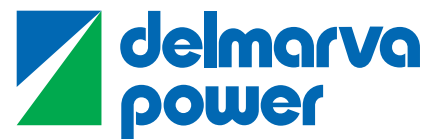# Web-Programmable Thermostat
Homeowner's Manual

Our web-programmable thermostat can help you save up to 10% off
your heating and cooling costs, according to the U.S. Department of Energy.
Look inside for a complete guide to the set up and operation of your new thermostat.

Installed by: _____

Date: _____

Number of Thermostats:_____

Notes: _____

_____

_____

_____

_____

delmarva power

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Table of Contents

Your Delmarva Power Energy Wise Rewards thermostat controls your central air conditioning and heating system. The types of compatible systems include:

Central Air Conditioners:	**Furnaces**:	**Aux Heat:**
• Single Stage	• Single Stage Gas or Oil	• Single Stage Electric
• Multi-Stage	• Multi-Stage Gas or Oil	• Multi-Stage Electric
	• Single Stage Electric	
Heat Pump*:	• Multi-Stage Electric	
• Single Stage	• Two-Wire Hydronic	
• Multi-Stage	• Millivolt Heat System	

All compatible components are connected and configured by the Energy Wise Rewards technician during installation.

*If you have a heat pump, make sure your heat settings are no more than **2°** between the warmest temperature, the one you set when you are home, and coolest temperature, the one you set when you are away. Large temperature differences may enable the auxillary heating mode and potentially cause your electric bill to increase significantly in the fall and winter months.

Step 1: Getting Started

A. Thermostat Buttons and Indicators
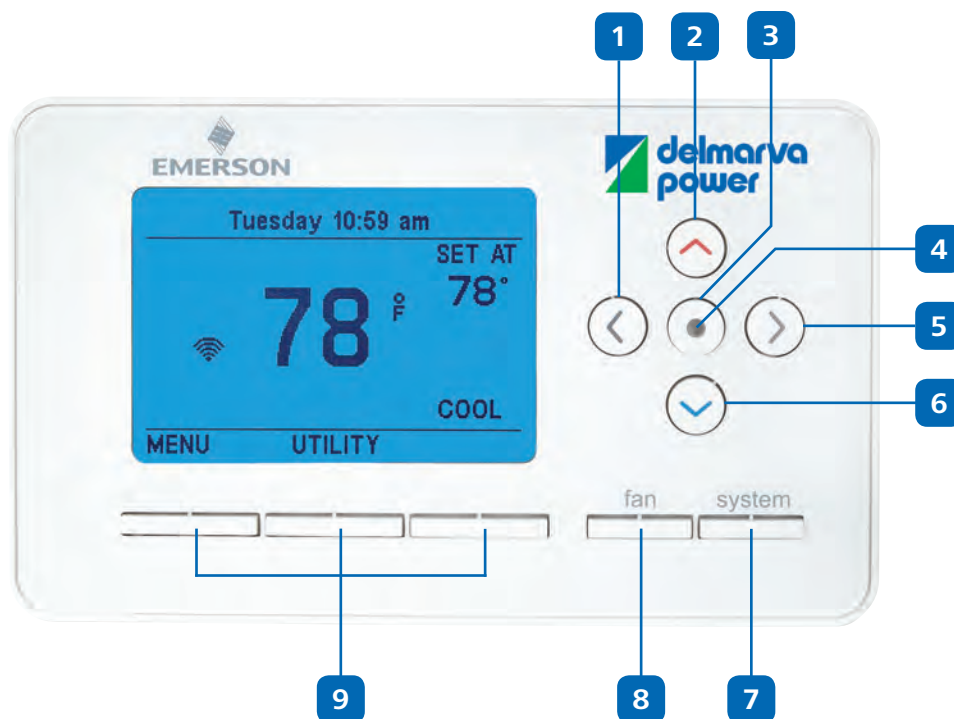
1	**Left Arrow**	Navigates menu items
2	**Up Arrow**	Raises temperature setpoint and changes selected menu item
3	**Action Button**	Selects action of selected menu item
4	**LED Light**	Indicates status of pending, active, or overridden conservation periods
5	**Right Arrow**	Navigates menu items
6	**Down Arrow**	Lowers temperature setpoint and changes selected menu item
7	**SYSTEM Button**	Changes system selection (OFF, COOL, HEAT, AUX [displayed on heat pump units only])
8	**FAN Button**	Changes fan setting (Auto/On)
9	**Soft Keys**	Performs action listed on display above the button

Step 1: Getting Started

B. Thermostat Display
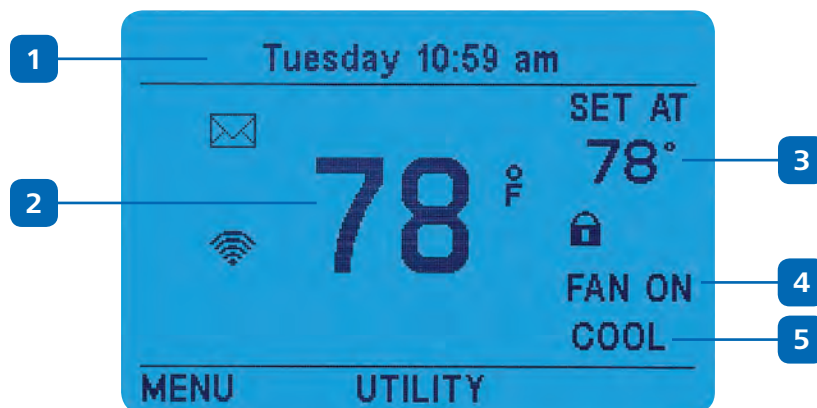
|		
1	**Messaging Area**	Displays day and time, thermostat, and Delmarva Power-related messages. In the event of a power outage, the clock will maintain the correct time for 48 hours
2	**Temperature**	Displays current room temperature
3	**Setpoint Temperature**	Displays current desired temperature • Blank when user selects the **OFF** mode via the menu (turns system off) • When system is **ON**, the words SET AT changes to HOLD AT when in temporary or permanent hold
4	**FAN Status**	Blank when in auto mode — displays **FAN ON** when fan is on continuously

5	**System Status**	Displays current operation mode according to system configuration as set by installer
		• **OFF** – system is OFF
		• **COOL** – system is in COOL mode but no call for cool
		   COOL1 – call for first stage of cool
		   COOL2 – call for second stage of cool (multi-stage units only)
		• **AUX** – system is in AUX heat mode but no call for heat (heat pump only)
		   AUX1 – call for first stage of auxiliary heat (heat pump only)
		   AUX2 – call for second stage of auxiliary heat (multi-stage heat pump only)
		• **HEAT** – system is in HEAT mode but no call for heat
		   HEAT1 – call for first stage of heat
		   HEAT2 – call for second stage of heat (multi-stage units only)
		   HEAT3 – call for first stage of auxiliary heat (heat pump only)
		   HEAT4 – call for second stage of auxiliary heat (multi-stage heat pump only)

Step 1: Getting Started

B. Thermostat Display (Continued)
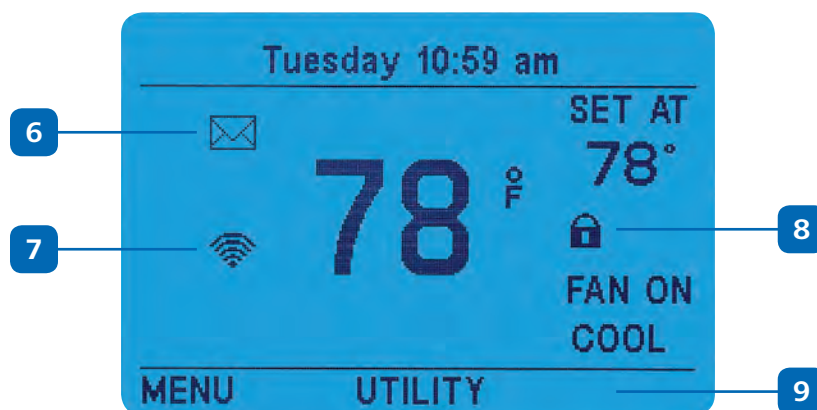
6	**Message Icon**	Indicates unread utility message(s)
7	**Link Status**	Indicates status of communications link
8	**Lock Icon**	Indicates keypad is locked or temperature control is active
9	**Soft Key Display**	Actions to be performed when corresponding button is pressed

Step 2: Main Menu and Thermostat Settings

A. Main Menu

The Homeowner Programming Menu table (next page) summarizes the configuration items that the homeowner can change, and a convenient space to keep track of your settings. For more details on each homeowner programming menu option, see: Thermostat Settings on page 7, and Description of Menu Options on page 9. To enter the Homeowner Programming Menu:

1. Ensure the thermostat is at the home screen (see example below).
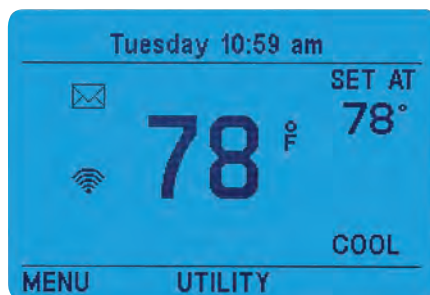
2. Press the **MENU** soft key. The display will show the first level of the Homeowner Programming Menu.

3. While in the Homeowner Programming Menu:

   - The ⌃ and ⌄ buttons scroll the cursor up and down, respectively
   - The ⟨ and ⟩ buttons scroll the cursor left and right, respectively
   - The ⊙ (Action) button selects the highlighted menu item
   - The soft key labeled **HOME** exits the Homeowner Programming Menu back to the home screen (**NOTE:** when the **HOME** soft key is pressed, any changes made on the current menu item are not saved)
   - When changes are made to a menu item, pressing **DONE** will save the changes and go back one menu level
   - If a mistake is made during programming, press **HOME** once, then return to the programming option and re-enter the information (press **DONE** to save changes, press **HOME** to exit)

4. To exit the menu and return to the program operation, press **HOME** (when available).

If no keys are pressed within two minutes, the thermostat will revert to normal operation. Any changes made but not saved by pressing **DONE** will be lost.

Step 2: Main Menu and Thermostat Settings

B. Thermostat Settings

Menu Name	Submenu	Press ⌃ or ⌄ to Select Other Options (Defaults in BOLD)	Comments
Heating Schedule*	Weekdays/Weekends Individual Days	Default settings: **Morning 6:00 am 70°** **Day 8:00 am 62°** **Evening 5:00 pm 70°** **Night 10:00 pm 62°**	Use ⟨ ⟩ to scroll through items to change Use ⌃ ⌄ to increase/decrease values When complete, press **DONE** to save settings or **NEXT** to program next period
Cooling Schedule	Weekdays/Weekends Individual Days	Default settings: **Morning 6:00 am 78°** **Day 8:00 am 85°** **Evening 5:00 pm 78°** **Night 10:00 pm 82°**	Use ⟨ ⟩ to scroll through items to change Use ⌃ ⌄ to increase/decrease values When complete, press **DONE** to save settings or **NEXT** to program next period

*If you have a heat pump, make sure your heat settings are no more than **2**° between the warmest temperature, the one you set when you are home, and coolest temperature, the one you set when you are away. Large temperature differences may enable the auxiliary heating mode and potentially cause your electric bill to increase significantly in the fall and winter months.

Keep Track of Your Thermostat Settings Below

Period		Weekdays		Weekend	
		Start Time	Temp	Start Time	Temp
HEAT	**MOR**				
	DAY				
	EVE				
	NGT				
COOL	**MOR**				
	DAY				
	EVE				
	NGT				

Step 2: Main Menu and Thermostat Settings

B. Thermostat Settings (continued)

Menu Name	Press ⌃ or ⌄ to Select Other Options (Defaults in BOLD)	Comments
Backlight	**Auto** On	Use ⊙ to change the underlined value When complete, press **DONE** to save settings, or **HOME** to exit without saving
Temperature Limits	Min Cool Set Point: **45°F** Max Heat Set Point: **99°F**	Use ⟨ ⟩ to select setpoint to change Use ⌃ ⌄ to increase/decrease value When complete, press **DONE** to save settings, or **HOME** to exit without saving
Adjust Temperature Display	Current Room Temp (measured temp) Desired Offset **0°**	Use ⌃ ⌄ to increase/decrease value When complete, press **DONE** to save settings, or **HOME** to exit without saving
Energy Management Recovery (see page 10)	**Off** On	Use ⊙ to change selection When complete, press **DONE** to save settings, or **HOME** to exit without saving
°F/°C	**°F** °C	Use ⊙ to change selection When complete, press **DONE** to save settings, or **HOME** to exit without saving
Thermostat Lock (see page 10)	**0000**	Enter four-digit passcode (default is "0000"). Use ⟨ ⟩ to change which digit is highlighted. Use ⌃ ⌄ to increase/decrease the highlighted digit When complete, press **DONE** to save settings, or **HOME** to exit without saving the keypad lockout code
Comfort/Economy (NOTE: Only displayed for multi-stage units)	**Comfort** Economy	Use ⊙ to change selection When complete, press **DONE** to save settings, or **HOME** to exit without saving

Step 2: Main Menu and Thermostat Settings

C. Description of Menu Options

The following are detailed descriptions of your Energy Wise Rewards thermostat configuration menu options.

1. Programming – Heat/Cool Programming

Your Energy Wise Rewards thermostat can program the Heating and Cooling schedules as Individual Days or Weekdays/Weekends. Using the Individual Days programming profile, you can program each day of the week with its own setpoint profile. With a Weekdays/Weekends profile, Monday–Friday has the same setpoint profile while Saturday–Sunday can be programmed with its own setpoint profile.

2. Thermostat Settings – Backlight

This menu item controls the display backlight. You can choose either:

- **AUTO** – (Default) Backlight comes on when you press any key. Backlight goes off after a short delay when there is no button pressed
- **ON** – Backlight is always On

3. Thermostat Settings – Temperature Limits

Temperature limits can be used to limit how high your heating temperature can be set and how low your cooling temperature can be set. The range for both values is from 45°F to 99°F.

- **Cool Setpoint** – 45°F
- **Heat Setpoint** – 99°F

4. Thermostat Settings – Adjust Temperature Display

This allows you to adjust the displayed temperature up to 5° higher or lower than the actual room temperature.

Your thermostat was accurately calibrated at the factory, but you have the option to change the display temperature to match your previous thermostat. The current, or adjusted room temperature, will be displayed on the left side of the screen; your desired offset will be displayed on the right side of the screen.

Options for this menu item include:

- **+1° through +5°** – Adjusts the displayed temperature a specified number of degrees higher than the measured room temperature
- **0** – (Default) Displays the measured room temperature
- **−1° through −5°** – Adjusts the displayed temperature a specified number of degrees lower than the measured room temperature

5. Thermostat Settings – Energy Management Recovery

Options for this menu item include:

- **OFF** – (Default) The system starts heating or cooling at the start time for the program period

- **ON** – The system starts heating or cooling before the start time for the program period so that the room temperature reaches the program setpoint at the period start time

Example: You select EMR ON and have your heat (conventional heating system) programmed to 65° at night and 70° at 7:00 AM (a difference of 5°). Allowing 7 minutes per degree, the thermostat will start calling for heat prior to the 7:00 AM start time in an attempt to reach the 70° setpoint by 7:00 AM. With EMR OFF, the thermostat will wait until the 7:00 AM start time to begin heating the home.

6. Thermostat Settings – °F/°C

You can display temperature in either:

- **°F** – Fahrenheit (Default)

- **°C** – Celsius

7. Thermostat Settings – Thermostat Lock

The Delmarva Power Energy Wise Rewards thermostat can be locked to prevent unwanted users from changing the thermostat settings.

- **To Lock the Thermostat:**

  a. Access the **Enter PIN Number** screen:

    1) Press the **MENU** key

    2) Press ⌃ or ⌄ to highlight the **Thermostat Settings** item, then press ⦿

    3) Press ⌃ or ⌄ to highlight the **Thermostat Lock** item, then press ⦿

  b. **0000** is the default code and needs to be changed to add a passcode. Press ⟨ or ⟩ to choose which digit is highlighted and ⌃ or ⌄ to increase or decrease the number. Press **DONE** to save the new PIN number. Please write down your PIN number for safekeeping. There is a note section in the back of this manual.

    A lock icon (🔒) will be displayed on the home screen to indicate the keypad is locked.

> Leaving the default PIN number at **0000** will allow any user full access to your thermostat.
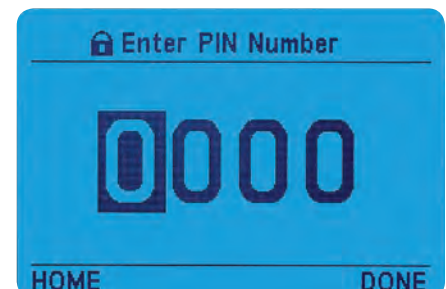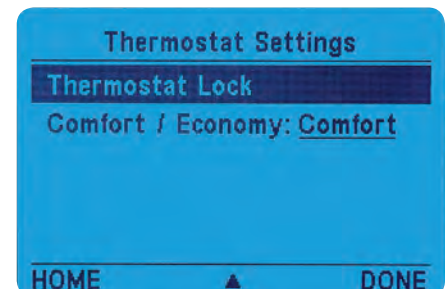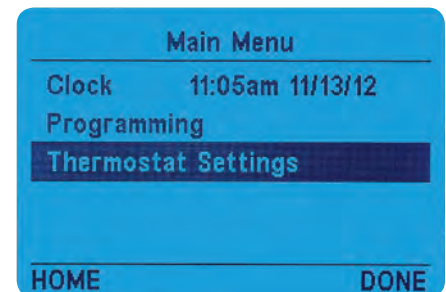
- **To Temporarily Unlock the Thermostat:**

  a. Press the **MENU** key to go directly to the **Enter PIN Number** screen.

  b. Press ⟨ or ⟩ to choose which digit is highlighted and ⌃ or ⌄ to increase or decrease the number. Press **UNLOCK** and your thermostat will return to the home screen.
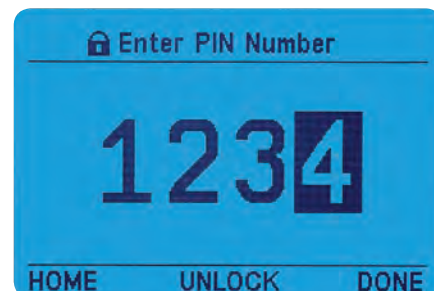
  c. If the correct PIN number is entered, the thermostat will return to the home screen and allow the user to make changes as needed. If the wrong PIN number is entered, the screen at the right will appear:

  > The thermostat will lock after two minutes of keypad inactivity.

- **To Permanently Unlock the Thermostat:**

  a. Follow the steps to temporarily unlock the thermostat (above).

  b. Follow the steps to lock the thermostat (see page 10), but enter **0000** to clear the lock code.

  c. Press **DONE** to save the change.
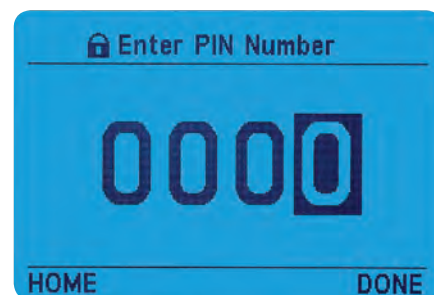
8. Thermostat Settings – Comfort/Economy

> Setting the PIN number to **0000** will allow any user full access to your thermostat.

This option is only available if you have a multi-stage heating, central air conditioning, or heat pump system.

- In **Comfort** mode (default), the higher stages of the heating or cooling system will be initiated when you modify the temperature setpoint three degrees or more.

- In **Economy** mode, the thermostat will analyze when the higher stages are needed for heating or cooling in order to economize energy usage.
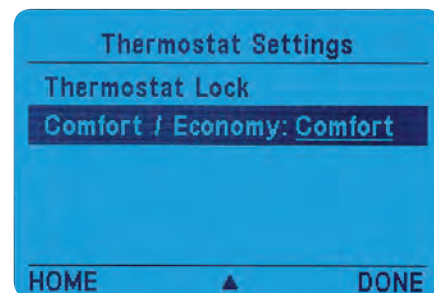
Step 3: How to Program Your Heating and Cooling Schedules

1. Press **MENU** to enter the **Main Menu**.
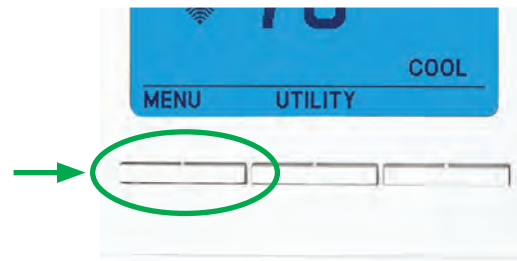
2. Press ⌃ or ⌄ to highlight **Programming**, then press ⦿.

   If the **HOME** button is pressed at any point during the programming sequence, any changes will not be saved and the thermostat will return to the home screen.
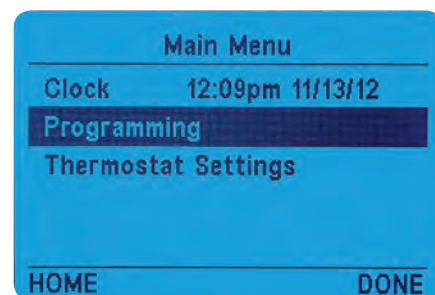
3. Press ⌃ or ⌄ to highlight **Heating Schedule** or **Cooling Schedule**, then press ⦿.

   The user can highlight **Time-based Programming** and change the setting to **Off** if the user prefers to change the temperature manually. To set programmed schedules, **Time-based Programming** must be set to **On**.
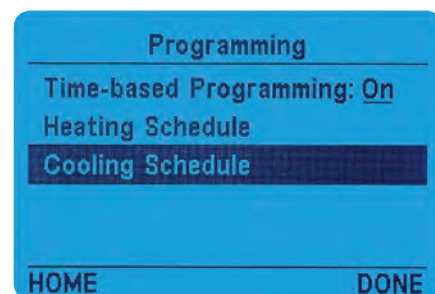
4. Press ⌃ or ⌄ to highlight **Weekdays/Weekends** or **Individual Days**, then press ⦿.
   a. **Mon–Fri** sets all weekdays to the same operating schedule.
   b. **Sat–Sun** sets the weekend days to the same operating schedule.
   c. **Individual Days** allows the user to program each day individually.

   If the **DONE** key is pressed at any point while in the **Heating Schedule** or **Cooling Schedule** menus, any changes will be saved and the thermostat will return to the previous menu.
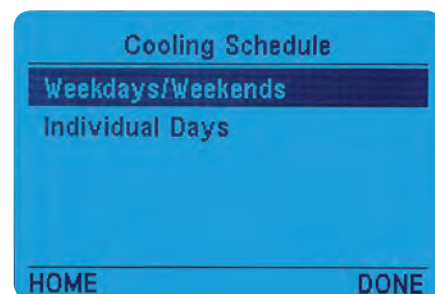
While in any schedule programming screen:

- Pressing **HOME** will exit without saving changes
- Pressing **NEXT** will advance to the next day(s) to be programmed
- Pressing **DONE** will save any changes and return to the previous menu

Mon-Fri Cooling		
Period	Starts At	Cool To
Morning	6:00am	78°
Day	8:00am	85°
Evening	5:00pm	78°
Night	10:00pm	82°
HOME	NEXT	DONE

5. The Morning **Starts At** time is highlighted. Press ⌃ or ⌄ to adjust the Morning time period to the desired start time. Press ⟩ to highlight the Morning **Cool To** or **Heat To**.

6. The Morning **Heat To** or **Cool To** (depending on which mode is being programmed) is highlighted. Press ⌃ or ⌄ to adjust the Morning setpoint to the desired temperature. Press ⟩ to highlight the Day **Starts At** time.

Mon-Fri Cooling		
Period	Starts At	Heat To
Morning	6:00am	70°
Day	8:00am	62°
Evening	5:00pm	70°
Night	10:00pm	62°
HOME	NEXT	DONE

7. Repeat Steps 5–6 for the Day, Evening, and Night **Starts At** and **Heat To** or **Cool To** setpoints.

8. To change to the next day or group of days (Weekdays or Weekends), press **NEXT**. Then repeat steps 5 through 8 as needed.

9. When changes are complete, press **DONE**.

Evening	5:00pm	78°
Night	10:00pm	82°
HOME	NEXT	DONE

10. Press **HOME** after programming is complete and changes have been saved.
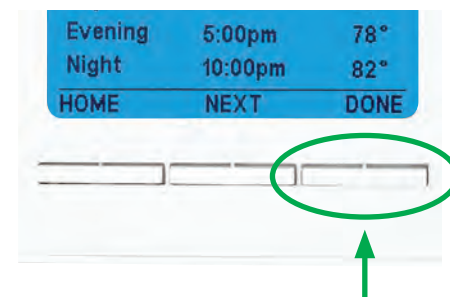
PROGRAMMING TIPS:

- If you don't want to program a particular day, you can skip it. Press **NEXT** one or more times until you reach the desired day.
- If you want to similarly program days in a group with only slight differences, program as a group first, then program individual days as needed. The individual day program overrides the group program.

SYSTEM MODE

The **SYSTEM** button selects the system mode of operation — **OFF**, **COOL**, or **HEAT**. If the system is a heat pump, there is also a selection for **AUX** to operate the auxiliary heat.

AUX should only be selected if the heat pump cannot supply ample heat in extreme cold conditions or in the event the heat pump is not operational. Selecting **AUX** can increase electricity use and costs.

FAN MODE

The **FAN** button selects whether the fan should:

- Operate constantly to circulate air regardless of the System Mode setting, or call for Heat or Cool. This is indicated by displaying **FAN ON** on the display.
- Operate only during a call for Heat or Cool. This is indicated by a lack of **FAN ON** on the display.

Temporary Versus Permanent Hold

A temporary hold can be set when operating in any mode except for **OFF**. A temporary hold is set by pressing the ⌃ or ⌄ on the thermostat to adjust the desired temperature. The SET AT indication of the temperature setpoint will change to HOLD AT and a message will appear in the thermostat messaging display area to confirm that a temporary hold is set. A temporary hold setpoint will be maintained until the start of the next programmed time period or the **RUN** soft key is pressed.

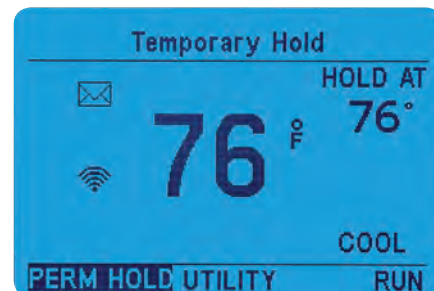A permanent hold can be set when operating in any mode except for **OFF**. To set a permanent hold, change the temperature just like setting a temporary hold. When the desired setpoint is entered, the user will have five seconds to press the **PERM HOLD** soft key to convert the temporary hold into a permanent hold. The SET AT by the setpoint will change to HOLD AT and a message will appear in the thermostat messaging display area to confirm that a permanent hold is set. If the **PERM HOLD** soft key is not pressed within five seconds, the hold will remain a temporary hold.

A permanent hold setpoint will override the programmed setpoints and time periods and can only be ended by pressing the **RUN** soft key.

Energy Wise Rewards Conservation Period Details

The following are detailed descriptions of the Energy Wise Rewards conservation periods.

1. Control Event Pending

The phrase **Control Event Pending** will appear in the message rotation at the top of the home screen before an Energy Wise Rewards conservation period is set to begin. The LED on the Action button (◉) will flash until the event begins.

2. Event in Progress

When an Energy Wise Rewards conservation period is in progress, the phrase **Event in Progress** will be displayed in the message rotation at the top of the home screen. The LED on the Action button (◉) will maintain a steady light for the duration of the event.

2. Event in Progress (Continued)

The LED colors represent a few different types of conservation periods:

- **Green** – standard Energy Wise Rewards conservation period
- **Red** – PJM-required conservation period (user is unable to opt out)
- **Yellow** – User has opted out of the conservation period

3. Seeing Scheduled Conservation Periods

Delmarva Power Energy Wise Rewards participants can see future scheduled conservation periods (shown as **Control Events** on the thermostat).

a. Press the **UTILITY** button on the home screen.
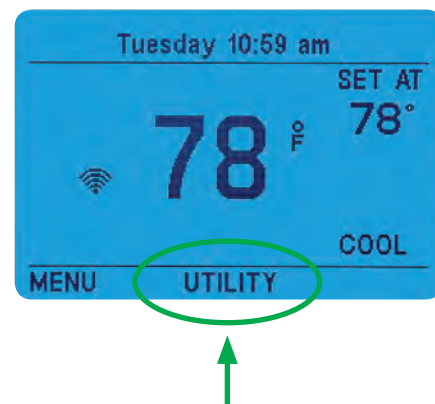
b. Press ⌃ or ⌄ to highlight **Control Events**, then press ◉.
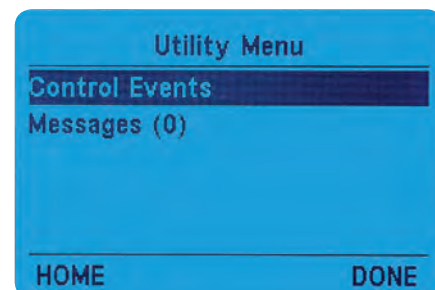
c. If a conservation period has been scheduled, you can see the details by pressing ◉.
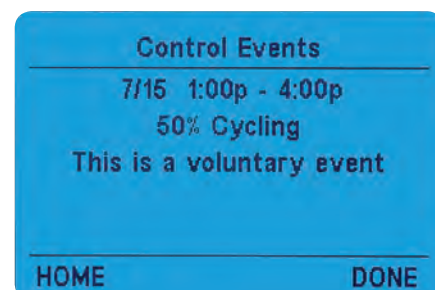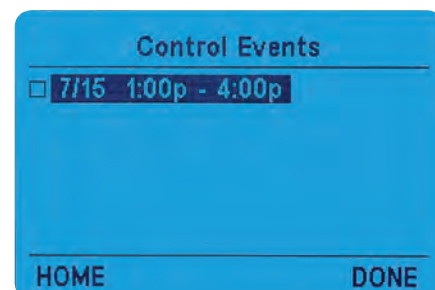
Energy Wise Rewards Program Messages

Delmarva Power Energy Wise Rewards can provide specific messaging to participants directly through the thermostat. When a message is received, an envelope icon (✉) will appear on your home screen.

To access your message:

a. Press the **UTILITY** button on the home screen.
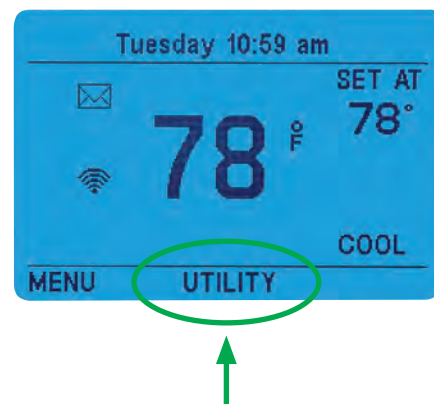
b. Press ⌃ or ⌄ to highlight **Messages**, then press ◉ to access your message.

c. Press ◉ to see the details of your message.
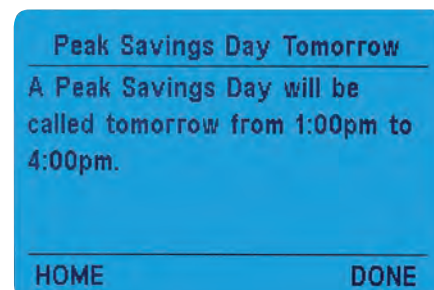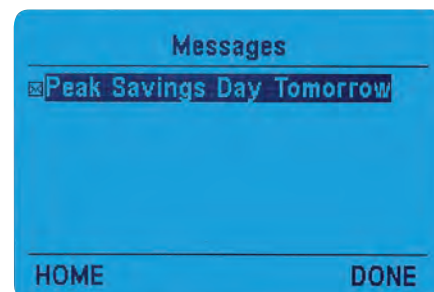
POWER LOSS

The Energy Wise Rewards thermostat is designed to withstand a power loss without the need of a battery backup. The thermostat responds to a power loss as follows:
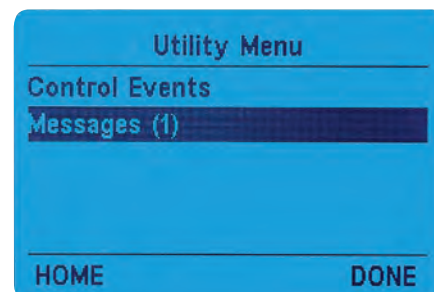
- All Thermostat Settings and Schedule Programming are stored to permanent memory and retained throughout the power loss.

- The thermostat will return to the same System Mode (Off/Heat/Cool/Aux) it was in prior to the power loss.

- A **Permanent Hold** will be maintained after a power loss.

- A **Temporary Hold** will be maintained after a power loss ONLY if still within the same Program Schedule time period. Otherwise the thermostat will return to operating according to the Program Schedule.

- The thermostat is designed to maintain the clock for at least 72 hours without power. If power has been lost for more than 72 hours, the clock will return to a factory default time and will update with the next utility time sync.

- A **Conservation Period** will be maintained after a power loss if still within the same conservation period.

Troubleshooting

Common Problems: No Heat, No Cool, or No Fan

Possible Cause	Corrective Action
Blown fuse or tripped circuit breaker.	Replace fuse or reset breaker.
Furnace power switch set to **OFF**.	Turn switch to **ON**.
Furnace blower compartment door or panel is loose or not properly installed.	Replace door panel in proper position to engage safety interlock or door switch.

No Heat or No Cool

Possible Cause	Corrective Action
Thermostat may be in an Energy Wise Rewards conservation period. "Event in Progress" will be displayed on top line of home screen.	Wait for the Energy Wise Rewards conservation period to end.
System switch is set to OFF.	Press the thermostat's **SYSTEM** button one or more times to select **HEAT** or **COOL** (as appropriate).

Heat, Cool, or Fan Runs Constantly

Possible Cause	Corrective Action
Fan set to **ON**.	Change Fan to **AUTO**.

Thermostat Setting and Thermometer Disagree

Possible Cause	Corrective Action
Thermostat thermometer setting requires adjustment.	The thermometer can be adjusted +/− 5 degrees. See Adjust Temperature Display on page 9.

Troubleshooting

No Heat

Possible Cause	Corrective Action
Pilot light not lit.	If it will not stay lit, call for service from your HVAC contractor.
System switch not set to HEAT.	Press the thermostat's **SYSTEM** button one or more times to select **HEAT** and press ⌃ to raise the temperature setpoint above room temperature.
Furnace Lock-Out Condition. Heat may also be intermittent.	Many furnaces have safety devices that shut down when a lock-out condition occurs. If the heat works intermittently, contact the furnace manufacturer or your HVAC contractor for assistance.
Heating system requires service or thermostat requires replacement.	To diagnose this condition: Press **SYSTEM** button to select **HEAT** and press ⌃ to raise the temperature setpoint above room temperature. Within a few seconds the thermostat should make a soft click sound. This sound usually indicates the thermostat is operating properly. If the thermostat does not click after being reset, contact Delmarva Power Energy Wise Rewards for a replacement thermostat. If the thermostat does click, contact the furnace manufacturer or your HVAC contractor for a service visit to verify the heating is operating correctly.

Furnace or Air Conditioner Cycles Too Fast or Too Slow (Narrow or Wide Temperature Swing)

Possible Cause	Corrective Action
The location of the thermostat and/or the size of the heating system may be influencing the cycle rate.	Electronic thermostats, like this one, normally provide precise temperature control and may cycle faster than some older mechanical models. A faster cycle rate means the unit turns on and off more frequently to maintain the desired temperature, but runs for a shorter time so there is no increase in overall energy use.

Troubleshooting

No Cool

Possible Cause	Corrective Action
System switch not set to **COOL.**	Press **SYSTEM** button to select **COOL** and press ⌄ to lower the temperature setpoint below room temperature.
Outdoor unit disconnect or breaker tripped.	Verify the outdoor unit disconnect or breaker has not been tripped.
Cooling system requires service or thermostat requires replacement.	To diagnose this condition: Press **SYSTEM** button to select **COOL** and press ⌄ to lower the temperature setpoint below room temperature. Within a few seconds the thermostat should make a soft click sound. This sound usually indicates the thermostat is operating properly. If the thermostat does not click after being reset, contact your installing contractor for a replacement thermostat. If the thermostat clicks, contact the furnace manufacturer or HVAC contractor for a service visit to verify the cooling is operating correctly.

Multi-stage Air Conditioner or Heat Pump: Second, Third, or Fourth Stage Won't Come On

Possible Cause	Corrective Action
Your thermostat is designed to determine the optimum time to activate the second stage. Simply raising the temperature in heating or lowering it in cooling will not always force the thermostat to bring the second stage on quickly. There is a time delay of 0 to 30 minutes depending on the performance of the first stage of the system.	Wait for the second, third, or fourth stage to come on.

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