

April 22, 2010

2010-04-22: As green as you want to be

Greg St. Martin
Northeastern University

Recommended Citation

St. Martin, Greg, "2010-04-22: As green as you want to be" (2010). *News@Northeastern*. Paper 569. <http://hdl.handle.net/2047/d20001812>

This work is available open access, hosted by Northeastern University.

As green as you want to be



April 22, 2010

Determined to find ways to reduce the world's energy consumption, a group of five **electrical and computer engineering** seniors at Northeastern University have developed a home power-monitoring system that not only tracks how much energy specific devices use, but gives consumers simple ways of making greener decisions, even when they're away from the house.

Marc Neuwirth, Kris Eberle, Hannah Echo, Josh Tappan and Sean McGrath unveiled the project during the College of Engineering's senior capstone presentations in early April. Dubbed Numbers Empower, their system offers consumers a detailed picture of their energy-consumption habits, showing them potential areas where they might cut back.

Wireless radio sensors attached to home electronic devices (televisions, lamps, toasters, fans, and so on) track how much power each device uses. This information is transmitted to a router that collects all the home's power-usage data. An online computer program can convert the data into customizable graphs that show how much power a specific device or the entire house uses during a particular hour, day, week, or year. The project was sponsored by National Grid.

So, if you've ever wondered how much energy your laptop wastes when it's left on all night, Numbers Empower can give you the precise answer.

"That was our main thing—visually showing people exactly where their power is going," says Neuwirth. The computer program also calculates how much each of your devices costs to run, multiplying the kilowatts used by the cost per kilowatt listed in your energy bill.

Numbers Empower lets consumers set up automated schedules for turning their appliances on and off. And an innovative Web-based component allows electronic devices to be controlled remotely. Leave a living-room lamp on by mistake? Use your smartphone to turn it off while you're at the supermarket. Or use your work computer to turn on your home air-conditioning just before you leave the office for the evening.

The engineering students say the Numbers Empower (<http://numbersempower.com/>) idea came from their joint interest in sustainability.

"Our main goal is to reduce demand on the grid and save the consumer money," Eberle says. "More than anything, we want you to be able to look at these graphs and make your own decisions."

For more information, please contact Greg St.Martin at 617-373-5463 or at g.stmartin@neu.edu.

Archives

The following news stories and features are available. For information about older content, please contact University Communications and Public Relations at (617) 373-5471.

2010

January
February
March
April
May
June
July
August
September
October
November
December

Share



Like

Sign Up to see what your friends like.