



FACT SHEET

## New Technologies Advance Consumer Control

### New Technologies for the Home

Turning off appliances via the Internet. Using at-home power storage systems. Controlling lighting without using switches. All of these options are possible for homeowners due to new energy management devices already available in home improvement and entertainment retailers, like Lowe's and Best Buy.

Technology exists today, and more is on the horizon, that finally gives homeowners control over their energy use — reducing expenses, increasing energy efficiency and protecting the environment.

### Energy Management Tools for the Home — Available Now

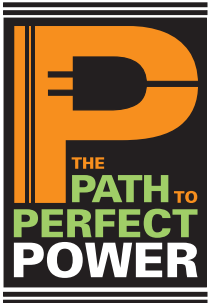
#### Programmable Thermostats

Only a third of households have at least one programmable thermostat, even though some of these are available for retail prices as low as \$50. Their designs are eye-pleasing and they are easy to install and manage. These thermostats help consumers reduce energy use by automatically adjusting the home's temperature settings according to the consumer's programming, saving energy while they are away or sleeping.

#### Home Energy Control Systems

These energy management systems are an easy, convenient and cheap incremental by-product of other home activities, such as TV viewing, cable-channel surfing, security and home entertainment investments. The interface is not a grey thermostat LED read out, but can be a "10 foot" plasma TV display, a handy remote control, or a slick Web page.

- **AT&T Remote Monitor** offered by AT&T is easy to install and operate, allowing homeowners using a Cingular Wireless cell phone and/or the Internet to remotely monitor their home, turn appliances and lights on and off and receive alerts via email or text message if security sensors are triggered.
- **HomeSettings** offered by Intermatic, a home control system at a low price point, provides effectiveness and ease-of-use that is designed for "non-techie" households. Available at Lowe's, the system includes a number of plug-in and screw-in modules and in-wall devices that can be used around the house. All controls can be set with a master controller and/or a remote control. Also, for about \$10 a month Intermatic offers a Web-based subscription service that allows the home owner to set its home control unit from a Web page (maintained by Intermatic).
- **Life/Ware** offered by Exceptional Innovation is the first full visualization product using Windows Media Center PCs. The Life/Ware software platform can roll in data from various systems into a seamless result and display the result on TV.



- **ICM system** offered by Honeywell ties its APEX security system with its Enviracom programmable thermostat and allows control via an IP Web-based interface. The ICM also is compatible with lighting products offered by Lutron Electronics, a major lighting product company. Such systems can offer enhanced protection. For example, if the security system detects a fire, it sends a message to the HVAC unit to turn off the fans and shut down.
  - **HomeSight**, offered by Motorola and available at Radio Shack, uses Zigbee technology to manage and monitor home energy use.
  - **HIP 100 Intelligent Controller**, offered by Lagotek, is a single integrated platform for HVAC, lighting, video, audio and irrigation, using slick panels and PDA remotes.
  - **BaseCamp Home Automation System**, offered by Bulogics, is a set-top box that allows users to control home energy settings from anywhere in the home through the television set.
  - Control4's **Home Automation System**, which includes wireless light switches and climate control devices, is a comprehensive home energy system using Zigbee technology.
- **Grid Protect** is a reliability and demand response system interfacing with the grid.
  - **Grid Connect** can easily tie to a renewable energy source such as solar panels (up to eight kWp) and can use that power even if the power is out.
- GridPoint units can control between four and eight loads in the home and the owner can choose all the right settings using a Web-interface with 24 hour a day/seven day a week monitoring by the GridPoint network center. The owner can even set up a monthly energy budget and have the unit manage its operations to come as close as possible to the goal through a combination of load shifting, load shedding, battery cycling and power resales.

### Benefits of Using Energy Management Devices in the Home:



- Allows consumers to save electricity and money by better managing their energy load in response to family schedules, weather, and other variables
- Provides better, remote control of lighting, security and other systems when a consumer is away from home
- Allows consumers more control over the operation and maintenance of home appliances and provides notification when it's time to upgrade or replace them
- Enables consumers to participate in demand-response programs sponsored by the local public utility commission

### On-Site Energy Storage Units

Intelligent home energy storage appliances provide increased reliability and power quality, sustainable ride-through even during relatively prolonged multi-hour outages, exchange power (on a net-metered basis) with the grid and act as an energy control system as well.

- GridPoint offers a smart-grid-interactive power storage unit that is part energy management, part reliability back-up and part redistributed energy.

*The Galvin Electricity Initiative, launched by former Motorola chief Robert W. Galvin, is leading a campaign to transform the nation's inefficient, unreliable and insecure electric power system into one that can truly meet consumers' needs in this new century. Galvin's vision for this transformation includes a major technical update of existing systems that allows for consumer control of energy use, as well as the interconnection of smart microgrids and distributed generation systems around the country.*