

How to read your residential net energy meter...

There are several models of NEM (net energy metering) meters that have been installed by HELCO. The models may differ in appearance and in the display codes that are used to differentiate the display readings. If your ID Display Codes are 7, 3, and 6, refer to the attachment for NEM meters installed prior to January 1, 2011. If your ID Display Codes are 3, 23, and 33, refer to the attachment for NEM meters installed after January 1, 2011.

Regardless of the residential NEM meter model installed, the meter will cycle through 4 displays. All readings are cumulative from the time that the NEM meter was installed. (The numbers below do not represent the order of display.)

- 1. Meter check.** The meter display will show all 88888.
- 2. Delivered to Customer.** This shows the cumulative number of kilowatt-hours (kWh) that have been supplied to you from HELCO.
- 3. Received from Customer.** This shows the cumulative amount of kWh that HELCO has received from your NEM system. Please note that this is not the amount of energy produced in total by your NEM system, as the energy generated by your system first goes to power your electrical appliances and other electrical loads. Only the excess energy produced by your system beyond that which is consumed on-site is "received" by HELCO and recorded as a NEM meter reading. Therefore, the total amount of energy produced by your NEM system as shown on your inverter(s) display will not be the same as a NEM meter reading.
- 4. Net Energy.** This shows the cumulative "net" energy. It is the difference between the kWh "Delivered to Customer" and the kWh "Received from Customer" meter readings. If the energy received from you is greater than the energy delivered to you from HELCO, the NEM meter will count backwards. If you subtract the "Received from Customer" from "Delivered to Customer" kWh readings and a negative number results, HELCO has received more energy from you than has been delivered to you by HELCO (i.e., more energy has been produced by your NEM system than has been consumed on-site).

For more information on your NEM meter readings and information on how to read your NEM bill and reconciliation spreadsheet, refer to the handouts "What every NEM customer should know..." and "How to read your NET energy billing and 12-month reconciliation spreadsheet..."

How to estimate your total energy consumed on-site...

Though your NEM meter will not display the total amount of energy that you consume on-site, an estimate of the actual kWh you used over a period of time can be calculated by the following method. The examples use a 30 day timeframe, but other timeframes can be used. Just remember to take all of the beginning readings on the same date and after the desired period of time has elapsed, the ending readings together.

- 1) Record the total output of your inverter(s) in kWh along with the HELCO "net" reading and the date.
- 2) After 30 days, again record the total output reading of your inverter(s) in kWh along with the HELCO "net" reading.
- 3) Subtract the second pair of readings from the first pair.
- 4) Add the resulting two numbers together.

Example 1:

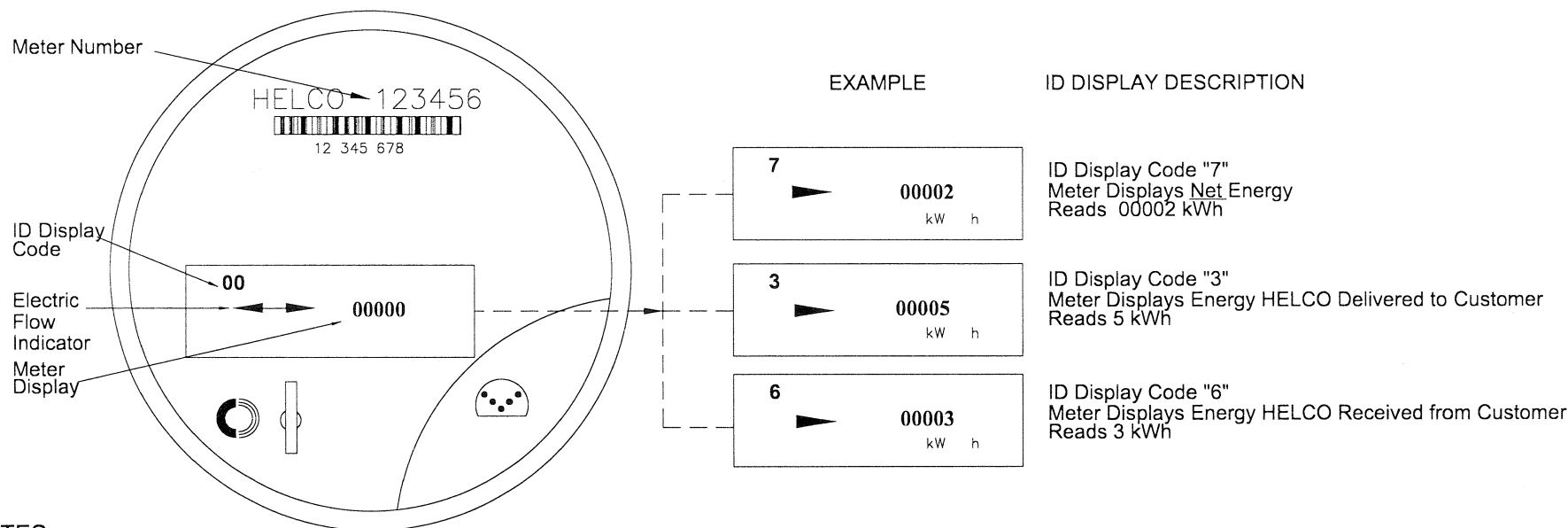
<u>May 31, 2011</u>		
HELCO meter "net" reading:	50402	Total Inverter reading: 2,534
<u>May 1, 2011</u>		
HELCO meter "net" reading:	<u>50236</u>	Total Inverter reading: <u>2,116</u>
<u>Difference:</u>	166	418
HELCO meter "net" reading:	166	
Total Inverter reading:	+ <u>418</u>	
Estimate of kWh used:	584	

Example 2:

<u>June 30, 2011</u>		
HELCO meter "net" reading:	50355	Total Inverter reading: 3,179
<u>June 1, 2011</u>		
HELCO meter "net" reading:	<u>50408</u>	Total Inverter reading: <u>2,548</u>
<u>Difference:</u>	<u>53</u>	631
HELCO meter "net" reading:	<u>53</u>	
Total Inverter reading:	+ <u>631</u>	
Estimate of kWh used:	578	

NET Energy Meter Display (Meters installed prior to January 1, 2011)

HELCO NET ENERGY METER



NOTES:

- The NEM meter is a solid state, multi-measurement, highly accurate electronic meter capable of measuring the flow of energy in both Forward (HELCO Deliver) and Reverse (HELCO Receive) directions:
 - ▶ When the indicator is pointing right, HELCO is delivering energy to the customer.
 - ◀ When the indicator is pointing left, HELCO is receiving energy from the customer.
- The NEM meter will scroll through several screens as shown in the example above. Refer to the ID Display Code to determine what information is being displayed. Commercial and time-of-use customers will have meters that display more ID Display codes than shown above. There may also be slight differences in the display depending on the manufacturer and model of the NEM meter.
- The NEM energy readings will increment based on the amount of power delivered by HELCO or received from the customer over a period of time similar to how a car's odometer will increment for the distance traveled.
- The NEM meter is typically installed with the Delivered, Received and Net Energy Meter energy registers at 00000. Some NEM meter may have the Net Energy registers set to 50000 initially.
- The NEM customer is billed off the Net Energy Readings (ID Display Code 7).

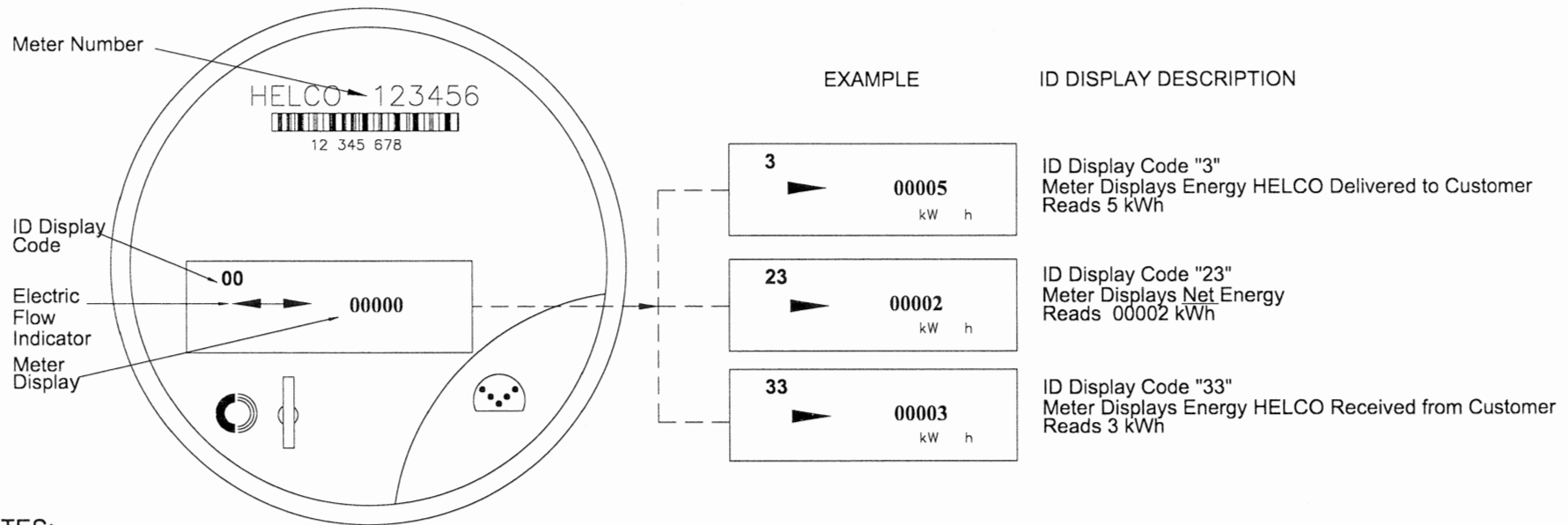
Example	ID Display Code	Current Reading	Previous Reading	Consumption
Net Energy	7	00002	minus 00000	= 00002

- Net Energy readings can be also be confirmed by reading the HELCO Delivered (ID Display Code 3) minus HELCO Received (ID Display Code 6).

Example	ID Display Code	Current Reading	Previous Reading	Consumption
Energy Delivered	3	00005	minus 00000	= 00005
- Energy Received	6	00003	minus 00000	= 00003
Net Energy				00002

NET Energy Meter Display (Meters installed after January 1, 2011)

HELCO NET ENERGY METER



NOTES:

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 - ▶ When the indicator is pointing right, HELCO is delivering energy to the customer.
 - ◀ When the indicator is pointing left, HELCO is receiving energy from the customer.
- The NEM meter will scroll through several screens as shown in the example above. Refer to the ID Display Code to determine what information is being displayed. Commercial and time-of-use customers will have meters that display more ID Display codes than shown above. There may also be slight differences in the display depending on the manufacturer and model of the NEM meter.
- The NEM energy readings will increment based on the amount of power delivered by HELCO or received from the customer over a period of time similar to how a car's odometer will increment for the distance traveled.
- The NEM meter is typically installed with the Delivered, Received and Net Energy Meter energy registers at 00000. Some NEM meter may have the Net Energy registers set to 50000 initially.
- The NEM customer is billed off the Net Energy Readings (ID Display Code 23).

Example	ID Display Code	Current Reading	Previous Reading	Consumption
Net Energy	23	00002	minus 00000	= 00002

- Net Energy readings can be also be confirmed by reading the HELCO Delivered (ID Display Code 3) minus HELCO Received (ID Display Code 33).

Example	ID Display Code	Current Reading	Previous Reading	Consumption
Energy Delivered	3	00005	minus 00000	= 00005
- Energy Received	33	00003	minus 00000	= 00003
Net Energy				00002