LPEA's Guide to Optimizing your FranklinWH Battery System

Overview: This guide is intended to support LPEA members who own FranklinWH battery systems and want to operate the system to maximize their financial savings. *These recommendations are specific to LPEA's General Service residential rate. If you are on the residential Time-Of-Use (TOU) rate or another rate, please reach out to communitypower@lpea.coop for personalized guidance.*

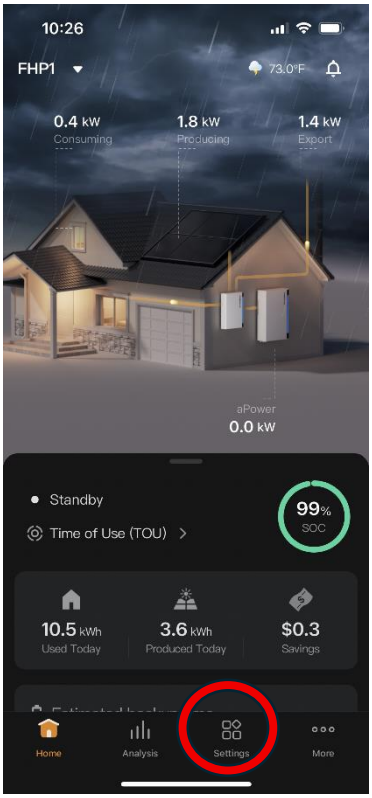
The required settings for the **LPEA Battery Rebate** are explicitly shown in this guide with a icon. If proof of the setting is required in the Battery Rebate application, you will see a icon. Additionally, there are several steps in this guide that have a icon. This icon identifies situations where you need to choose how to operate the system based on your goals.

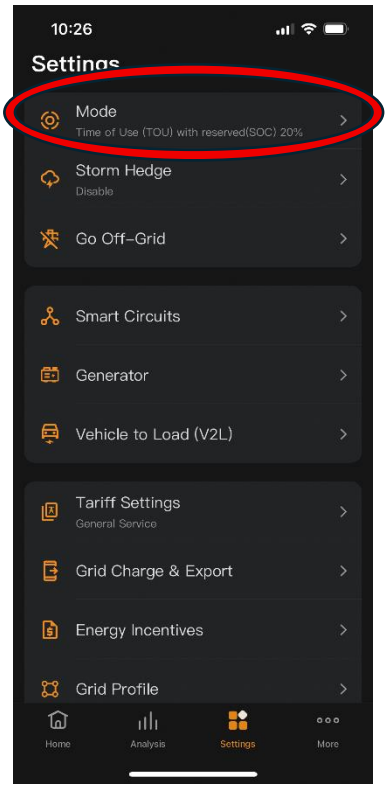
If you are also applying for the **LPEA Bonus Battery Rebate** you will skip **Step 5** and instead follow **Step 6**.

Step-by-Step Instructions

1. Log into the FranklinWH App

1. Open your app and log in with your credentials.

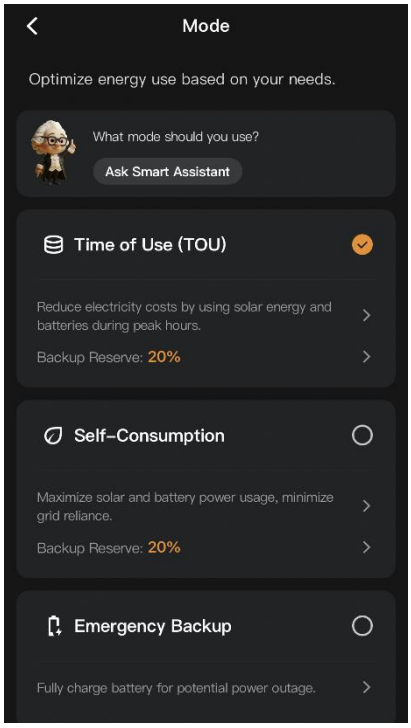


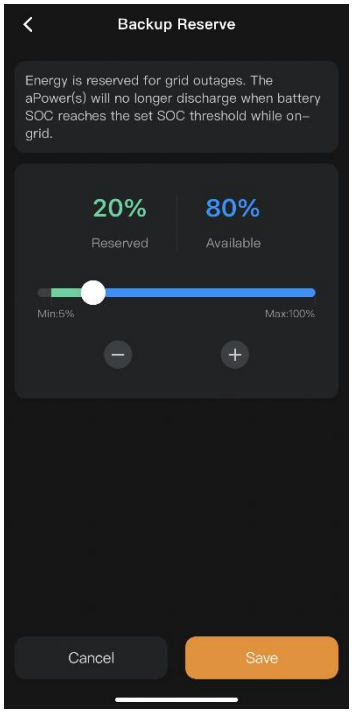


2. Select Operational Mode and Backup Reserve

1. Click on the **Settings** menu on the bottom of the page. Once on the Settings screen, select **Mode.**

2. On the Mode screen you will need to select the Mode which best achieves your goals. The **Time of Use (TOU)** mode is what will likely be the most financially beneficial to you and to LPEA. This mode must be selected to receive LPEA's Battery Rebate. Check the circle to select this mode.





3. Below each Mode option is the control to set a **Backup Reserve** percent. This is the minimum charge your battery will reach in its daily use cycle and the battery charge that you maintain all the time in case of an unexpected outage.

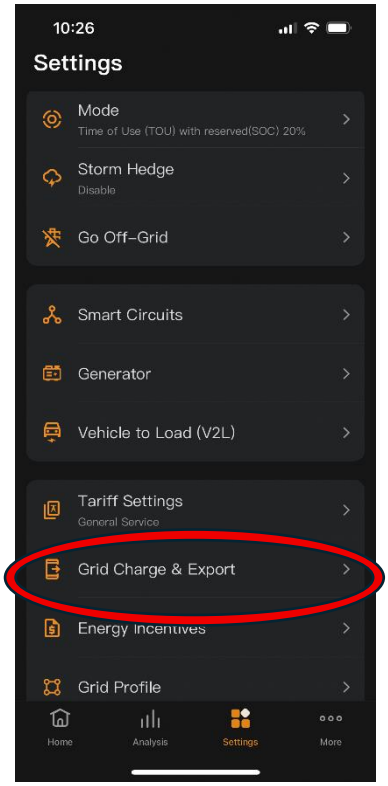
   *The lower the reserve, the more you can power your home self-generated electricity and the more you can reduce your electric bill, but the less backup power you are guaranteed to have. The risk of not having enough backup power can be somewhat mitigated with the **Storm Hedge** feature described in Step 4 or using the **Standby Operating Schedule** after the peak demand time period.*

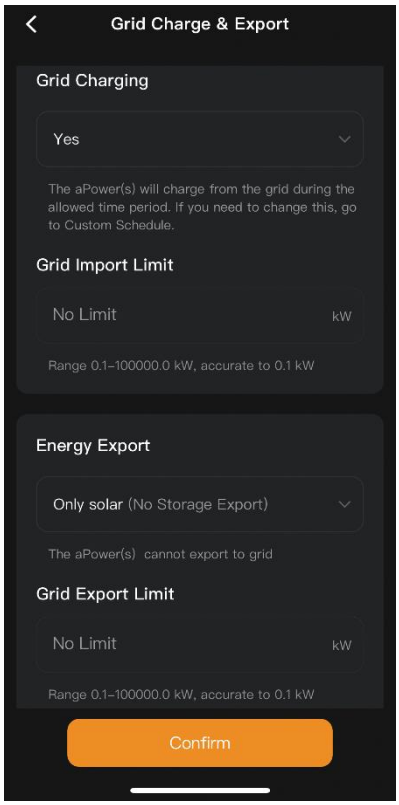
   To be eligible for LPEA's Battery Rebate your Backup Reserve must be 30% or less.

   Once you've set the Backup Reserve, take a screenshot.

3. ❓Enable Grid Charging

This is an optional but highly recommended step. If you want to minimize your potential Peak Demand charges and support the grid you should complete this step. The schedules described in Steps 5 and 6 are designed so that your system will only charge from the grid if it is unlikely to achieve a full charge from onsite solar prior to the Peak Demand window. However, if you want to minimize your reliance on the grid you can skip this step.

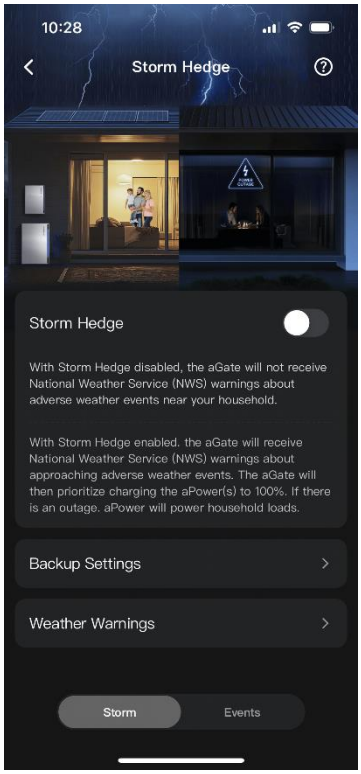


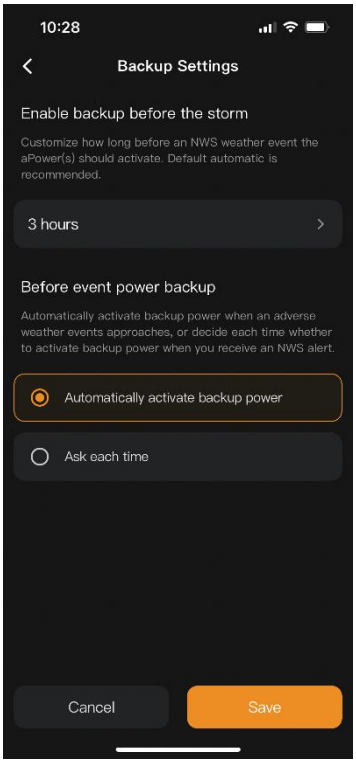


1. On the **Settings** menu, click on **Grid Charge & Export**.
2. Under **Grid Charging**, select **Yes**. Set the **Grid Import Limit** as **No Limit**, unless you have a reason to set a limit. *The battery will already limit its charging rate to no more than 5 kW.*
3. Under **Energy Export**, select **Only Solar (No Storage Export)**. Under **Grid Export Limit**, set **No Limit** unless as a condition of your Interconnection you have an export limit.

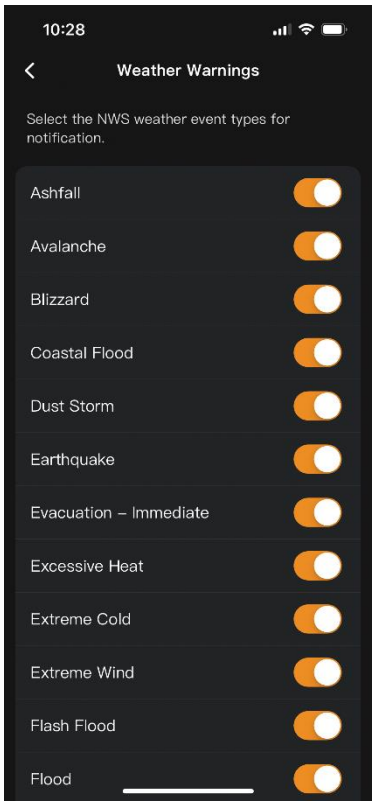
4. Select Storm Hedge mode status

1. Decide whether to enable **Storm Hedge.**





   With Storm Hedge enabled you will have maximum back-up power at times when outages are more common. However, it may cause you to have a higher Peak Demand charge because you charged from the grid during Peak Demand hours or your battery didn't discharge to serve home load during Peak Demand hours. You have the ability to opt-out of upcoming or active events in the app and/or adjust your settings seasonaly. Read more here.



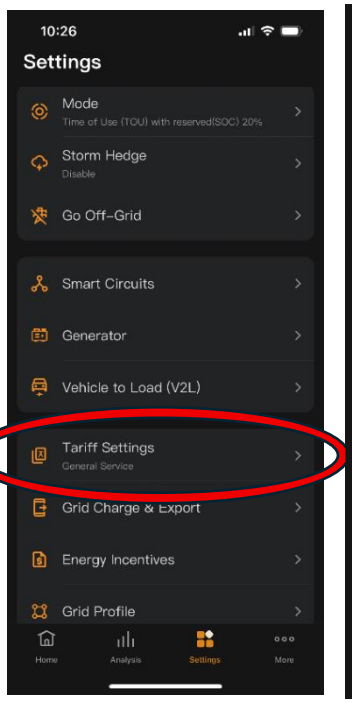
2. If you choose to enable Storm Hedge, you must decide how to configure it. This includes deciding how far in advance of the start of the National Weather Service warning the system will go into backup mode, whether it automatically goes into backup mode or notifies you of the warning and ask you to decide, and which NWS warnings trigger the backup mode. *This can be helpful if you want to ensure backup power in the winter, but don't necessarily want the system to go into backup mode with every summertime Red Flag warning.*

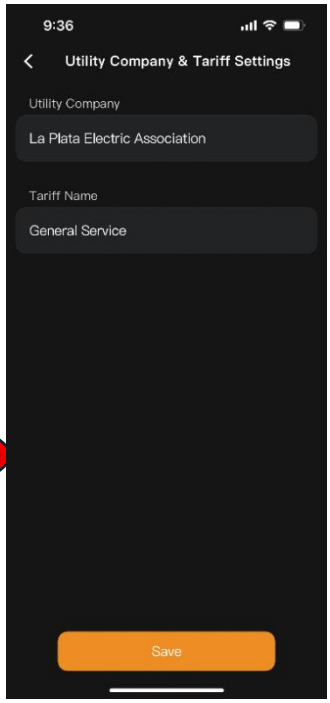
   LPEA does not require Storm Hedge to be enabled or disabled, but we would like to be able to track member preferences and know Storm Hedge status when reviewing battery performance data so we ask for a screenshot of your settings.

5. Set Utility Rate Plan (standard Battery Rebate Only)

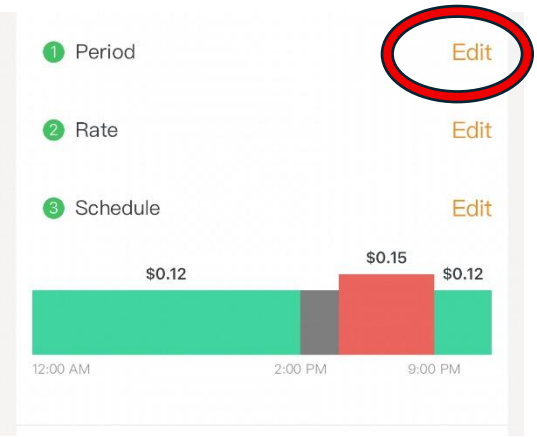
If you are in an Interconnection Limited Zone (Orange or Red area) and are applying for the Bonus Rebate skip to Step 6.

1. Return to the **Settings** menu and select **Tariff Settings.**
2. Click on **Edit** at the bottom of the screen.
3. For **Utility Company** & **Tariff**, we recommend you enter **La Plata Electric Association** and **General Service**.
4. This operating schedule will apply for the whole year so there is no need to create additional Seasons.
5. Click on **Edit** for **Period** and set up the following schedule:



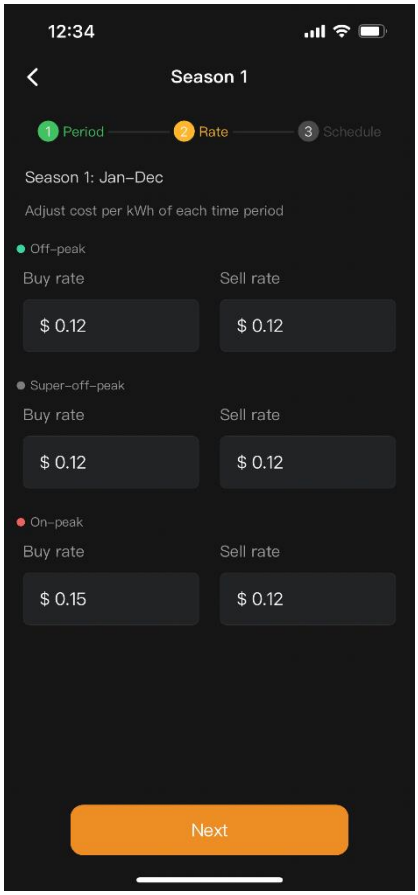


Time Period	Type
12:00 AM-2:00 PM	Off-peak
2:00 PM-4:00 PM	Super-off-peak
4:00 PM-9:00 PM	Peak
9:00 PM-12:00 AM	Off-peak



6. Click on **Edit** for **Rate** and set the following values in the table below. The italicized text below explains the reasoning for the Buy and Sell rates.

Classification	Buy	Sell
Off-peak	$0.12	$0.12
Super-off-peak	$0.12	$0.12
Peak	$0.15	$0.12



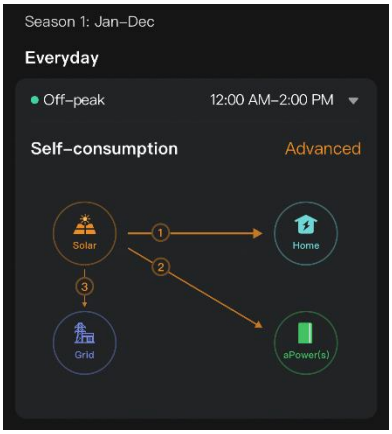
$0.12 is currently the cost for each kWh of electricity, rounded to the nearest penny, on LPEA's General Service rate. Net-metering policy dictates that a kWh sold to the grid has equivalent value to one purchased from the grid. This is why the Buy and Sell rates are equivalent for all but the Peak time period which is factoring an additional once-per-billing cycle demand charge.

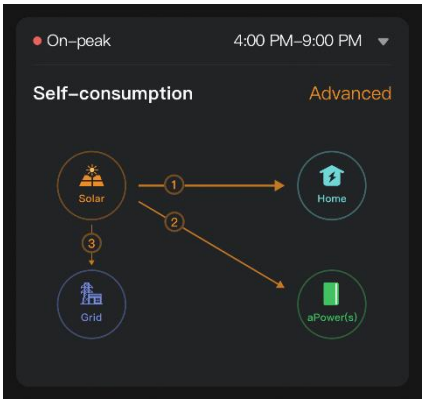
LPEA's Peak Demand charge is $5.73/kW for the one hour a billing cycle, between 4-9pm, when you use the most electricity from the grid. If this amount is spread evenly across all kWh used between 4-9 pm, this adds approximately $0.03/kWh to the Peak Buy rate which is why we are using $0.15/kWh for the Buy rate.

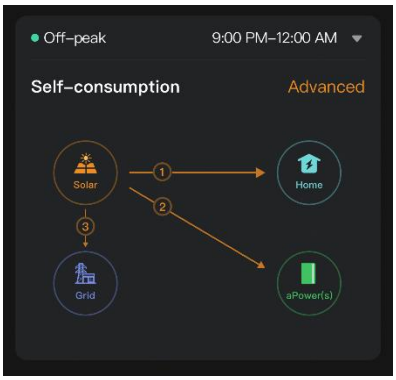
These rates are used by the FranklinWH app to estimate cost savings from your system and do not affect the system's behavior.

7. Click on **Edit** for **Schedule** and set the following scheduling modes.

Time Period	Classification	Schedule Mode
12:00 AM-2:00 PM	Off-peak	Self-consumption
2:00 PM-4:00 PM	Super-off-peak	aPower charges from solar/grid
4:00 PM-9:00 PM	Peak	Self-consumption
9:00 PM-12:00 AM	Off-peak	Self-consumption

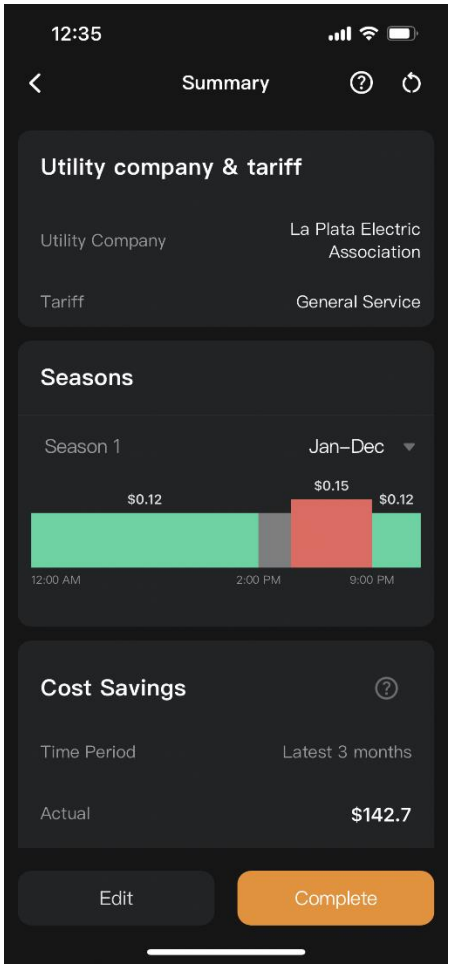






The schedule suggested above will minimize peak demand charges, support the grid, and use your battery to power your home throughout as much of the night and morning as possible, until reaching your Backup Reserve percent. If you would rather prioritize having additional backup power through the night in the unlikely event of an outage over using your battery to power your home throughout as much of the night and morning as possible, you could set the battery to be in **aPower on standby** mode for 9pm-12am or another interval of your choosing. Talk with LPEA or your installer if you would like support with this.

8. When complete, the Summary screen should look similar the one on the right. Take a screenshot and click **Complete.**

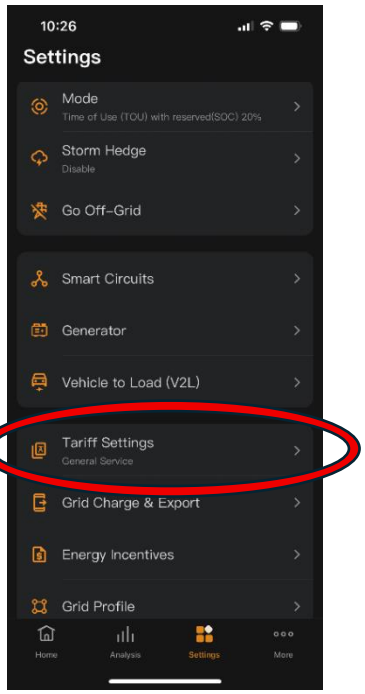


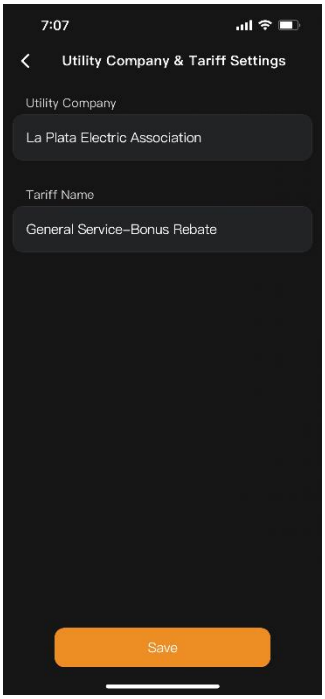
Congratulations! You have finished configuring your system for optimal financial savings under LPEA's General Service residential rate and for LPEA's Battery Rebate. You should also now have all the screenshots needed to apply for LPEA's Battery Rebate. Reach out to communitypower@lpea.coop with any questions.

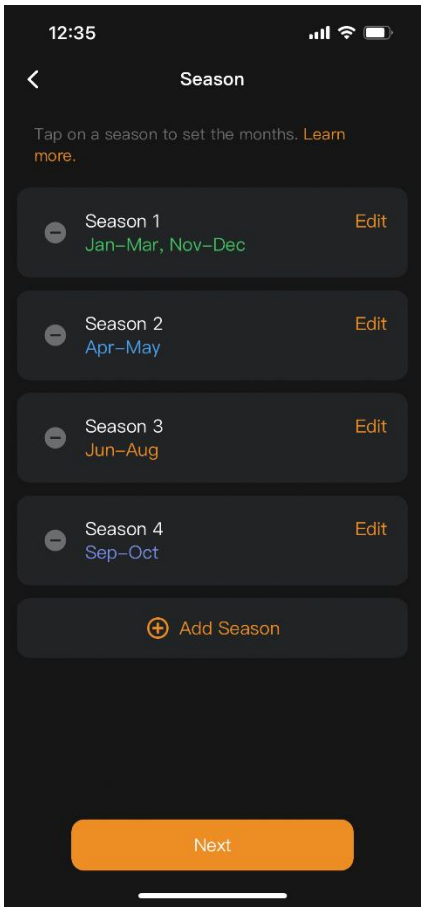
6. Set Utility Rate Plan (Bonus Battery Rebate Only)

If you are in an Interconnection Limited Zone (Orange or Red area) and are applying for the Bonus Rebate follow these instructions.

1. Return to the **Settings** menu and select **Tariff Settings.**
2. Click on **Edit** at the bottom of the screen.
3. For **Utility Company** & **Tariff**, we recommend you enter **La Plata Electric Association** and **General Service-Bonus Rebate**.
4. This operating schedule will vary by season. You will need to create four seasons as shown in the picture below.

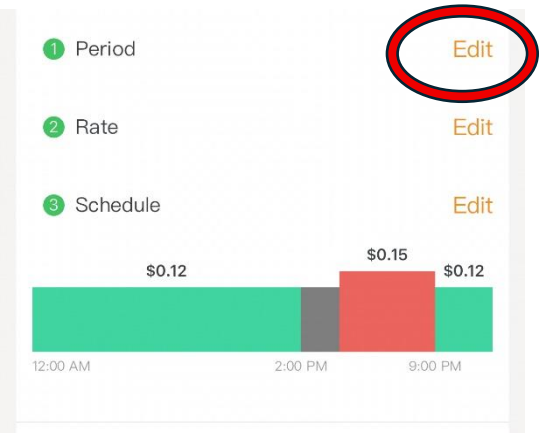






5. Select **Season 1, Jan-Mar, Nov-Dec** and then click on **Edit** for **Period** and set up the following schedule:

Time Period	Classification
12:00 AM-2:00 PM	Off-peak
2:00 PM-4:00 PM	Super-off-peak
4:00 PM-9:00 PM	Peak
9:00 PM-12:00 AM	Off-peak



6. Click on **Edit** for **Rate** and set the following values in the table below. The italicized text below explains the reasoning for the Buy and Sell rates.

Classification	Buy	Sell
Off-peak	$0.12	$0.12
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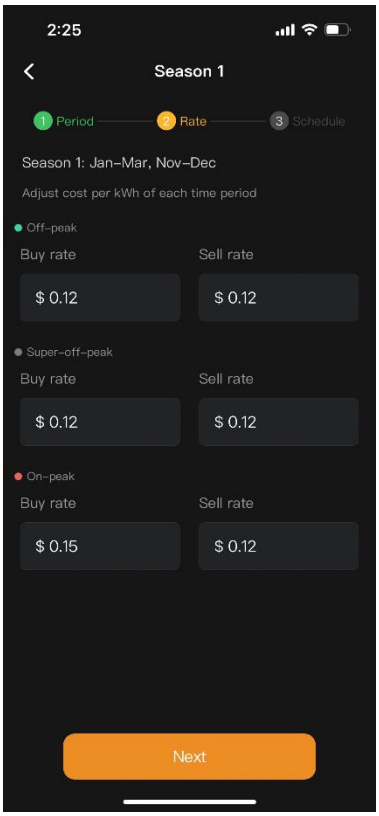
Peak	$0.15	$0.12



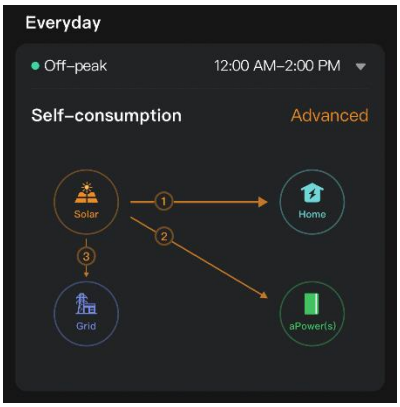
$0.12 is currently the cost for each kWh of electricity, rounded to the nearest penny, on LPEA's General Service rate. Net-metering policy dictates that a kWh sold to the grid has equivalent value to one purchased from the grid. This is why the Buy and Sell rates are equivalent for all but the Peak time period which is factoring an additional once-per-billing cycle demand charge.

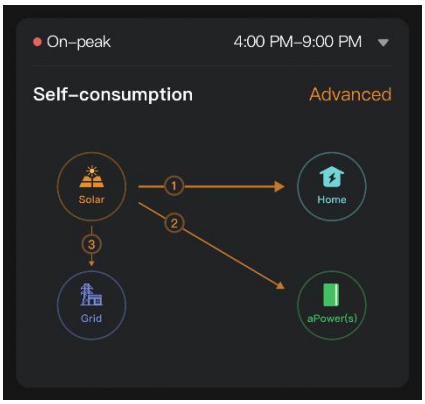
LPEA's Peak Demand charge is $5.73/kW for the one hour a billing cycle, between 4-9pm, when you use the most electricity from the grid. If this amount is spread evenly across all kWh used between 4-9 pm, this adds approximately $0.03/kWh to the Peak Buy rate which is why we are using $0.15/kWh for the Buy rate.

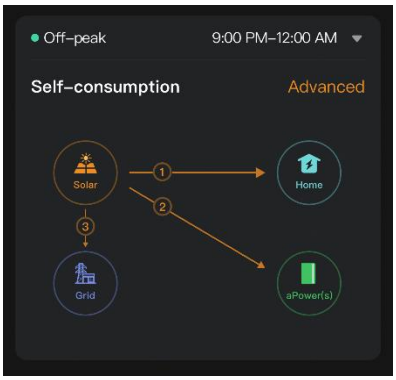
These rates are used by the FranklinWH app to estimate cost savings from your system and do not affect the system's behavior.

7. Click on **Edit** for **Schedule** and set the following scheduling modes.

Time Period	Classification	Schedule Mode
12:00 AM-2:00 PM	Off-peak	Self-consumption
2:00 PM-4:00 PM	Super-off-peak	aPower charges from solar/grid
4:00 PM-9:00 PM	Peak	Self-consumption
9:00 PM-12:00 AM	Off-peak	Self-consumption





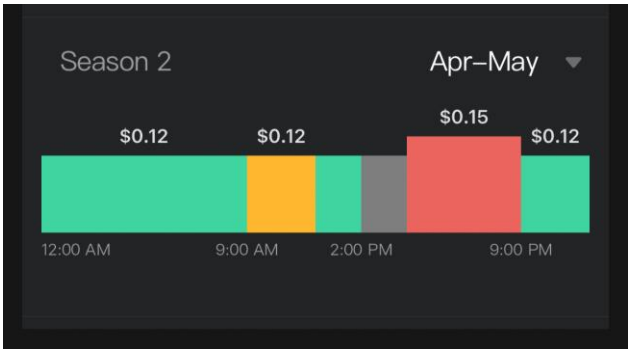


❓ *The schedule suggested above will minimize peak demand charges, support the grid, and use your battery to power your home throughout as much of the night and morning as possible, until reaching your Backup Reserve percent. If you would rather prioritize having additional backup power through the night in the unlikely event of an outage over using your battery to power your home throughout as much of the night and morning as possible during the winter(or another season), you could set the battery to be in* ***aPower on standby*** *mode for 9pm-12am or another interval of your choosing. Talk with LPEA or your installer if you would like support with this.*

8. These same Settings will apply to **Season 3, June-August**.

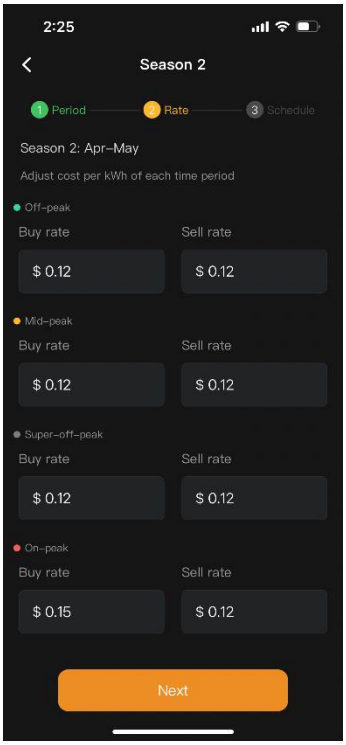
9. Select **Season 2, April-May** and then click on **Edit** for **Period** and set up the following schedule:

Time Period	Classification
12:00 AM-9:00 AM	Off-peak
9:00 AM –12:00 PM	Mid-peak
12:00 PM-2:00 PM	Off-peak
2:00 PM-4:00 PM	Super-off-peak
4:00 PM-9:00 PM	Peak
9:00 PM-12:00 AM	Off-peak



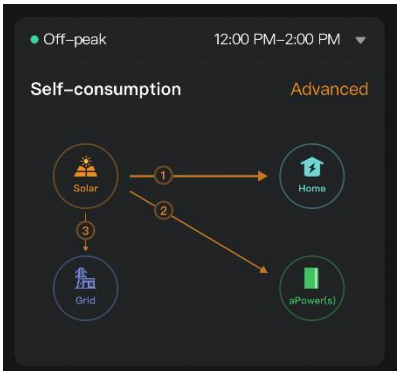
10. Click on **Edit** for **Rate** and set the following values in the table below. The italicized text below explains the reasoning for the Buy and Sell rates.

Classification	Buy	Sell
Off-peak	$0.12	$0.12
Mid-peak	$0.12	$0.12
Super-off-peak	$0.12	$0.12
Peak	$0.15	$0.12



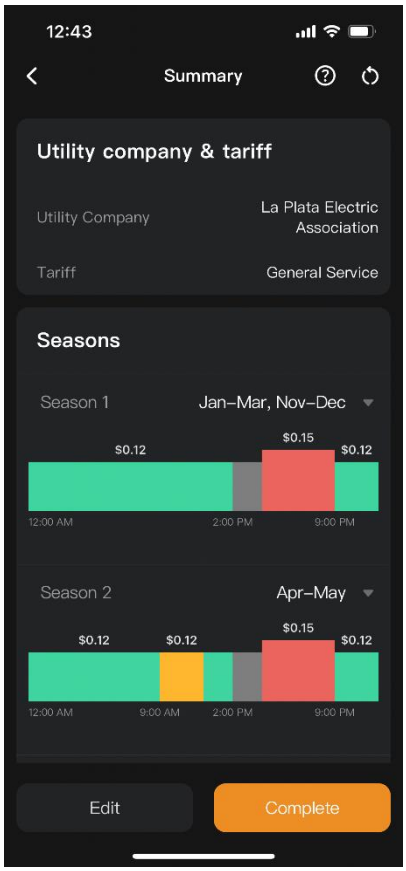
11. Click on **Edit** for **Schedule** and set the following scheduling modes.

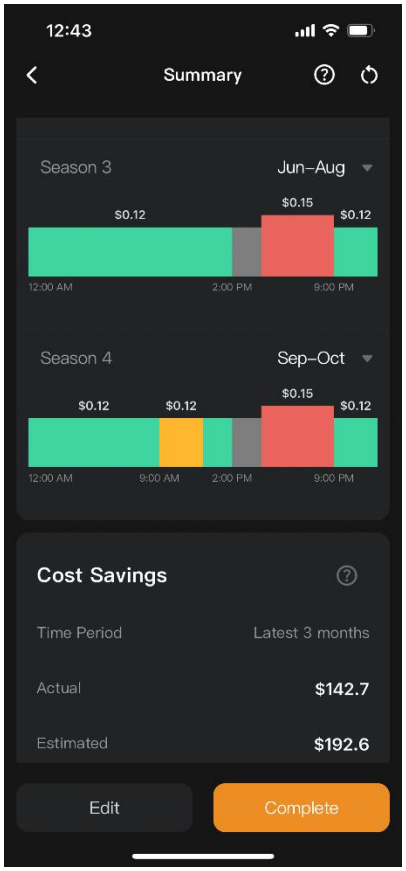
Time Period	Classification	Schedule Mode
12:00 AM-9:00 AM	Off-peak	Self-consumption
9:00 AM –12:00 PM	Mid-peak	aPower on standby
12:00 PM-2:00 PM	Off-peak	Self-consumption
2:00 PM-4:00 PM	Super-off-peak	aPower charges from solar/grid
4:00 PM-9:00 PM	Peak	Self-consumption
9:00 PM-12:00 AM	Off-peak	Self-consumption



12. These same Settings will apply to **Season 4, Sept-Oct**.

13. When complete, the Summary screen should look similar the ones below. Take a screenshot and click **Complete.**





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