

# aquatech

Solar Technologies Pty Ltd

## WI-FI SETUP MANUAL



# Contents

## 1. Connecting to the Tuya App

MAKE SURE THE HEAT PUMP IS UNPLUGGED OR SWITCHED OFF | DOWNLOADING THE TUYA SMART HOME APP | SIGN UP & LOGGING IN | ADD A DEVICE | SWITCH ON THE DEVICE | CONNECT THE DEVICE

## 2. Tuya App features & display

HOME SCREEN/YOUR COZY HOME/SCENES/SMART/ME/DEVICES | DEVICE SCREEN/INFO BUTTON/CURRENT MODE/SET TEMP/TEMP ADJUST BUTTONS/CURRENT TANK TEMP/POWER BUTTON/MODE BUTTON/SETTING-TIMER BUTTON

## 3. Switching | Modes | Timers

TURNING DEVICE ON & OFF | CONTROLLER ON DISPLAY/CONTROLLER OFF DISPLAY | UNDERSTANDING MODES - STANDARD/ECO/HYBRID/HYBRID+/ELEMENT | CHANGING MODES | CONTROLLER DISPLAY MODES | UNDERSTANDING TIMERS | SETTING AN ON TIME | SETTING AN OFF TIME

## 4. Customise with Tuya Scenes

INTRODUCTION TO TUYA SCENES | HOT WATER USAGE CATEGORIES | SETTING AN ON-TIMER | SETTING AN OFF-TIMER | SETTING A WINTER BOOST | SETTING A MORNING BOOST

### **.... IMPORTANT INFORMATION ....**

**Wi-Fi features are only intended for use by heat pumps that are connected to a continuous power supply. If your system is connected to a control load tariff, the power to the system is turned on and off independently by your energy provider.**

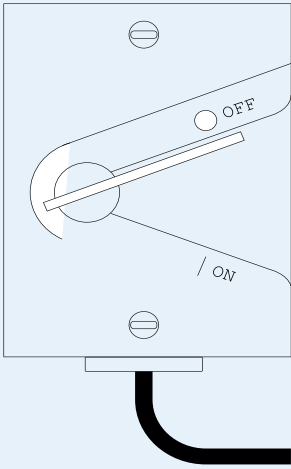
**This may cause conflicts between settings on the app and windows when the system is powered on or off by the energy provider. If your system is on a control load tariff, it should run without timers and be set to a mode based on your hot water usage at home.**

# CONNECTING TO THE TUYA APP

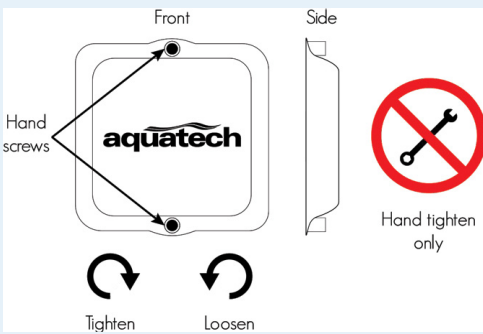
1. POWER OFF HEAT PUMP
2. DOWNLOAD THE TUYA SMART HOME APP
3. SIGN UP / LOG IN
4. ADD DEVICE
5. POWER ON HEAT PUMP
6. CONNECTING DEVICE



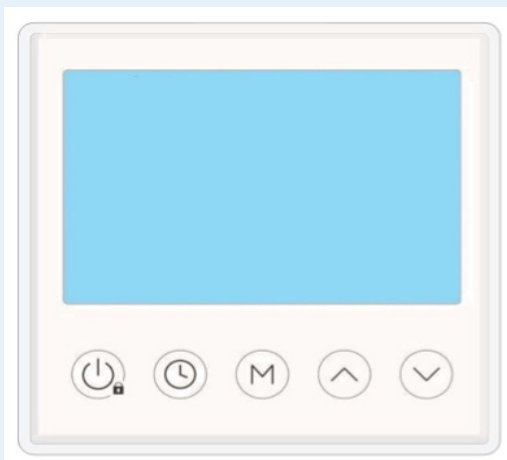
# 1. POWER OFF HEAT PUMP



**Please ensure that the device is turned off before proceeding. If it is hardwired to an isolation switch, please turn it off. If it is connected to a power point, please unplug it and/or turn the switch to the off position. If the device is hardwired without an isolation switch, please turn it off at the home's switchboard.**



**To remove the controller cover on the heat pump, please unscrew the thumb screws that are holding it in place.**



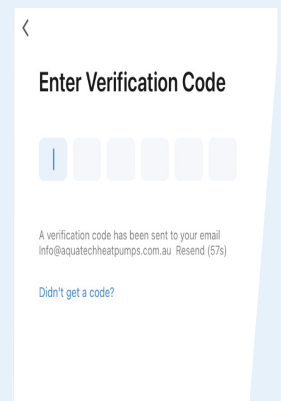
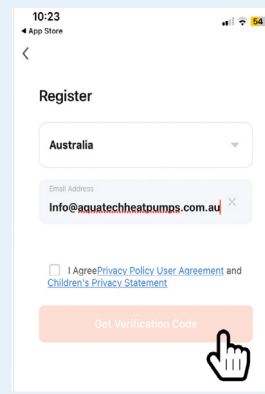
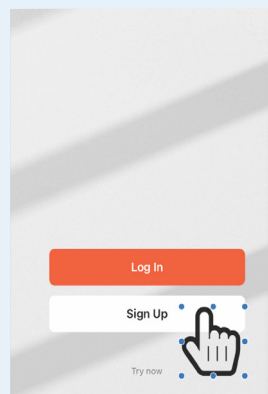
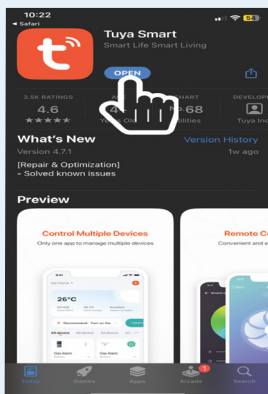
**Please make sure that the heat pump and controller screen are both turned off and that the screen is completely blank before continuing.**

## 2. DOWNLOAD THE TUYA APP



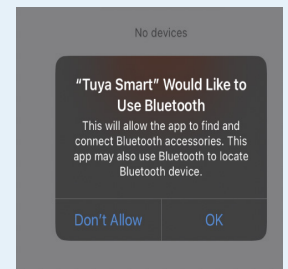
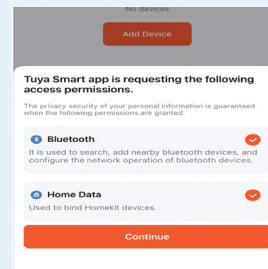
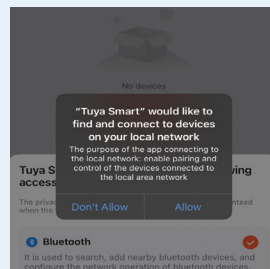
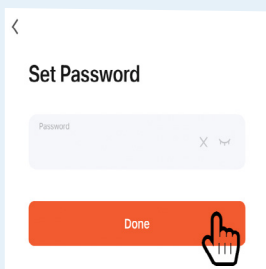
To download the TUYA Smart Home app, simply scan the QR code using your mobile device and access it through either the Android or iOS app stores.

<https://www.tuya.com/product/app-management/all-in-one->



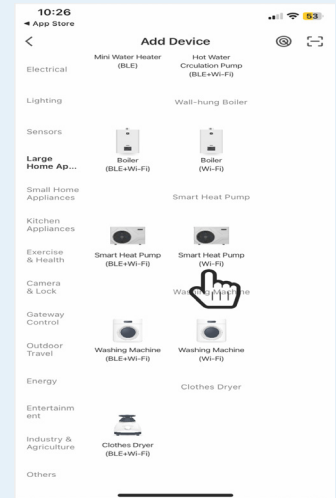
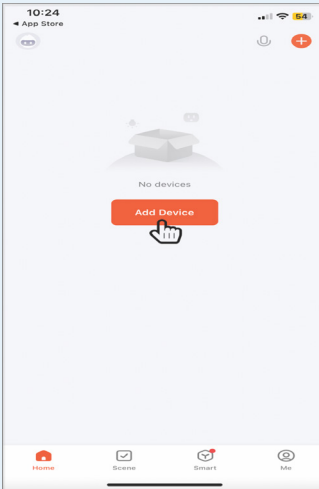
After downloading the app, click **“Open”** and then click **“Sign Up”**. Enter your email address and click **“Get Verification Code”**. Check your email for the six-digit code and enter it into the app.

## 3. SIGN UP / LOG IN

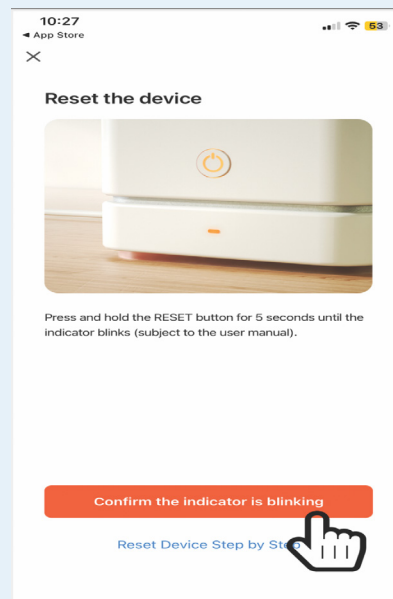
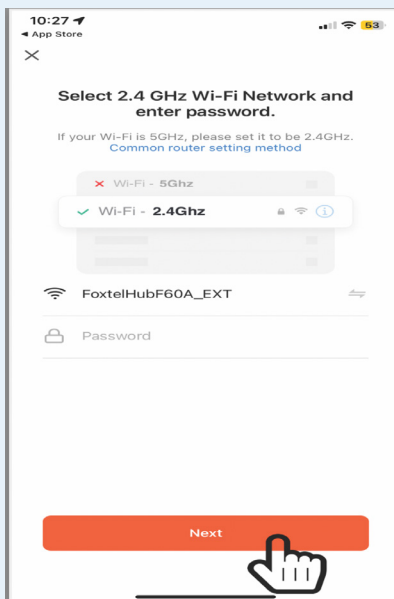


Next, set up a login password and click **“done”**. Tuya would like to connect to devices on your network, so please click **“allow”**. The Tuya app is requesting the following access, so please click **“continue”**. Tuya would also like to use Bluetooth, so please click **“OK”**. Additionally, Tuya would like to access your home data devices, so please click **“OK”**.

# 4. ADD DEVICE

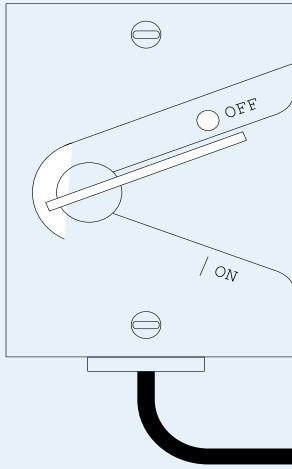


To add a device, start by going to the home screen and clicking on the **"Add Device"** button. Tuya will request permission to access your location, so click on **"Continue"** and then **"Allow while using app"**. Next, click on **"Add Device Manually"** and select **"Large Home Appliances"** from the list on the left-hand side. Scroll down the device list until you find **"Smart Heat Pump (Wi-Fi)"** and click on it.

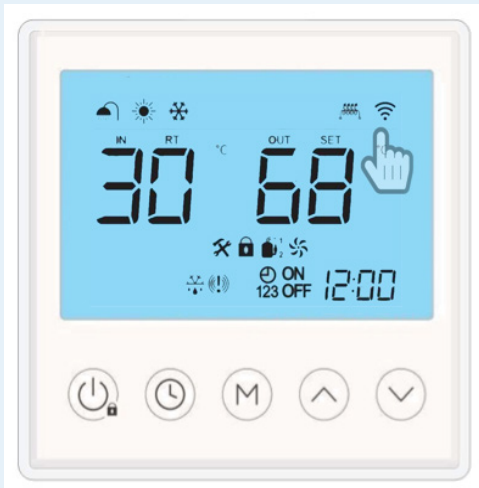


Tuya will prompt you to enter your Wi-Fi password and then click **"Next"**. Once done, click **"Confirm"** when the indicator is blinking.

## 5. POWER ON HEAT PUMP

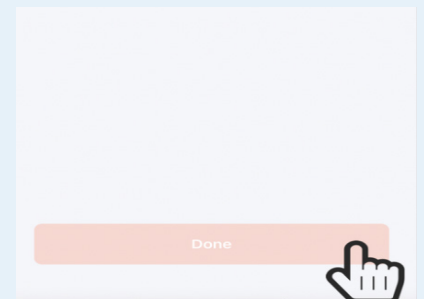
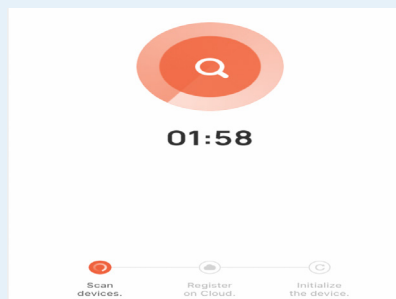
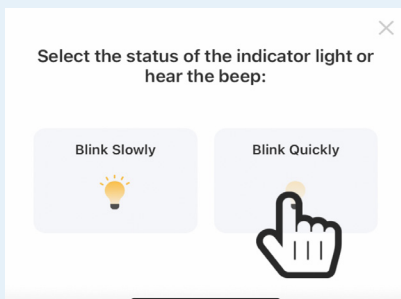


Please ensure that the device is turned on before proceeding. If it is hardwired to an isolation switch, please turn it on. If it is connected to a power point, please unplug it and/or turn the switch to the on position. If the device is hardwired without an isolation switch, please turn it on at the home's switchboard.



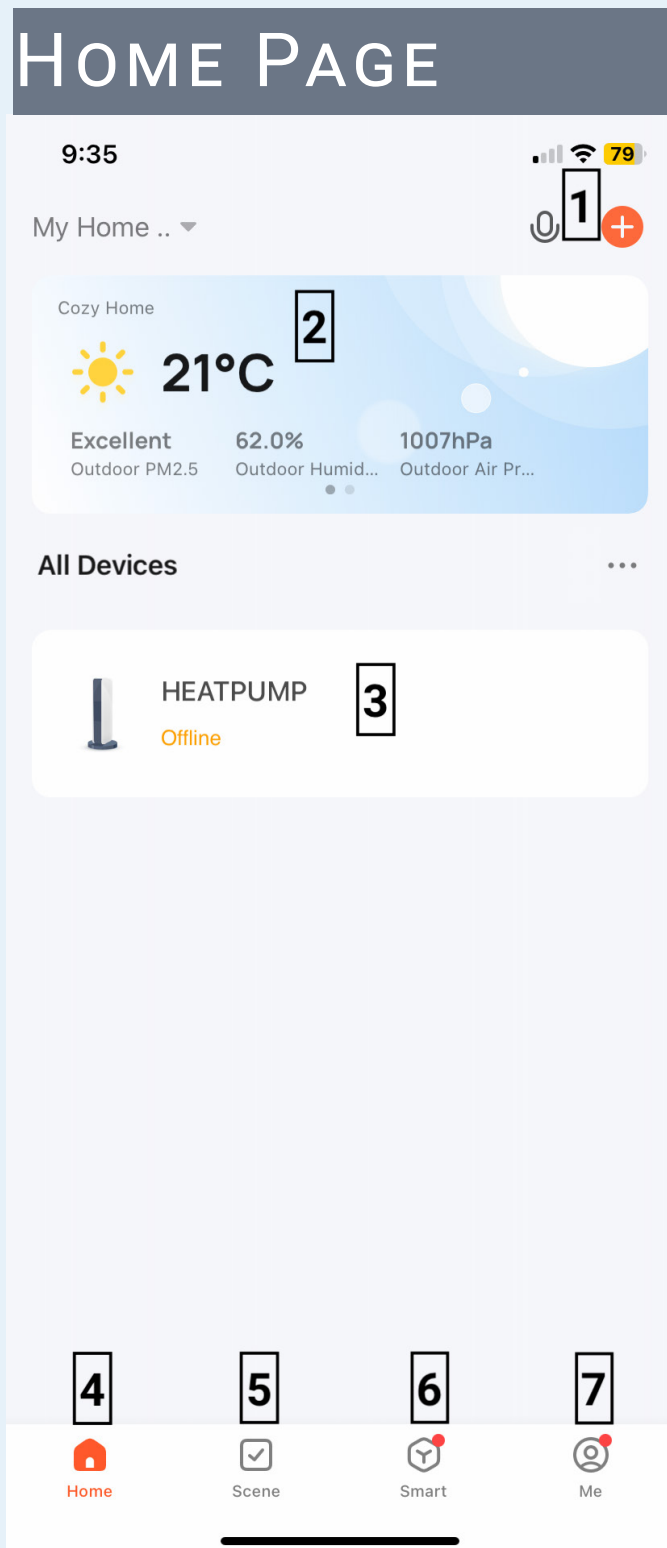
Before proceeding, ensure that both the heat pump and controller screen are turned on and their screens are illuminated. After five seconds, the WiFi symbol will start flashing in the right-hand corner. At this time turn your attention back to the Tuya App on your mobile device.

## 6. CONNECTING DEVICE



To connect the heat pump through the Tuya app, press the **"Blink Quickly"** button and wait for the app to establish the connection. Once the connection is established, click **"Done"**.

# TUYA APP FEATURES & DISPLAY



## 1. PLUS BUTTON

Click to add more devices to the home screen.

## 2. HOME LOCATION

Displays weather conditions at the your homes location.

## 3. DEVICE DISPLAY

Click to see device screen for live readings and operations.

## 4. HOME BUTTON

Click to return to the home screen.

## 5. SCENE BUTTON

Click to add running scenes for selected device.

## 6. SMART BUTTON

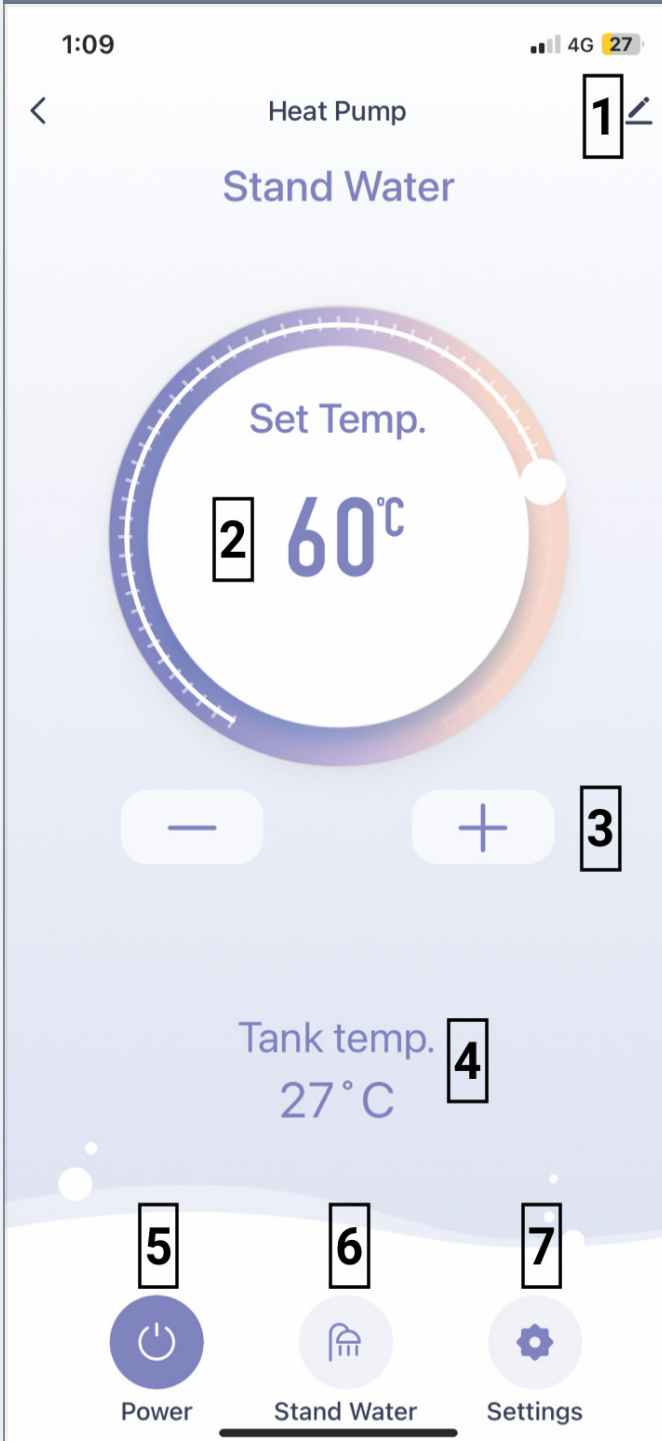
Learn more about the Tuya Smart Home App and features.

## 7. ME BUTTON

Your Tuya Profile details and message centre.



# DEVICE PAGE



## 1. INFO BUTTON

Access device information change settings such as displayed name.

## 2. SET TEMP DISPLAY

Displays temperature the heat pump will reach based on current mode.

## 3. ADJUSTMENT BUTTONS

Adjust the set temperature up or down overriding mode preset. **Note you can not adjust higher than the maximum set temp as defined by the mode.**

## 4. TANK TEMP DISPLAY

Shows the current temperature reading in the tank. Is used by heat pump to trigger reheat cycles based on the mode.

## 5. POWER BUTTON

Switch the heat pump on or off.

## 6. MODE BUTTON

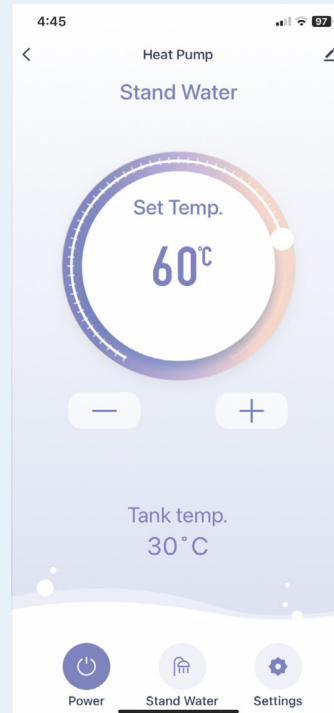
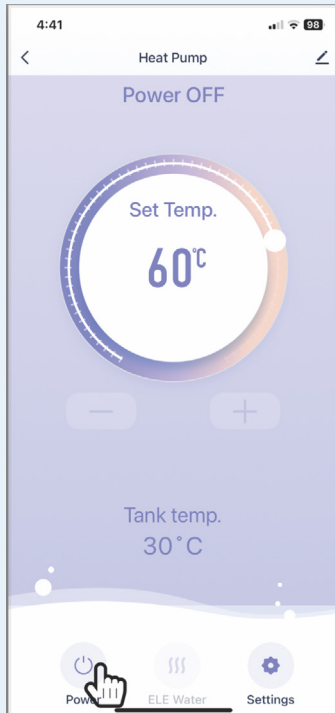
Switch between the main heating modes.

## 7. SETTINGS BUTTON

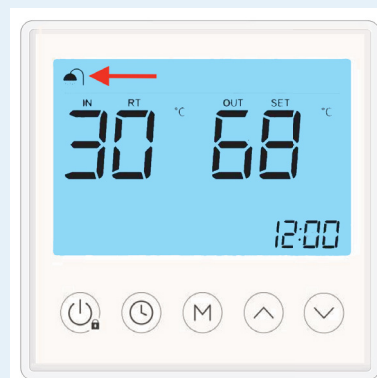
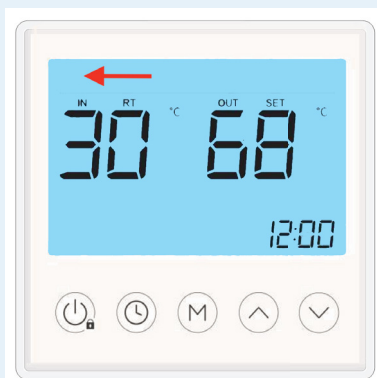
Add heating timers.

# SWITCHING | MODES | TIMERS

## Switch the heat pump on/off

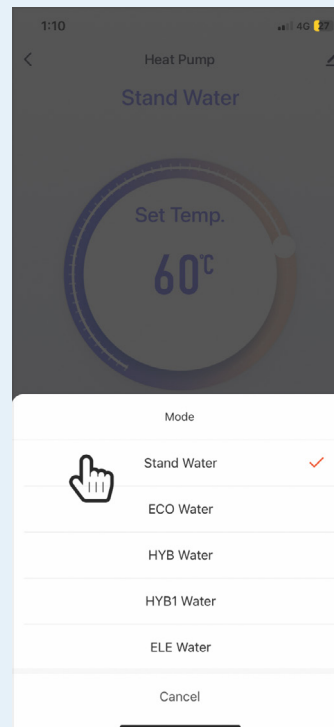
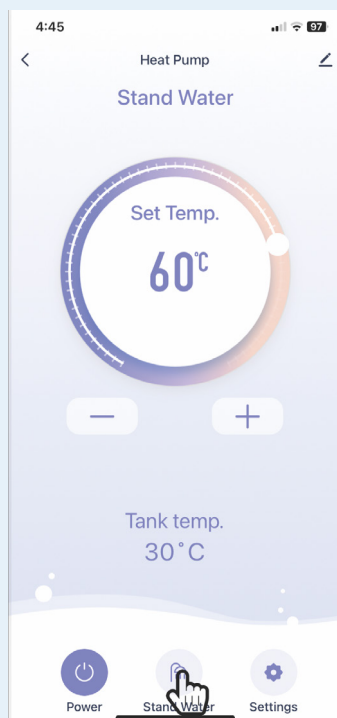


To switch the heat pump on or off, simply use the **POWER BUTTON** located on the device display page. If the device is turned **OFF**, the words **“Power Off”** will appear in the top header. When the device is turned **ON**, the **“Current Mode”** will be displayed in the top header.



To check the status of your heat pump, simply access the controller interface and look for the shower symbol in the top left corner. If the symbol is **VISIBLE**, it means the heat pump is turned **ON**. If the symbol is **MISSING**, then the heat pump is turned **OFF**.

# Switch between heating modes



**To switch between heating modes, you can use the MODE BUTTON on the device display page. Once you press the MODE BUTTON, the mode selection screen will appear. Then, you can choose a mode by pressing its corresponding name.**

**STANDARD:** is recommended for the majority of homes. The parameters for this mode include setting the temperature at 60°C and triggering the reheat temperature at 55°C.

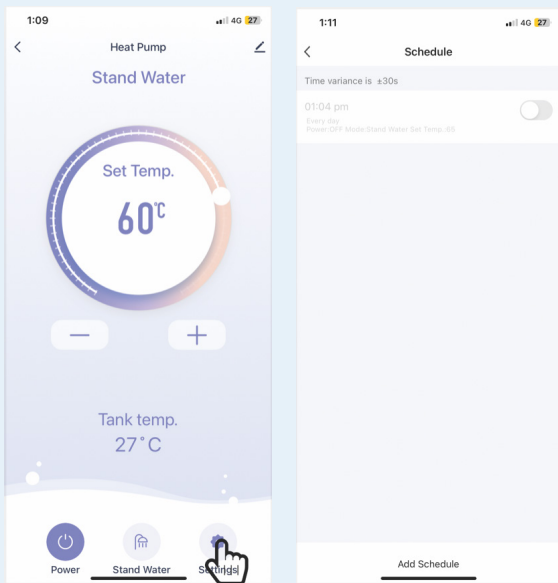
**ECO:** the temperature is set at 60°C and the reheat temperature trigger is at 48°C. This mode is best for homes with low occupancy, specifically less than three people. Additionally, it can be used when the owners are away and want the system to recover less frequently.

**HYBRID:** set the temperature at 65°C. The Heat pump will heat up to 60°C first, then the element will take over and heat up to 65°C. The reheat temperature will be triggered at 55°C. This mode is recommended for larger homes with high hot water demand in either morning or evening. It is suitable for homes with 3-4 people during winter, who wish to limit the system to heat only once a day with Solar PV.

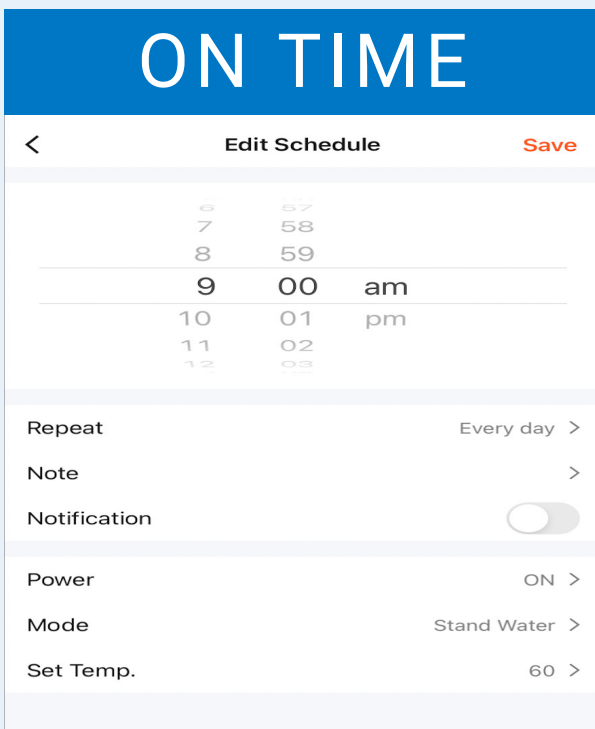
**HYBRID1:** set temperature to 70°C. The heat pump will heat up to 60°C, and then the element will take over and heat from 60°C to 70°C. The reheat temperature trigger is 50°C. This mode is typically used for installations where there are higher requirements for controlling Legionella Disease, such as in age care facilities, hospitals or commercial kitchens.

**ELEMENT:** set temperature at 70°C, reheat temperature trigger at 60°C, 1800W Element responsible for all heating. ELEMENT mode is utilised only when there are issues with the heat pump that necessitates onsite services or when owners prefer running the system without noise from the compressor and fan.

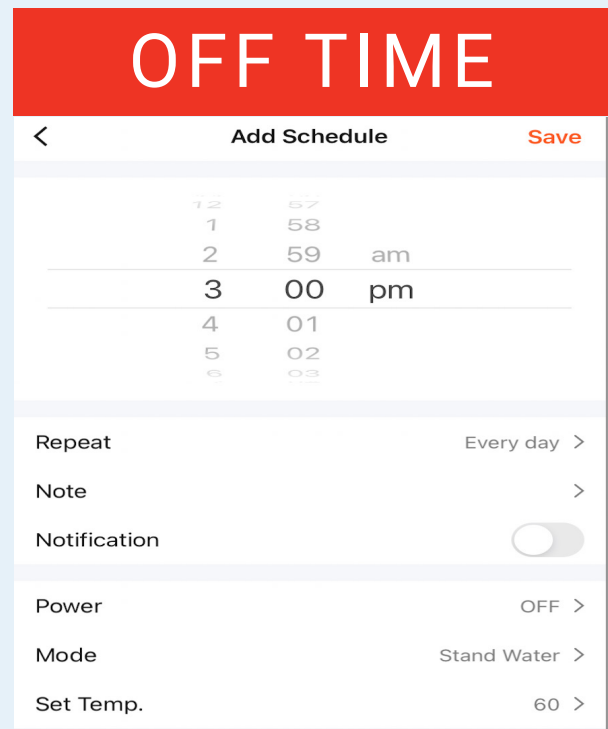
# Set heating timer windows



You can set specific times for it to turn on and off. This is particularly helpful if you use Solar P.V and want to limit heating to daytime hours or if you want to take advantage of lower energy tariffs. To create a schedule, simply click on the **"SETTING"** button and then click the **"ADD SCHEDULE"** button at the bottom of the app display. You will need to set two schedules one for **ON** time and the second for an **OFF** time. You can toggle schedules ON/OFF using the button next to the schedule.



To set the schedule, navigate to the **"Edit Schedule"** page and use the wheel to choose **9:00 am** as the start time. Next, click on the **"Repeat"** option and select **all days** that you want the schedule to apply to. Then, toggle the **"Power"** option to **ON** and **"Mode"** to **STANDARD**. Set the temperature to **60°C** by clicking on **"Set Temp."**. Finally, click the **"SAVE"** button to save the schedule.



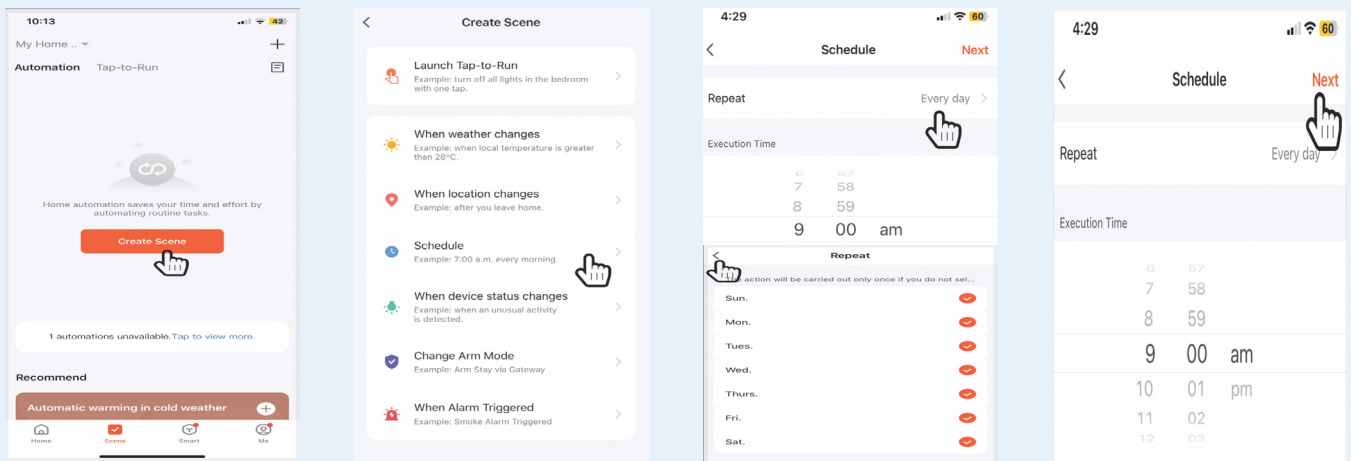
To set the schedule, navigate to the **"Edit Schedule"** page and use the wheel to choose **3:00 pm** as the start time. Next, click on the **"Repeat"** option and select **all days** that you want the schedule to apply to. Then, toggle the **"Power"** option to **OFF** and **"Mode"** to Standard. Set the temperature to **60°C** by clicking on **"Set Temp."**. Finally, click the **"SAVE"** button to save the schedule.

# CUSTOMISE WITH TUYA SCENES

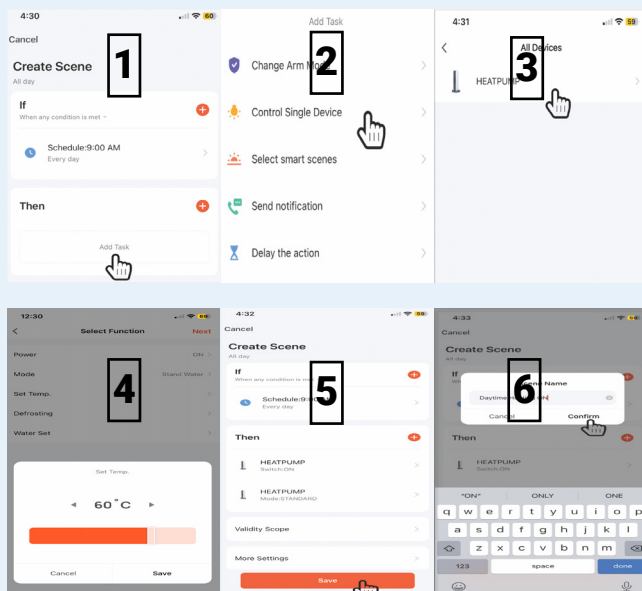
Customising your heat pump settings through Tuya scenes can effectively provide hot water to your home at a low cost. Each scene comes with a TRIGGER and an EVENT, which can be overwhelming for some users. To make things easier, we have prepared a few recommended scenarios based on different usage patterns in homes.

**BEFORE SETTING ANY SCENES, IT IS IMPORTANT TO ENSURE THAT ALL TIMERS ARE TURNED OFF ON THE CONTROLLER AND/OR THE TUYA APP.**

## Scene 1: Set ON timer

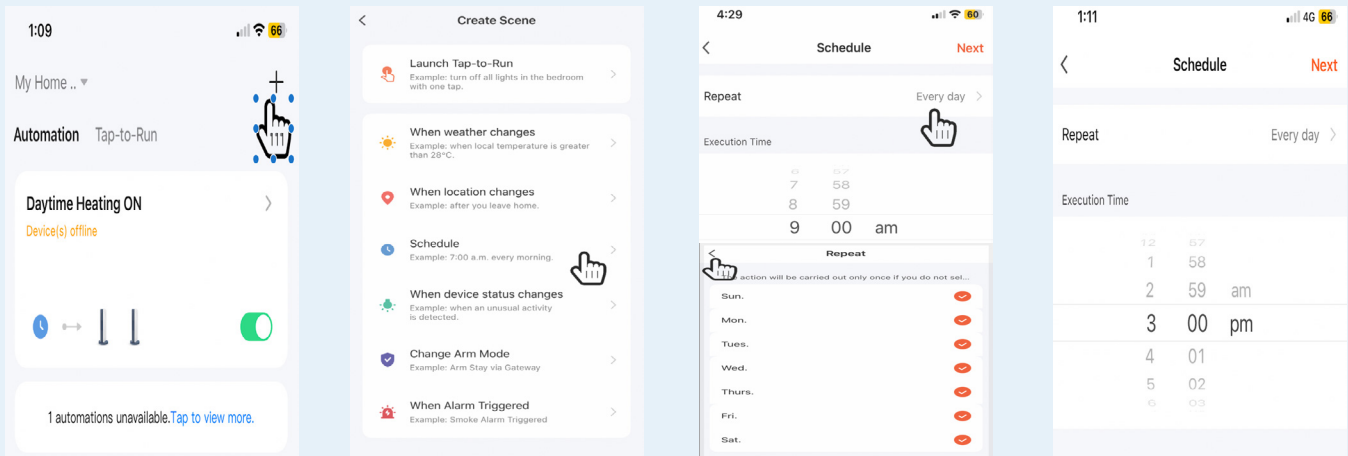


To add a new scene, simply click the **“scene button”** located on the app home screen. Next, select **“create new scene”** and then click on **“Schedule”** on the following page. To repeat the scene every day, **select all days** from the options provided. Finally, set the time to **9:00 am**.

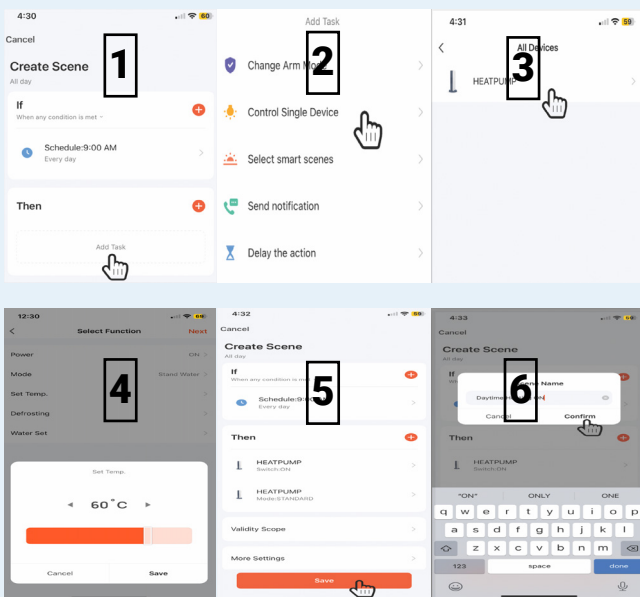


1. **Create Task:** Click **“add task”**
2. **Set Task:** Click **“control single device”**
3. **Select Device:** Select the **“heat pump”**
4. **Set Device Conditions:** **TURN ON/ STANDARD MODE/60°C SET TEMP** the click **“next”** to continue
5. **Save Task:** Click **“save”** to set the task.
6. **Name Task:** Name task : **“Daytime Heating On”** then click **“yes”** to turn scene on.

# Scene 2: Set OFF timer



To add a new scene, simply click the **“+ button”** located on the app scenes page. Next, click on **“Schedule”** on the following page. On the setup page repeat the scene every day, by **selecting all days** from the options provided. Finally, set the time to **3:00 pm**.



1. **Create Task: Click “add task”**
2. **Set Task: Click “control single device”**
3. **Select Device: Select the “heat pump”**
4. **Set Device Conditions: TURN OFF/ STANDARD MODE/60°C SET TEMP the click “next” to continue**
5. **Save Task: Click “save” to set the task.**
6. **Name Task: Name task : “Daytime Heating Off” then click “yes” to turn scene on.**

Your scenes home page should now show the two scenes you have set with both turned on. Your heat pump will now only heat between 9:00 AM - 3:00 PM everyday in standard mode.

You can adjust the **START TIME & OFF TIME** to better suit your homes needs but maintain a **MINIMUM 6 HOUR HEATING WINDOW**. and account for any changes in your time of use tariff charges.

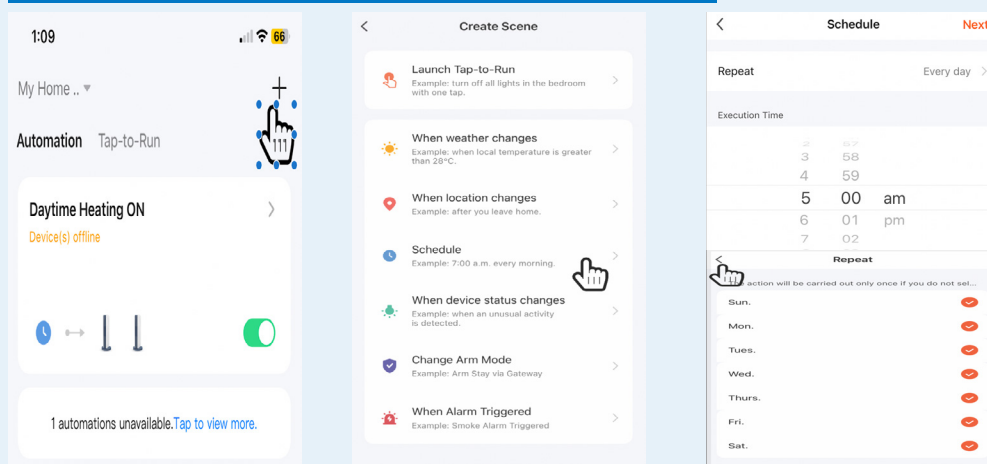
For solar homes you can change the trigger from **SCHEDULE** to **WEATHER CHANGE**. Then select **TWO HOURS AFTER SUNRISE FOR ON & TWO HOURS BEFORE SUNSET FOR OFF**. This can help maximise your Solar P.V.

# Scene 3: Set a conditional boost

It is possible to use scenes to add extra conditions for when the heat pump will turn on or off. This can be very useful if you want to increase efficiency while still making sure there is enough hot water in the house.

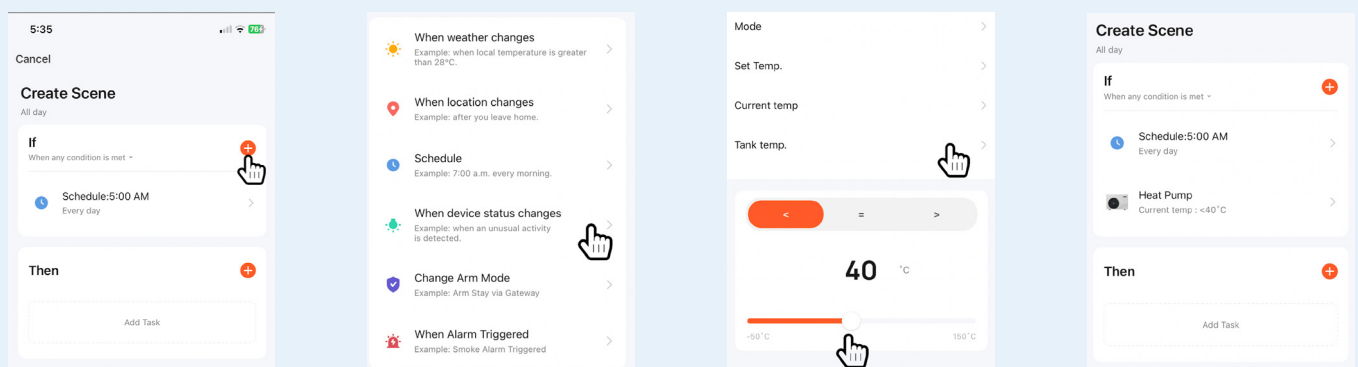
For this example, we will have the app **check the current tank temperature at 5:00 am** every morning. If the temperature is **less than 40°C**, the app will run a short heat cycle **for 1.5 Hours to 55°C**. This boost will help ensure there is hot water available for morning showers, while the majority of heating still occurs during the primary daytime heat cycle that has already been set up.

## SET A 5:00am Schedule



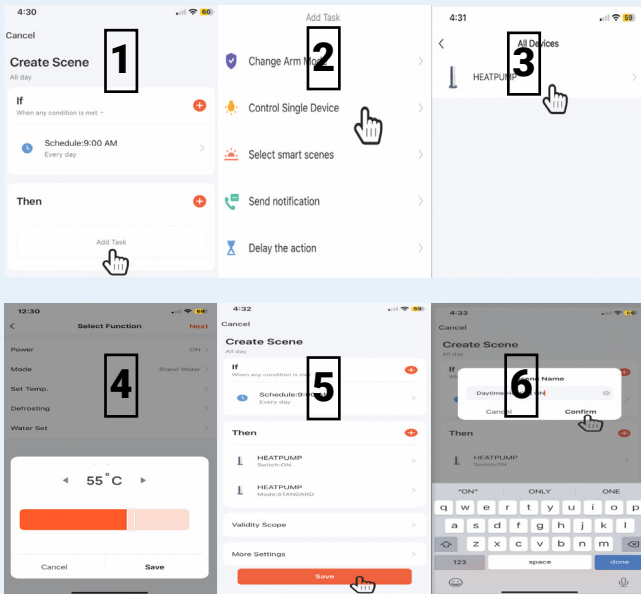
To add a new scene, simply click the **“+ button”** located on the app scenes page. Next, click on **“Schedule”** on the following page. On the setup page repeat the scene every day, by **selecting all days** from the options provided. Finally, set the time to **5:00 am** and press **“next”**

## ADD A Temperature Condition



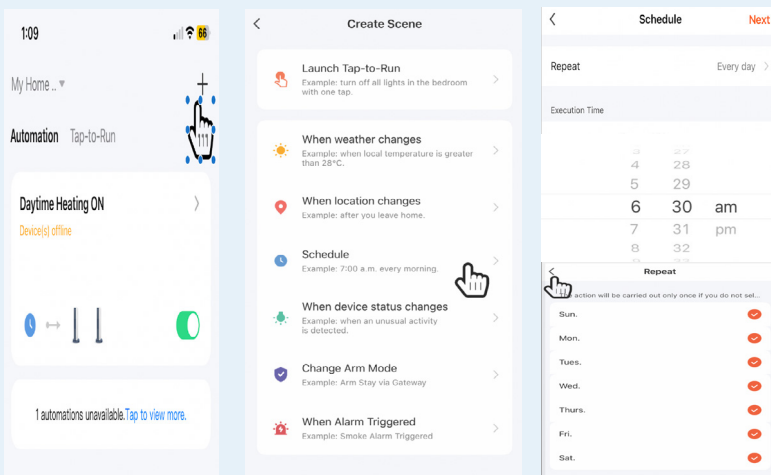
To add a new condition, simply click the **“+ button”**. Next, click on **“when device changes”** on the following page. Then select **“current temperature”** use the slider to move to **< 40°C** then press **“next”**

# Add Task To Turn Heat Pump ON



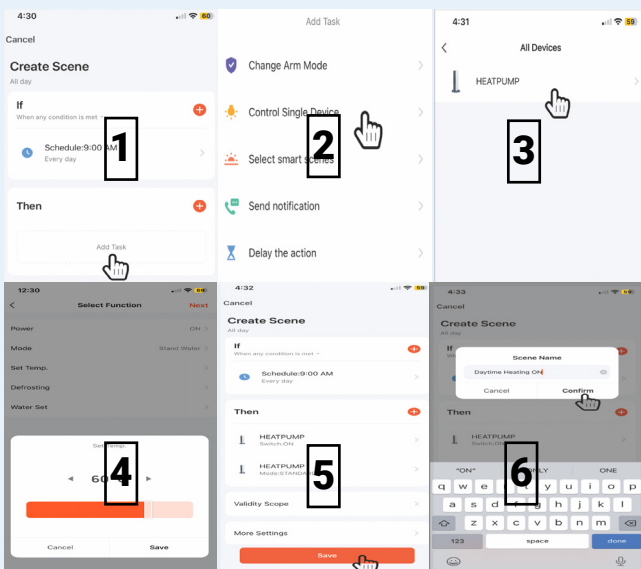
1. **Create Task:** Click **"add task"**
2. **Set Task:** Click **"control single device"**
3. **Select Device:** Select the **"heat pump"**
4. **Set Device Conditions:** **TURN ON/ STANDARD MODE/55°C SET TEMP** the click **"next"** to continue
5. **Save Task:** Click **"save"** to set the task.
6. **Name Task:** Name task : **"Morning Boost ON"** then click **"yes"** to turn scene on.

# SET A 6:30am Schedule



To add a new scene, simply click the **"+ button"** located on the app scenes page. Next, click on **"Schedule"** on the following page. On the setup page repeat the scene every day, by **selecting all days** from the options provided. Finally, set the time to **6:30 am** and press **"next"**

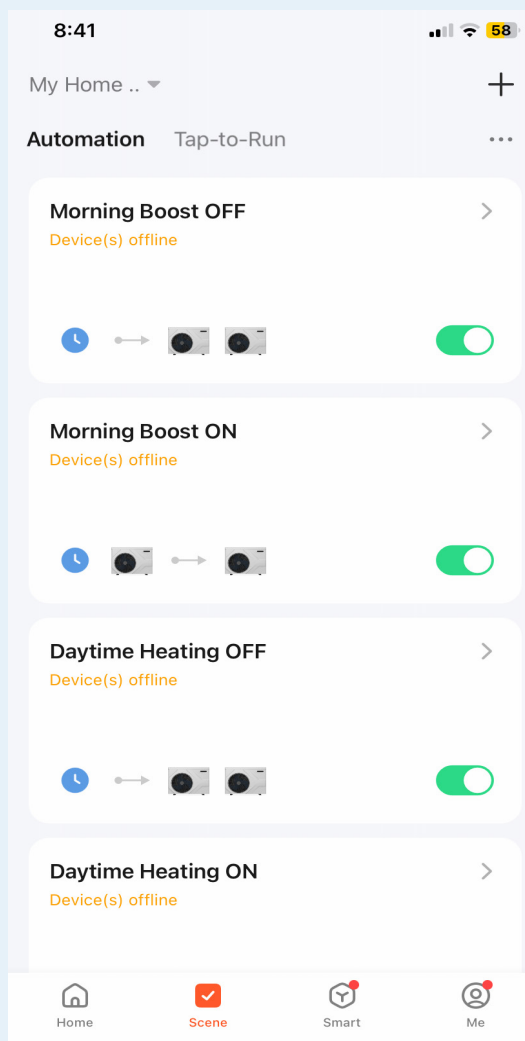
# Add Task To Turn Heat Pump OFF



1. **Create Task:** Click **"add task"**
2. **Set Task:** Click **"control single device"**
3. **Select Device:** Select the **"heat pump"**
4. **Set Device Conditions:** **TURN OFF/ STANDARD MODE/60°C SET TEMP** the click **"next"** to continue
5. **Save Task:** Click **"save"** to set the task.
6. **Name Task:** Name task : **"Morning Boost OFF"** then click **"yes"** to turn scene on.



## Summary & Tips



Your scenes home page should now show the four scenes you have set with all turned on. Your heat pump will now only heat between **9:00 AM - 3:00 PM** every-day in **"Standard"** mode. At **5:00 AM** the APP will check the current tank temperature. If the temperature is **below 40°C** the APP will start a morning boost to bring the temperature **back to 55°C** for morning showers.

You can adjust the **START TIME & OFF TIME** for the morning boost to better suit your homes usage patterns. We suggest having the APP check the tank temperature **1 - 2 hours** before the first morning showers.

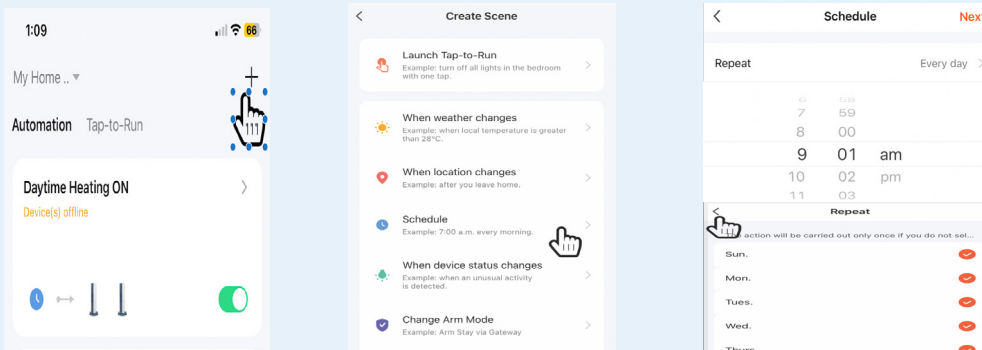
If you have **noise concerns** or your local council does not allow heat pumps to run in early morning times. You can have the APP perform the morning boost using the heat pumps back up element. Follow the same steps but change the mode on the **5:00 AM ON** setting from **"Standard"** to **"Element"**

## Scene 3: Conditional Mode Change

You can utilise scenes to apply additional conditions for when the heat pump will transition between heating modes. This feature comes in handy when you want to increase the set temperature the heat pump attains at different ambient temperatures. As lower ambient temperatures usually lead to higher hot water consumption in homes, adjusting the set temperature can enhance the availability of hot water and ensure a consistent supply.

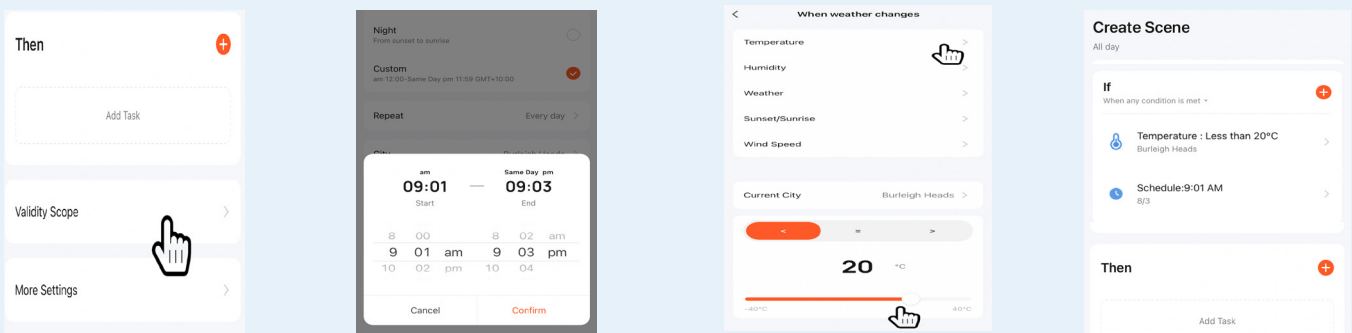
In this Scene, the app will check the ambient temperature at 9:01 am each morning during the **Daytime Heating ON** cycle. If the temperature is **below 20°C**, the app will switch from **"STANDARD"** mode to **"HYBRID"** mode and increase the set temperature from **60°C** to **65°C**.

## SET A 9:01am Schedule



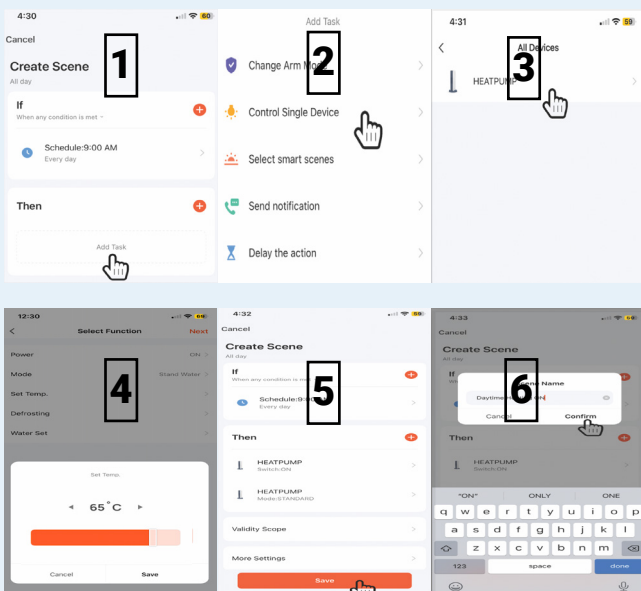
To add a new scene, simply click the **“+ button”** located on the app scenes page. Next, click on **“Schedule”** on the following page. On the setup page repeat the scene every day, by **selecting all days** from the options provided. Finally, set the time to **9:01 am** and press **“next”**

## ADD A Weather Condition Via Validity Scope



To add a weather condition, simply click the **“validity scope button”**. Next, click **“effective period”** on the next page click **“custom”** then select between 9:01 am and 9:03 am press **“confirm”**. Then click **“valid when”** & **“weather condition”** on the following page. Then select **“temperature”** use the slider to move to **<20°C** then press **“next”** finally press the **“done”** button to return to scene page.

## Add Task To Switch Heat Pump MODE



1. **Create Task: Click “add task”**
2. **Set Task: Click “control single device”**
3. **Select Device: Select the “heat pump”**
4. **Set Device Conditions: HYBRID MODE/65°C SET TEMP** the click **“next”** to continue
5. **Save Task: Click “save”** to set the task.
6. **Name Task: Name task : “Winter Mode ON”** then click **“yes”** to turn scene on.

## Summary & Tips

### Daytime Heating ON/OFF

On your scenes home page, you should now see all five scenes that you have set with each one turned on. At this time we would suggest turning all scenes off EXCEPT for the **Daytime Heating ON** & **Daytime Heating Off** To ensure proper functionality, it is recommended to activate only these scenes for a few days before making any adjustments. If there is a **shortage of hot water in the evenings**, you can change the **Daytime Heating ON** mode from “Standard” to “Hybrid” or “Hybrid1”

You can also change the **ON/OFF** trigger to synch with **Day/Night** cycles. Instead of **Schedule** select **Changed Weather Condition** and then select **1 or 2 hours after Sunrise** for **Daytime Heating ON** and select **1 or 2 hours before Sunset** for **Daytime Heating OFF**

### Morning Boost ON/OFF

If there is a **shortage of hot water in the mornings**, activate the **Morning Boost ON** & **Morning Boost OFF** scenes. At **5:00 AM** the APP will check the current tank temperature. If the temperature is **<40°C** the APP will start a morning boost to bring the temperature **back to 55°C** for morning showers. If you still find you running out of hot water in the mornings you can adjust this scene by increasing the trigger temperature from **<40°C** to **<50°C** and the Set Temperature from **55°C** to **60°C**

If you have **noise concerns** or your local council does not allow heat pumps to run in early morning times. You can have the APP perform the morning boost using the heat pumps back up element. Follow the same steps but change the mode on the **5:00 AM ON** setting from “Standard” to “Element”

### Winter Mode ON

Should you find that your home runs out of hot water in the evening as the weather cools. Activate the **Winter Mode ON** scene. Your heat pump will operate in either “Standard” mode between **9:00 AM to 3:00 PM** every day, if the ambient temperature is **above 19°C**, or in “Hybrid” mode if the temperature is **below 20°C**.

If evening hot water supply is still an issue try switching from “Standard” to “Hybrid” or “Hybrid1” and increase the set temp from **55°C** to **65°C** or **70°C**.



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