

ELECTRIC THERMAL STORAGE SYSTEM OPERATION

NOVA SCOTIA POWER PROGRAM

SYSTEM DISPLAY:

7am = System will switch to a "P" mode and the dash on the top should be displayed. The P will display for 5 hours (until noon). This dash indicates that the first internal timer is on and timing. The bottom dash can never (or should never) be on during a peak time unless Comfort Override has been enabled.

NOTE: 5100 Series systems display water temperature; therefore, the timing indicator will not be displayed if the water temp is above 99 degrees C or F.

Noon = Peak timer #1 will time out and timer #2 now comes on, so the top dash will continue to display. At this time, the system will switch to an "A" mode. This is the shoulder time rate in Nova's program. The bottom dash will come on if elements are energized. During the "A" period, charging is dependant upon heat calls; therefore, charging is based on how many heat calls have been received in the past 6 hours.

4pm = Peak timer #2 will time out so the top bar will no longer be displayed. The system display will switch to a "P" mode once again and stay in this mode until 11pm. The bottom bar should not be on.

11pm = System will switch into a "C" mode and stay in this mode until 7am the next morning (start of Nova's daily peak time). This is off-peak time during which the heater will charge itself automatically based on outdoor temperature. The bottom dash may or may not be on during this time....this dash will come on any time the elements come on to generate heat for storing in the bricks.

NOTE: If a power outage occurs, internal timers reset and the system may not display "P", "A", or "C" at the proper times. Internal timers reset again the following morning at 7:00 am.

CHARGING STRATEGIES:

During the "P" times, the system doesn't charge unless Comfort Override is enabled. If Comfort Override is enabled, the heating system only charges if it runs out of heat completely and there is a heat call. During the "C" times, the system charges according to outdoor temperature. It starts taking a charge according to the temperature set in Configuration 1 (C001) and targets a full charge at or below the temperature programmed into Configuration 2 (C002). So, if you have a value of 15 in C001 and a value of -10 in C002, then when the temperature outside is at 5 degrees Celsius, the heating system would target a 40 percent core charge and when it is zero degrees Celsius outside, the system would target 60 percent etc.

If you wish to have the heating system charge more aggressively at night, change the value in C002 to a higher number such as -5 or 0. If changed to zero, then at 5 degrees Celsius the system would target approximately 66 percent instead of 40 percent.

The afternoon charge (Anticipated Peak or "A" time charge) is based on energy usage for the past 6 hours. Therefore, if there are no heat calls, the system won't charge during the anticipated peak time. If there are several heat calls it will target a higher core charge. Turning the thermostat down at night and then back up in the morning will make the system charge more during the anticipated peak time.