How to Use Go Direct Energy Sensor (Vernier GDX-NRG)

Download software: www.vernier.com/products/software/graphical-analysis/

The software you use to connect to the sensor, called "Graphical Analysis," is found at the link above. You can also find it in the app store on your phone. See the icons to the right – make sure you download the one without the green "GW banner" when downloading from the app store. The software runs almost exactly the same, regardless of device (Windows, macOS, Chrome, iOS, Android).
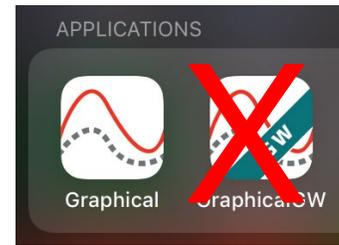
Quick overview on how to use the device:

- Hold down on the power button on front of device for a couple seconds to turn it on (or to turn it off). There will be a light that flashes every couple seconds to let you know it's on.
- Connect the wires from the sensor to the wires from the generator (red to red and black to black).
- On the side of the sensor, make sure the button is on the "internal 30-ohm load" side.
- Once you open the software, it should automatically open to let you connect to the sensor. If not, there's a button in the lower right-hand corner of the window that you can click on to open up the "sensor connection" section.
- The software should automatically change the chart to show two graphs (one for current and one for voltage). We recommend you click on the left-hand axis title of one of the graphs (such as current) and change it to "Energy (J)," as that's how we'll be measuring turbine performance.
- Once the turbine is spinning, click on "Collect" at the top of the window and it will collect data for 30 seconds.
- If you want to do multiple runs and make some adjustments to see what works best, you can click on the left-hand axis title and choose to show "Data Set 1," "Data Set 2," etc. Those can also be renamed. For example, you could change the title of your first run to be "3 blades," the next run to be "4 blades", etc.

NOTE: If Bluetooth keeps disconnecting, make sure the sensor is not still paired to someone else's computer or phone. If you have issues with Bluetooth working, please connect to the sensor using the included USB cable.

KANSAS ENERGY PROGRAM