

Overview

Nergy Sense Support software is used to manage Power Usage sensors, including preparing for test use, downloading data and reviewing results.

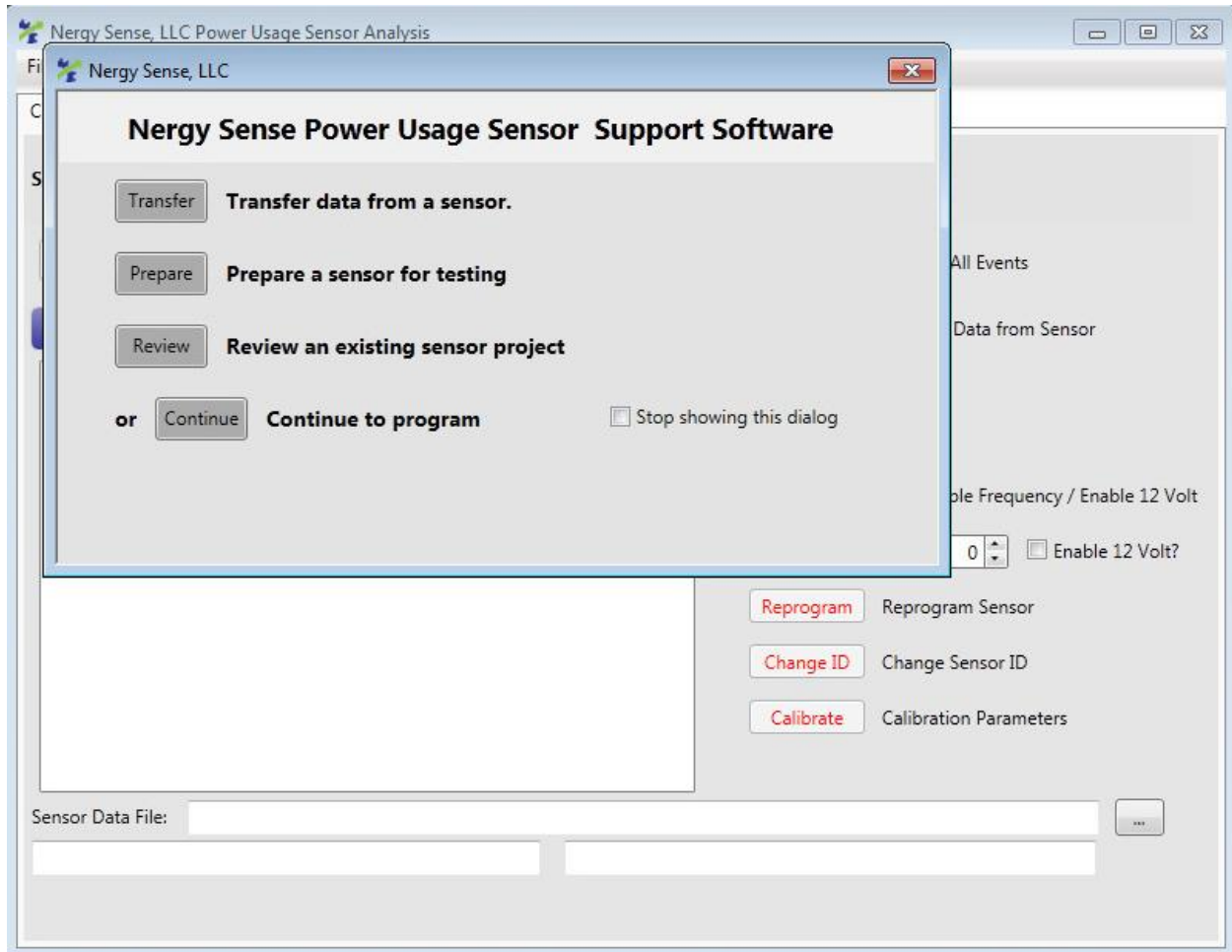
Refer to the installation guide for information on installing the software and the USB communications dongle.

Start the Program

On your Desktop, Locate the Nergy Sense program icon and double click it.



The program will start, and display the Task dialog.

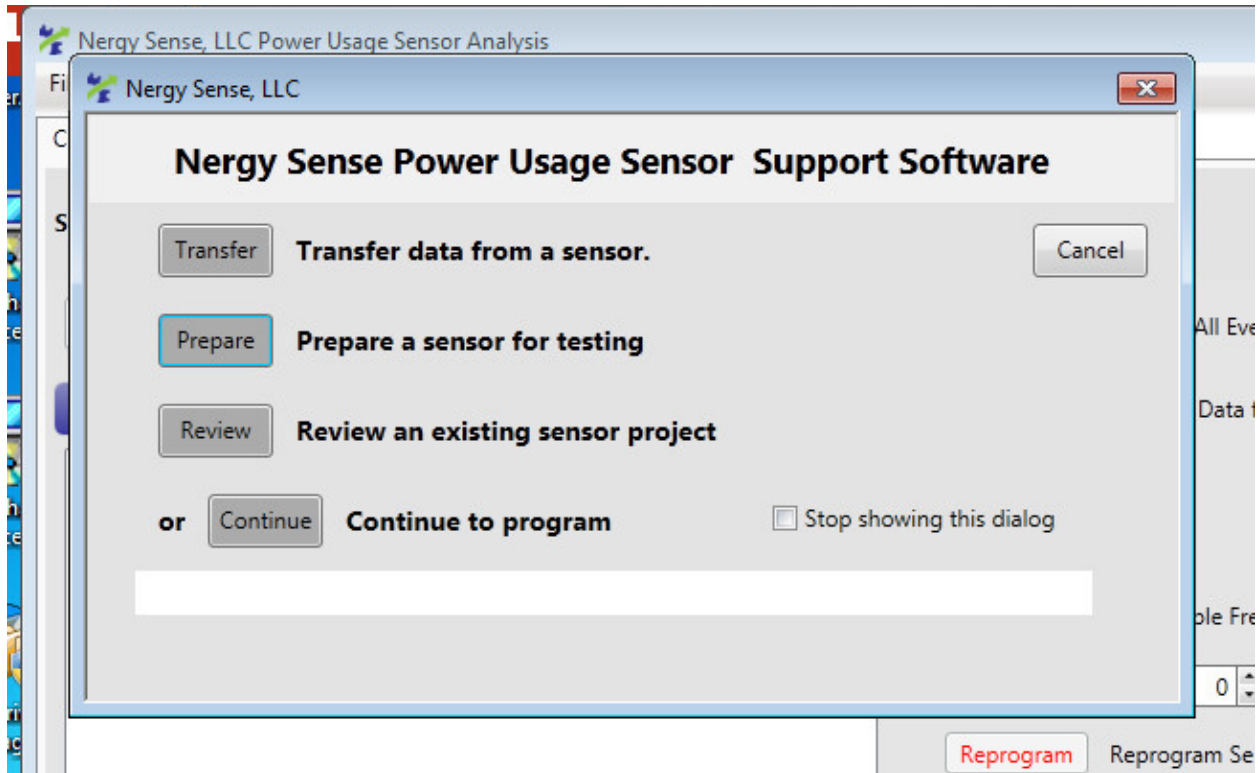


In most cases, you can do everything from this dialog, including preparing a sensor for test and reading and reviewing data.

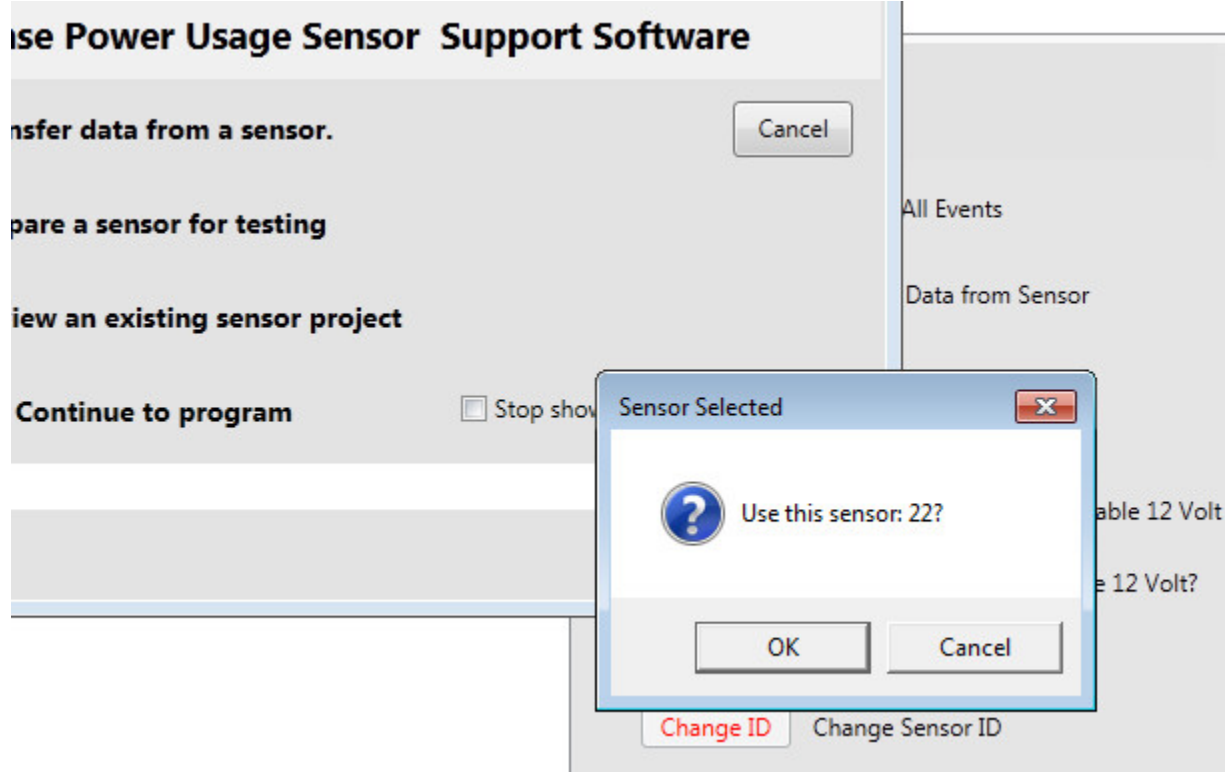
Prepare a Sensor for testing

Power on the Power Usage sensor using the provided 12 volt power supply.

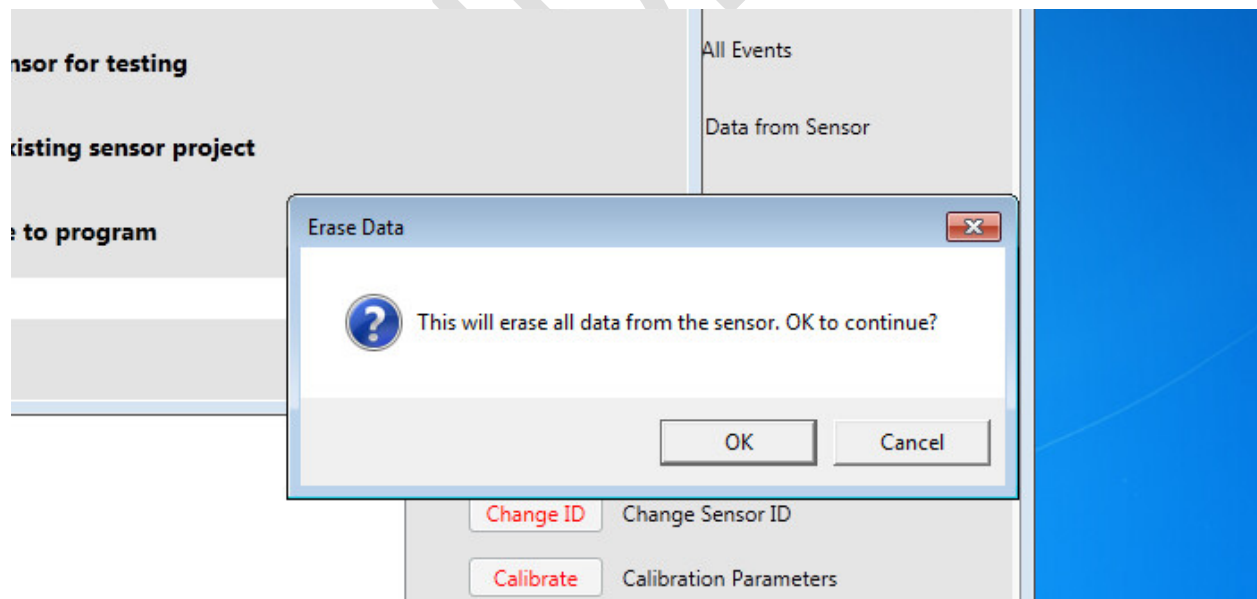
Click on the 'Prepare' button on the Task dialog.



Communications status will be reported on the screen. Once a sensor is located, the sensor ID will be reported, and you can confirm it is the sensor you wish to use.



Click 'OK' and then confirm that it is OK to reset the sensor by erasing existing data.

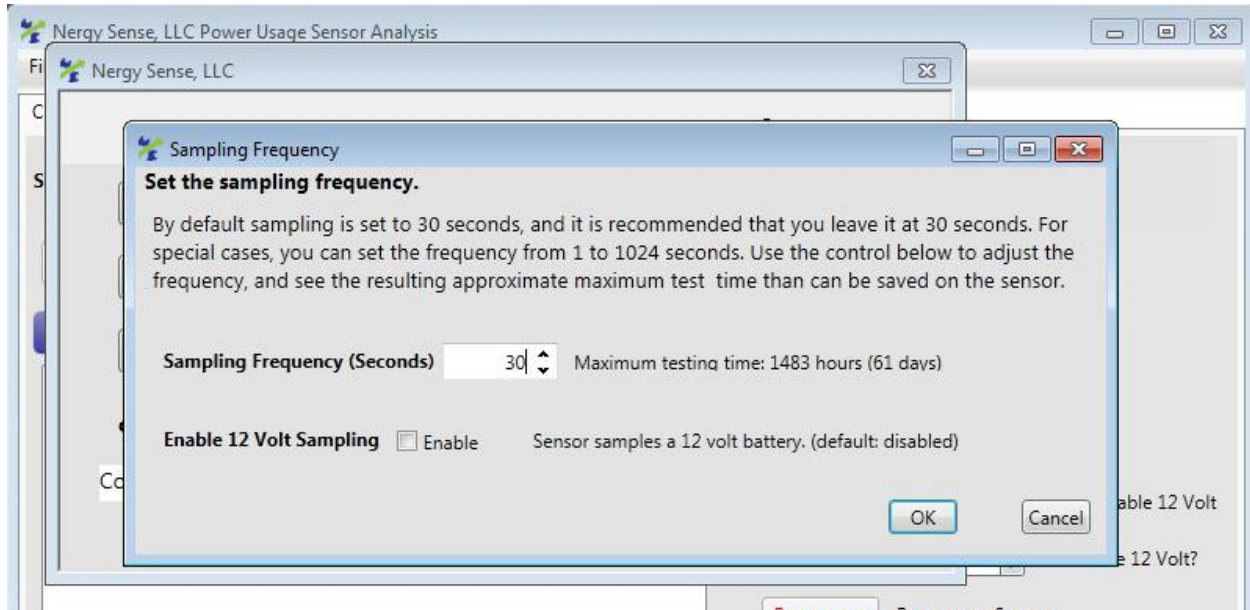


The sensor may be configured to record data over a wide range of sampling frequencies – from 1 second and up. Use the displayed dialog to select a frequency. The text will update to display the maximum recording time at the presently selected frequency.

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Nergy Sense recommends a sampling frequency of 30 seconds for most applications. This results in a total recorded time of > 60 days.

Check 'Enable 12 Volt Sampling' if you are installing the sensor on a 12 volt battery.

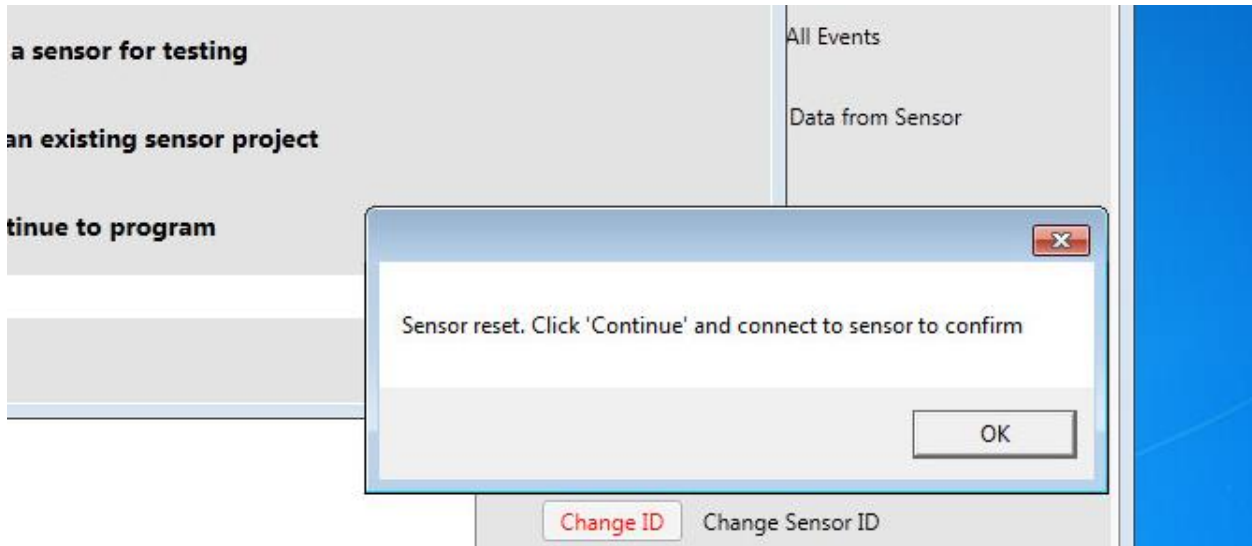


Click 'OK' and the sensor preparation will begin. It may take a minute or so for the erase to complete.

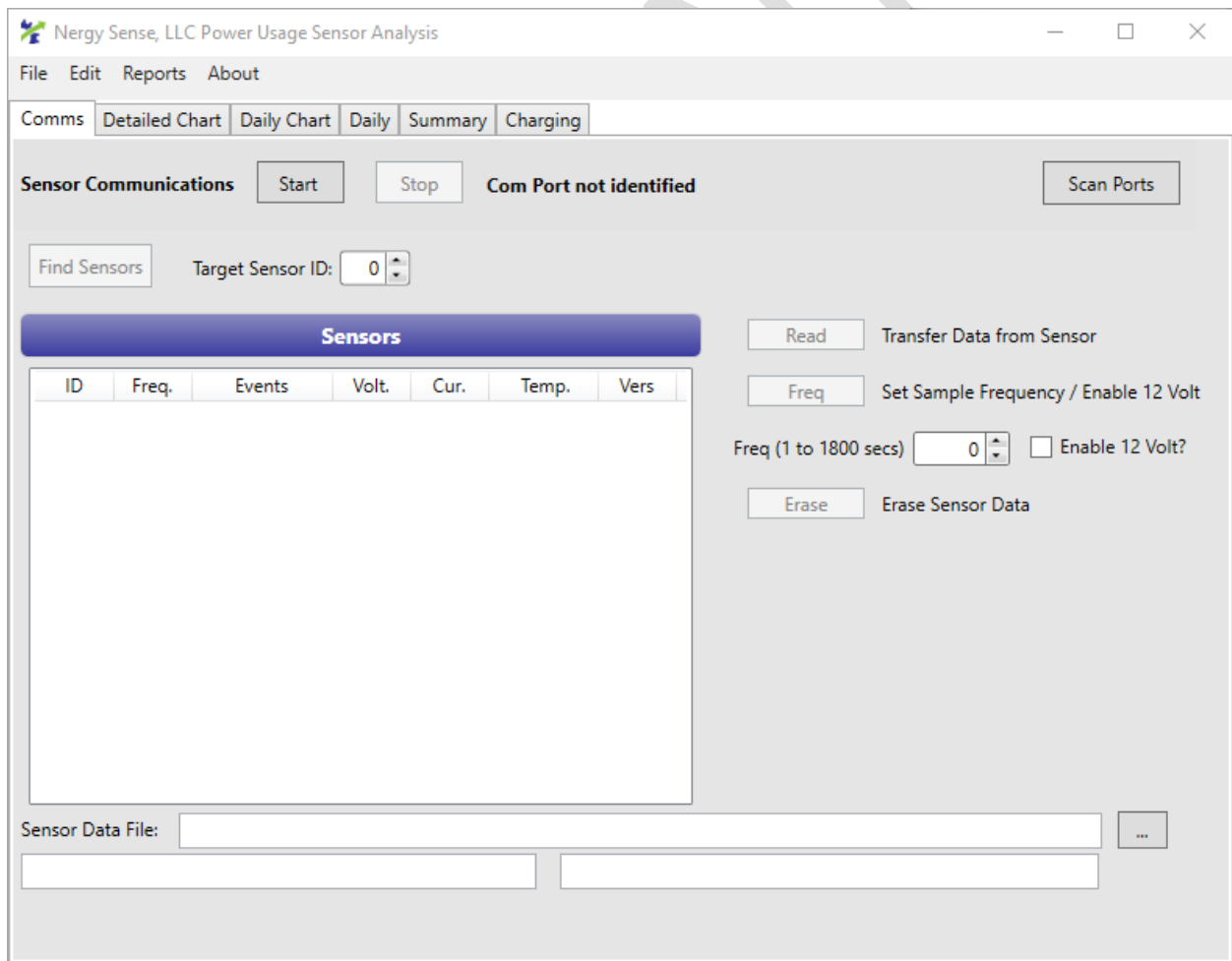
NOTE: Make sure the time on your PC is correct. The sensor time is initialized using the PC clock. If your PC time is wrong, the sensor time will be wrong.

The sensor is ready for use when the following is displayed.

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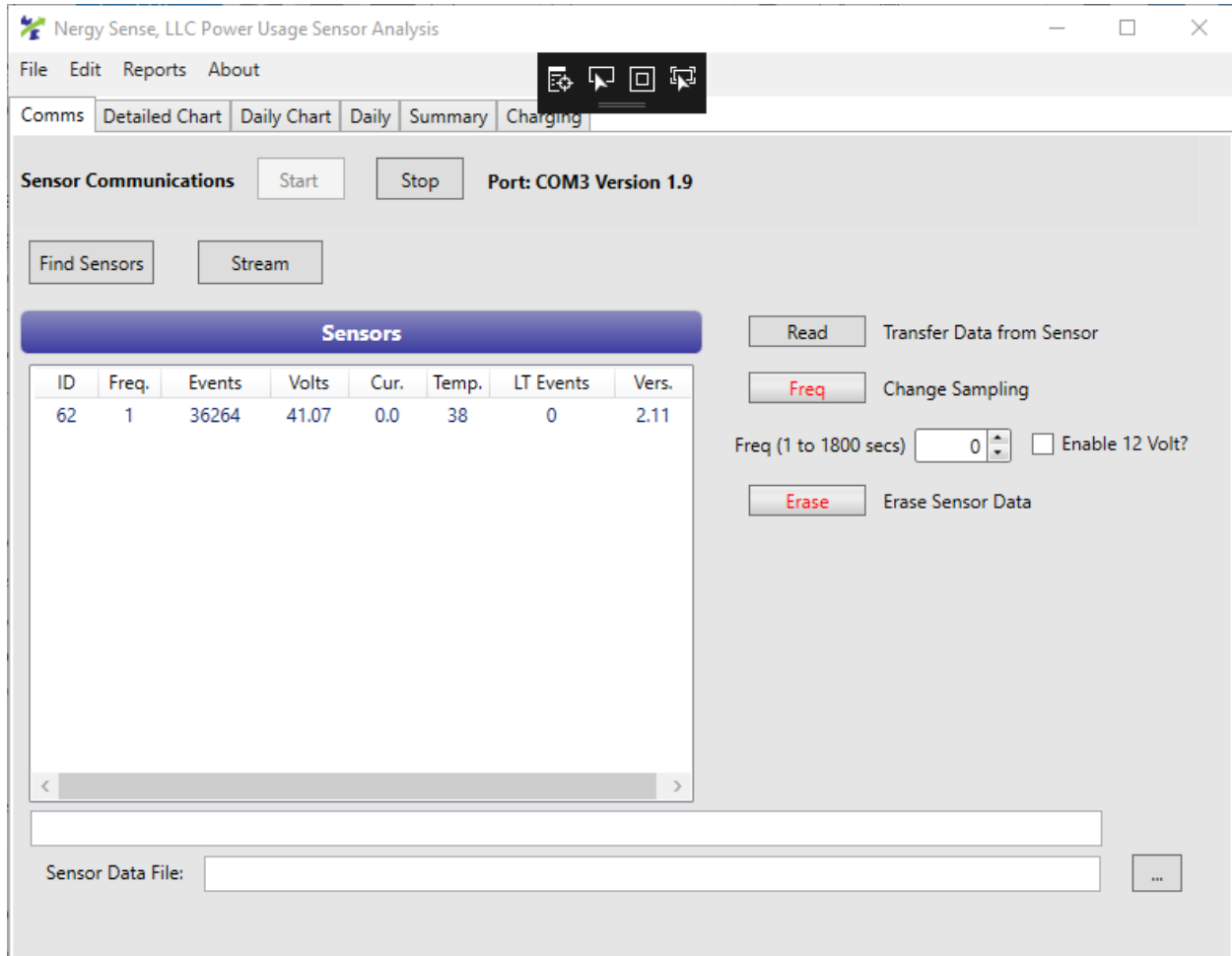


Click 'OK' to close the dialog box, then 'Continue', to reach the comms screen.



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Verify the sensor settings by clicking 'Start' to begin communications. When comms starts, it will automatically discover your sensor, showing something similar to this:



When you see the sensor in the 'Sensors' list, you know it is ready. Click 'Stop' and then disconnect the sensor from the power supply.

Install the sensor on the truck and confirm the onboard LEDs are flashing.

After a Test – Transfer Data from a Sensor

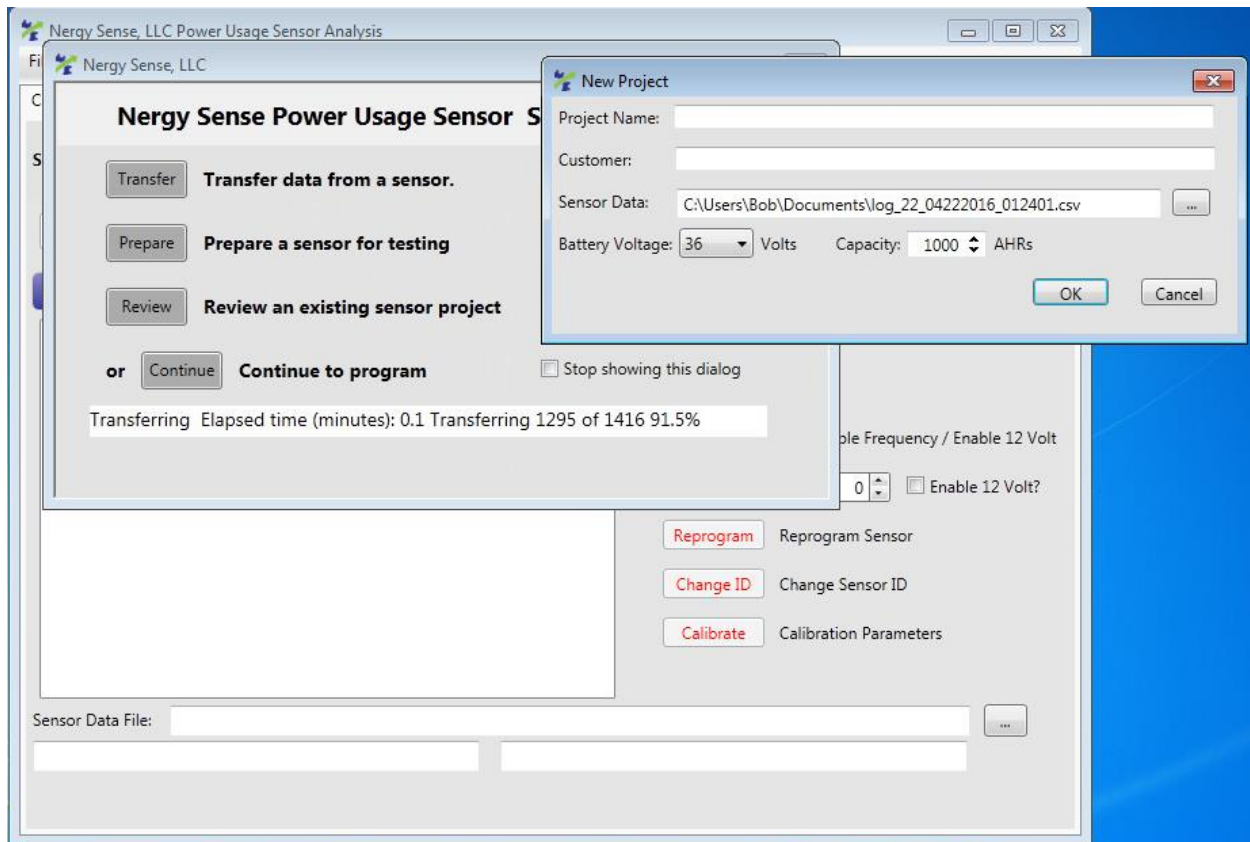
Once a test is complete, you can collect data from the sensor before or after uninstalling.

If you uninstall the sensor from the battery first, then use the 12 volt power supply to power up the sensor.

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From the Task Dialog, choose 'Transfer'. You will be asked to confirm the sensor ID prior to transferring. Click 'OK' to start the transfer.

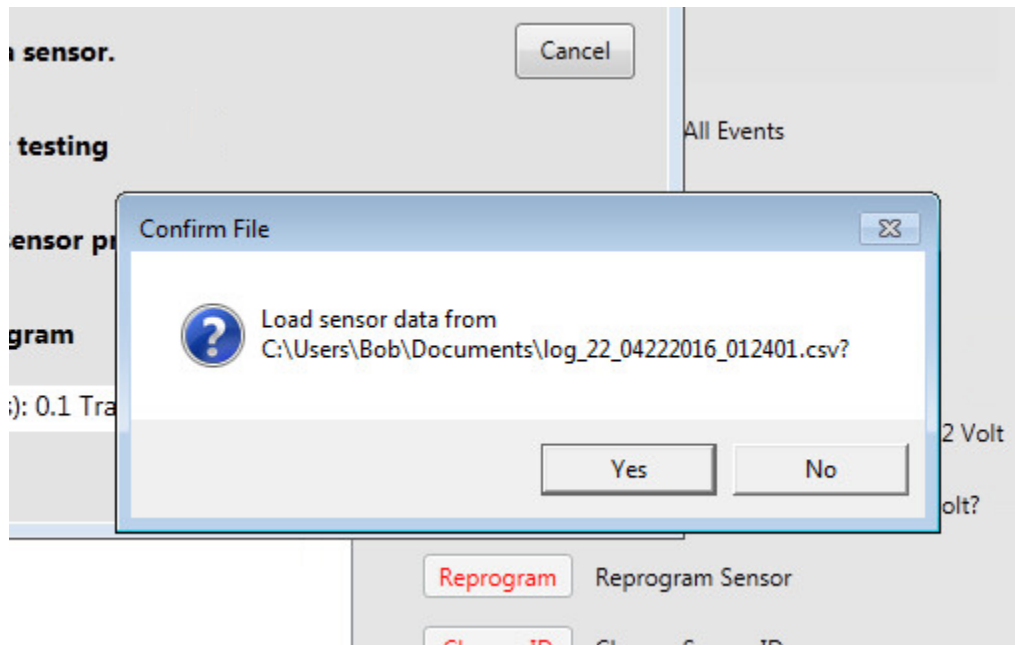
Transfer statistics will appear on the task dialog, and when all data is transferred, the New Project dialog will appear.



The dialog offers a quick way to enter the key parameters for a project, including Customer Name, and Project, Battery voltage and capacity

NOTE: You can change all of these values at a later time, including battery capacity and voltage. The unique Nergy Sense architecture protects you from mistakes in configuration.

Click OK, and you will be prompted to confirm loading your sensor data. Click Yes to proceed



Once the data is loaded, you will be asked to confirm the location for storing the project file, and its name. The name is automatically defined by the Project Name entered in the Project dialog – but you can override it as desired.

A project will be created, using the data from your sensor

Review the sensor data

Once the data is loaded in a project, you can use it for graphing and reporting. If you have just completed the Transfer step, click 'Continue' to proceed to the main program dialogs. Otherwise, use 'Review' on the task menu to locate and open an existing project.

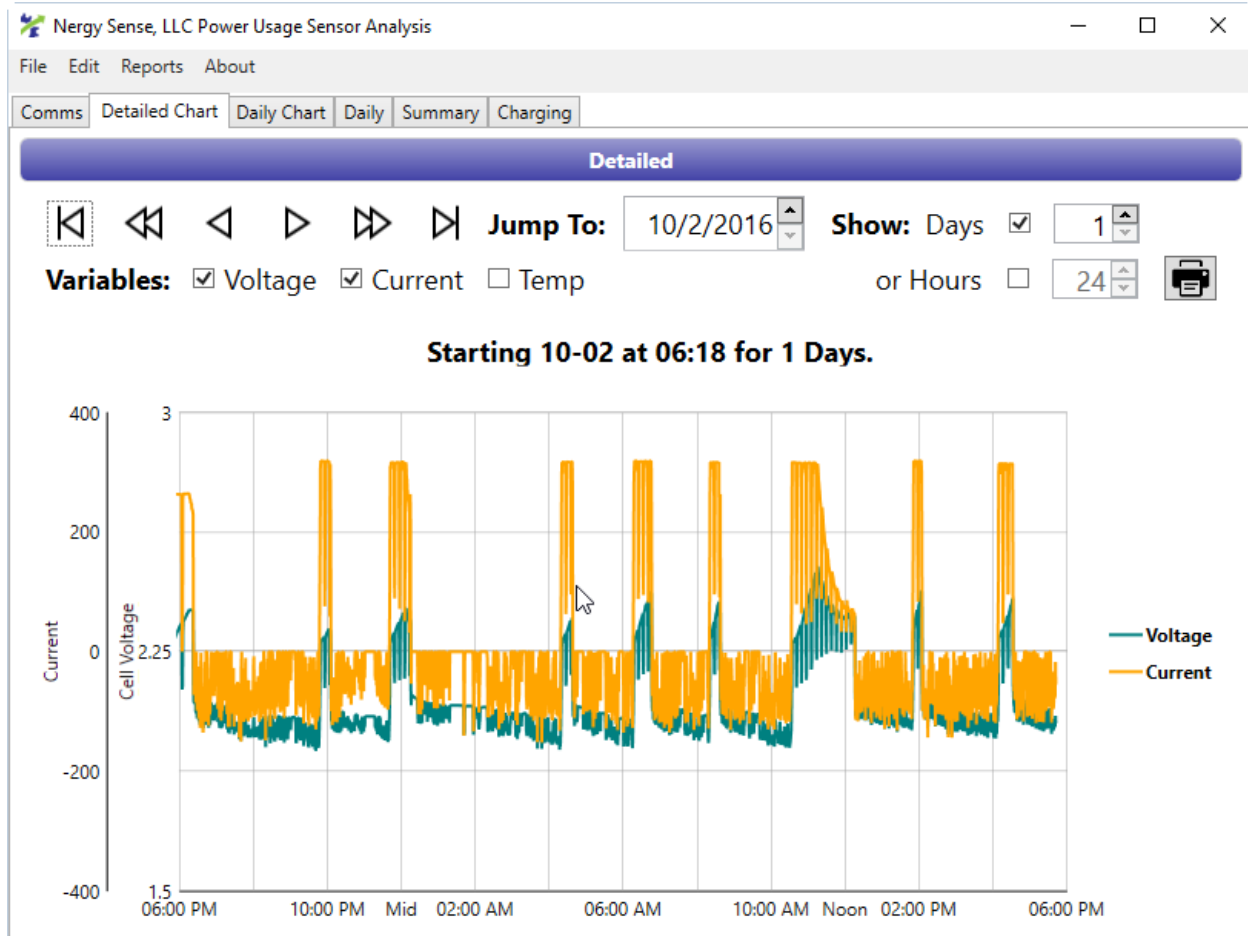
NOTE: If you have a sensor data file and you want to use it to create a project, click 'Continue' and in the File menu, use 'New Project' to create a project.

The main dialog for the Sensor Support application is organized in tabs. One tab ('Comms') is used to manage more advanced sensor tasks, or can be used to transfer data.

The remaining tabs are used to view sensor data in a variety of formats.

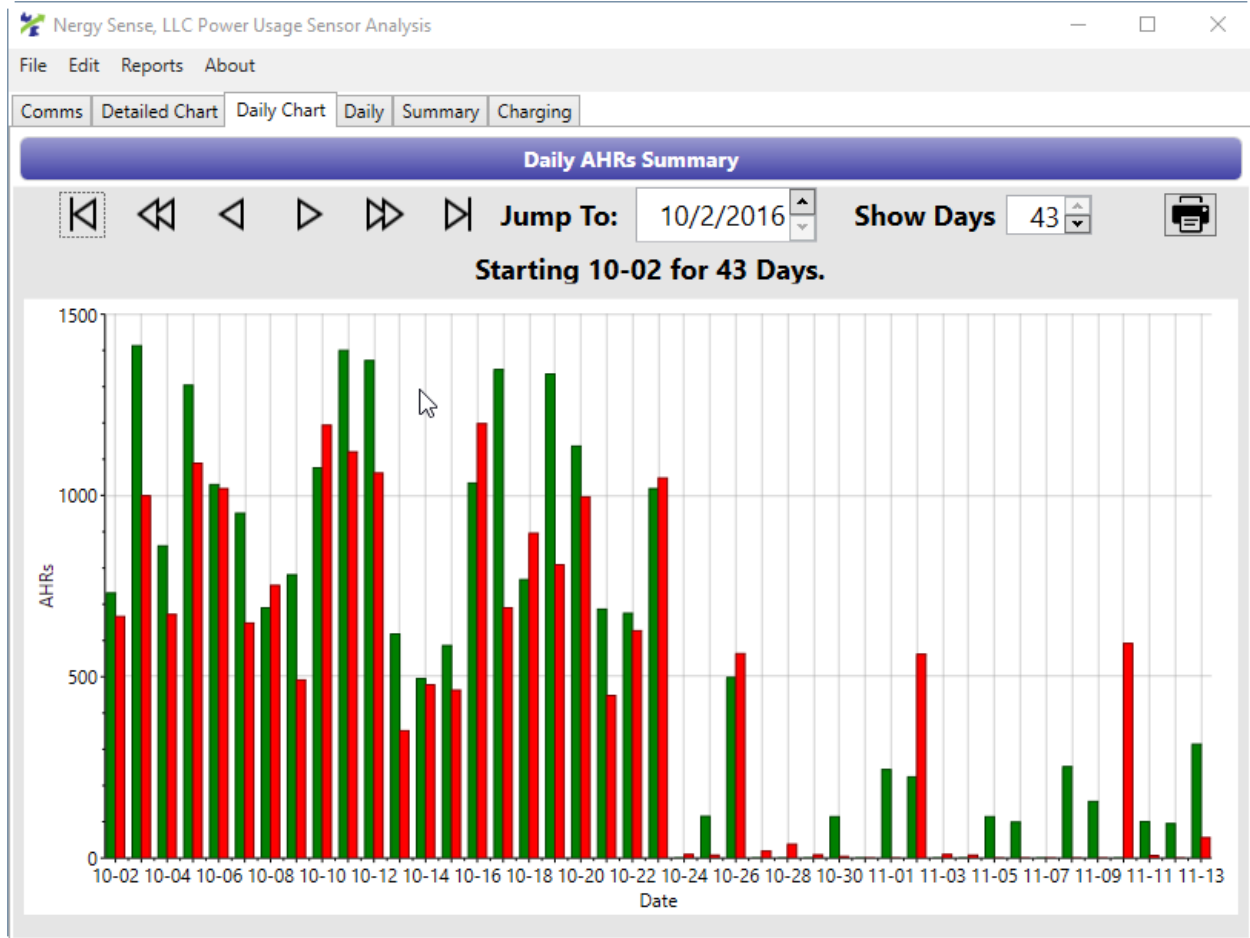
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Detailed Chart offers a detailed view of the data, over a range of time spans. Use this tab to see detailed activity.



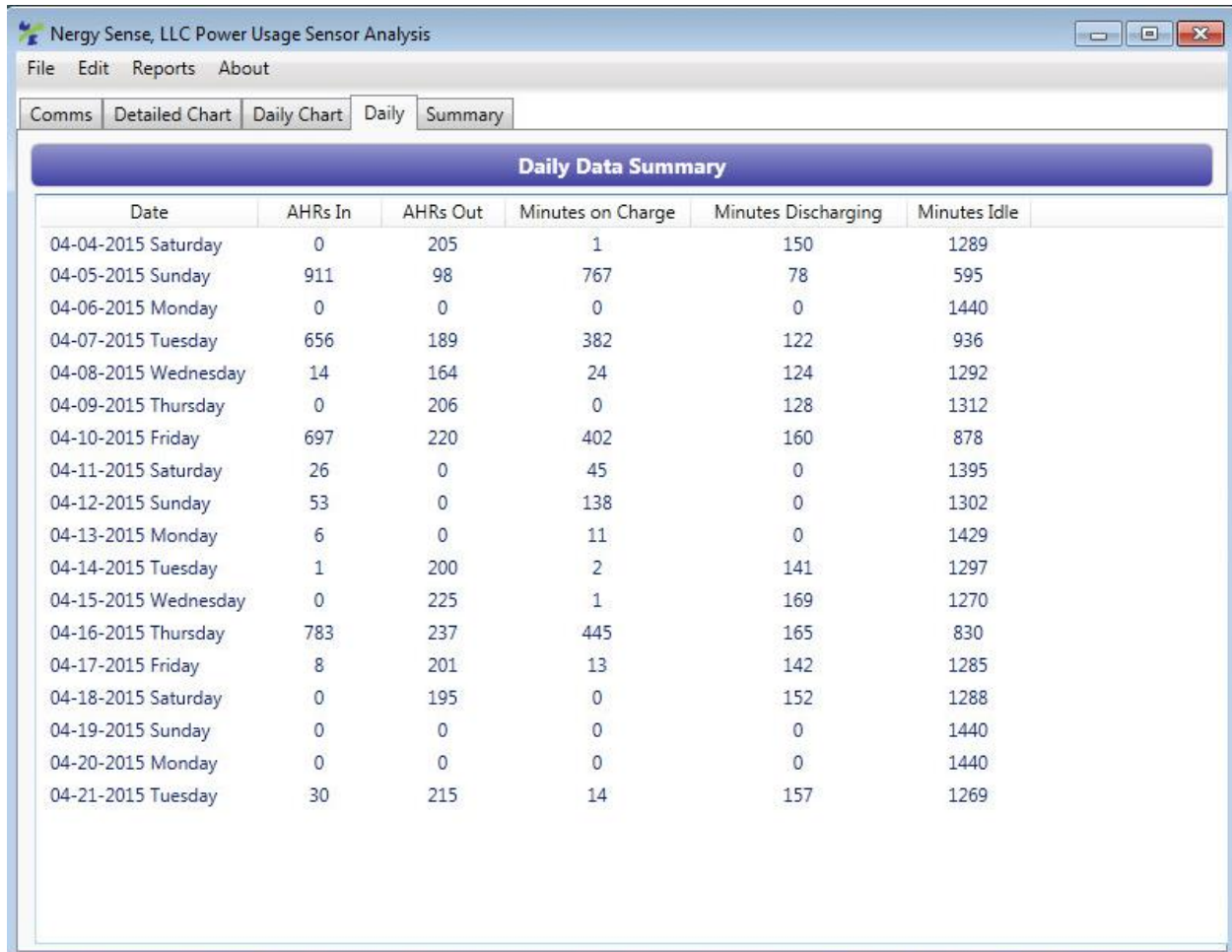
Checkboxes for Voltage, Current and Temperature allow you to see each variable independently or in combination. Arrows allow you to move the graph forward and backwards. Use the checkbox and numeric fields to choose the graph resolution and duration. The Printer icon generates a report containing the currently displayed graph.

Daily Chart displays daily throughput for the entire test period.



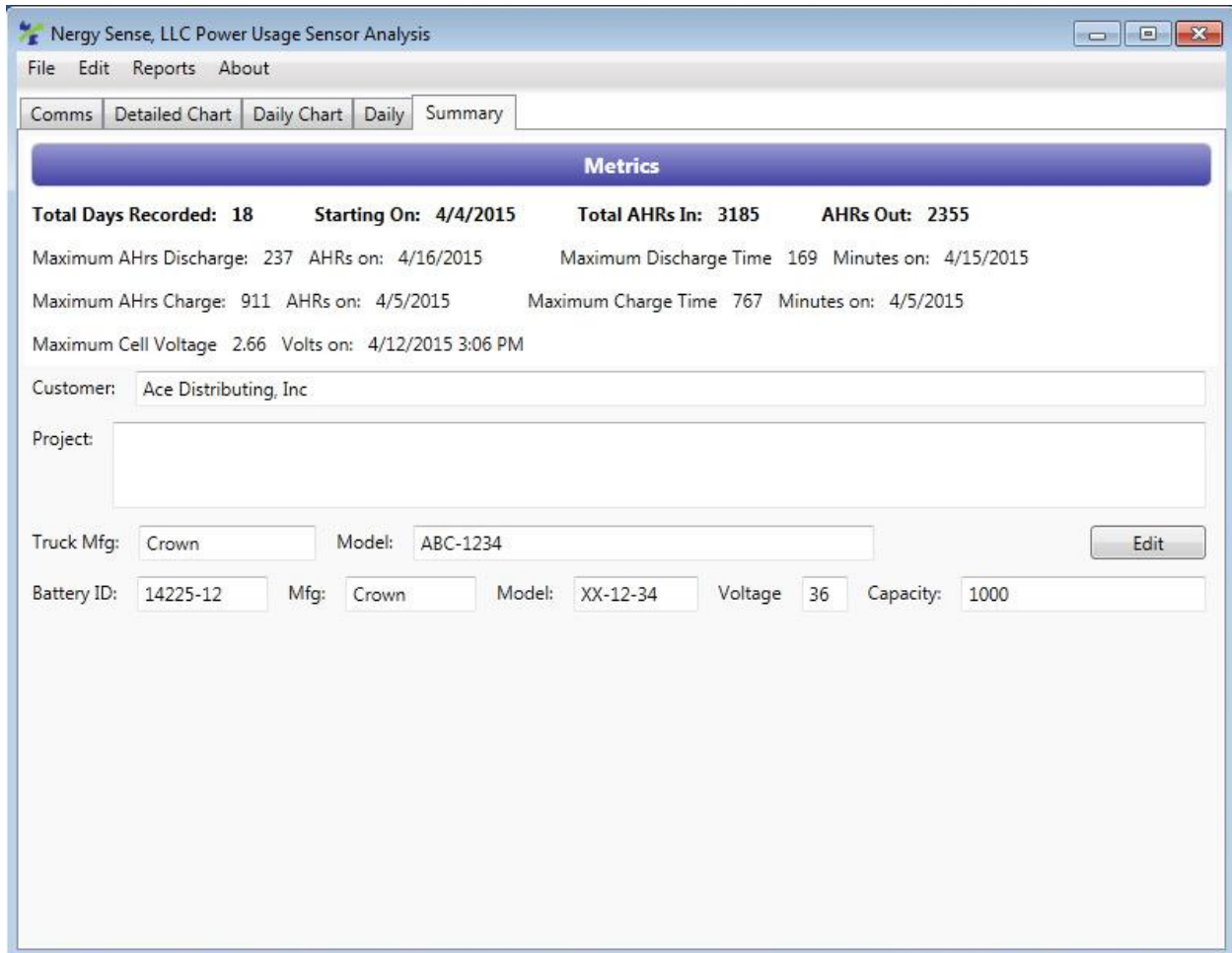
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Daily presents key daily parameters in a tabular format.



Date	AHRs In	AHRs Out	Minutes on Charge	Minutes Discharging	Minutes Idle
04-04-2015 Saturday	0	205	1	150	1289
04-05-2015 Sunday	911	98	767	78	595
04-06-2015 Monday	0	0	0	0	1440
04-07-2015 Tuesday	656	189	382	122	936
04-08-2015 Wednesday	14	164	24	124	1292
04-09-2015 Thursday	0	206	0	128	1312
04-10-2015 Friday	697	220	402	160	878
04-11-2015 Saturday	26	0	45	0	1395
04-12-2015 Sunday	53	0	138	0	1302
04-13-2015 Monday	6	0	11	0	1429
04-14-2015 Tuesday	1	200	2	141	1297
04-15-2015 Wednesday	0	225	1	169	1270
04-16-2015 Thursday	783	237	445	165	830
04-17-2015 Friday	8	201	13	142	1285
04-18-2015 Saturday	0	195	0	152	1288
04-19-2015 Sunday	0	0	0	0	1440
04-20-2015 Monday	0	0	0	0	1440
04-21-2015 Tuesday	30	215	14	157	1269

Summary reports Project details, and key metrics.



The screenshot shows a software window titled "Nergy Sense, LLC Power Usage Sensor Analysis". The window has a menu bar with "File", "Edit", "Reports", and "About". Below the menu bar is a tabbed interface with tabs for "Comms", "Detailed Chart", "Daily Chart", "Daily", and "Summary". The "Summary" tab is active, displaying a "Metrics" section with the following data:

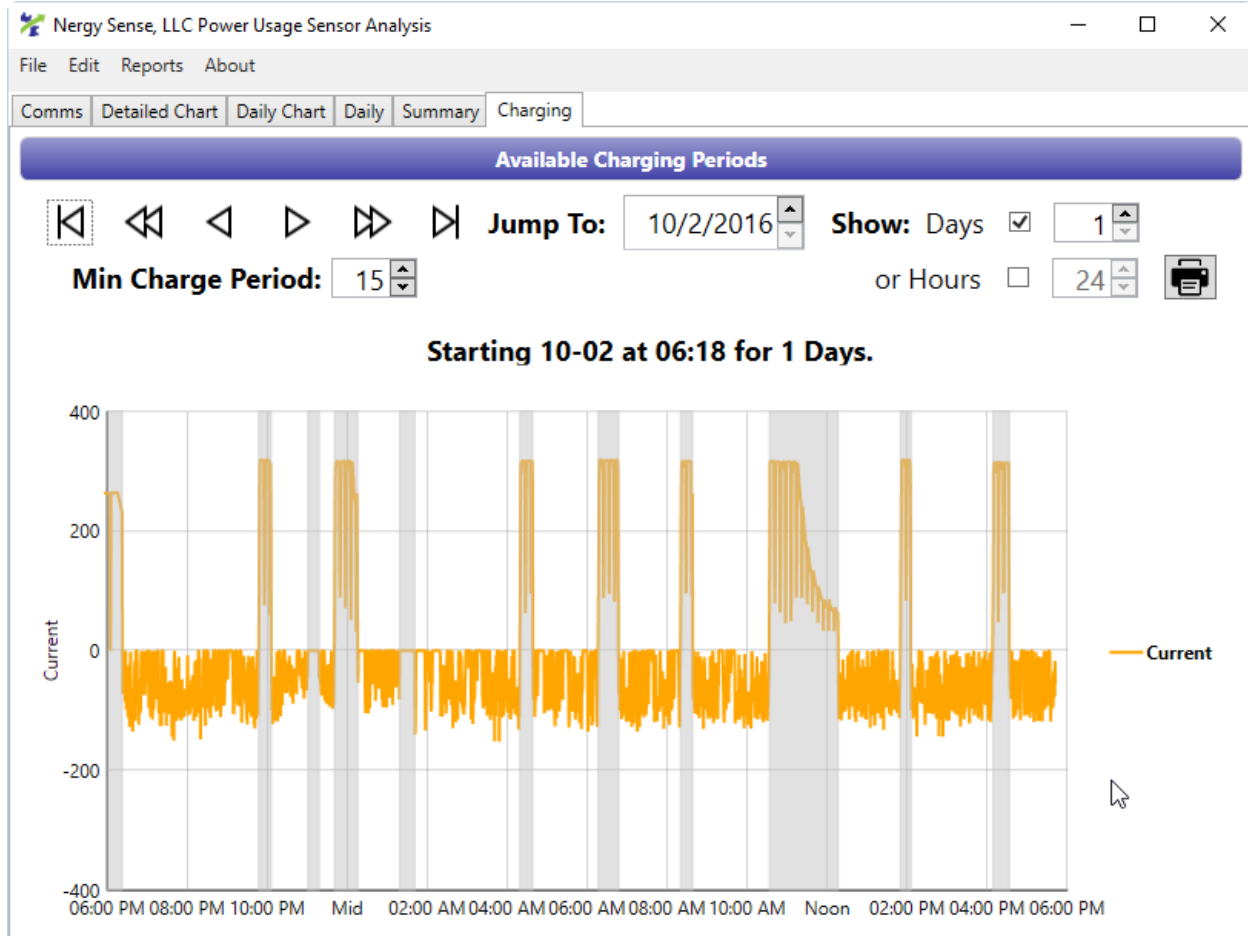
- Total Days Recorded:** 18
- Starting On:** 4/4/2015
- Total AHRs In:** 3185
- AHRs Out:** 2355
- Maximum AHrs Discharge:** 237 AHRs on: 4/16/2015
- Maximum Discharge Time:** 169 Minutes on: 4/15/2015
- Maximum AHrs Charge:** 911 AHRs on: 4/5/2015
- Maximum Charge Time:** 767 Minutes on: 4/5/2015
- Maximum Cell Voltage:** 2.66 Volts on: 4/12/2015 3:06 PM

Below the metrics, there are several input fields for customer and project information:

- Customer:** Ace Distributing, Inc
- Project:** (empty field)
- Truck Mfg:** Crown
- Model:** ABC-1234
- Battery ID:** 14225-12
- Mfg:** Crown
- Model:** XX-12-34
- Voltage:** 36
- Capacity:** 1000

An "Edit" button is located to the right of the "Truck Mfg" and "Model" fields.

Charging shows available charging periods within the collected data.



Use this view to identify contiguous time periods available for charging – useful in evaluating opportunity and fast charge applications. Use the ‘Min Charge Period’ field to set the minimum time to identify as an available segment. Available charge time is displayed as a gray bar on the graph.

Reports may be generated in PDF, Word or Open XML format. Use the Reports menu to choose the report and output format. Reports are being added frequently to the program, so check www.nergysense.com and verify you have the latest software version.

Adjust Project settings using the Edit menu. You can adjust any settings on the project, invert the current display (supports inverted installation of sensor), and add descriptive information used in the reports.

Use Project Start Times in certain cases to add actual times to test data. It is possible to use the sensor and have it collect data without knowing the real time. The dialog allows the actual test date and time to be added.



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The Program Settings dialog is for advanced use, and supports features sometimes used in troubleshooting and other advanced applications.

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