

ecobee

SmartThermostat  
with voice control

Thermostat Setup Guidelines for  
All-Electric Heat Pumps

from the

Single-Stage Heat Pumps





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The ecobee SmartThermostat with voice control is a powerful tool that can help save energy and money while managing energy resources to best serve all cooperative members. To make sure you're getting the most out of your ecobee SmartThermostat, Advanced Energy offers the following recommendations, based on the presence of an all-electric heat pump system and thermostat operating per manufacturers' instructions prior to the ecobee SmartThermostat installation.

Advanced Energy considers a single-stage heat pump to have one outdoor compressor stage (speed). This is more common on older, original equipment.

Read the ecobee installation materials carefully and only install the thermostat yourself if you are comfortable with electrical wiring and device setup. If you are not, seek a qualified HVAC contractor to complete installation and setup.

**DANGER: Incorrect wiring can cause damage and expensive equipment repairs.**

# Part One

## Step 1



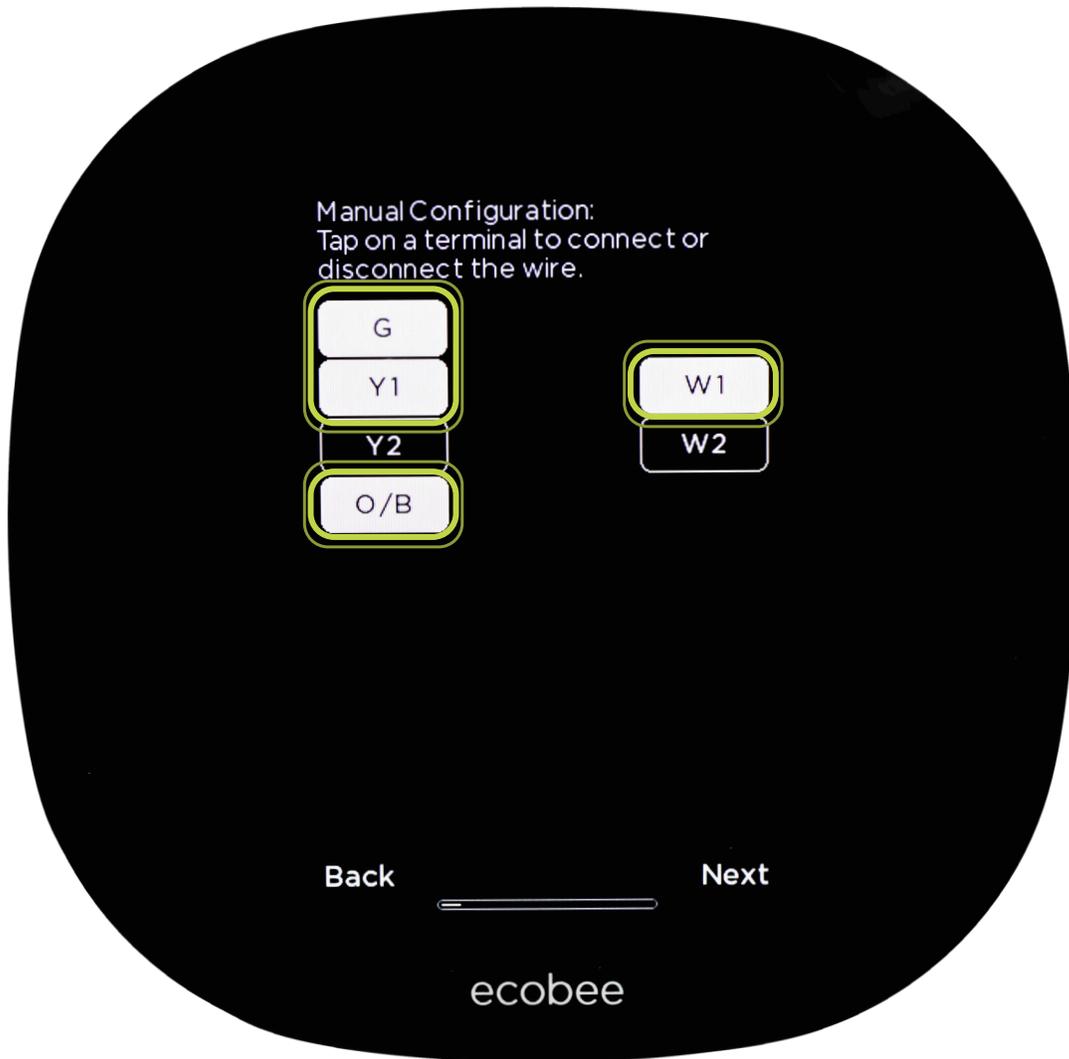
When starting up the ecobee SmartThermostat, this should be the first prompt you see. Select **Yes, only Rc is connected** for one transformer (most HVAC systems); select **Next**.



If your HVAC system has two transformers installed, select **No, Rc and Rh are connected**.



Make sure the following icons are highlighted on the screen:  
G Y1 W1 O/B; select **Next**.



It is important to follow the ecobee SmartThermostat installation documents to ensure your HVAC system is wired to maximize the thermostat's capabilities.

## Step 3



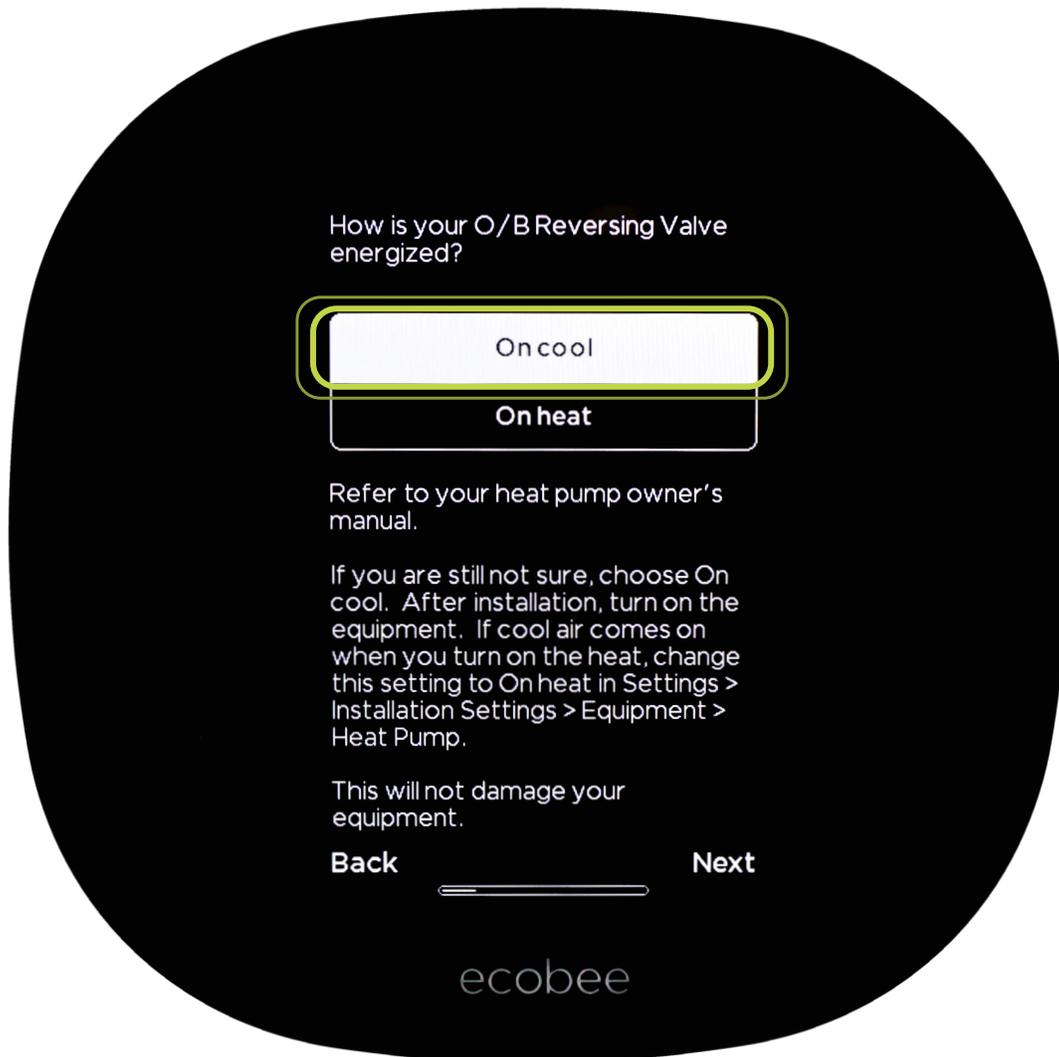
Select **Air to air**; select **Next**.



These are the recommended settings for an all-electric air to air heat pump. See the ecobee SmartThermostat installation documents if any other source of heating (geothermal, furnace, etc.) is present.



For Rheem and Ruud branded equipment only, select **On heat**; select **Next**. For all other equipment brands, select **On cool**; select **Next**.

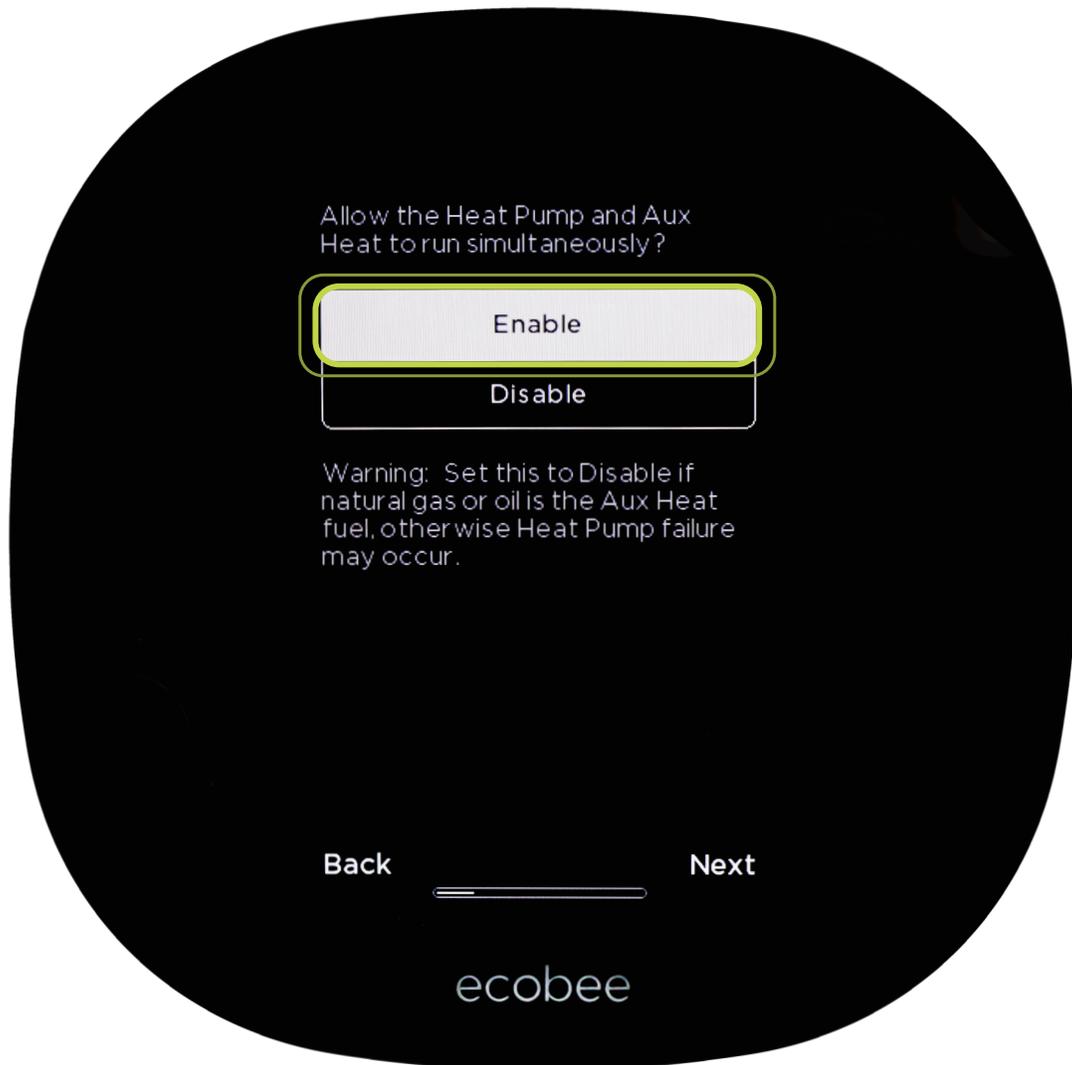


This will maximize your system's capabilities with the new thermostat.

## Step 5



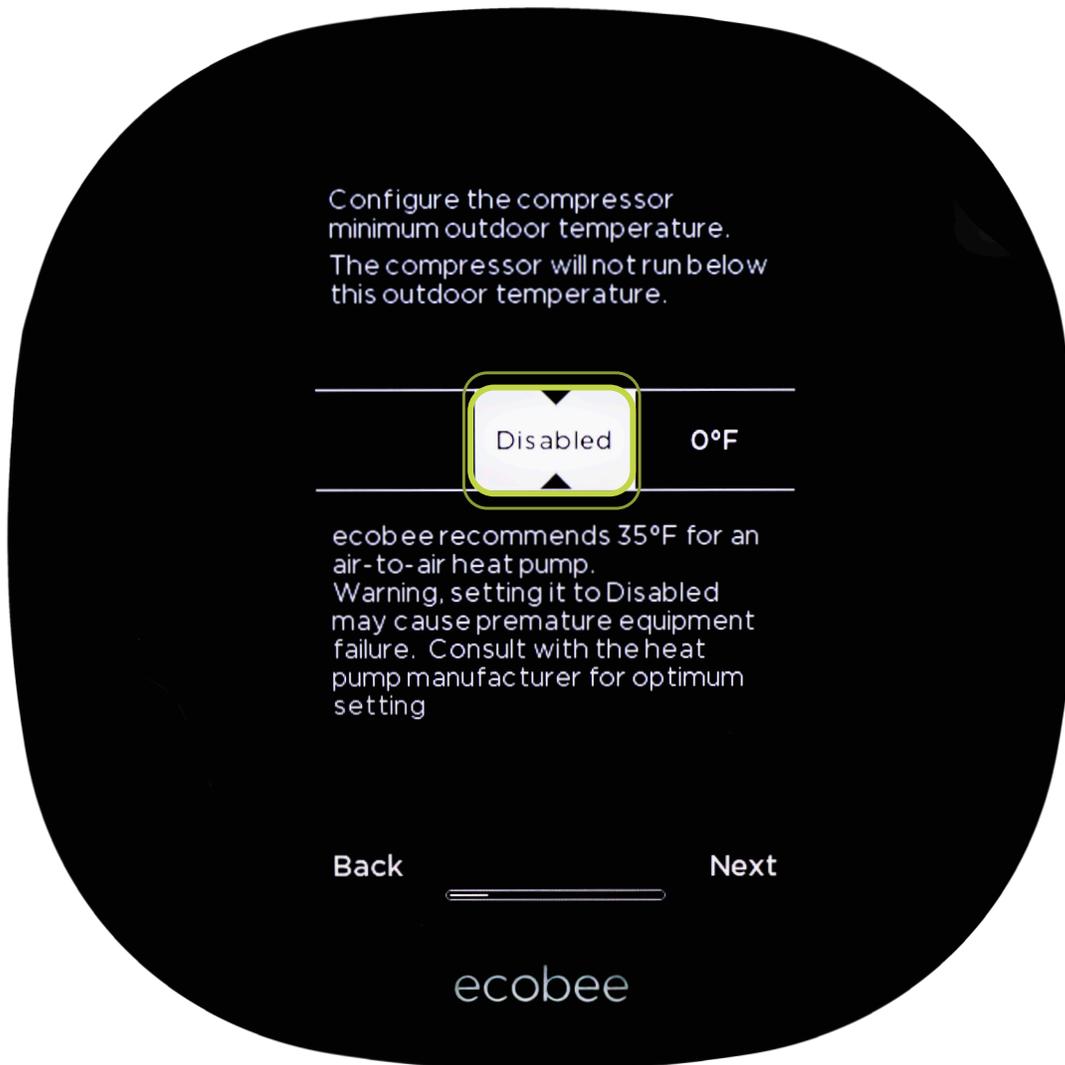
Select **Enable** Aux Heat Simultaneous Operation; select **Next**.



This is the recommended setting to maximize the efficiency of your air source heat pump before less efficient strip heat comes on to maintain comfort at lower temperatures.



Select **Disabled** for Compressor Min Outdoor Temperature; select **Next**.



This maximizes the efficiency of your air source heat pump before less efficient strip heat comes on to maintain comfort at lower temperatures.

## Step 7



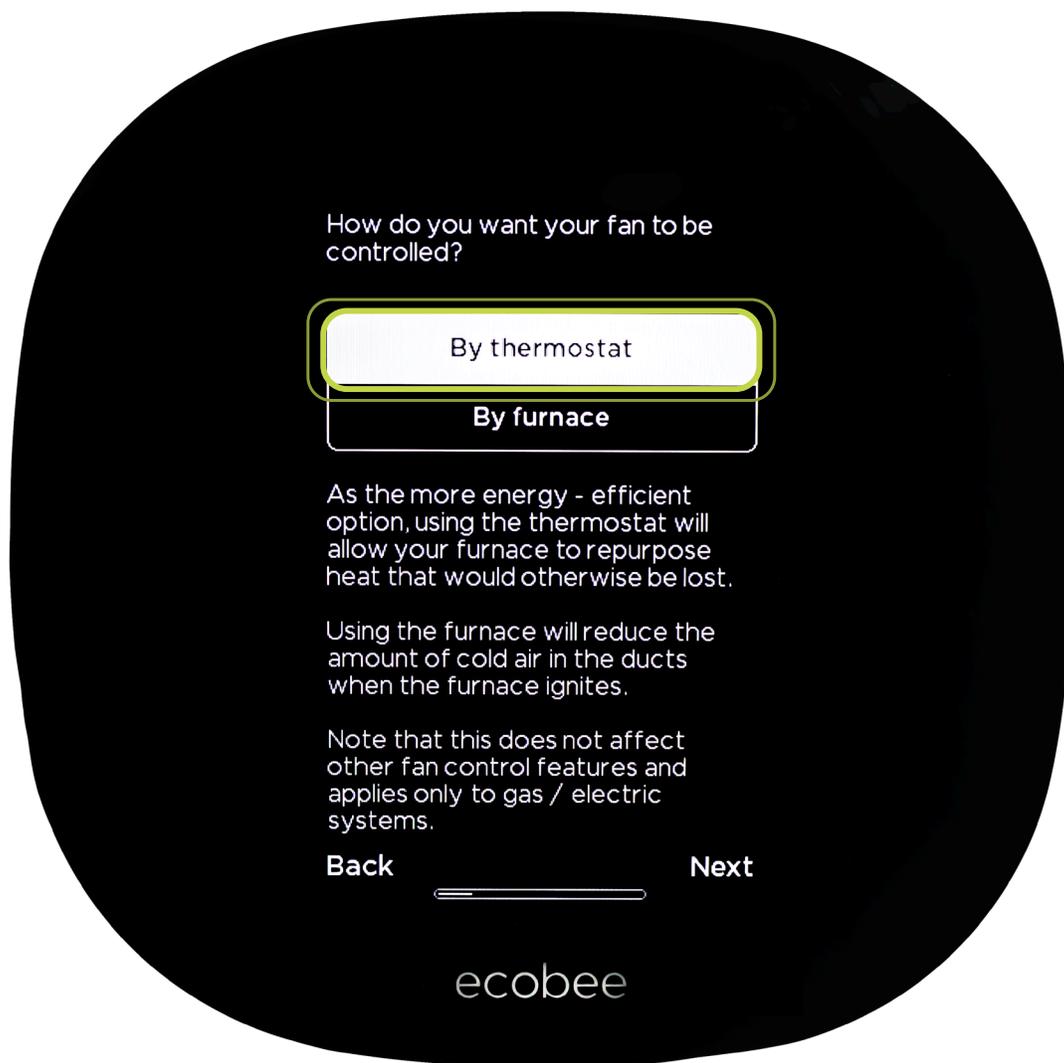
Select **Furnace**; select **Next**.



This is to tell the thermostat that the heat source for your home comes from the same components as your cooling.



Select **By thermostat**; select **Next**.



It is important to follow the ecobee SmartThermostat installation documents to ensure your HVAC system is wired to maximize the thermostat's capabilities.

The next series of questions will allow you to customize the thermostat settings based on your preferences and location. Part 1 is complete.

## Part Two

Your new ecobee SmartThermostat has been configured to work with your HVAC system. Select the following settings to maximize comfort and efficiency.

### Step 1



Once you are back on the home screen, select the **Main Menu icon**.





Scroll down, select **Settings**.



## Step 3

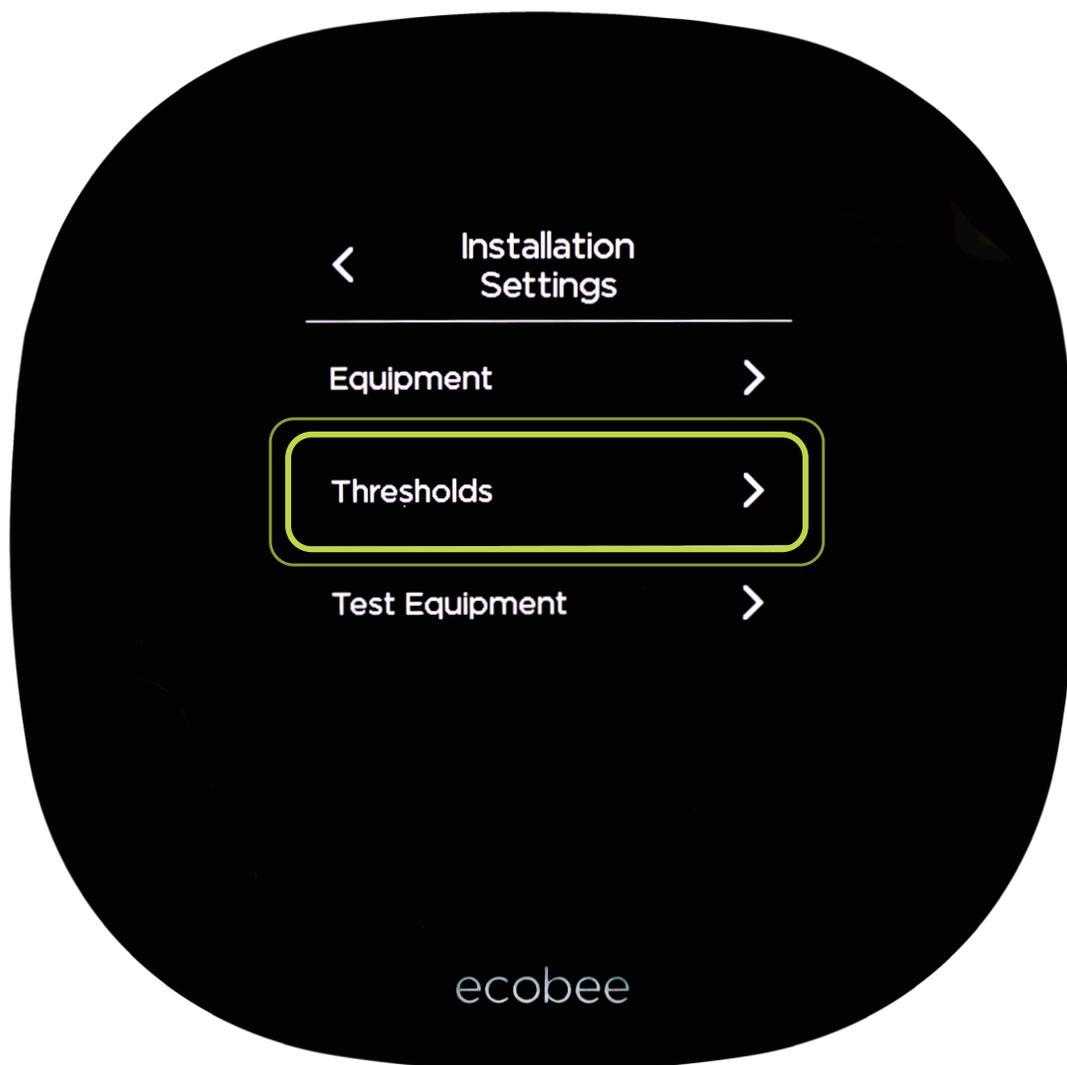


Select Installation Settings.





Select **Thresholds**.



## Step 5



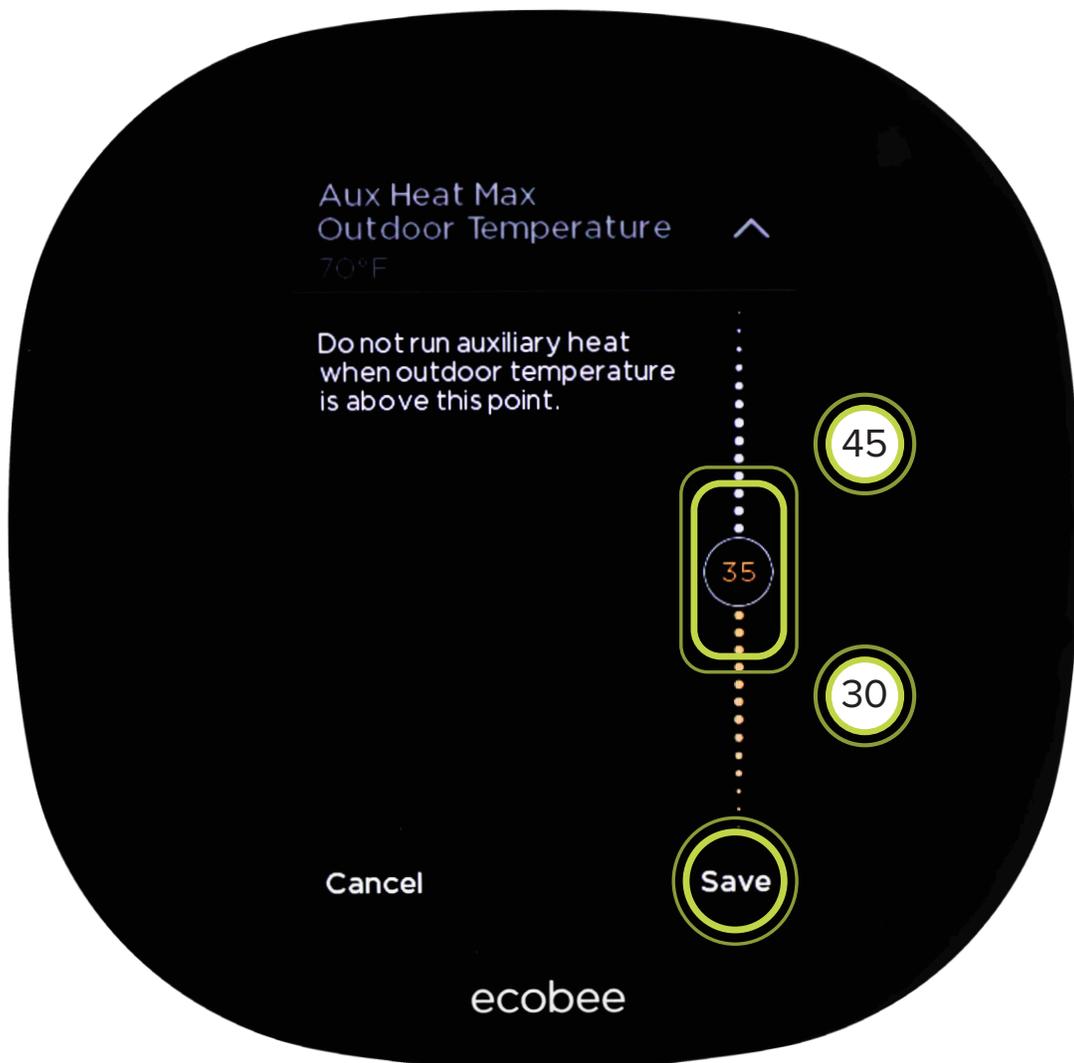
Select **Compressor Min Cycle Off Time**; select **600 seconds**.



This is a recommended setting to save energy and increase equipment durability. After the unit cycles off, it will not come back on for 10 minutes.



Select **Aux Heat Max Outdoor Temperature**; select **between 30 and 45 degrees**; select **Save**.



This temperature range is recommended to maximize the efficiency of your air source heat pump before less efficient strip heat comes on to maintain comfort at lower temperatures.

## Step 7



Select **Heat Differential Temperature**; select **1.0°F**.



A 1°F heat differential temperature will turn the heat on after the indoor temperature drops 1°F below setpoint. This setting should decrease energy usage and increase system durability through longer runtimes.



Select **Heat Dissipation Time**; select **60 sec**.



60 seconds will maximize the distribution of remaining heat in the system but not circulate cool air.

## Step 9



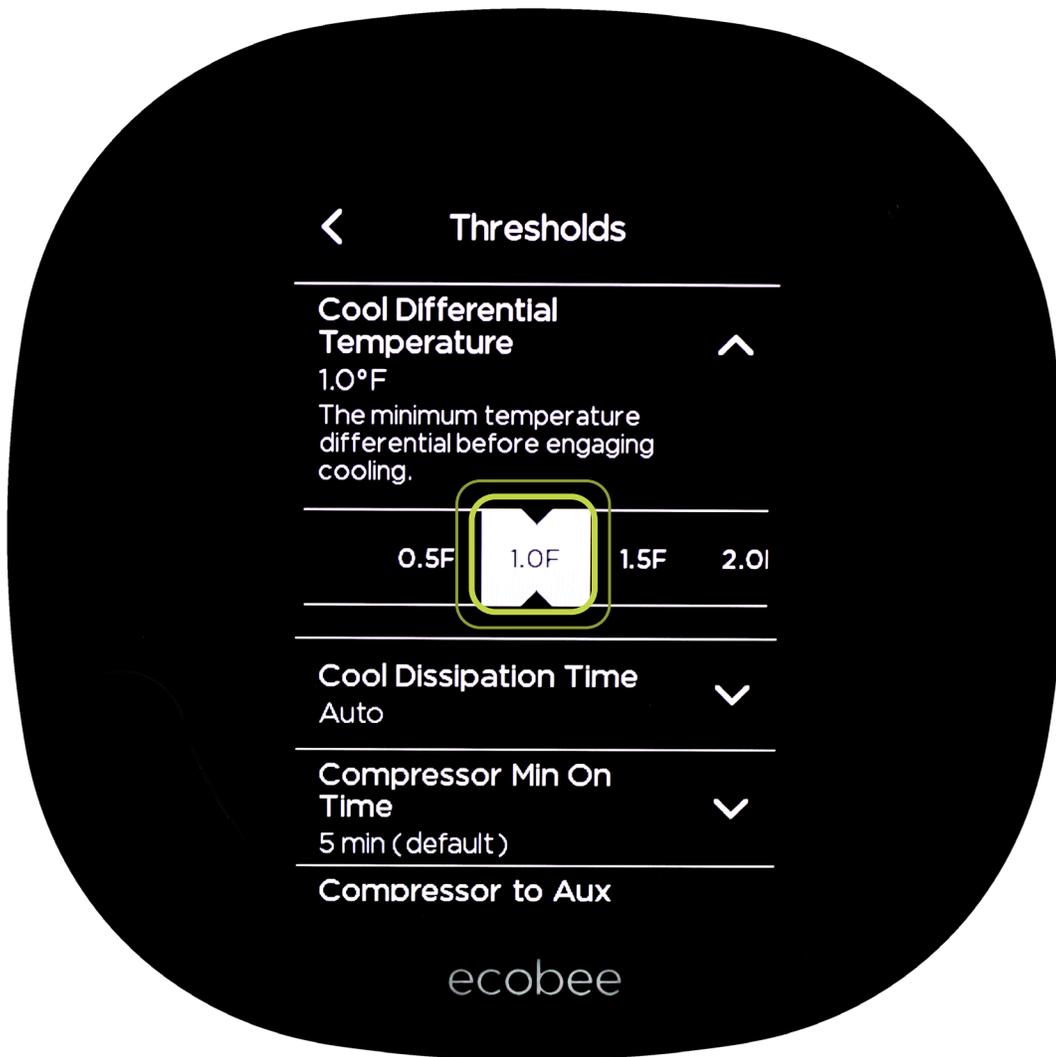
Select **Aux Min On Time**; select **1 min**.



This setting regulates the electric heat runtime, which maximizes energy savings and increases system durability.



Select **Cool Differential Temperature**; select 1.0°F.



A 1°F cool differential temperature will turn the cooling on after the indoor temperature is 1°F above setpoint. This setting should decrease energy usage and increase system durability through longer runtimes.

## Step 11



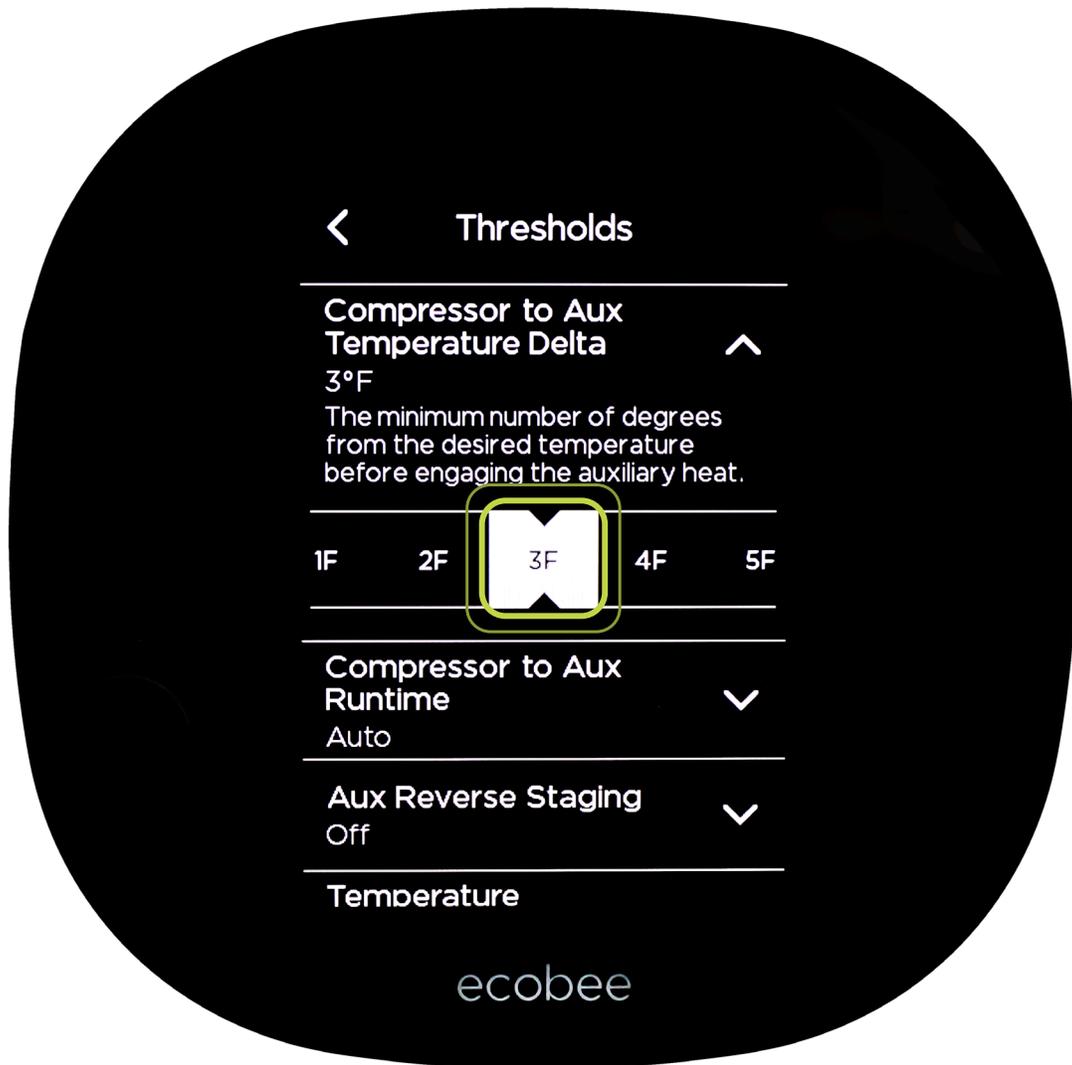
Select **Cool Dissipation Time**; select **0 sec**.



This maximizes the amount of humidity removed during cooling mode.



Select **Compressor to Aux Temperature Delta**; select 3°F.



This is to maximize the efficiency of your air source heat pump before less efficient strip heat comes on to maintain comfort at lower temperatures.

## Step 13



Select **Compressor to Aux Runtime**; select **30 min**.



This is to maximize the efficiency of your air source heat pump before less efficient strip heat comes on to maintain comfort at lower temperatures.

When complete, select the **arrow symbol** in the upper left corner to return to the main screen.

**Congratulations, your new ecobee SmartThermostat should now be setup to maximize your HVAC system efficiency and home comfort.**





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