

En-Touch Powers a Green Community

At a new solar-hybrid master-planned development in Houston, fiber to the home helps residents manage heating, cooling and other home systems.

By Masha Zager ■ *Broadband Properties*

Discovery at Spring Trails, a new Houston-area development, is unique in the United States: the first median-priced, master-planned community where every house will generate at least a kilowatt of solar energy and many will be all-solar; where all 2,000-plus houses will be built, in partnership with General Electric's ecomagination Homebuilder Program, to be 40 to 50 percent more energy-efficient than the average home; and where the fiber-to-the-home network supports a monitoring system that will help residents save even more energy, as well as water.

The developer, Land Tejas Cos., is working with builders to create housing designed with the environment and



Learn more about FTTH and energy conservation at the **Broadband Properties Summit, April 26 – 28 in Dallas.**

laboration is simple because broadband and energy are provided by the same company, En-Touch Systems.

A Houston-based competitive local exchange carrier (CLEC) that has built and operated FTTH networks since 2005 (and other types of broadband networks since 1996) in greenfield housing developments, En-Touch recently added

and reading the smart meters.

FTTH AS A TECHNOLOGY ENABLER

As in the other communities it serves, En-Touch provides triple-play services – including telephone, 50 Mbps high-speed Internet access and television services with more than 40 HDTV channels – as well as security monitoring with 24-hour alarm systems and smoke detection. Homeowners can use cell phones and PCs to monitor systems in their homes, get up-to-the-minute status reports and receive notifications about situations at remote locations.

En-Touch is also a one-stop shop for residents' technical needs, offering computer training, setup of residents' home networks and entertainment systems and, of course, troubleshooting.

What's different at Discovery at Spring Trails is the degree to which the fiber-to-the-home network – based on GEAPON technology from broadband access systems provider Enablence Technologies – supports home automation

All the houses in Discovery at Spring Trails are being designed with the environment and residents' utility bills in mind.

residents' utility bills in mind. Building envelopes are designed to meet Leadership in Energy and Environmental Design (LEED) Platinum standards. A smart metering system will enable residents to save money by moving electric loads to off-peak hours. Even the streetlights and common areas will be partially powered by solar energy.

Integrating broadband technology with a communitywide energy savings program requires close collaboration between the broadband service provider and the energy utility. In this case, col-

a retail electricity subsidiary. In Discovery at Spring Trails, En-Touch offers both communications and energy services, including solar panel installation, selling electricity and helping to manage the solar power systems. A different company, CenterPoint Energy, is responsible for electricity delivery and for installing

About the Author

Masha Zager is the editor of Broadband Properties. You can reach her at masha@broadbandproperties.com.

HOME ENERGY MANAGEMENT SYSTEMS

Home energy management systems (HEMS) may be a novelty today, but experts think the market will take off in the next year or two, making these systems commonplace in five years. Seventeen million HEMS will be shipped in 2014, according to market research firm ABI Research.

"There's a lot of flux in the home energy management systems market," says ABI practice director Sam Lucero. "Companies of many different kinds are trying to enter it, offering four main configurations: stand-alone systems, components of larger home automation systems, managed systems from service providers and those offered by electrical utilities, often as part of their demand/response deployments. Large software companies such as Microsoft and Google are also making a play in this market."

Stand-alone systems are expected to remain the smallest part of the market, and to show the least growth over the five-year period. Systems provided by utilities will form the market's largest segment, accounting for more than half the total system shipments in 2014. Those offered as part of home automation packages and those delivered as managed services by providers such as telcos will occupy the market's middle ground. ABI Research expects this market to start taking off seriously in 2010–2011.

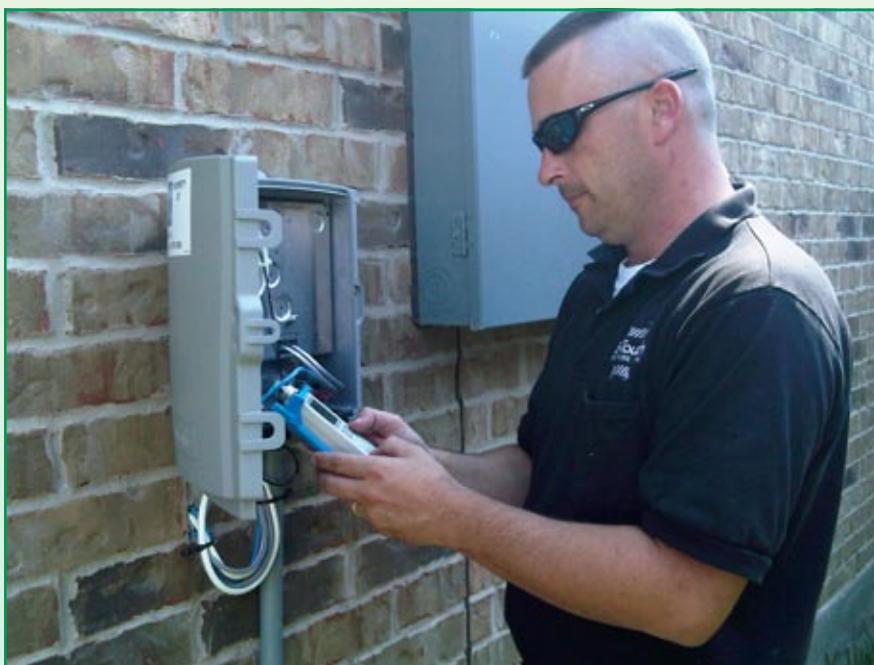
Google and Microsoft, which offer user-interface solutions and application software for some systems, might seem to be unlikely contenders in this area. Indeed, says Lucero, HEMS vendors should not be overly concerned by their entrance into the market: "HEMS are well outside their areas of core competency, and it will take these companies considerable time and effort to catch up with the leading innovators in this space." However, their interest is symptomatic of a wider drive toward smarter energy management as part of the clean tech movement.



and control. The broadband network gives homeowners access to systems that help them understand and manage their use of electricity, water and gas. For example, residents can control thermostats and lighting either from inside the home or remotely (by cell phone or e-mail). They can even see how much energy the solar panels are generating and how much is being taken from the electric grid.

"We see fiber to the home as a huge technology enabler," says Rich Gerste-meier, president and CEO of En-Touch. "We're working to put consumers in a position to be able to reduce total energy use and also increase their use of renewable technologies."

Like the first 1KW solar panel system, the home automation basics are standard with every home, including a dashboard display that gives an overview of all utility usage. "Once you begin to



The model should be replicable at other communities – and En-Touch hopes to replicate it soon.

introduce renewables, the dashboard will be popular,” Gerstemeier says. “Everyone who sees it wants to have it.” Optional equipment includes surveillance cameras, door openers and controllers for stereo systems and lighting. Add-ons are “surprisingly affordable,” according to Gerstemeier, because the wiring standards in the development make adding any device with a Cat 5 connection simple. Internet access to all the systems is also an extra.

The most exciting aspect of Discovery at Spring Trails is that the houses are production homes, not custom-built, and their sizes and prices are close to the median for the Houston area. Gerstemeier says, “We’re trying to validate that it’s a good business model and create a template – a solid plan you can carry somewhere else.” If Discovery at Spring Trails develops as expected, En-Touch will certainly be engaged in bringing the model to other new communities. **BBP**

En-Touch Solar

Today, En-Touch Energy provides solar friendly retail electric plans as well as solar maintenance and support. In the near future, new Energy Management solutions, including remote access to real-time usage information and participation in Demand Response Programs will be available to every resident in Spring Trails.

Demand Response Programs

Residents will then have the ability to be notified of impending periods of high electricity prices or service-affecting events allowing them to ignore, respond manually or automatically with pre-selected options to such events by turning off air conditioners, pool pumps and other electrical appliances for short periods of time.



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