

Battery Power to the Main Service Panel (MSP) Option

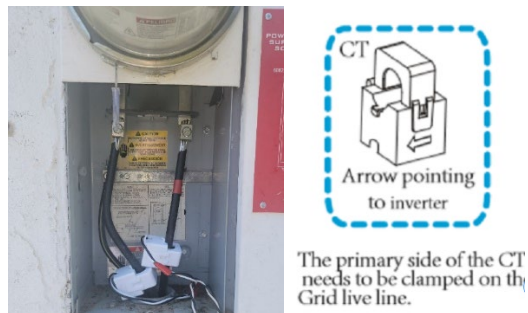
Many utility companies charge more for energy between 4 pm and 9 pm (Time-of-Use) or charge more when Tier thresholds are exceeded.

The NV14 inverter automatically discharges battery power to the provided critical load sub-panel after 4 pm when there is no longer sufficient solar to satisfy those loads.

As of May 2022, the inverter can also discharge battery power to the MSP after 4 pm. This option will further reduce Utility dependence but will also discharge battery power faster.

This is accomplished in 2 steps, described below.

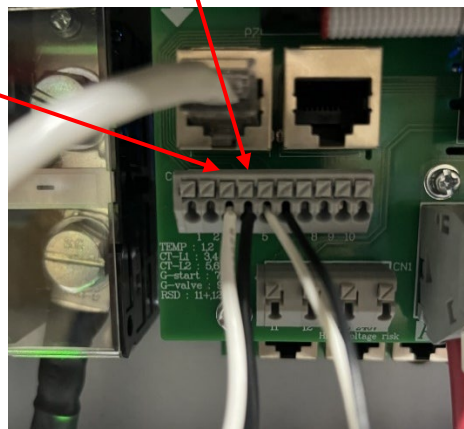
Step 1 A: Add the TWO provided Current sense Transformers (CTs) to the MSP L1 and L2 input feeds.



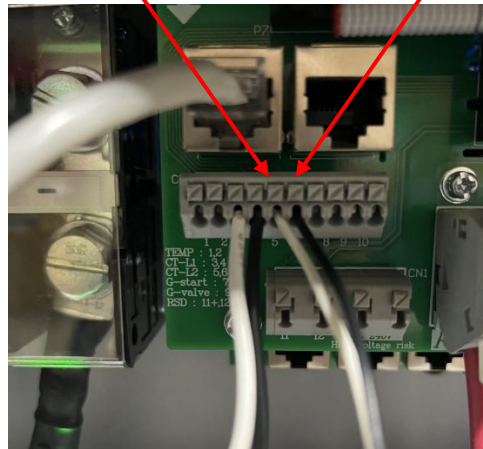
Ensure that the CT arrows are pointing away from the MSP and towards the NV14 inverter:

Step 1 B: Keep CT 1 and CT 2 white and black wires paired. The wires are 10-feet in length. Feed these wires through conduit to the NV14. These can be feed via the same conduit used for the NV14 Utility connection via the 40 Amp breaker.

Step 1 C: Open the bottom cover of the inverter (four hex bolts). Just below the Battery communications RS485 connection is a bank of CT mode clamps. Connect CT 1 white wire to pin THREE and CT 1 black wire to pin FOUR by depressing the grey plastic input tensioner.

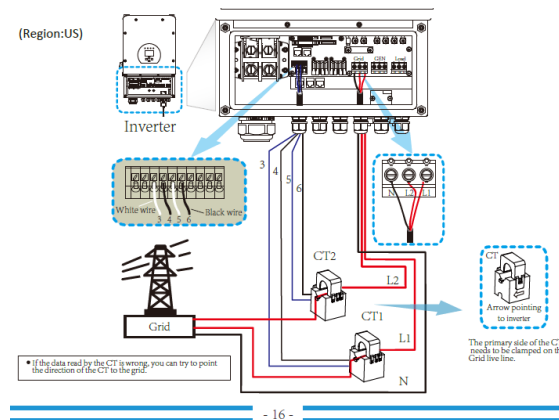


Connect CT 2 white wire to pin FIVE and CT 2 black wire to pin SIX by depressing the grey plastic input tensioner.



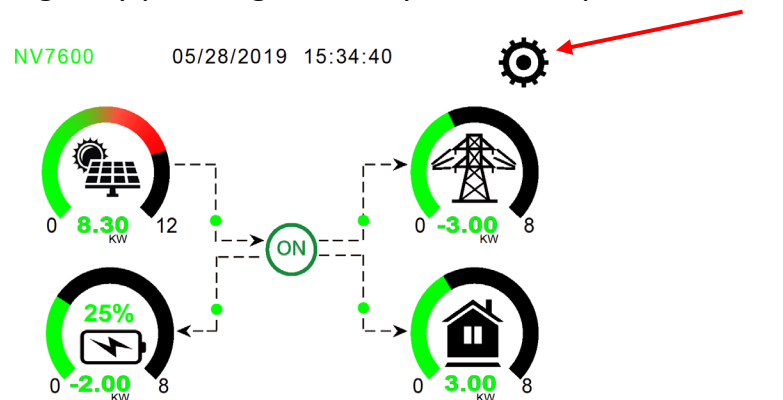
Bolt the inverter bottom cover back into place.

Wiring Diagram for these connections:

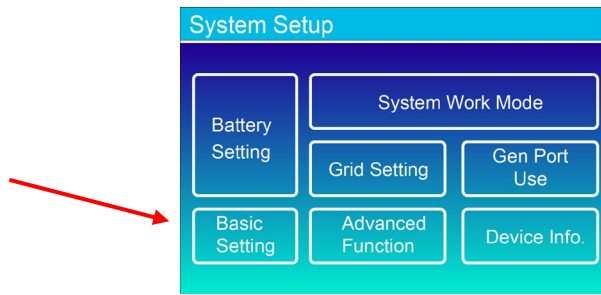


Step 2 programming the inverter:

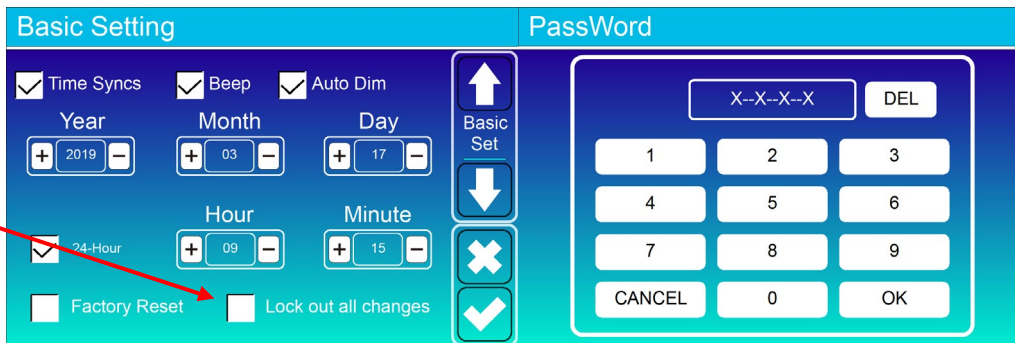
Step 2 A: Go to the Settings Pages by pressing on the System Set Up Menu Icon:



Step 2 B: Press Basic Settings:



If Lock Out All Changes is selected, then tap it to uncheck it. Then press the big check in the bottom right corner. Then enter Authorization Code 7, 7, 7, 7 and then press OK.



Step 2 C: Go to System Work Mode. The system is preset to “Zero Export to Load.” Press on “Zero Export to CT” so that the circle fills in. Then press the large check mark in the lower right corner:



Step 2 D: Go to System Work Mode. Ensure that changes saved. If they did, then press the down arrow on the right side of the LCD screen. You are on System Work Mode page 2. Systems are preset with Battery discharging to 22% daily. By sending battery power to the MSP you will greatly increase usage of the battery. It is recommended that you limit discharge to 40% or 50% if the customer is concerned with grid outage. If you allow the battery depletion to 22% minimum, then if the grid goes down there will be no power available for the critical loads. The customer will be in black out until the grid returns or until solar recharges the battery to 30%.

Recommend the following changes:

System Work Mode

Grid Charge	Gen	Time	Time	Batt
<input checked="" type="checkbox"/>	<input type="checkbox"/>	01:00	~ 06:00	50%
<input checked="" type="checkbox"/>	<input type="checkbox"/>	06:00	~ 08:00	50%
<input type="checkbox"/>	<input type="checkbox"/>	08:00	~ 13:00	100%
<input type="checkbox"/>	<input type="checkbox"/>	13:00	~ 16:00	100%
<input checked="" type="checkbox"/>	<input type="checkbox"/>	16:00	~ 21:00	50%
<input checked="" type="checkbox"/>	<input type="checkbox"/>	21:00	~ 01:00	50%

Time Of Use

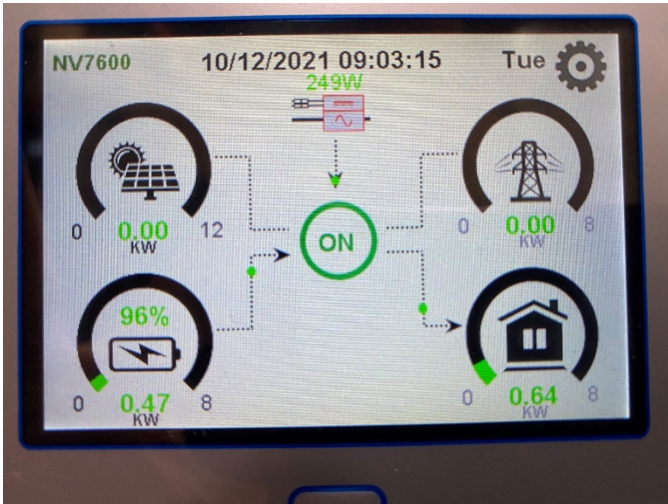
Work Mode2

Setting 50% next these times means that the battery will be allowed to discharge as needed (critical loads and MSP) to 50%. If the grid goes down, then the battery will discharge to the Critical load Sub-Panel only to 22%. This allows time for the grid to return or for solar to come on.

If the grid goes down, then the battery will discharge to the critical load sub-panel down to 22%. At 22% with grid off and no solar, the customer will be in a full blackout. The inverter will stay on and will send a 240 V pre-charge to an AC Solar System or 48 V pre-charge to a DC Solar System. When the Solar System reaches 125 V, then the solar will come on. When the battery recharges to 28%, the critical load sub-panel will again be powered.

Step 2 E: Press the ESC escape button under the LCD screen. You are on the Main Screen.

Now look at the main display to see how power will flow from the battery to supplement what is being generated by solar for the load demand.



Please advise NeoVolta if "Zero Export to CT" is being used via the Serial Number sheet that is to be returned to NeoVolta.