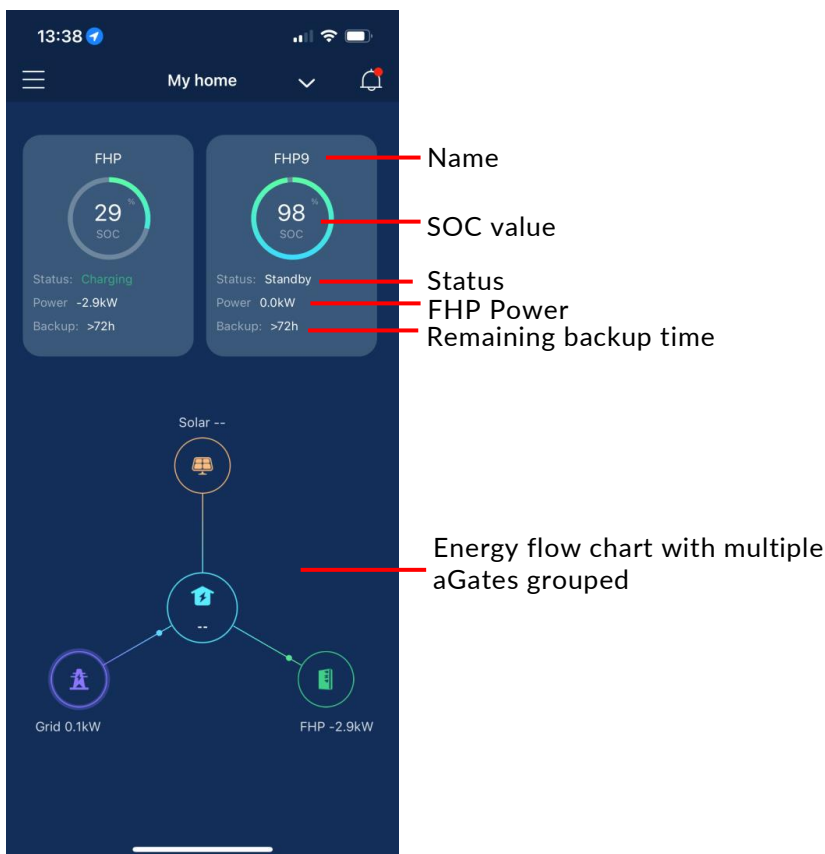
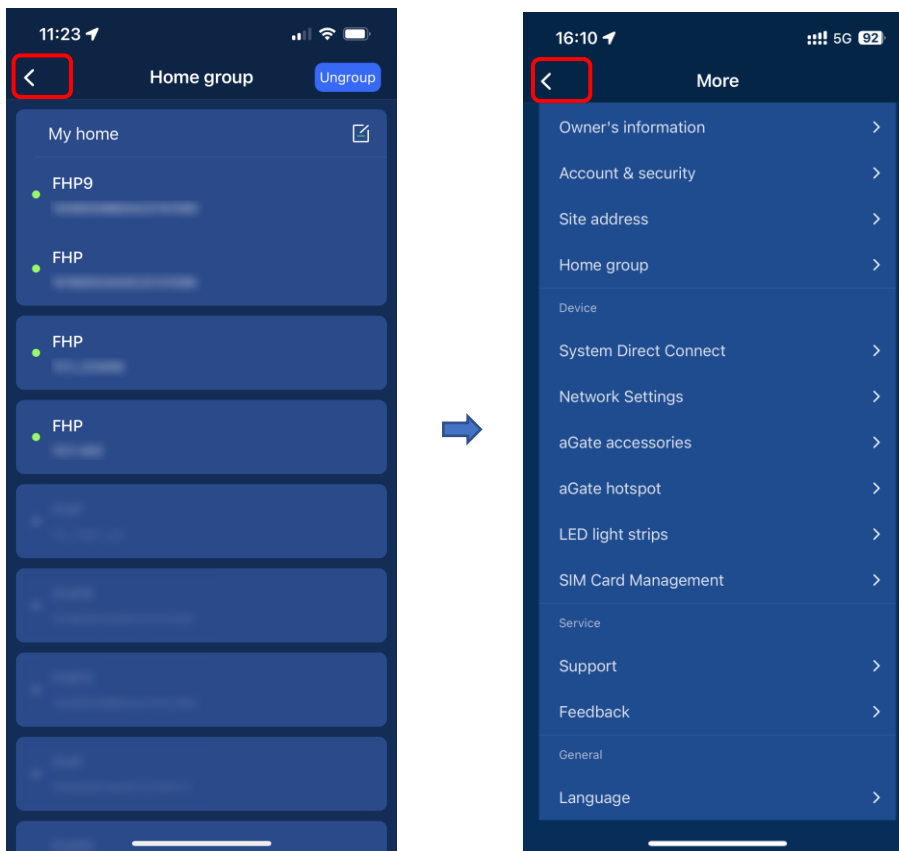
Click the **Group** button on the top right corner then, according to serial number of each aGate, select which devices you want to group. After finishing click the **Submit** button on the top right corner.



Enter a group name. The group name and information will be displayed on the Home Group page where you can rename the group or ungroup as needed.



After grouping, click the return icon on the top left corner, you can view energy data of the systems within the home group on the home screen.



When multiple aGates are grouped, you can enter the home page of each aGate in two ways: 1) Click each aGate displayed in the box in the home screen to enter the respective home page. 2) Click **My Home**, then tap each name in the drop down menu to enter the respective aGate's home page.

**Method 1**  
Click the box to enter the respective home page



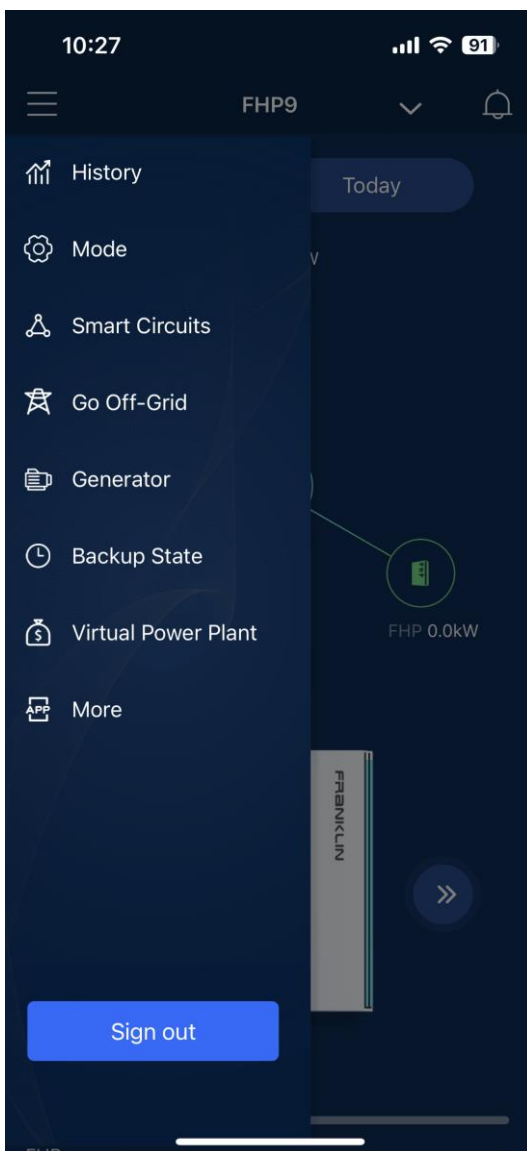
**Method 2**  
Tap each name to enter the respective home page





## Side Menu

Click the menu in the upper left corner of the home page to access multiple management options. **History, Mode, Smart Circuits, Go Off-Grid, Generator, Backup State, Virtual Power Plant** and **More** will be described in the following sections.

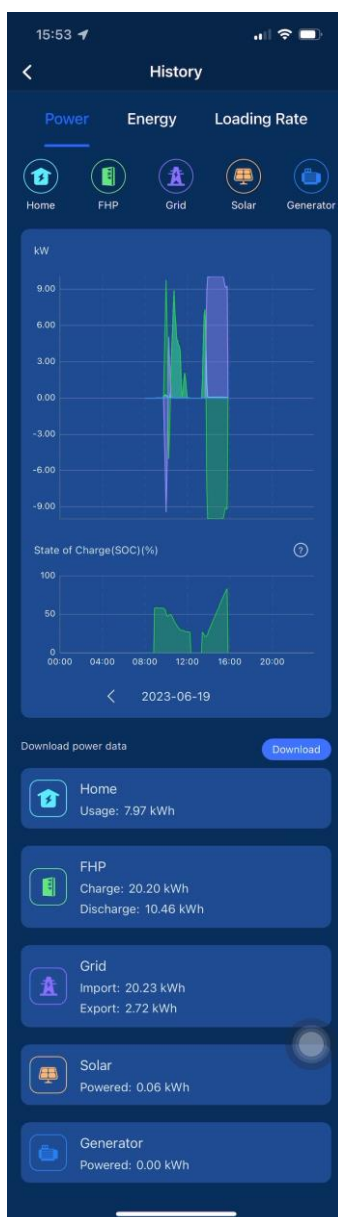


## History

By clicking **History** on the left side menu, you can view the historical power use data and export them to a statement.

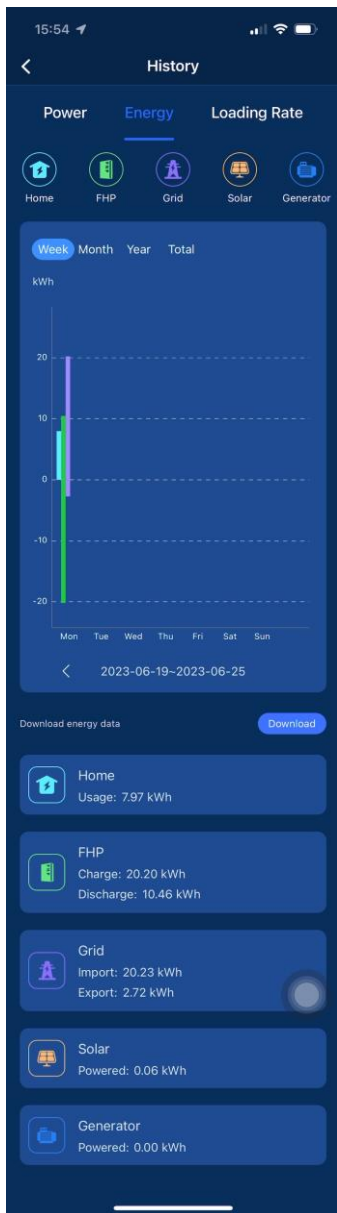
### Power

Click **Power** to view the daily power and SOC (State of Charge) data or jump to a specific day by selecting the desired date. By pressing and holding on the power or SOC curve, you can view the power or SOC data on the selected date. You may zoom in using two fingers to view details and statistics of the power consumption or SOC of the day.



## Energy

Click **Energy** to view the power consumption data by several statistical methods. You can also jump to a specific week/month/year by selecting the desired date and can download to your local device all power consumption data in the selected period.



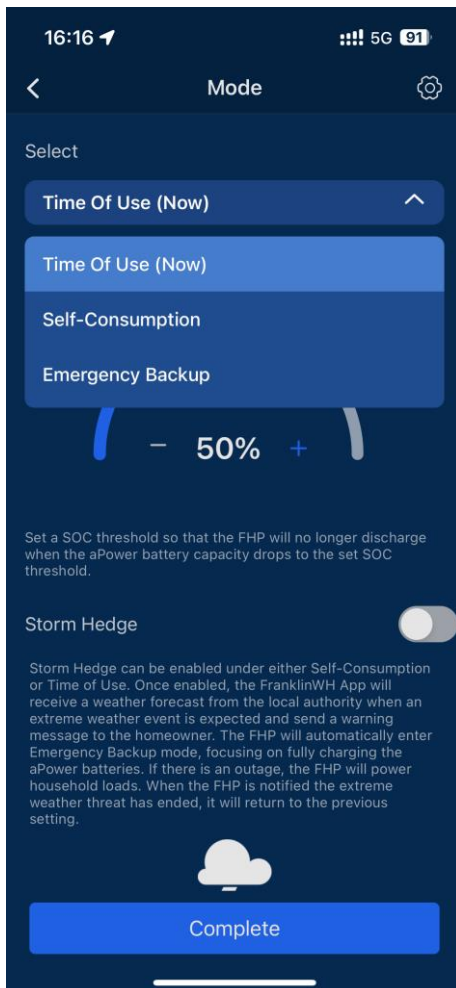
## Loading Rate

Click Loading Rate. This panel shows energy consumption from solar, grid, FHP, and generator.



## Mode

Click **Mode** to select a desired operating mode from Time of Use, Self-Consumption and Emergency Backup modes.

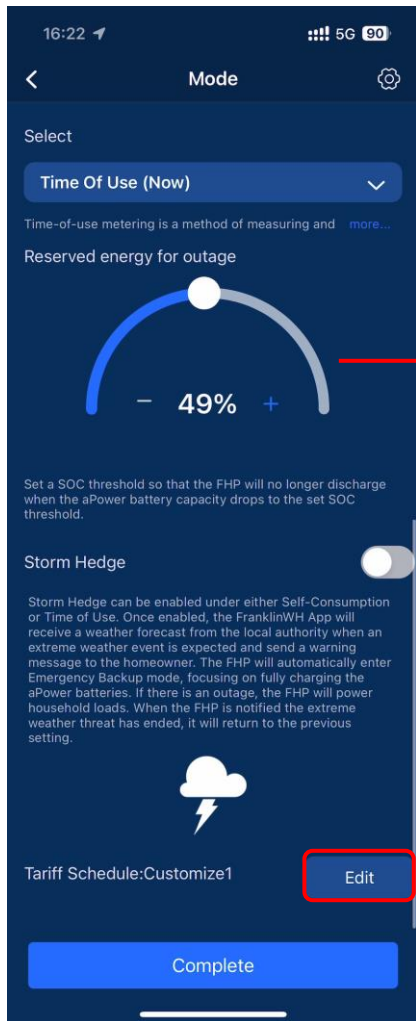


### NOTE

The Self-Consumption option will appear in the mode selector only if you have PV installed and connected to the aGate.

### Time of Use

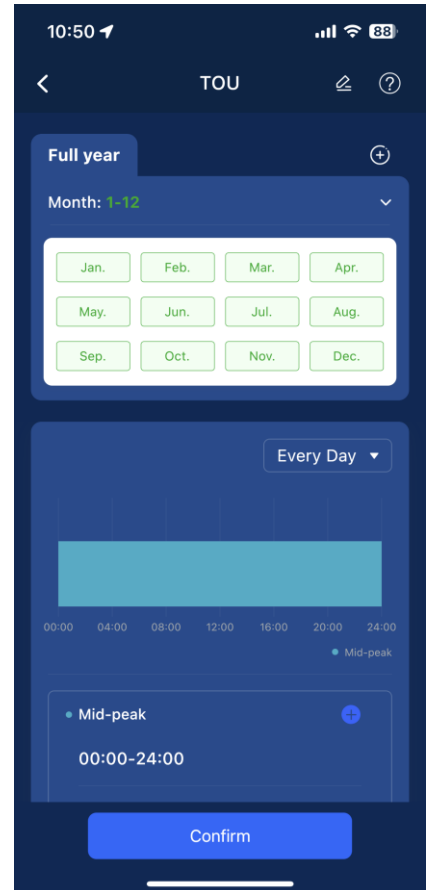
If you choose Time of Use mode, you may set the rate plan according to your own requirements.



Set SOC value for backup power

Enable/Disable Storm Hedge

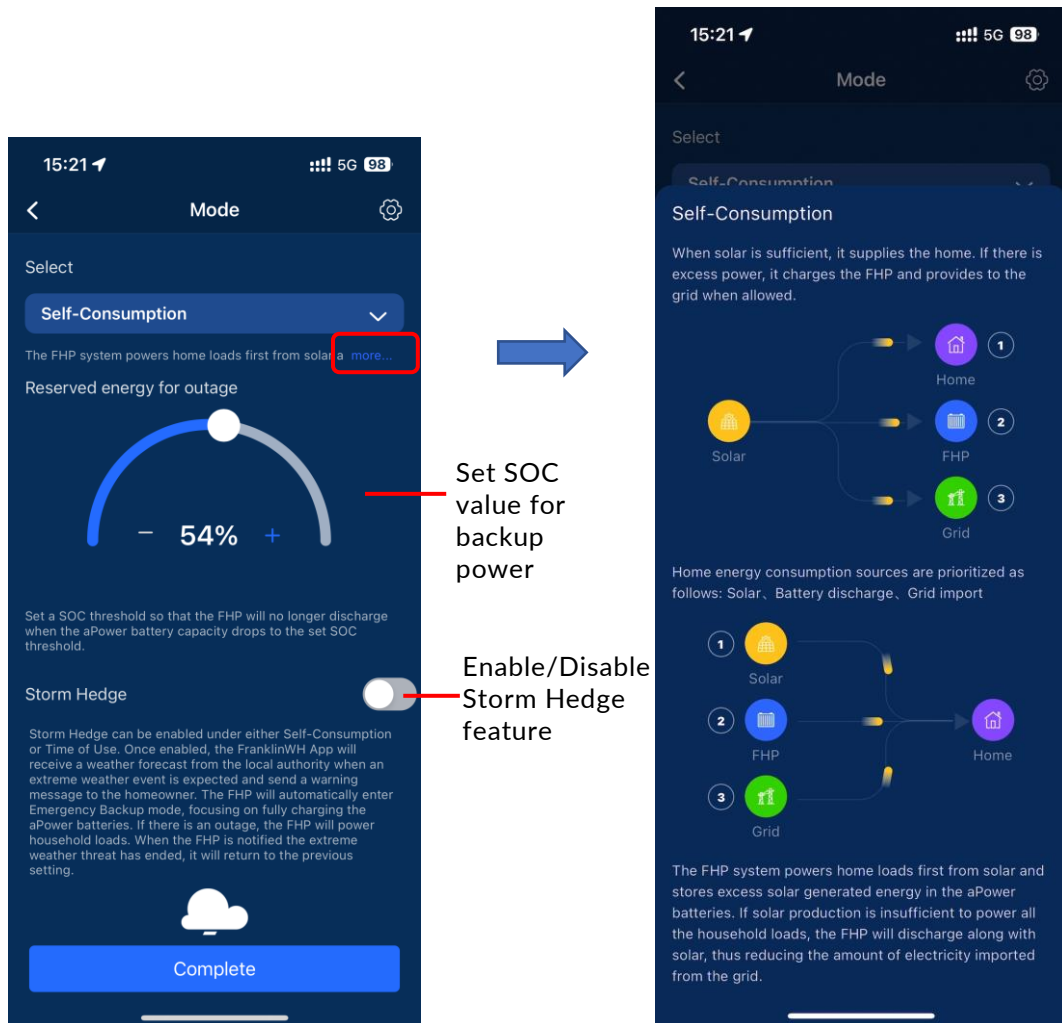
Click **Edit** to directly edit the current package. BB and Peak Demand packages do not allow editing. For details, see [Tariff Schedule](#)



## Self-Consumption

In Self-Consumption mode, the FHP system stores the excess electricity generated by the solar system after powering the household loads in real-time. If the solar production is insufficient to power all the household loads, the FHP system will discharge as a supportive power source, thus reducing the amount of electricity imported from the grid. Home energy sources are prioritized as follows: Solar, Battery discharge, Grid import. For more information, click “more”.

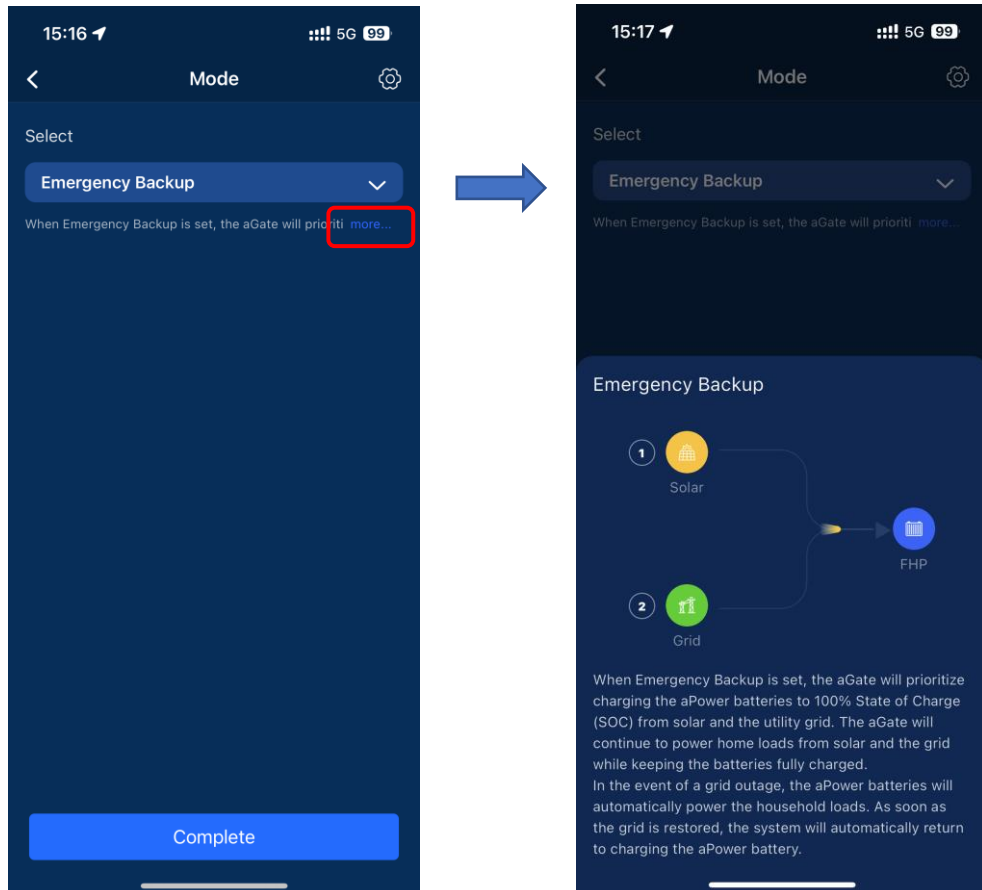
If the SOC is set to 100%, the FHP system will charge to full power (aPower battery actual SOC value = 100%) from solar and then not discharge from the batteries. In the event of a grid failure, the FHP will power the household loads.



### Emergency Backup

When the FHP operating mode is set to the Emergency Backup, the FHP system will prioritize charging the aPower battery to 100% State of Charge (SOC) from solar and the utility grid. The FHP will continue to power home loads from solar and the utility grid while keeping the batteries fully charged.

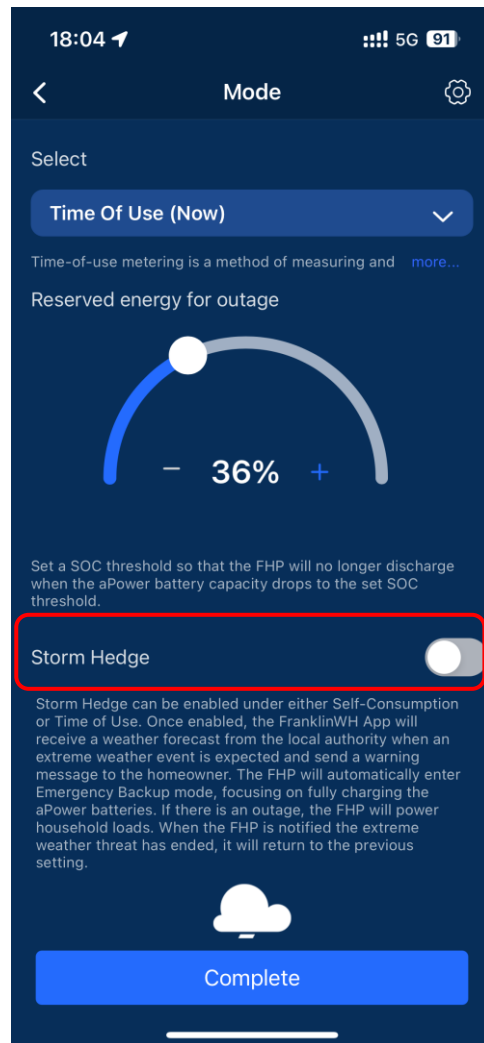
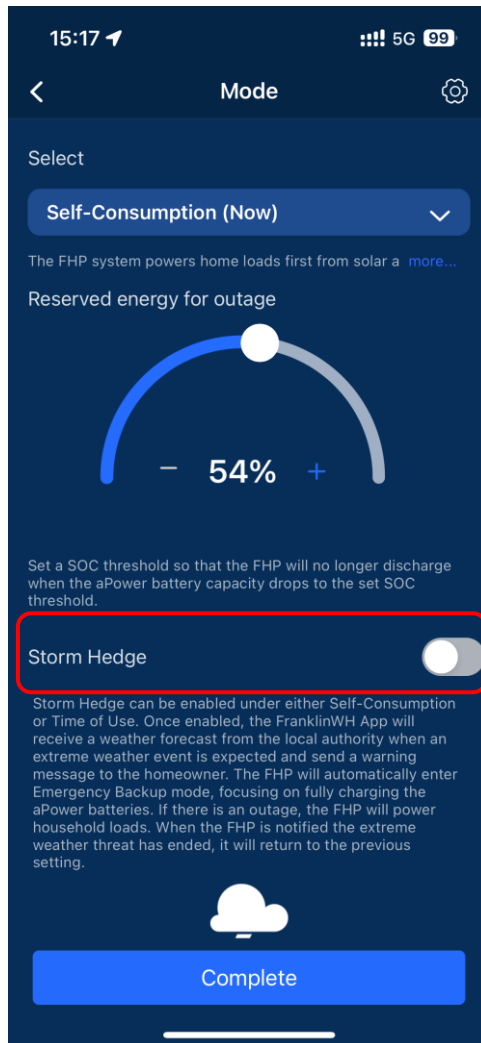
In the event of a grid failure, the aPower battery will automatically power the household loads. As soon as the grid is restored, the system will automatically return to charging the aPower battery. For more information, click “more.”





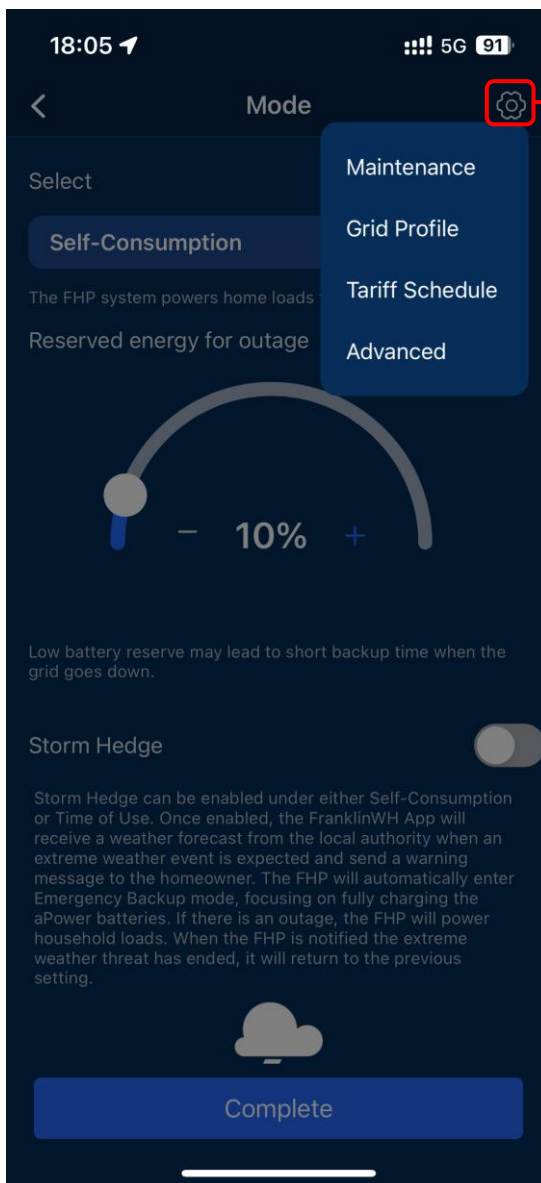
### Storm Hedge

The Storm Hedge feature can be enabled under either Self-Consumption or Time of Use. Once the feature is enabled, when an extreme climate event occurs, the FranklinWH App will receive a weather forecast from the local authority, send a warning message via the app, and then the FHP system will automatically enter Emergency Backup mode, focusing on fully charging the aPower batteries. If there is an outage, the FHP will power household loads. When the extreme weather is over, the FHP will return to the previous setting.



### Maintenance, Grid Profile, Tariff Schedule and Advanced

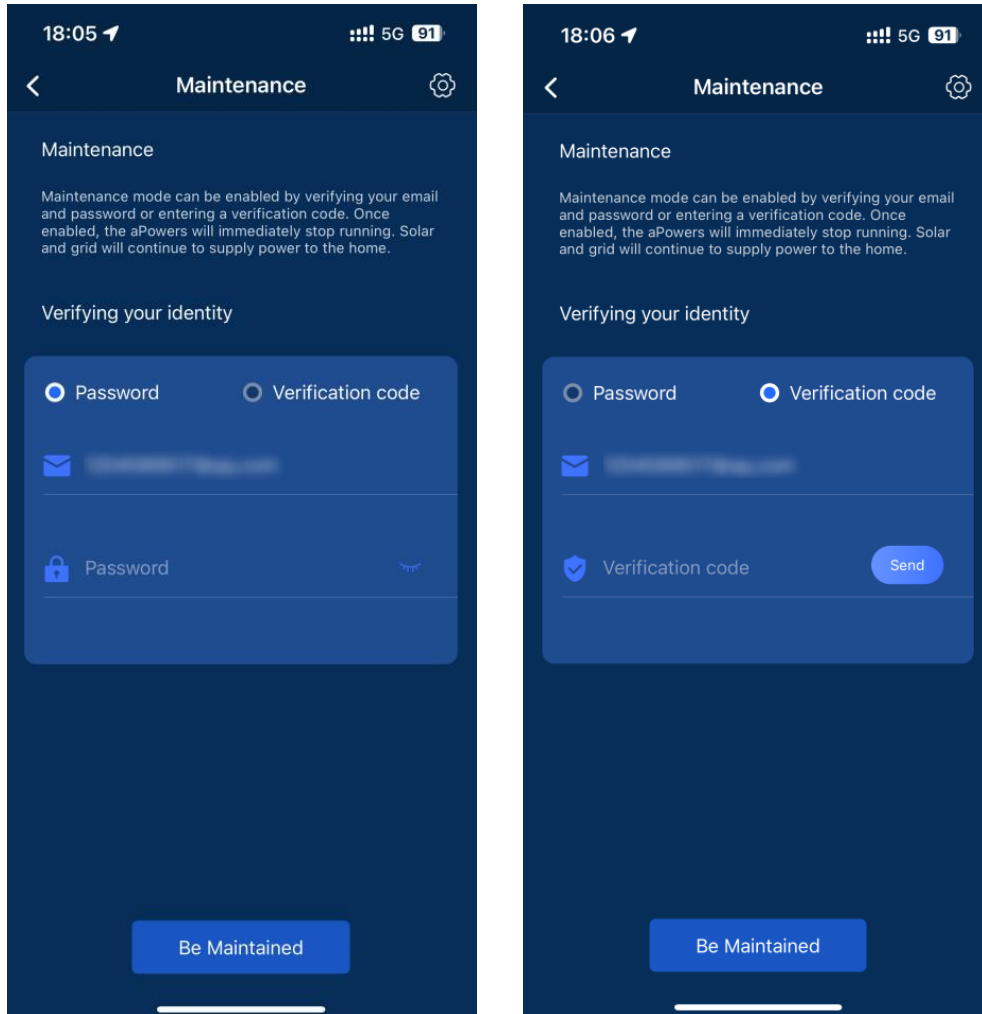
Click the settings gear in the upper right corner to enable **Maintenance** mode or to check the **Grid Profile**, **Tariff Schedule** and **Advanced** settings



Click to expand the menu and browse the sections

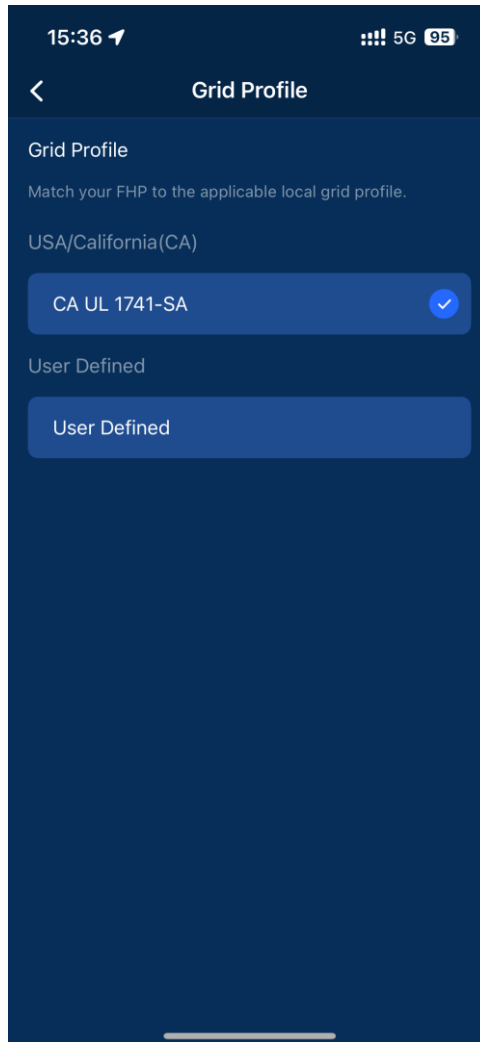
## Maintenance

Click **Maintenance** to enter the **Maintenance** page. When the FHP needs maintenance, you can enable **Maintenance** mode by verifying your identity via your email and password or verification code. Once this mode is enabled, the aPowers will immediately stop running. Solar and grid will continue to supply power to the home.




## Grid Profile

Click **Grid Profile** to view grid parameters as needed, such as when requested by the utility company for inspection.



### Tariff Schedule

Click **Tariff Schedule** to enter the **Tariff Schedule** page. This page allows you to set or change the current Tariff Schedule.



The screenshot shows the 'Tariff Schedule' page in the FranklinWH app. The page is dark-themed and contains several sections: 'Does the homeowner have a tariff?' with a 'Yes' dropdown; 'Country/State' with a dropdown set to 'United States · California'; 'DER schedule' with a dropdown set to 'NEM 2.0'; 'Utility Company' with buttons for 'Pacific Gas and Electric', 'Southern California Edison', 'San Diego Gas & Electric Company', and 'Others'; 'Tariff' with buttons for 'EV-TOU-2', 'EV-TOU-5', 'TOU-DR', '+ New', and 'More >>'; 'Currently in use' with a 'Customize' button; and 'Advanced Settings' with a toggle for 'Are you a SGIP customer?'. A 'Next' button is at the bottom. Red lines and boxes highlight specific elements: a dropdown arrow for 'Country/State', a red box around the '+ New' button, and red boxes around the 'Apply' and 'Edit' icons in the 'Tariff' section.

Click the drop-down box to select Country/State

Click + New to customize a tariff schedule

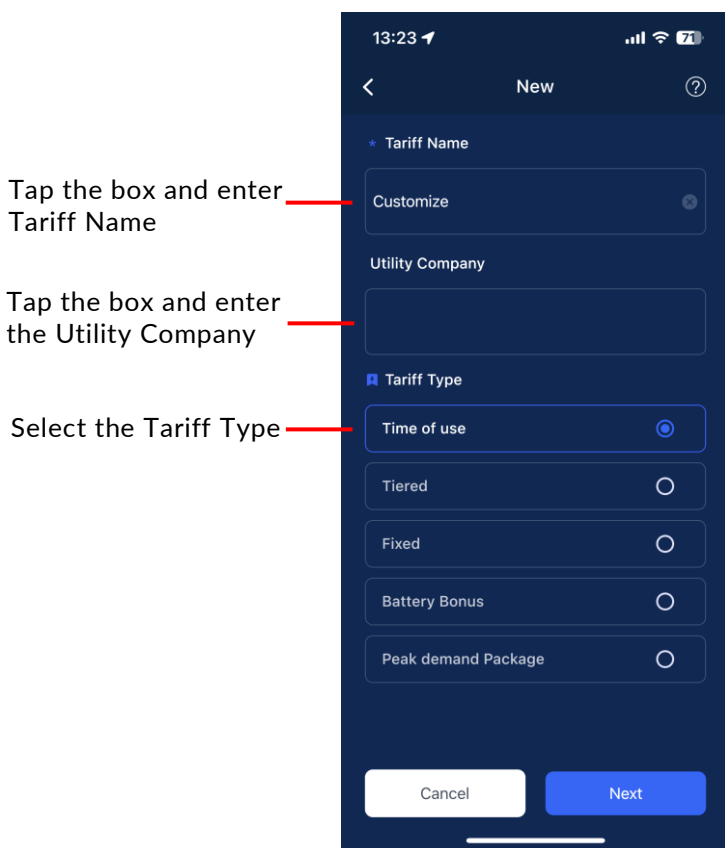
Preview the details of the current package

- Click **Edit** to modify the parameters
- Click **Apply** to use the current package

Modify the parameters of the current package

You can choose the Tariff Type according to your own needs.

- Time of use: FranklinWH system operates energy scheduling based on your tariff schedule to reduce your electricity bill.
- Tiered: Runs the energy schedule according to your tiered tariff.
- Fixed: Runs the energy schedule according to your fixed tariff.
- Battery Bonus: Runs the energy schedule according to your battery bonus tariff.
- Peak Demand Package: Runs the energy schedule according to your peak demand tariff.



### Time of use

1. Select **Time of Use Tariff** and the customized schedule page is displayed.

Tap the season name and select the designated months

Tap the plus sign in the upper right corner to edit, add, or delete a season

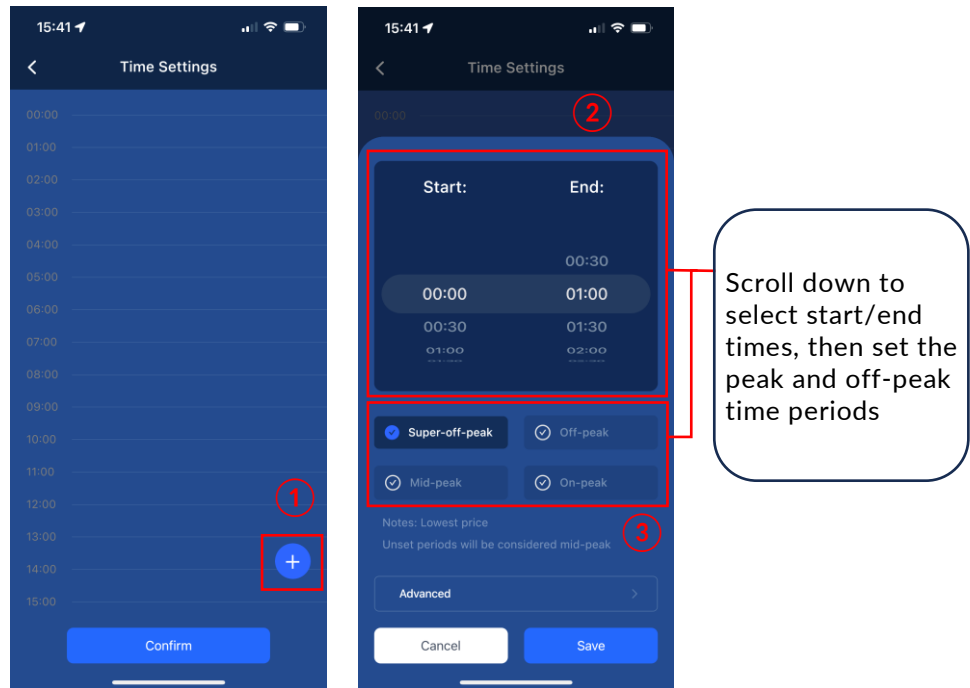
Select **Every Day** or **Weekdays & Weekends** from the **Week** selector

Tap the plus sign on the right of the **On-peak/Off-peak** to set the On-peak, Off-peak, Mid-peak, and Super-off-peak time periods

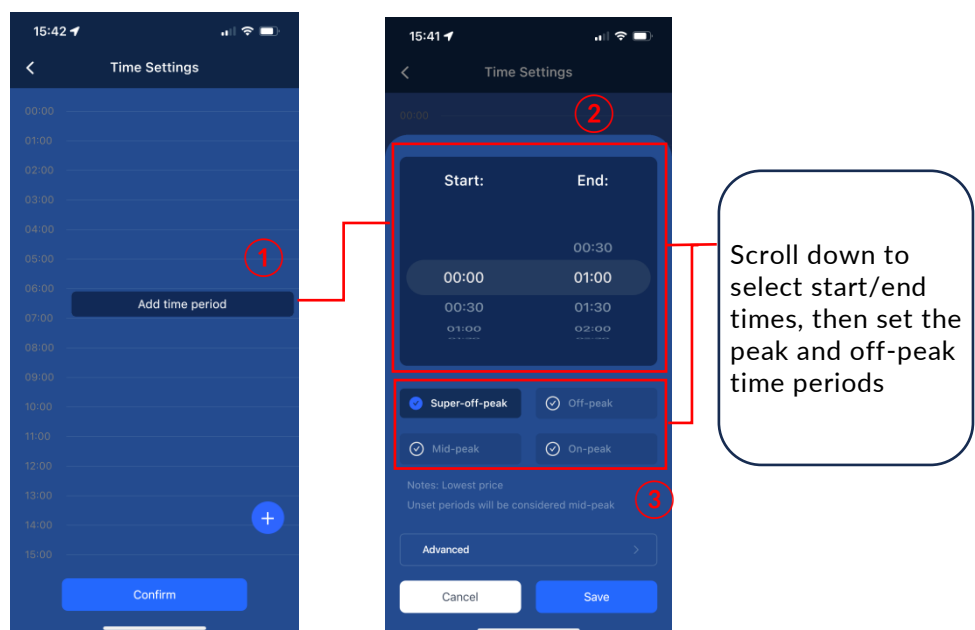
2. Customize time Settings.

- Super-off-peak: Lowest price period.
- Off-peak: Lower price period.
- Mid-peak: Moderate price period.
- On-peak: High price period.

Method 1: Tap the plus sign to configure time periods.



Method 2: An "Add time period" pop-up will prompt when tapping the time row, tap the prompt window to configure time periods.





- When time settings are complete, tap **Advanced** to enter the advanced settings page if needed. Recommended configuration for advanced settings is selected by default. Tap **Customize** to configure the system.

### Reserved battery

For example, if the battery reserve is set to 50%, the battery will not discharge when the battery capacity drops below 50%.

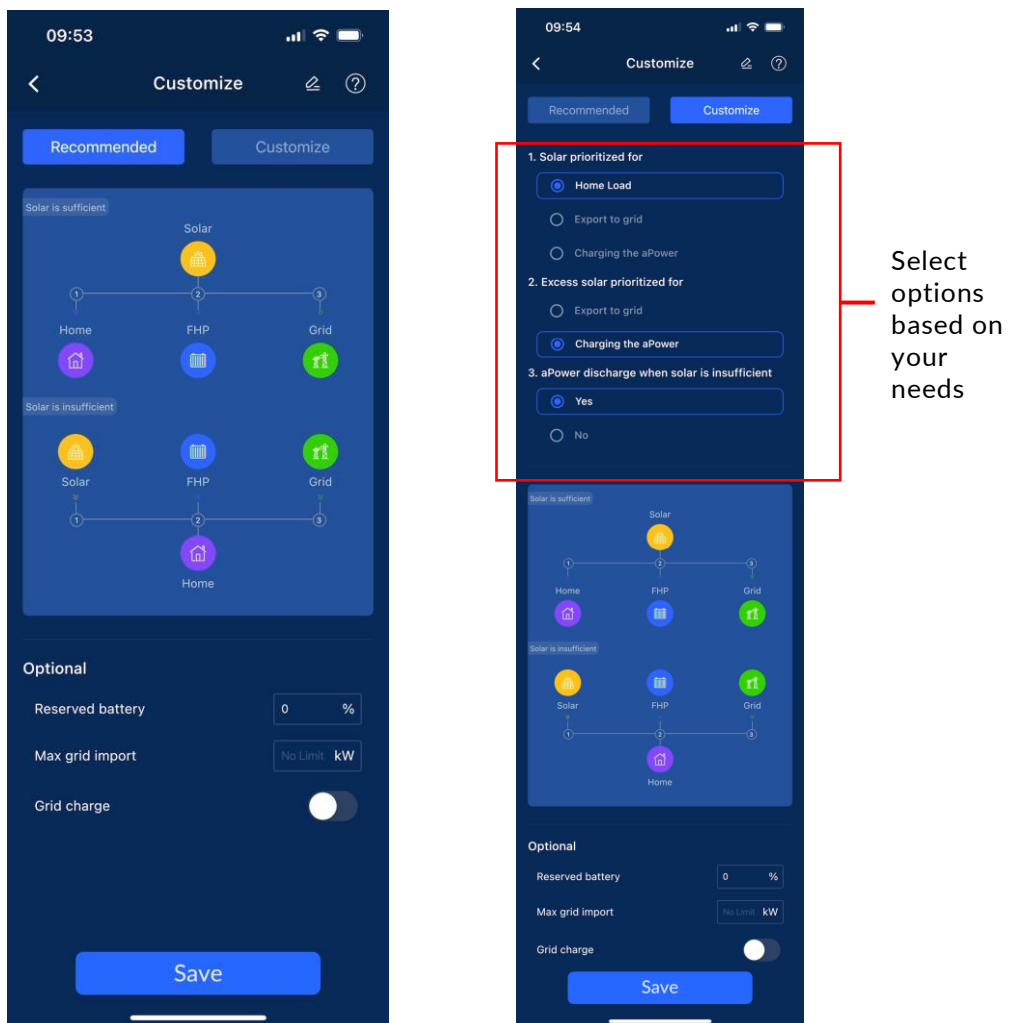
### Max grid import

The FranklinWH PCS algorithm can adjust the aPower charge/discharge power to prevent grid import from exceeding the Max grid import value.

### Grid charge

If it's allowed to charge the battery from the grid, this slider can be enabled. Set the maximum grid charge power based on the utility requirements and site conditions.

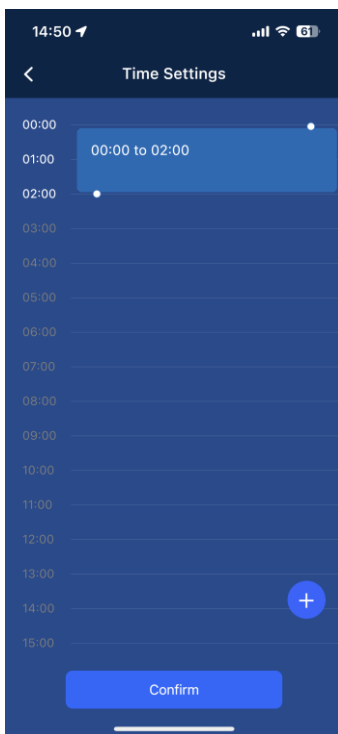
If the **Grid charge** feature is disabled, the aPower battery will never charge from the grid.



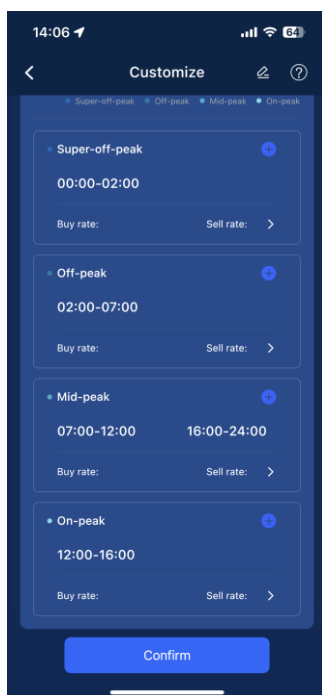
After the configuration is complete, tap **Save** at the bottom.

- Return to the **Time Settings** page. You can re-configure the settings by tapping the added time period. Long press the added time period to activate gesture control. Long-press & drag to set the added time period or drag the dot to change the time boundary.

Tap **Confirm** to save the configuration after the time period is set. The unselected time periods will be set to Mid-peak by default.



- Enter the electricity price for each period, tap **Confirm** to complete the settings.

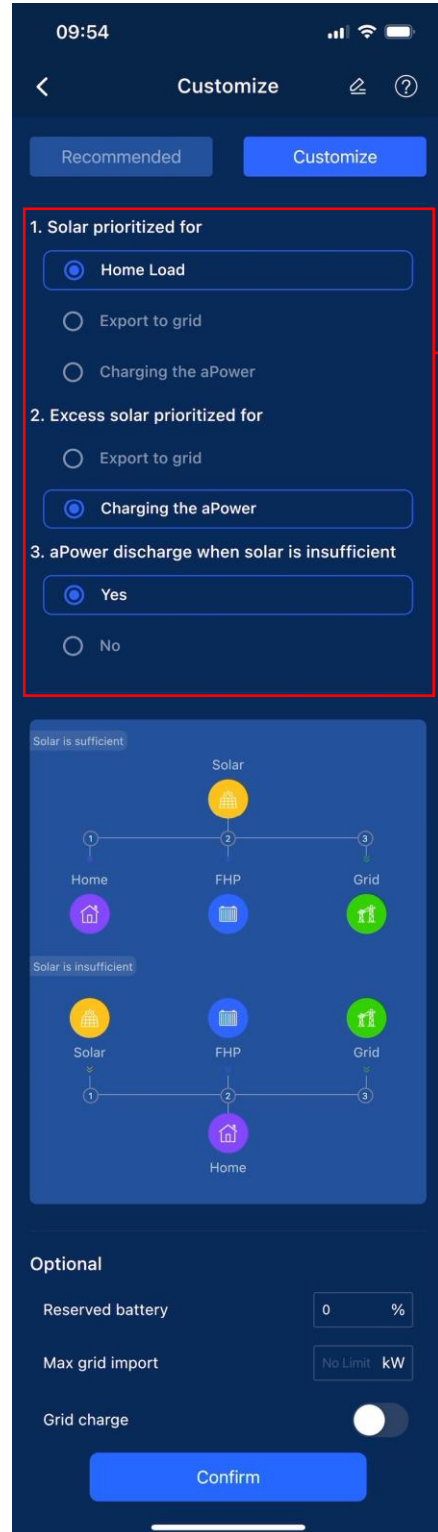
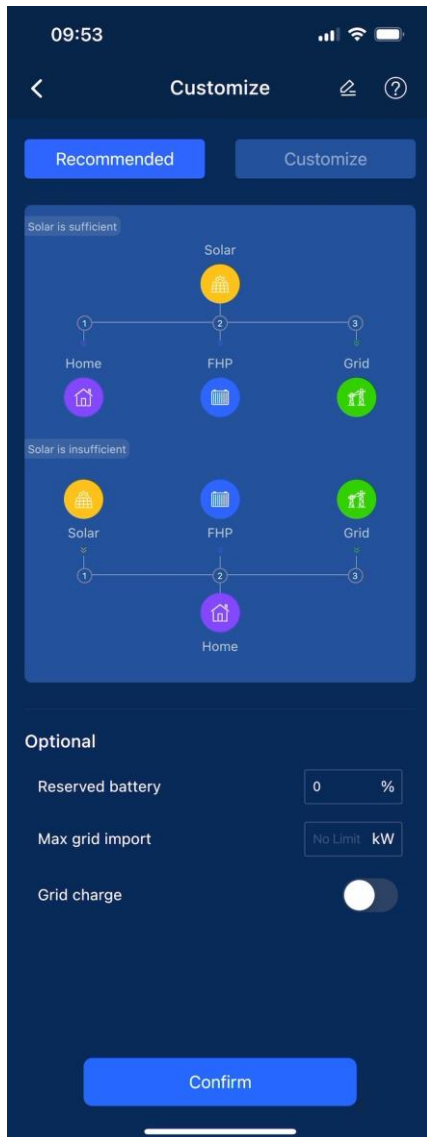


- 6. Return to the **Tariff Schedule** page, and the customized Tarriff is automatically added to the template library.



### Tiered Tariff & Fixed Tariff

1. Select **Tiered Tariff** or **Fixed Tariff** and the advanced settings page is displayed.
  - The recommended configuration is selected by default.
  - Click **Customize** to configure the system based on your needs.



Select options based on your needs

- 2. After the advanced settings are saved, return to the **Tariff Schedule** page, and the customized Tarriff is automatically added to the template library.

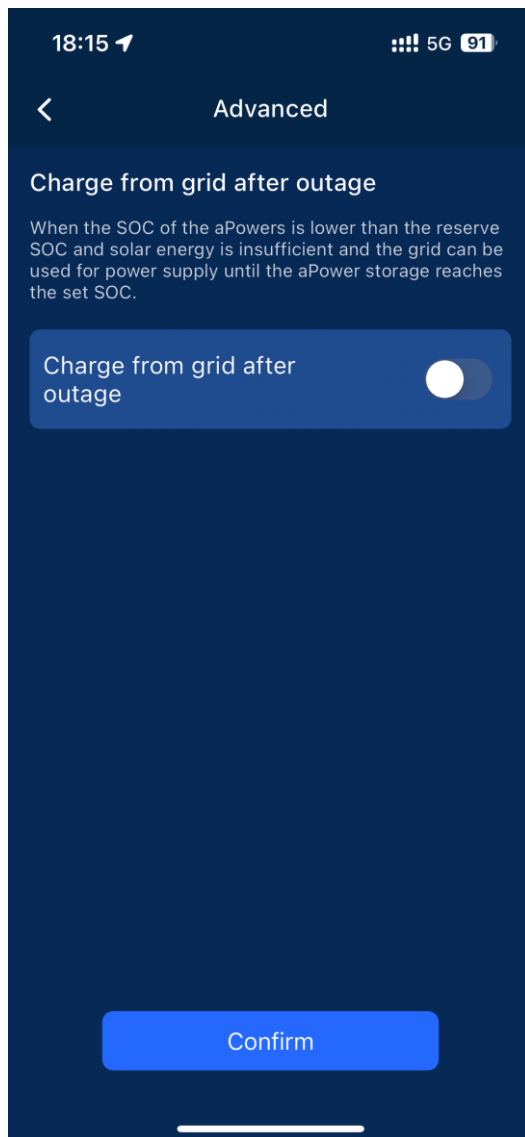


### Battery Bonus Package & Peak Demand

Customization is not currently supported. If necessary, please contact FranklinWH for customization.

## Advanced

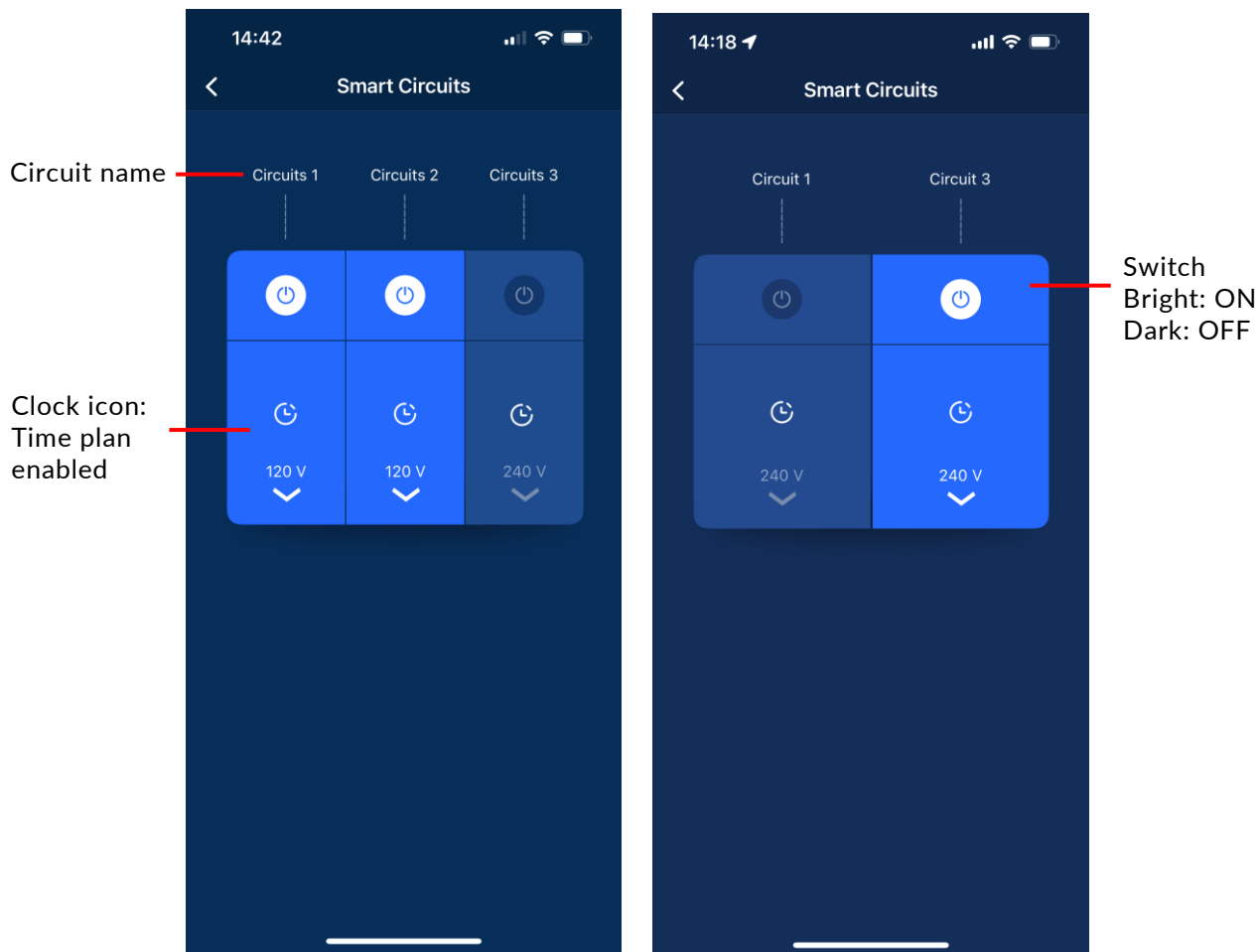
Click **Advanced** and turn on **Charge from grid after outage**. When the SOC of the aPowers is lower than the reserved SOC, the solar energy is insufficient and the grid can be used for power supply. Until the SOC of aPower reaches the set reserved SOC.



## Smart Circuits

Click **Smart Circuits** to access the Smart Circuits settings page where you can set a dedicated power supply plan for each Smart Circuit.

If the switch is highlighted, it indicates that the corresponding circuit is operating. If the switch is dark, it indicates that the circuit is disabled. Click the button for the corresponding load module to enable or disable a circuit, then click to set the dedicated power plan for that circuit.



You can customize each Smart Circuit name with a maximum length of 20 characters. When the power level drops to the minimum SOC, the circuits will be automatically disconnected to reduce the power consumption.

In your power schedule, you can set up the cycle period, start date, and actuation time, so that your system can work intelligently to satisfy your power consumption needs.

The screenshot shows the 'Circuit 1' configuration screen in the FranklinWH app. The interface is dark-themed with blue accents. At the top, there's a back arrow and the title 'Circuit 1'. Below this, there are several settings: 'Circuit 1' with a pencil icon for editing; 'SOC Threshold' with a toggle switch and a dropdown menu showing '36 %'; 'Enable timing schedule' with a toggle switch; 'Cycle interval' with a dropdown menu showing '1 Day'; 'Start date' with a dropdown menu showing '2022-10-16'; and 'Execution time' with a plus icon and a table showing 'Start 11:36' and 'End 13:35'. At the bottom, there are four cards displaying '238.3V Voltage', '1.0A Current', '0.00kW Power', and '0.02kWh Total power supply'. A 'Complete' button is at the very bottom.

Annotations on the left side:

- Percent SOC at which the circuit will be disconnected (points to SOC Threshold)
- Cycle Length: 0 to 60 days (points to Cycle interval)
- Set an execution time. The start time must be on the same day and the length between the two times cannot exceed 24 hours (points to Execution time)

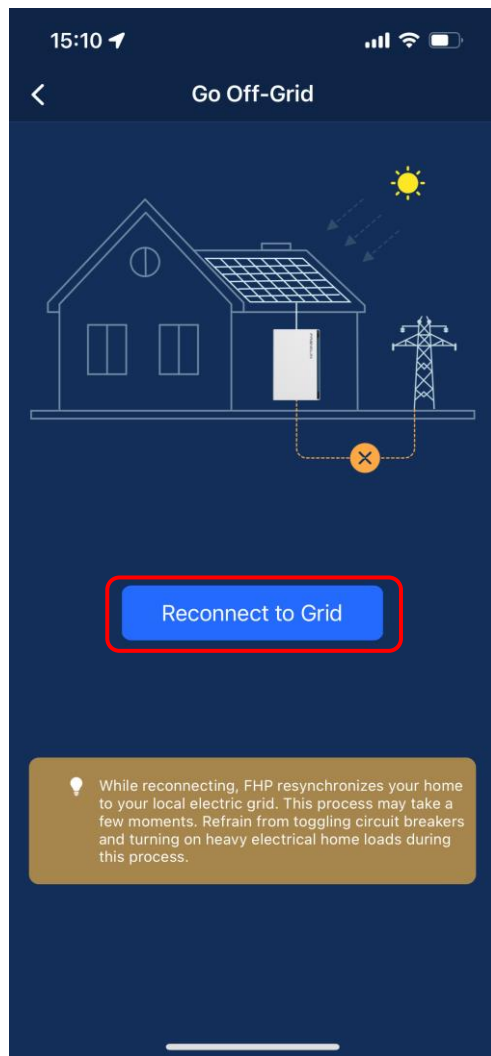
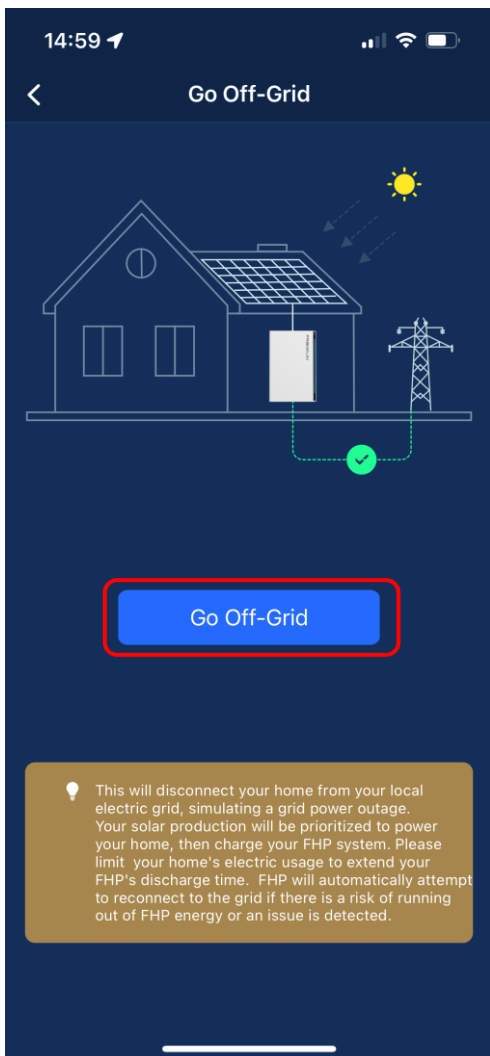
Annotations on the right side:

- Click to modify the circuit name (points to the pencil icon)
- Enable schedule (points to the 'Enable timing schedule' toggle)
- Set start date for the cycle (points to the 'Start date' dropdown)
- Add a new time. Maximum of two allowed (points to the plus icon)



## Go Off-Grid

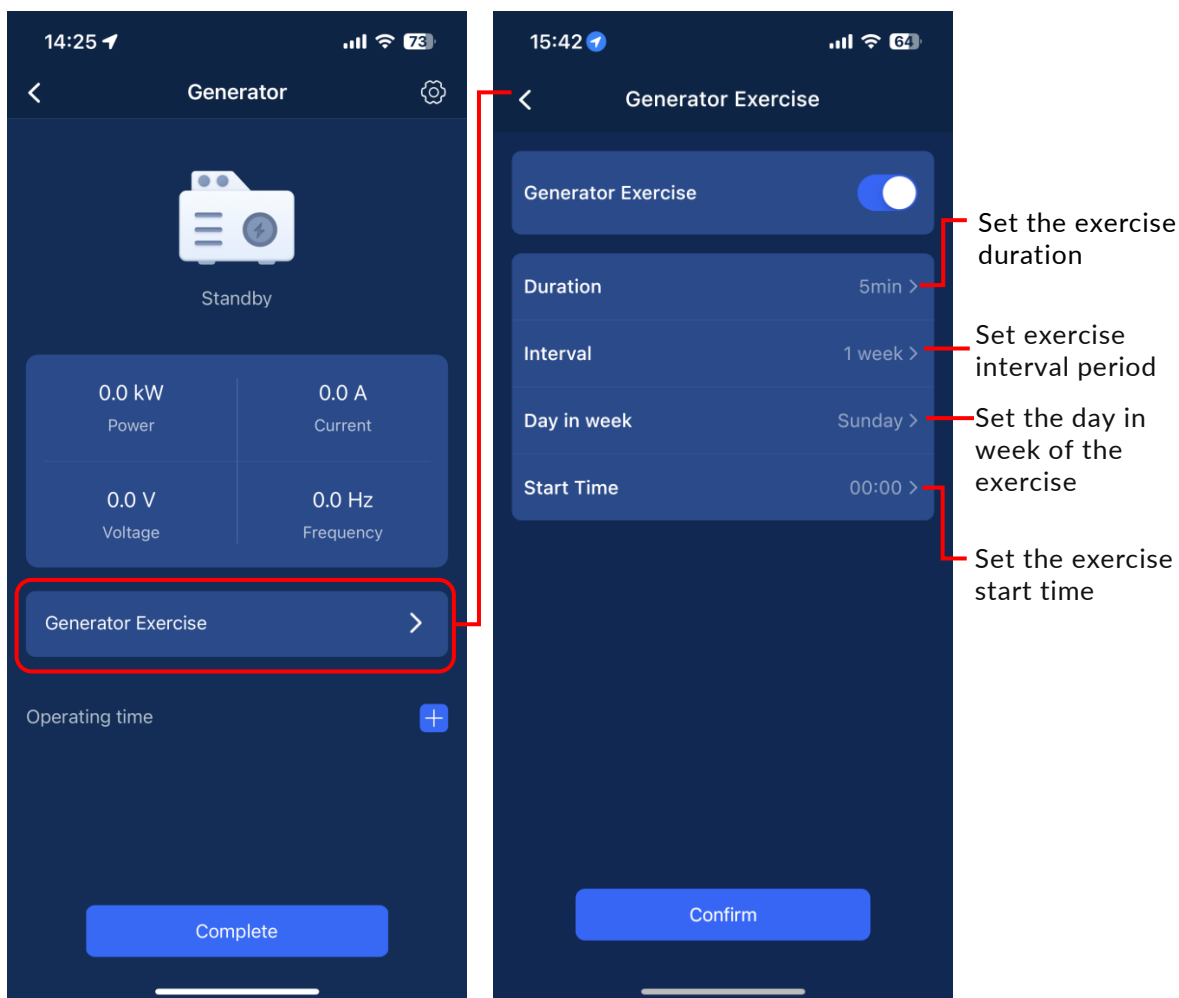
Click **Go Off-Grid** and connect the FHP hotspot to disconnect your home from your local electric grid. Click **Reconnect to Grid** and the FHP reconnects your home to your local electric grid.



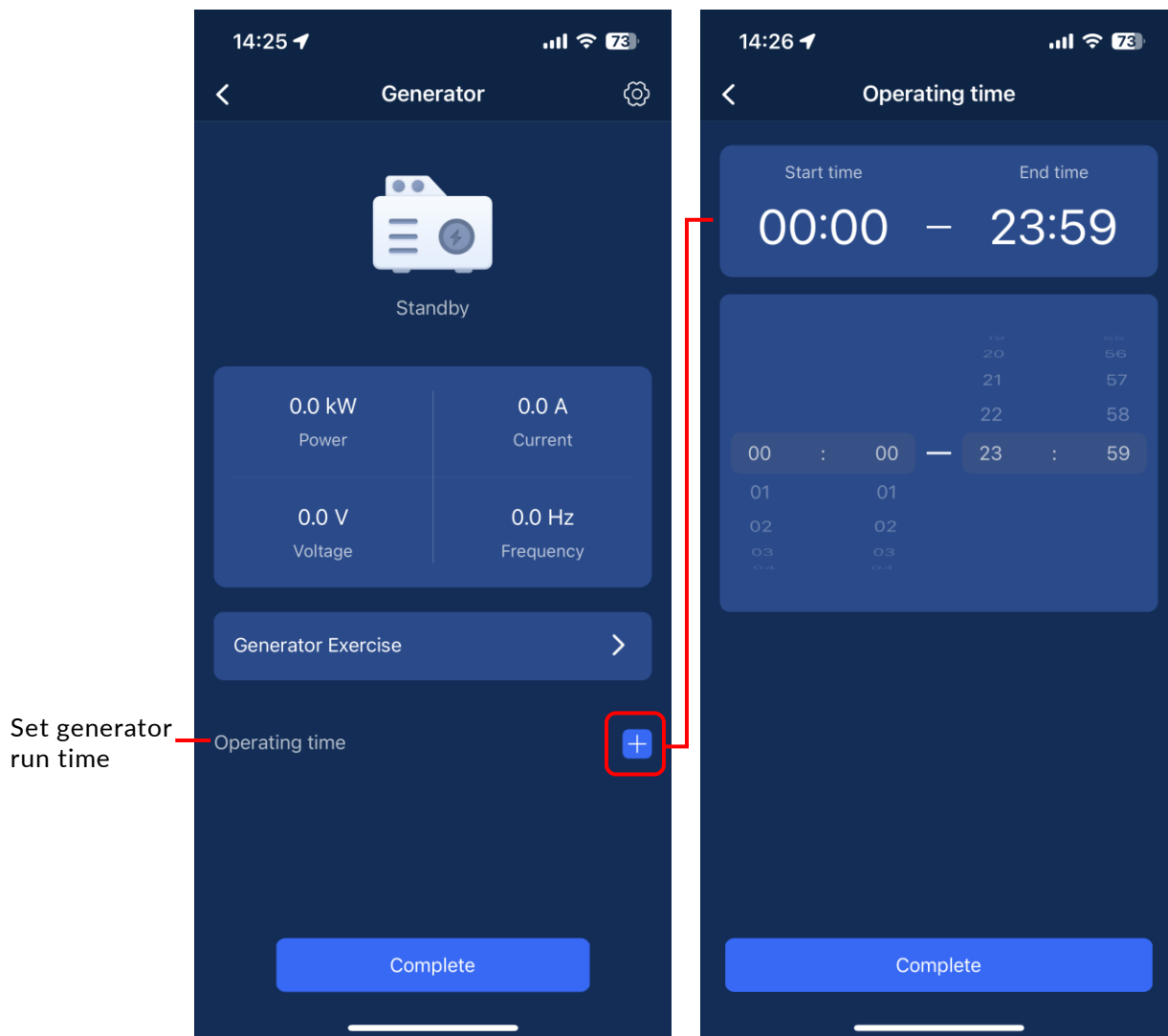
## Generator

Click **Generator** to view and manage the generator settings.

Click the **Generator exercise** to enter the setting page. In this page, turn on **Generator exercise** slider to enable the setting parameters.

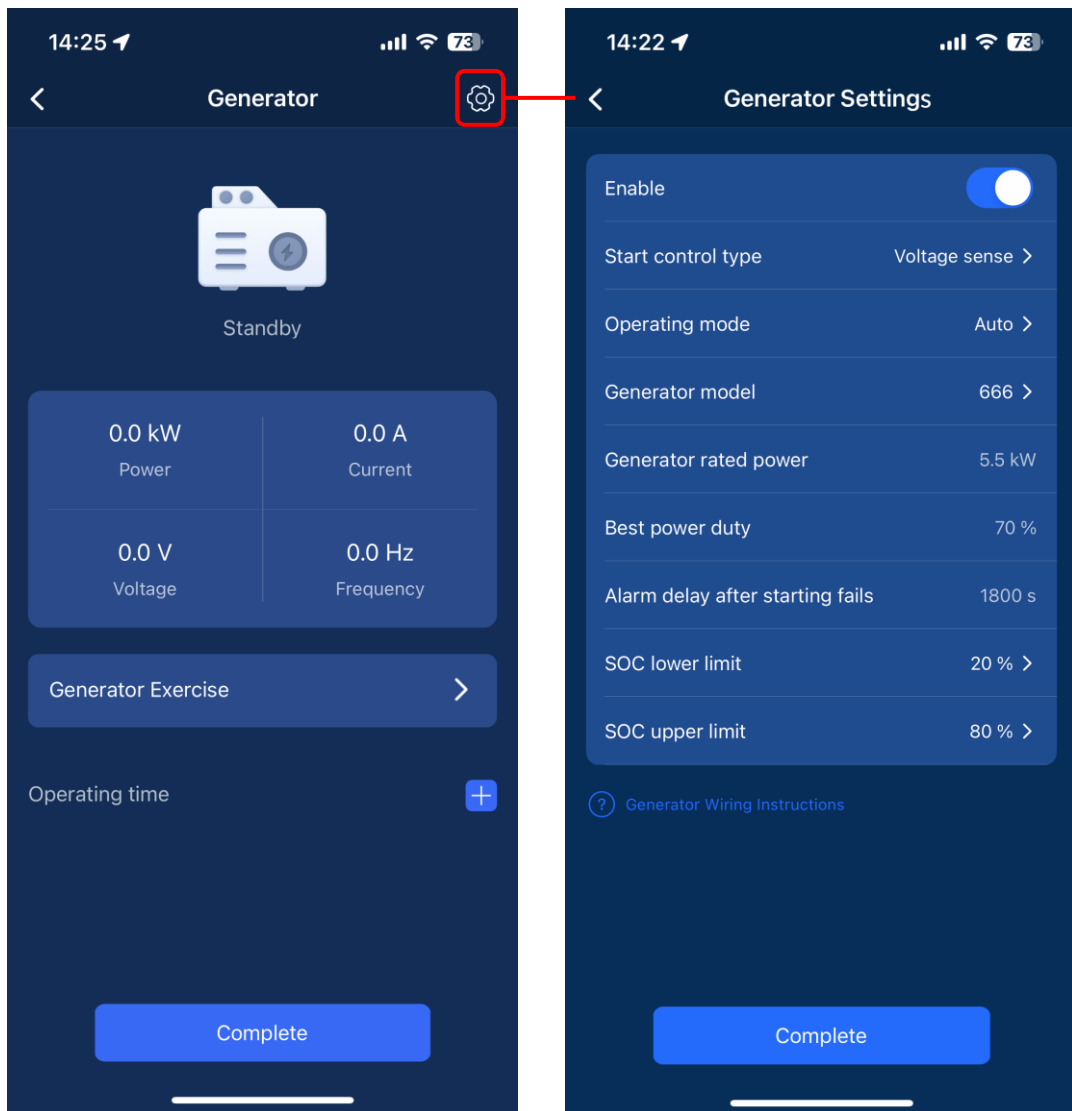


You can also set the generator run time by tapping the plus sign in the bottom right corner.

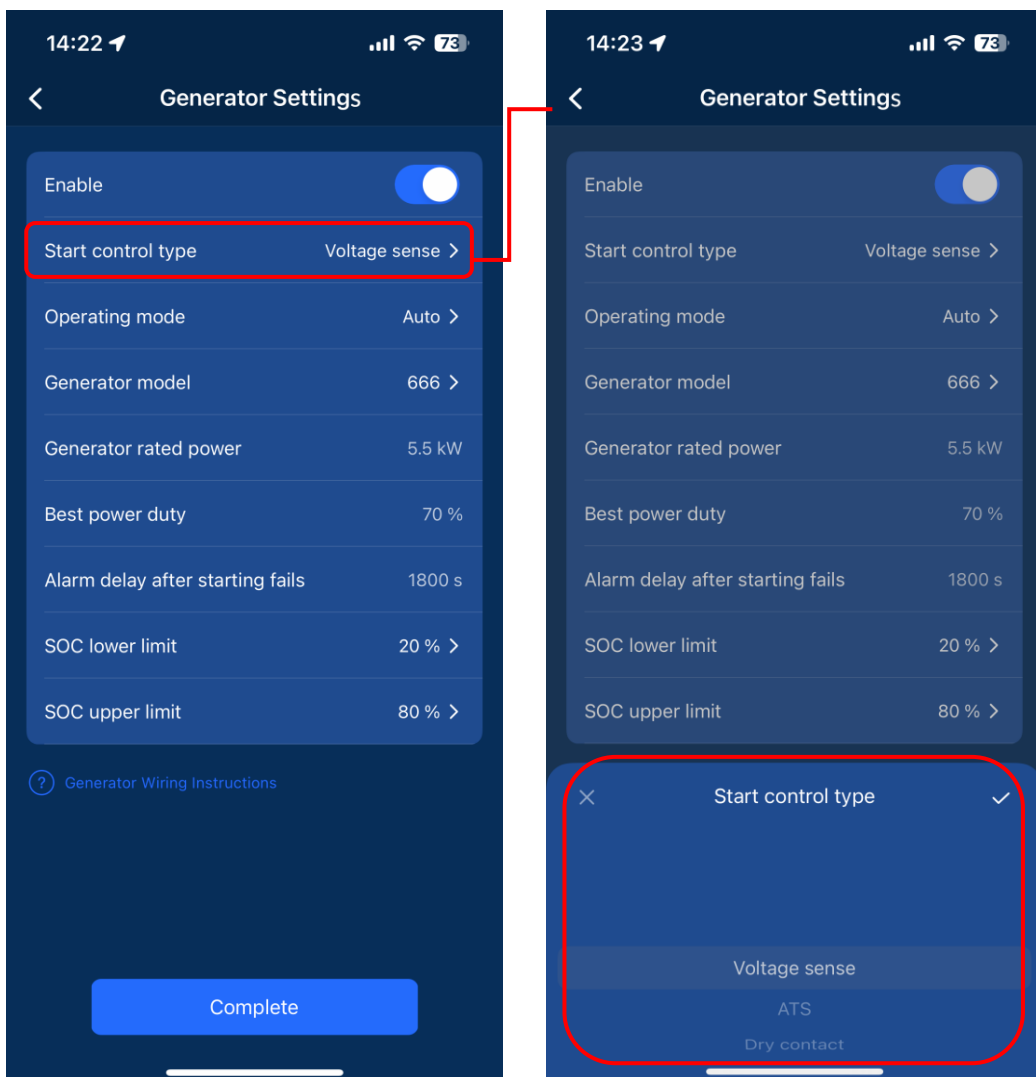


Click the setting icon in the top right corner to enter the **Generator Setting** page. In this page, you can enable the settings **Start control type**, **Operation mode**, **Generator model**, and **SOC low limit** and **SOC upper limit**. You can click **Generator Wiring Instructions** to check if the wiring is correct.

Note that **Generator rated power**, **Best power duty** and **Alarm delay after starting fails** are set from the installer interface and are only displayed on this page.

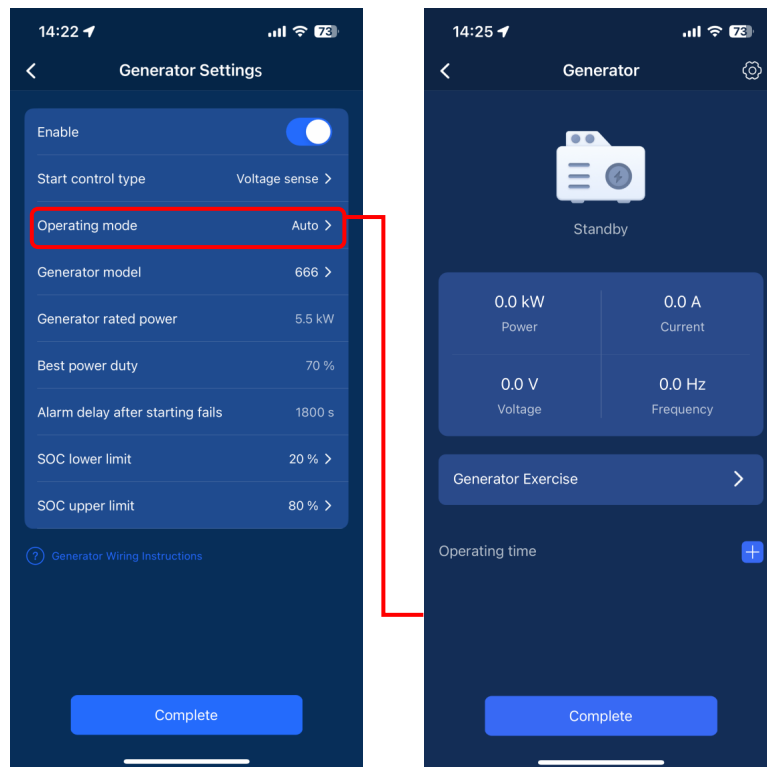


Click **Start control type**, then select a control type from the option box. There are three options, Voltage sense, ATS, and Dry contact.

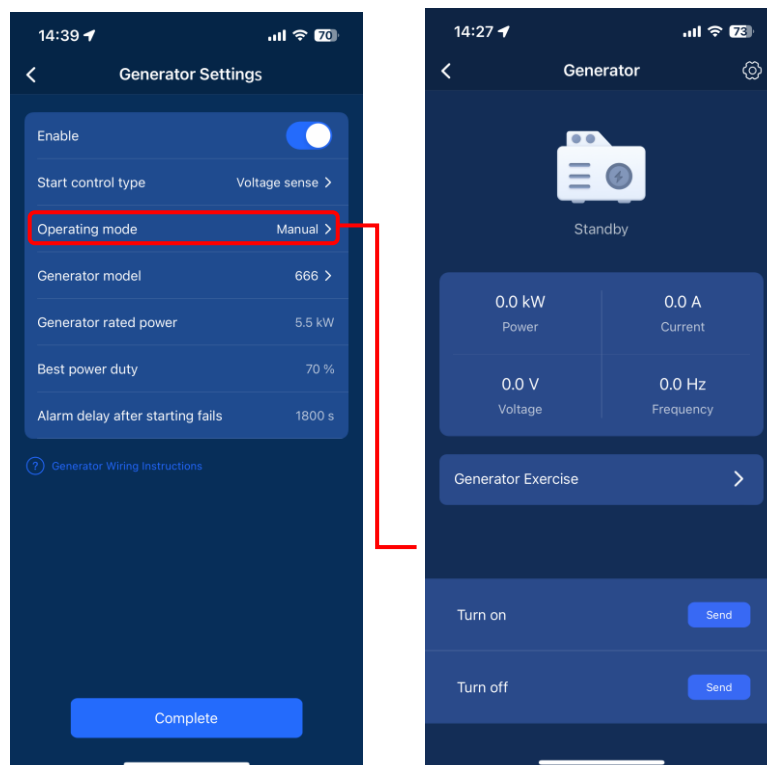


Click **Operating mode**, then select either Auto or Manual.

- Auto: The generator will run in accordance with the set time periods or the SOC lower and upper limit values.



- Manual: Customers may manually start or stop the generator.



## Backup State

Click **Backup State** to view the current SOC value of the battery pack, the SOC values set for reserved power in the **Self-Consumption** and **Time of Use** modes, the backup remaining, and historical data.

Backup Remaining: Without power input from the grid, generator and solar system, the FHP can be maintained for approximately the maximum amount of time, based on the current power consumption.

**Current load:**  
Maximum estimated time length based on the current consumption rate

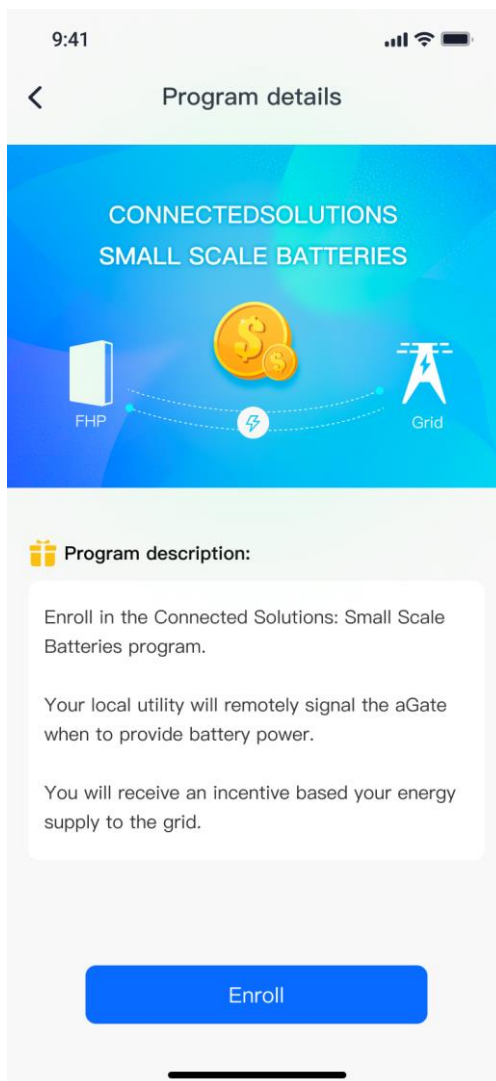
**High Load:**  
Maximum estimated time length, if the electricity is consumed at the highest load in last 72h

**Average Load:**  
Maximum estimated time length, if the electricity is consumed at the average load in last 72h

**Times of backup power supply, total time lengths, and particulars of a single backup power supply operation**

## Virtual Power Plant

1. Click **Virtual Power Plant** to begin the enrollment. Click **Enroll**, you can enroll in the EnergyHub Battery Program and join the events to get bonuses.





- 2. Enter your personal info in the **Submit the information** page. You must agree to the Terms & Conditions by checking the button. Click **Submit** when complete. You will receive push notifications once the enrollment information has been submitted. The **Enrollment information** status in the Program details page will be **Pending**.

9:41

< Submit the information

Program

Eversource Details >

Email Address \*

Email Address

Your Name and Home Address \*

First Name \* Last Name \*

Address Line 1 \*

Address Line 2 (Apt.)

City \* State \* ▾

Zip Code \* ▾

Phone Number \*

Utility Account Number \* ?

I agree to the CONNECTEDSOLUTIONS:SMALL SCALE BATTERIES Program [Term & Conditions.](#)

Submit

9:41

< Program details

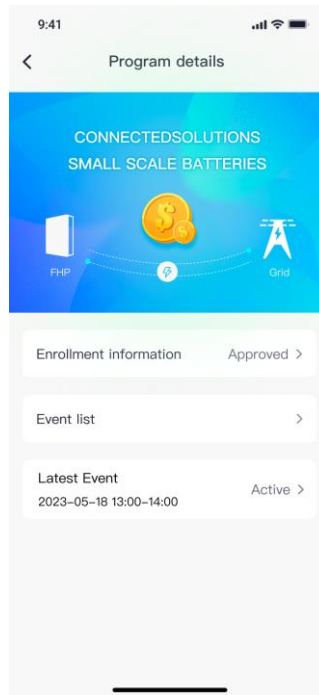
CONNECTEDSOLUTIONS  
SMALL SCALE BATTERIES

FHP Grid

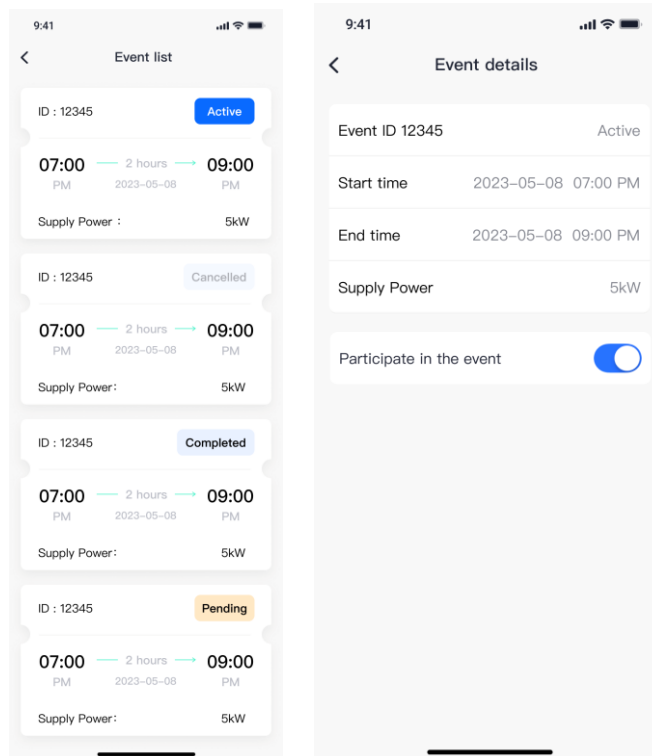
Enrollment information Pending >

Event list >

- 3. A notification will also be sent once the utility has reviewed the application. The Enrollment information status will turn to be **Accepted** or **Rejected** depending on the result.

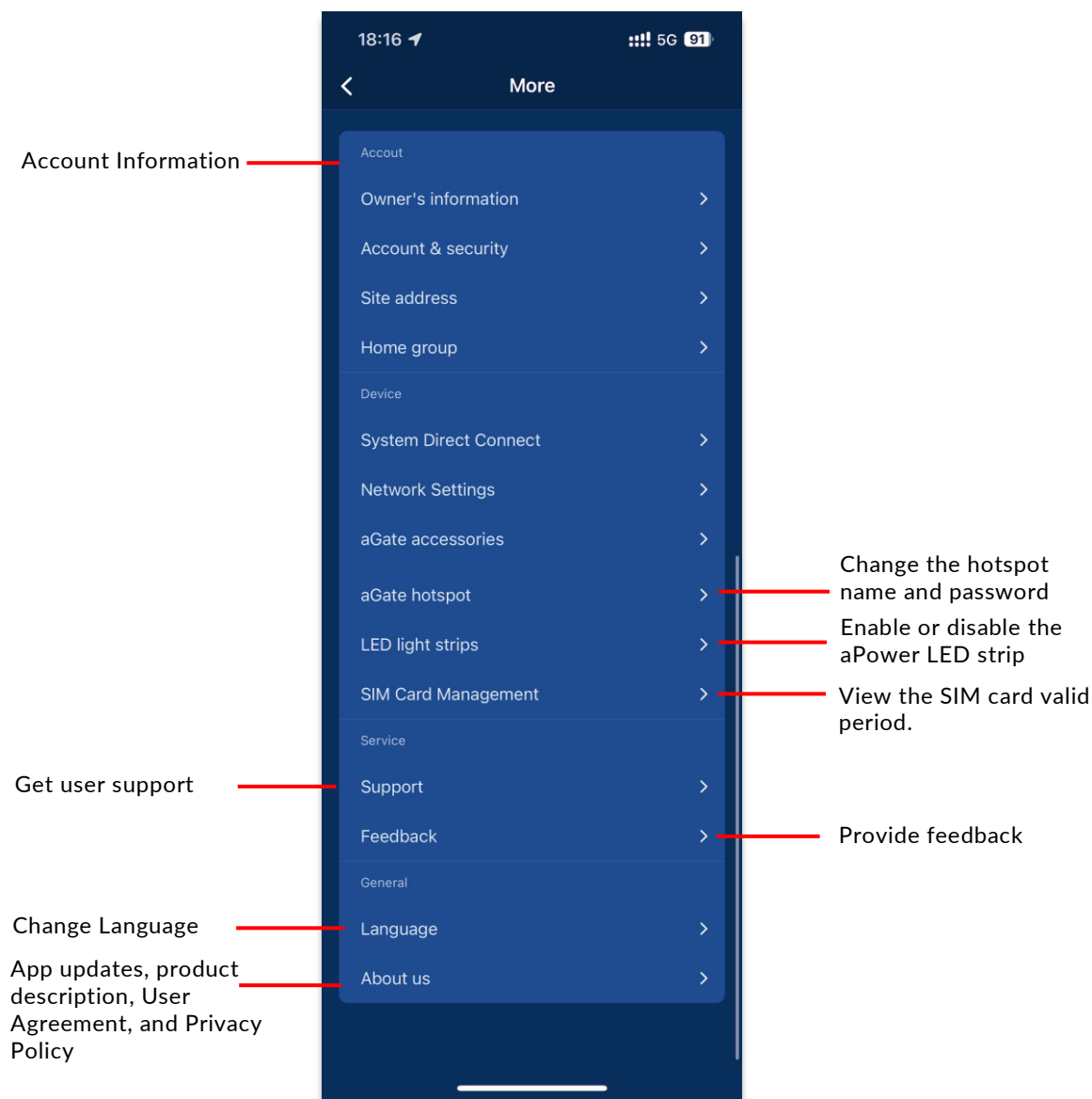


- 4. 24 hours prior to a grid supply event, you will receive a push notification informing you of the event time and power you will supply to the grid. Click **Event list** bar in **Program details** page to enter **Event list** page. Hit the specific event to check the event details. **Participate in the event** is enabled by default.



## More

Click **More** to view the auxiliary features page.



### Owner’s Information

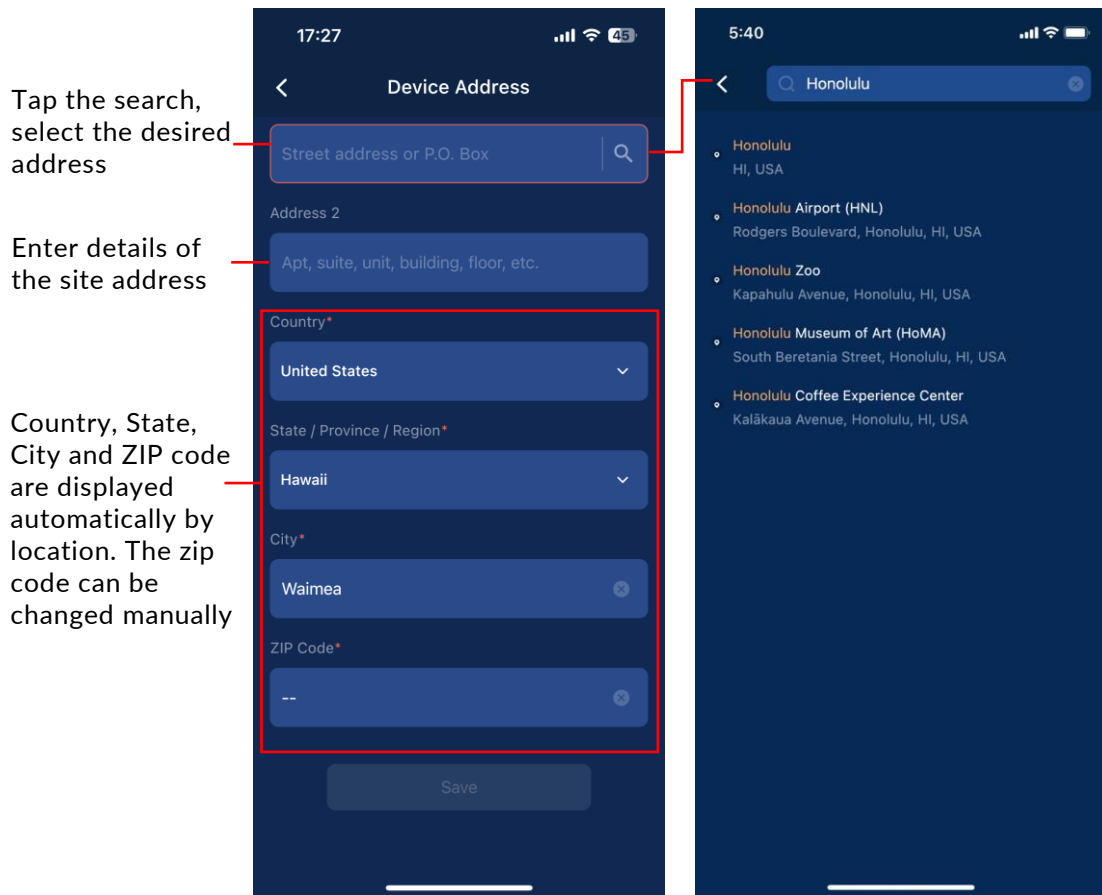
Click **Owner’s Information** to view the owner’s first name, last name and phone number.

### Account & Security

Click **Account & Security** to view the current account email address, modify the user password and delete the account.

### Site address

Click **Site address** to add site address information and device address information.



### Home Group

Click **Home Group** to view the aGate list under the homeowner account and can make the units a group.

### System Direct Connect

You can check the current system energy flow chart and the working status of various sources, and check the status and the device information of your aGate and aPower units. You can also set up networking parameters for the equipment and disconnect/connect your home from your local electric grid.

**System energy flow diagram showing the operating status of various devices**

**aGate status: SOC, SN, current status**

**aPower status: SOC, Power, SN, current status**

**Check the FHP device information**

**Set up network**

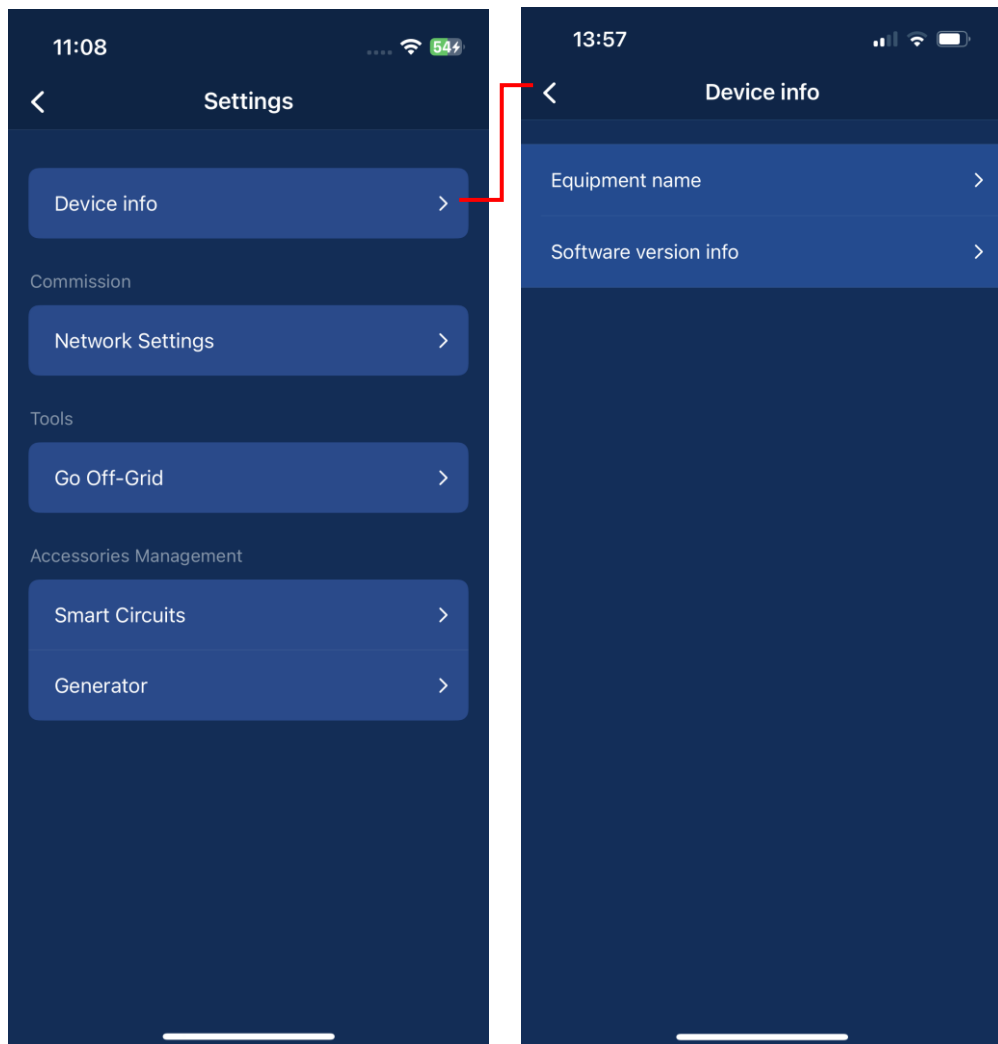
**Disconnect/connect your home from your local electric grid**

**Check and manage the Smart Circuits settings**

**Check and manage the generator settings**

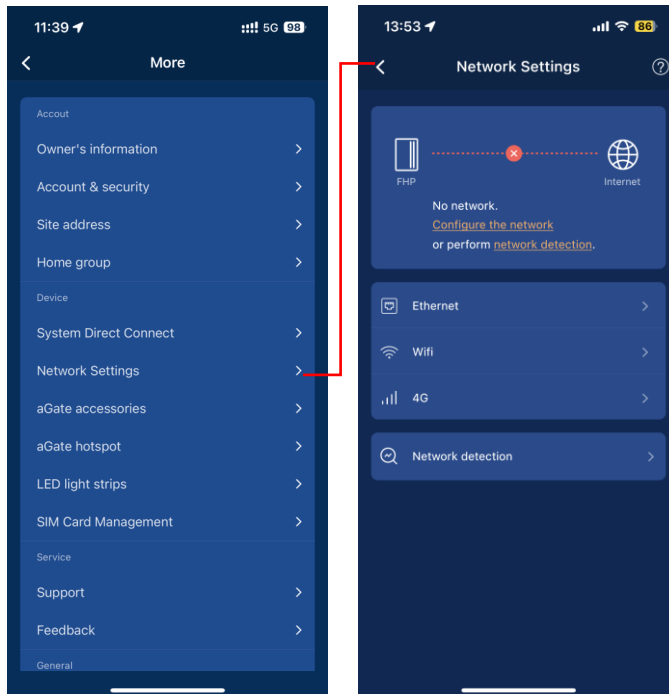
## Device info

Click **Device info** to view the equipment name and software version information.

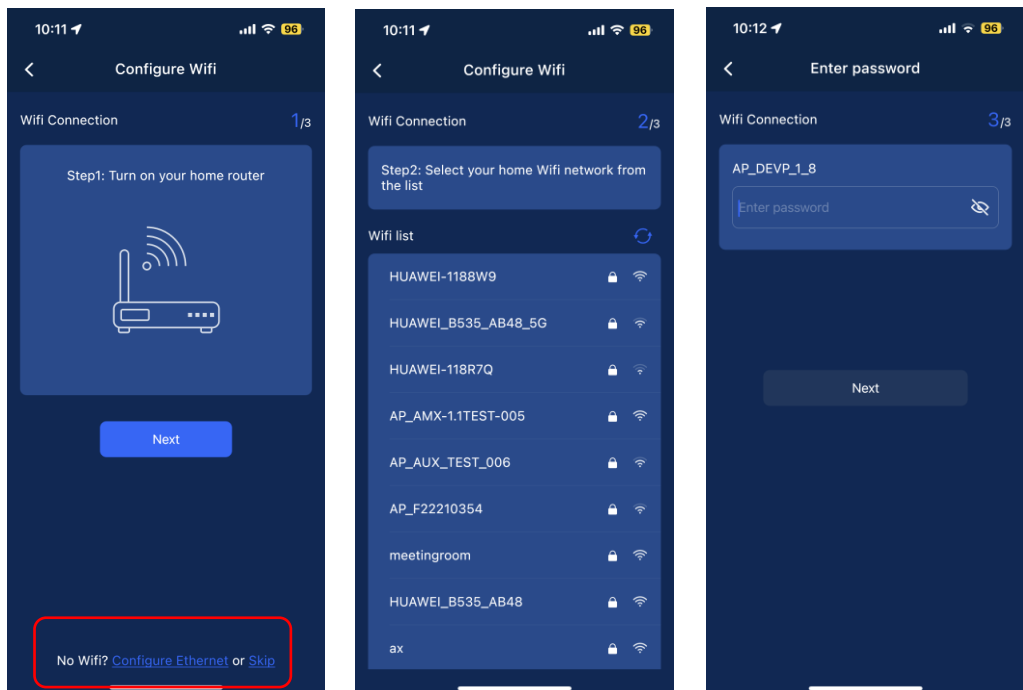


## Network Settings

Click **Network Settings** to access the network settings page. If there is no network, tap **Configure the network** or perform **network detection**.



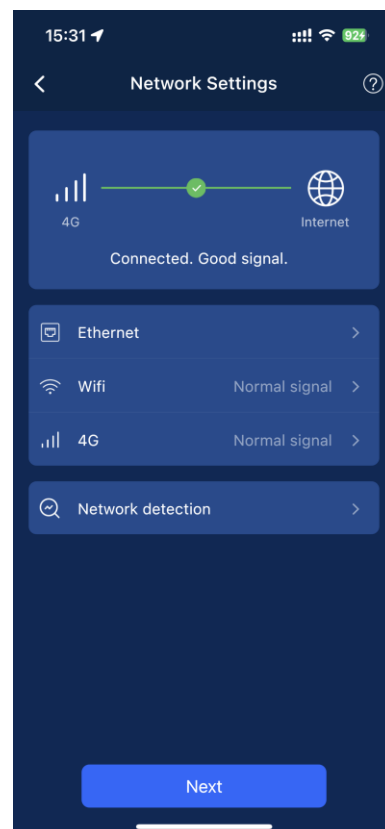
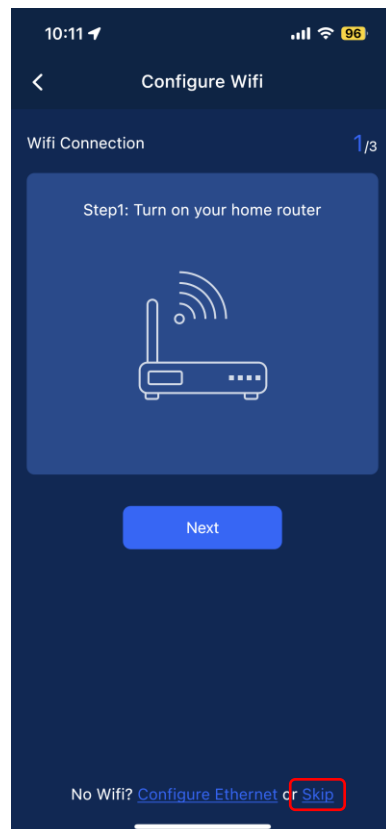
Prefer to configure Wifi. Follow the instructions on the screen to configure the Wifi connection.



If there is no home Wifi connection, you can tap **Configure Ethernet**.



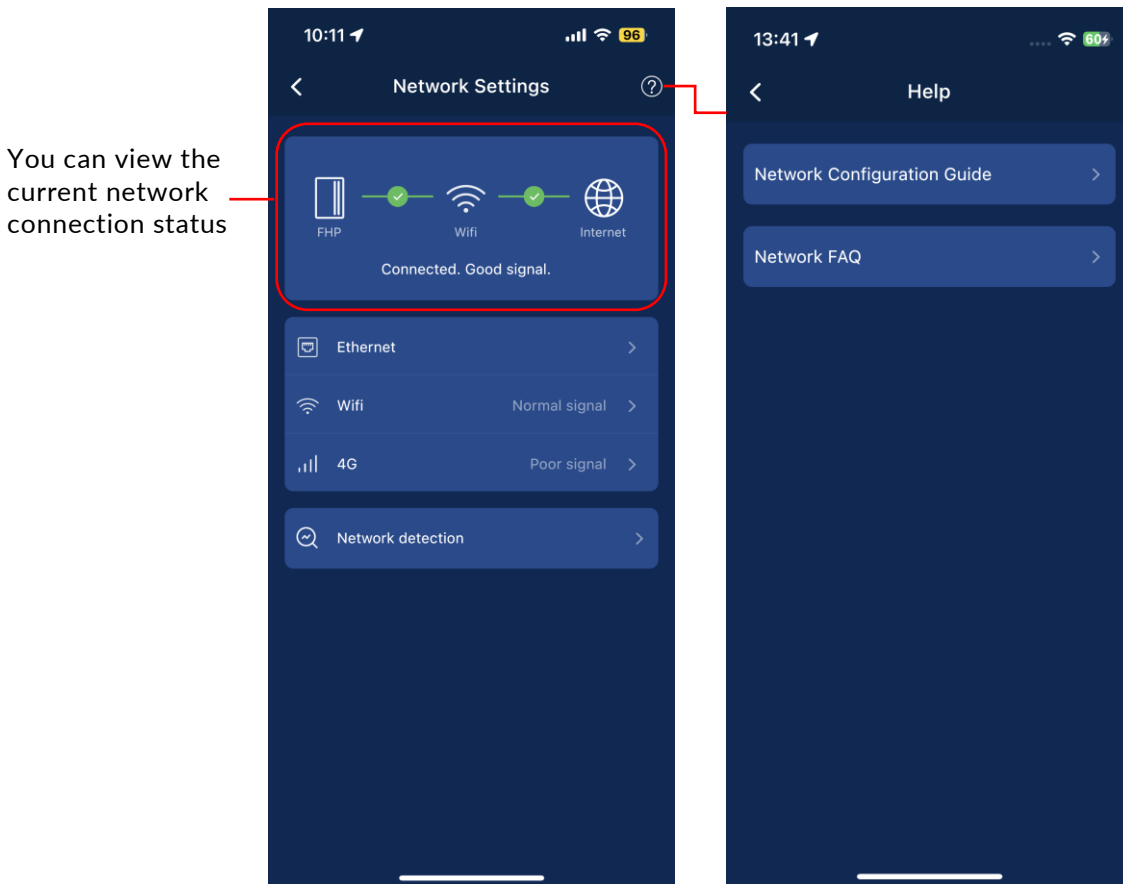
Or tap **Skip** on the Configure Wifi page (4G is connected by default).





*\*NOTE: A Wifi or Ethernet connection is preferred to the 4G cellular network, as 4G is easily affected by the carrier services and weather conditions. Currently, only 2.4Ghz Wifi connections are supported between the aGate and the router.*

After network configuration, you can click **Network detection** to check the network connection. When the current network connection is poor or abnormal, you can tap the question mark icon in the upper right corner to view the configuration guide or FAQ collection.



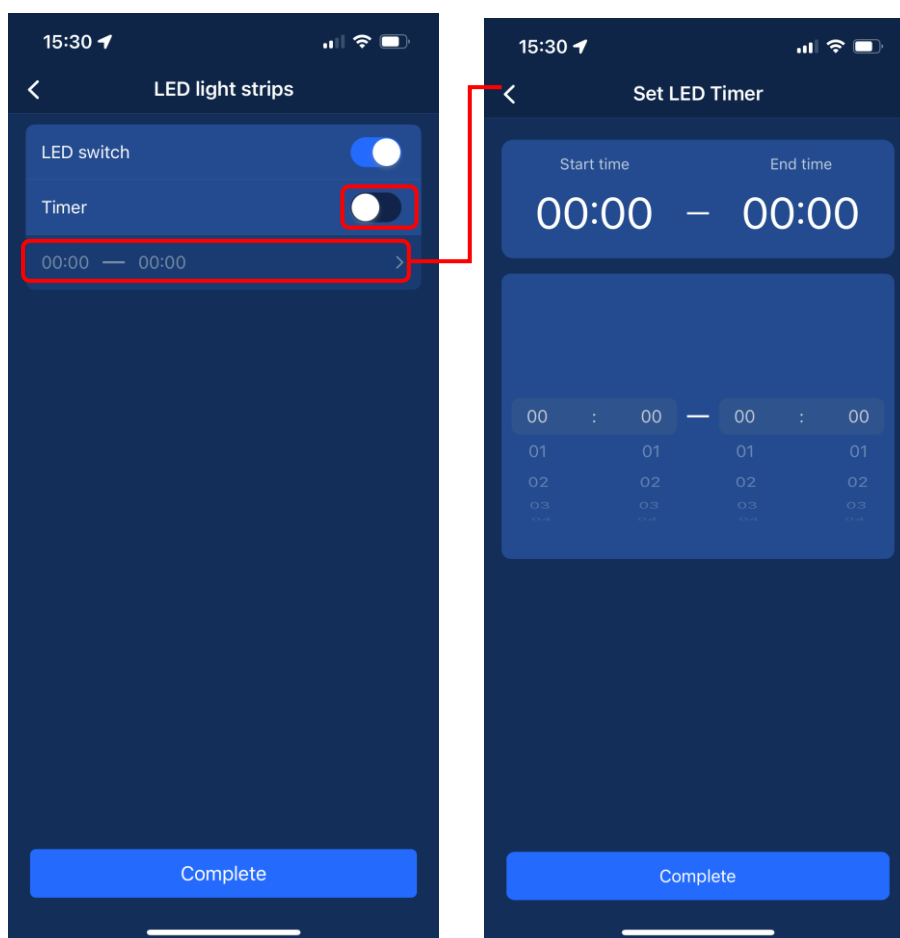
### aGate accessories

Click **aGate accessories** to view or bind the serial number of the Smart Circuits Module and the Generator Module to the aGate.

### LED light strips

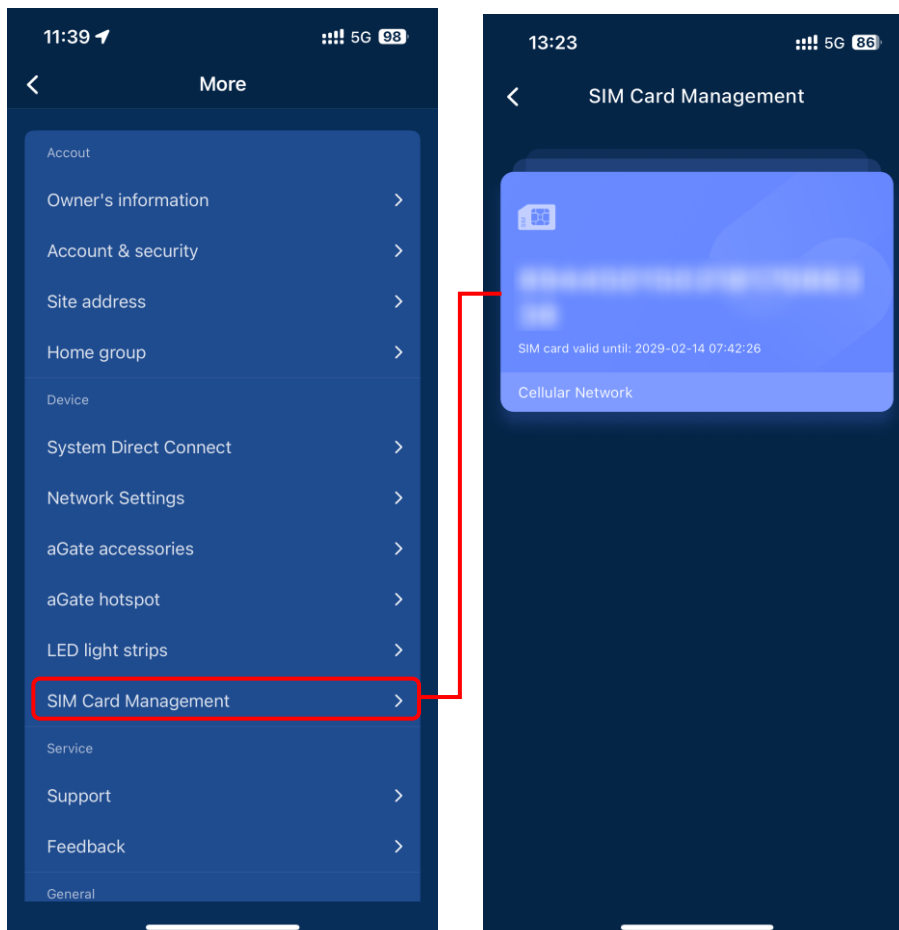
You can enable and disable the aPower LED light strips. When the LED switch is disabled, the LED indicators will not light even though the aPower power switch has been turned on.

You can also set the lights on for a certain time period by using the slider to the right of **Timer** and entering the time period.



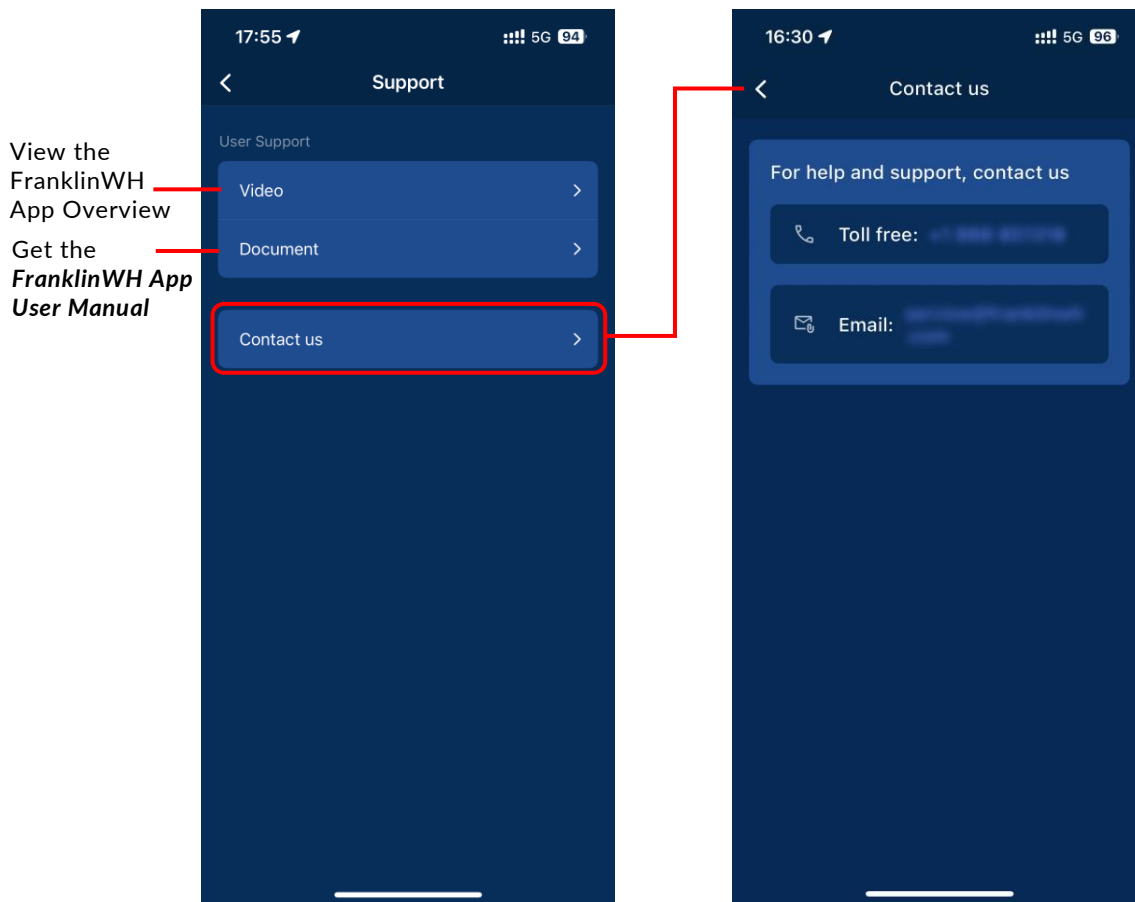
### SIM Card Management

Click **SIM Card Management** to view the validity period of your SIM card. The software will remind you 60 days before the expiration date that a payment is due.



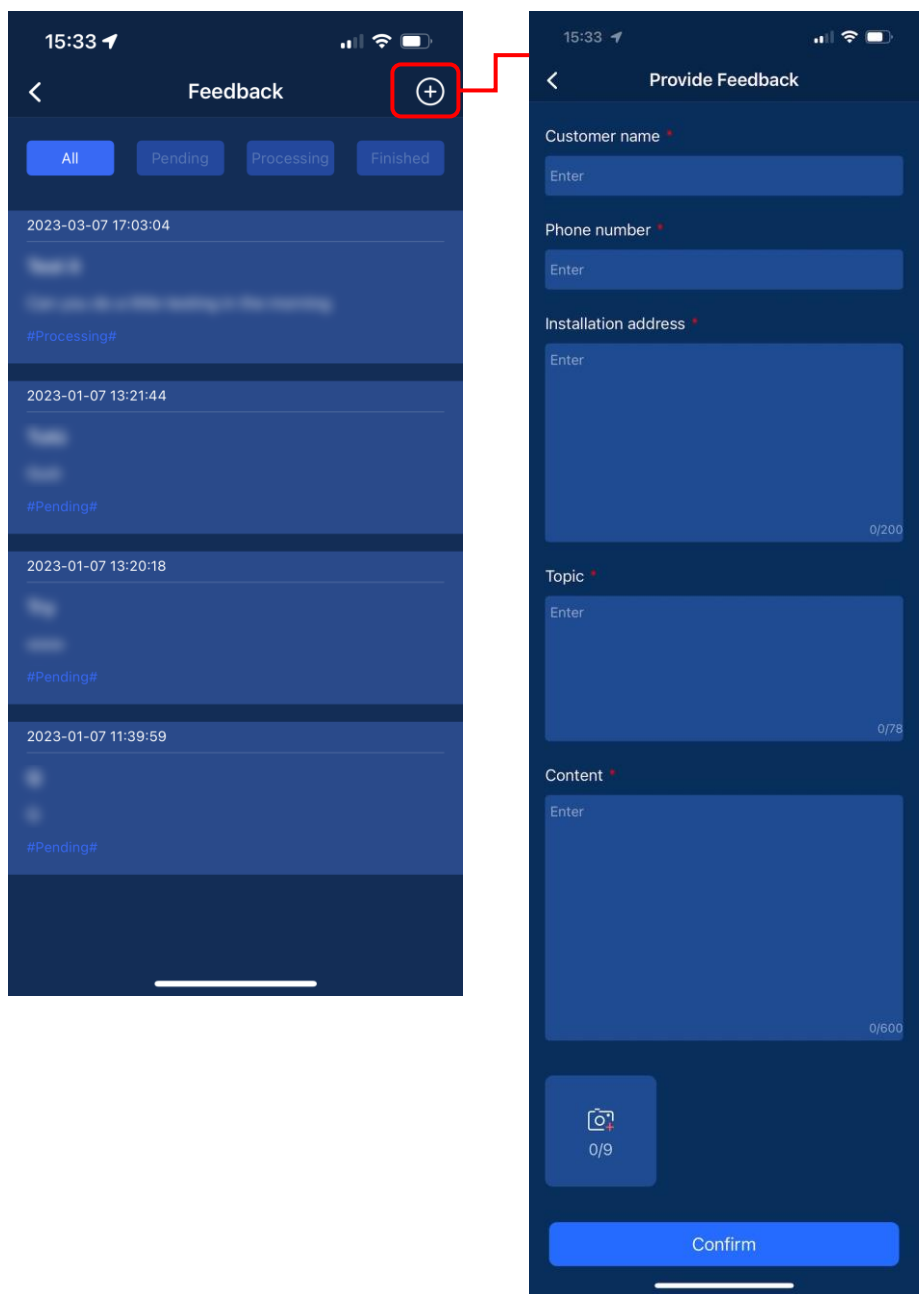
## Support

Click **Support** to access videos and articles about the FranklinWH App. Please feel free to contact us if you need any assistance.



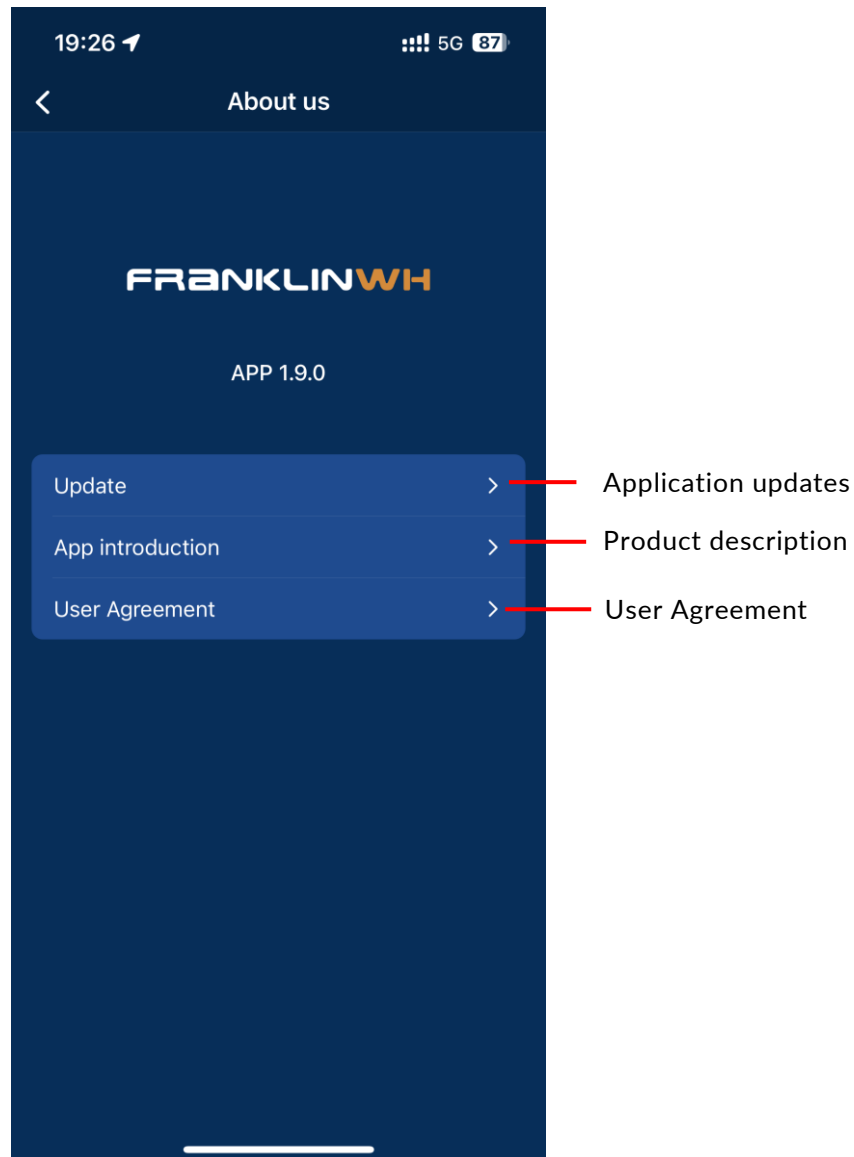
## Feedback

Click **Feedback** to enter the Feedback display page. There are four options here, **All**, **Pending**, **Processing**, and **Finished**. **All** is the default page, where the submitted feedback is listed. Tap the plus sign on the top right corner to provide your feedback details, including **Customer name**, **Phone number**, **Installation address**, **Topic**, and **Content**. You may also upload pictures as a supplement. After finishing, tap **Confirm** to submit it. Click each submitted feedback displayed in the **All** page to check the progress.



## About Us

Click **About Us** to enter the page where you can check the latest updates of the FranklinWH App, view the production description, User Agreement, and our privacy policies.



## Sign out

Click **Sign out** to sign out of the currently logged in homeowner account.