Citizen Engagement for Energy Efficient Communities (CoNNECT)

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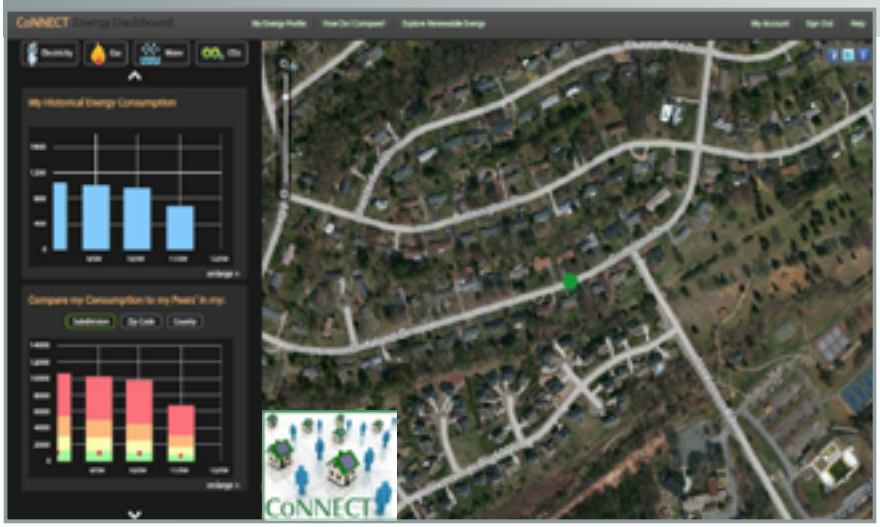

Technology Summary

Promoting energy efficiency is a primary focus for achieving sustainable energy. There have been many programs that target the use of energy efficient technologies. But to increase the likelihood of achieving desired energy savings, citizens need to go beyond one-time improvements that are often not monitored and measured over time. By allowing consumers to easily analyze and share their own energy usage data, an effective and sustainable way of achieving energy efficiency goals can emerge.

Researchers at ORNL have developed a system, Citizen Engagement for Energy Efficient Communities (CoNNECT), which is a community-based computational framework that enables consumers to benchmark their consumption against that of their peers. Taking advantage of energy usage data, including the smart meter data from the utilities as well as property and spatial data from county government offices, CoNNECT provides an improved energy feedback mechanism that informs households in more detail about their consumption pattern so they can achieve better awareness and control, which in turn motivates them to conserve. The web-based feedback application uses GIS- (Geographic Information System) based approaches to identify a consumer's peer group for energy usage comparison. The application provides consumers with possibilities for saving energy through sharing best practices. In addition to the framework, the system includes a depository of energy usage and related data, and data analysis algorithms for comparative visualization and identification of spatial consumption and carbon emission patterns. CoNNECT can also enable users to evaluate future energy technologies, including renewable energies.

Advantages

- Enhances consumer access and understanding of energy consumption data
- Provides computational framework to allow consumers to benchmark themselves against their peers and enhance energy efficiency
- Enables users to evaluate future energy technologies including renewables

Potential Applications

- Utility companies, government agencies, consultants, and energy consumers
- Sustainable energy technology developers and providers

Patent

Patent Pending

Olufemi Omitaomu, *Citizen Engagement for Energy Efficient Communities*, patent application 61/543,830 filed October 6, 2011.

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