

## FAQs

### **What is the Tendril Residential Energy Ecosystem?**

This system is the building energy monitor Chugach Electric is using in the Watt Buster research project about energy efficiency. The system consists of the following components:

- Tendril Translate – Receives energy consumption information from your electric meter and communicates it to other devices in your home.
- Tendril Transport – Plugs into your router or modem; can receive and send energy related data, including pricing and energy consumption data, via the internet.
- Tendril Insight – Provides near real-time information on your energy consumption, including your projected billing amount and cost per hour. It also receives messages from Chugach Electric.
- Tendril Vantage Web Portal – The Web Portal is similar to a Web site. Once the Tendril devices are installed and registered, participants can go to the portal for current and historical data about your energy consumption and other information.

### **How long will the research project last?**

The residential monitors will be placed through June. At the end of the project, participants must return their devices to Chugach Electric. At that time, Chugach will begin collecting and analyzing the data.

### **Who do I contact if I have questions?**

If you have questions, feel free to contact Chugach Electric by email at [wattbuster@chugachelectric.com](mailto:wattbuster@chugachelectric.com) or by phone at 563-7494. You can also contact Chugach Electric with questions using the Web form on this site.

Chugach Electric will post questions and answers as well as other information on this site.

### **Does accessing the Vantage portal require a particular Web browser or software?**

Yes, though most people have the required software. Compatible browsers for Mac users are Firefox and Safari (MAC OS X). For Windows, you need Explorer 7.0 or 6.0, or Firefox. You also need Adobe Flash Player 9 or greater.

### **How can I change my password for Vantage?**

You can change your password within the User Profile tab on the Vantage portal.

### **Why doesn't the bill estimate on the Insight display match my actual bill?**

The system estimates your bill based on current energy use. This projection is only approximate and does not include the normal monthly customer charge.

### **Does plugging these devices into my home open a security risk, particularly in that the Tendril Transport is plugged in behind my router's firewall?**

Plugging in the Transport, which provides the communication between the meter and devices in your home and the network operations center, does not pose any additional security risks. Traffic is only initiated via an outbound connection from the Transport to the network operations center and doesn't require inbound ports open on the firewall. Once the connection is established, two-way encrypted communication (1024-bit RSA encryption) between the network operations center, the Transport, the Tendril Insight and Tendril Translate occurs.

**How much energy do the devices use?**

The Insight (with backlight on) consumes 1.8 watts. The Transport and the Tendril Translate each consumes a maximum of 1.2 watts. At an electricity price of \$0.15 kWh, the maximum cost of running these devices monthly would be approximately \$0.20 and \$0.13 respectively.

**What is a Home Area Network?**

When you install and register your devices, you are setting up what amounts to a communications network among your devices, your meter and the Vantage web portal. We call this your Home Area Network, or HAN.

**Will running my Home Area Network (HAN) interfere with my use of the Internet?**

Running the HAN should not interfere with your Internet use. The HAN itself requires very little bandwidth. To access Tendril Vantage, you need a minimum connection of 256 kbps, which isn't an issue if you have the broadband connection required for this release of TREE.

**Will the HAN interfere with 900MHz devices running in my home?**

Because the radios used in the HAN operate in the 2.4 GHz band, the potential for interference is with other devices in the 2.4 GHz band. However, the HAN is designed to establish itself on a channel that is unoccupied by other devices, so instances of interference are rare and unlikely to be noticeable. In particular, 2.4 GHz cordless telephones should be immune to interference from the HAN, and under no circumstances will the HAN interfere with a microwave oven.

**Why doesn't the current consumption data shown on my Insight always match what I see through the Vantage?**

Your Insight is designed to provide you a near real-time view of your energy consumption. It reads directly from the smart meter in your home every 10 seconds. The Transport in your home collects readings and sends information up to the network operations center every 15 minutes. The network operations center is what pushes the data down to the Vantage for display in the various graphs and charts.