

October 2010

# e-Solutions Benchmarking Technical Report



## ***Broadband for Energy Management - Selections from E-Solutions Benchmarking Technical Report for North Carolina***

Prepared for:  
*e-NC Authority*

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# Executive Summary

## A) PURPOSE AND OBJECTIVES

As part of the state-wide North Carolina broadband planning project, e-Solutions Benchmarking (eSB) was conducted by Strategic Networks Group in May 2010. The eSB surveys collected information from businesses, organizations, and households on the availability of broadband (high speed Internet) and the uses, benefits, drivers and barriers for broadband. The eSB results provide insights into gaps and opportunities for increasing broadband utilization by organizations and households.

The eSB is part of e-North Carolina's ongoing data collection and analysis. eSB's unique contribution is the detailed level of information collected directly from consumers, as well as the extension of data collection to businesses and other non-commercial organizations.

This report presents the results of the survey-based research for the State of North Carolina with a focus on key findings that may be considered in forward planning for broadband infrastructure, as well as policies and programs to promote adoption of broadband-enabled applications and uses, which are referred to as e-solutions<sup>1</sup>.

*The Study: Email invitations to participate in the e-Solutions Benchmarking (eSB) were sent to over 74,000 businesses / organizations and 29,000 households across the State of North Carolina. The business/organization deployment also targeted three sectors of specific interest: health organizations, nonprofit organizations, and county/municipal government organizations. Completed eSB survey responses were received from 3,506 businesses and organizations and from 1,182 households. Partial survey completions were received from an additional 2,760 organizations and 310 households, resulting in total usable responses from 6,266 businesses and organizations and 1,492 households.*

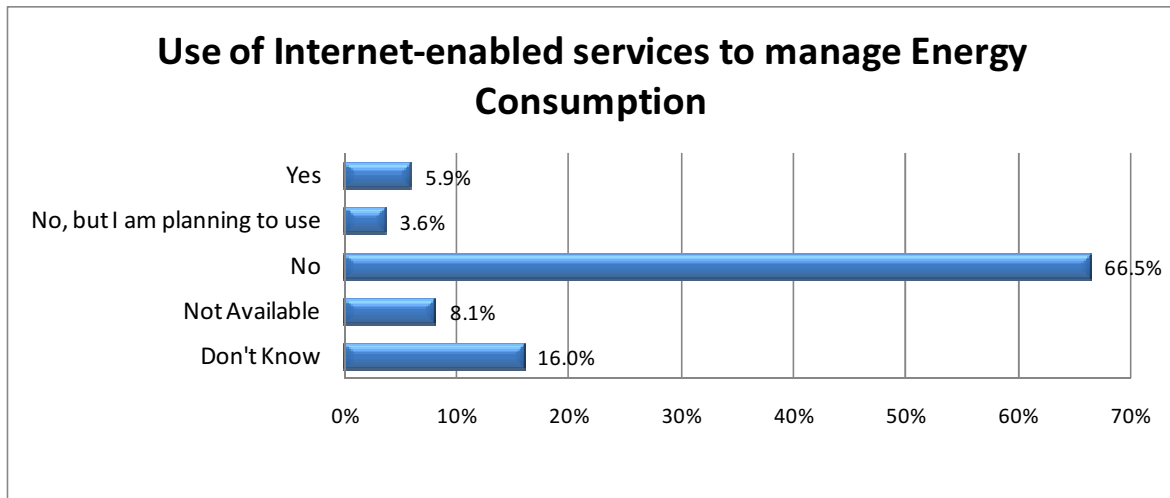
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<sup>1</sup> E-solutions refer to the integration of Internet technologies with the internal computer-based systems and applications within or among organizations for a variety of operational processes. E-solutions encompass not only product delivery and payment transactions (e-commerce) but also all processes that may be facilitated by computer-mediated communications over the Internet.

### 3.3.1.10 Broadband for Energy Management

Broadband communications technology provides new opportunities for control and management of electricity consumption and energy costs. Many power utilities are starting to offer a range of services that utilize broadband technologies for real-time monitoring and control of electricity usage. Organizations were asked about their current use, interests and preferences regarding Internet-enabled services from their power company to manage energy consumption.

**Figure 1 – Use of Internet for Managing Energy Consumption**



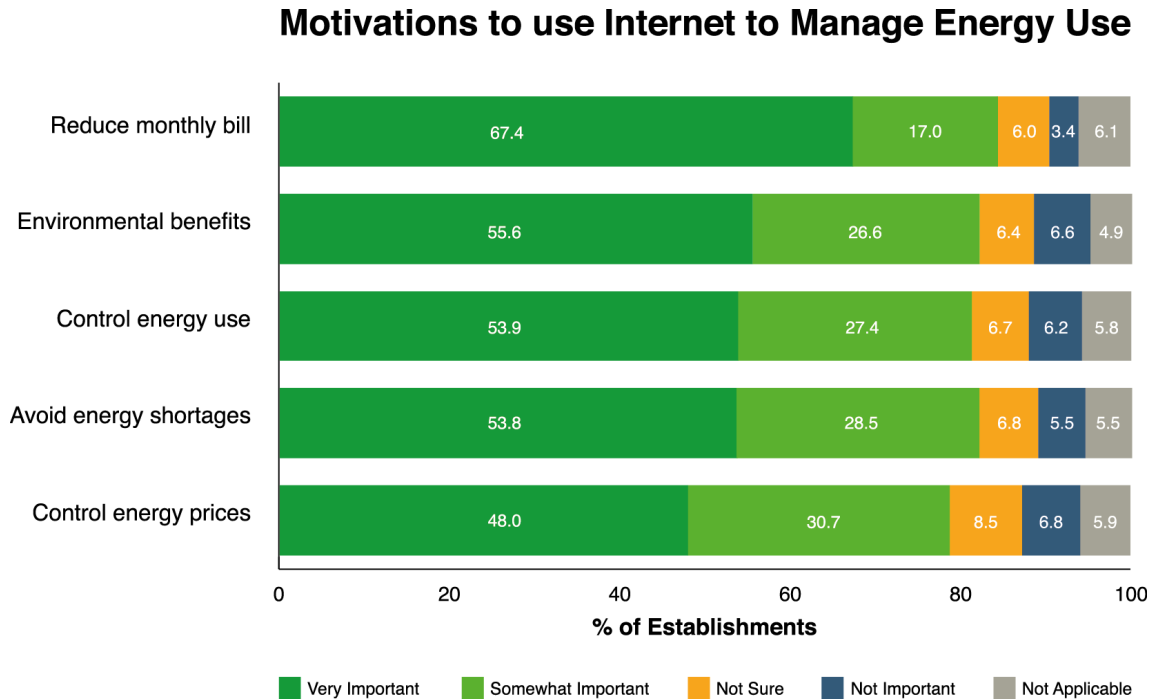
**Two-thirds of organizations are not using Internet-enabled services to manage their energy consumption.**

**Fewer than 10 percent of organizations are using or are planning to use such e-solutions.**

Organizations were also asked what would motivate them to use Internet-enabled services to manage their energy efficiency using the following categories. This is of particular interest since over 90 percent are not yet using such services. Respondents rated each of the following motivations:

- Opportunity to reduce monthly electricity bill
- Ability to control how I use energy
- The environmental benefits
- Help your power company control “pass-along” costs through improved energy management
- Help avoid energy shortages through more efficient energy use

Figure 2 – Motivations to Use the Internet to Manage Energy Use

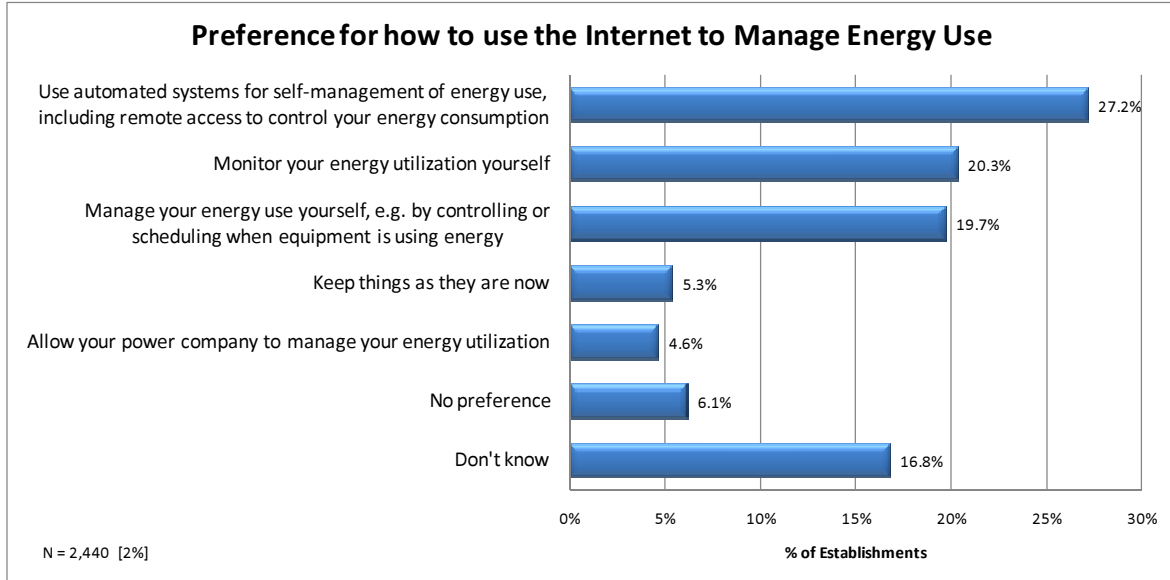


The most important motivation was the opportunity to reduce the monthly electric bill, however all of these motivating factors were considered of high importance by organizations.

**80% of businesses and organizations are motivated to use the Internet to manage energy use.**

Given these motivating factors, organizations were also asked about their preferences for using the Internet to monitor and control energy use.

**Figure 3 – Preferences for Using the Internet to Manage Energy Use**



While 23 percent of organizations did not express a preference or do not know, **the majority of organizations prefer some form of self-management for monitoring or controlling energy use.** Less than 5 percent prefer to allow their power company to use the Internet to manage their energy utilization.

## Concluding Comments

There is a gap between the energy suppliers who are planning smart grids and what the consumers of energy are actually doing to manage their energy efficiency. This is an issue of awareness and utilization where consumers need to understand the opportunities and the benefits so that they will choose their preferred option for better managing their energy consumption.

The findings from the Technical Report provide a solid foundation for evidence-based planning and decision-making. SNG provides a supplementary report (eStrategy) that identifies the planning implications that arise from the findings of the Technical Report. The eStrategy Report sets out some of the options that should be considered in developing broadband policies and strategies. However, these findings and their implications must be filtered through the values and priorities of the region and its communities.

For any questions or further details,  
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