Segment Specific Approaches to DSM Marketing for Commercial, Industrial, and Institutional Sectors

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Introduction

Large business customers are often difficult to profile. Knowing which DSM programs large businesses want and need is a challenge in and of itself. Having an understanding of *their* business and *their* industry trends, issues, and hot buttons provides a more complete picture. Without this information, understanding them well enough to successfully resonate to their efficiency and demand response needs is a real challenge. Yet, few utilities have taken advantage of these types of segmentation in their marketing and program design, and have instead aligned programs by technology.

Energy Service Companies (ESCOs), on the other hand, have explicitly created successful energy efficiency (and demand response) services targeted to business segments. The success rationale for ESCOs is that they only get paid for what they sell, install, and maintain.

To date, most utility market segmentation schemes have been residentially oriented; however rich segment or sector specific information can be used as an effective tool for account managers, field reps and program managers to increase penetration to the commercial, industrial and institutional sectors, and can even be used by the customers themselves in benchmarking.

There are mounting pressures on utilities and account managers to increase the penetration and success of DSM programs. Having simple tools for Account Managers and others that, based on business sector or SIC, lists issues, key messages, and hot buttons for Account Managers to probe and then recommend SIC-specific integrated and comprehensive packages of DSM for easy one-stop shopping. The DSM "packages" can be created from the standpoint of the customer's business needs and the key messages to discuss (e.g. providing safety or comfort instead of lighting efficiency and conservation), rather than the technology or merely lowering energy costs. An Account Manager or program manager that is sensitized to customer issues can benefit by shifting away from passively responding to customer questions to proactively offering customer-centric products and services.

This paper will leverage several components. First, the E SOURCE annual surveys of Corporate Energy Manager members, which we have done for the past 11 years. These energy managers, representing dozens of Fortune 500 companies, provide us with important qualitative insights into the thinking of some of the most sophisticated customers in the energy marketplace. Second, E SOURCE has conducted segment-based market research for about 30 key commercial, industrial, and institutional sectors and sector snapshots were developed. Each snapshot includes a general sector overview; essential data on geographic distribution, energy consumption and expenditures; industry trends; the best opportunities for saving energy; tips for how energy service providers can reach and serve the sector; and references for other resources. A library such as this gives account managers, strategic planners, and marketing staff a sharper picture of a particular business or industry sector. They become more informed and sensitized to

DSM opportunities for each of these business sectors. Lastly, I will highlight available market segment information sources including third party [secondary] market research on business demographics, business and industrial sector data and provide a more comprehensive picture of the landscape.

Who, Where, When, What, and Why

These are the natural questions when using segmentation approaches to design programs or target customers. The "who" and "where" are straight-forward business demographic questions that can be answered using off-the-shelf business information tools such as Dun & Bradstreet (D&B), Claritas, InfoUSA, Hoovers, US Department of Commerce, US Department of Labor, or even a utilities own customer master file. The "who" and "where" can be used for market segment sizing, as well as target marketing and sales. It should be noted that utility customer master files are limited in that they only include individually metered facilities (and some of these unmanned points like pumping stations, billboards, outdoor lighting, cell towers, switching stations, etc.). They therefore *exclude* about 30% of the potential "customers" for DSM or other products or services. For example, a single master-metered office building can include dozens, or possibly hundreds, of potential targets that utilities overlook. Granted that some tenants are not decision makers in major building improvements, but can and do influence things like lighting, and depending on the lease, any energy savings may or may not be seen by the tenant.

The "when", "what", and "why" require more sophisticated market research approaches. It is important to understand the customer's business and/or segment, energy profile, and operations in order to effectively design programs, and for marketing and sales. This segment information includes things like:

- Business sector facts regarding energy such as spending on energy, energy share of operating costs, number of facilities, average cost per facility and per sq ft, energy end uses, energy intensities, and typical load shape(s).
- Industry sector demographics, energy consumption, expenditures, and end uses
- Industry issues, hot buttons and trends and market conditions: competitive landscape; products, operations and technology; financial issues; regulation; regional and international issues; labor and human resources; business challenges
- Best bet opportunities for saving energy, energy technologies or products/services they might be interested in,
- How to best reach and serve the sector including strategies, what publications they read, associations they belong to, strategic partners, etc.
- Decision-makers and how decisions are made (central vs. local; CFO vs. Energy Manager vs. Facility/Property Manager, etc.)
- Major players in the sector such as influential owners; movers and shakers; and the key chains

Needs-Based Segmentation

The "why" is particularly important: why do they need it, why do they care, and why do they buy. Customers don't typically seek out a utility program or technology without a set of business needs and it isn't what you would think. The "whys" can be used to develop needs or

value-based segmentation. The list below is a summary of the key general business needs or issues to avoid or resolve for an energy related product/service. A need or value list can be created for specific business sectors, for specific technologies (e.g. HVAC or lighting), and for specific customer decision-makers or influencers (e.g. CFO, facility or energy manager, maintenance engineer). See the tables below which were broken into Commercial & Institutional and Industrial.

For each need, you can cross-tabulate all the business segments where that is of high importance and design your program around a bundle of offerings and technologies that addresses that need. Or vice versa, you can target all the business segments where that need is high for a particular technology-based program. For example, the first need on the list below – appearance – happens to be key for retail, grocery, restaurants and lighting is a major target technology. In this example, the product has to look good, show the right color, be easy to see, catch your eye, make you feel good, make you hungry, etc., etc.

Needs/Issues/Values	Commercial & Institutional												
	Casinos	Colleges and Universities	Data Centers	Government Buildings	Healthcare	Hotels and Motels	K-12 Schools	Office Buildings	Restaurants	Retail	Sports and Recreation Facilities	Supermarkets and Grocery Stores	Warehouses
Appearance (color, light levels, accent, etc.)	xx	x		x	xxx	xx	xx	xx	xx	xxx	x	xxx	
Comfort (space conditioning)	xx	xx	xxx	xx	xxx	xxx	xx	xxx	xxx	xx	xx	x	xx
Community and employee benefits (good corporate citizen)		xxx		xx	xx		xx	x		x	x	x	
Decreased Downtime	xx	x	xxx		xx	x	x	x	x	xx	xx	xxx	x
Decreased hassle and/or inconvenience	x	x					x	x	xx	x	x	x	x
Decreased operating costs (energy, maintenance)	x	xxx	xx	xxx	xx	x	xxx	xx	x	xx	xxx	xxx	xx
External environmental issues (e.g. Green House Gas emissions)		xx		x	xx		x			x		x	
Financing needs (lower cost, easy access to, off-the-books financing)		xx		xx	xx	x	xx	xx	xx	x	xx		xx
Increased revenues or benefits (productivity, performance, competitive advantage)	x		x	x	x	xx	x	xx	xx	xxx	xx	xx	x
Internal environmental issues (indoor air quality, mold, odors, pollutants)	xx	xx	xx	xxx	xxx	xxx	xxx	xx	xx	xx	xx	x	
Liability mitigation (health, safety, OSHA, EPA)	x	x	x	xx	xx	x	xx	xx	x	x	xx	xx	xxx
Lost revenues (e.g. equipment breakdown, opportunity cost)	xx		xxx		x	xx	xx	x	xxx	xxx	x	xxx	
Lower first cost (e.g. from rebates)		xx		xx	x	x	xx	x	x	xx	xx	x	x
New equipment that needs to be replaced		x		x	x		x		x			x	
Public Relations (Green image)		xx		x	xx	x	xx	x		x	x	x	
Reduced maintenance cost and hassle	x	xx	x	xx	xx	xx	xx	xx	xx	x	xx	xx	xx
Reliability (e.g. backup generator)	xxx	xx	xxx	x	xxx	xx	x	xx		xx		xxx	xx
Risk mitigation (e.g. dual fuel)	x	x	x	x	xx	x	x	x				x	
Safety (employees and customers)	xx	xx		xx	xx	xx	xx	xx	x	xx	x	xx	x
Security (employees and customers)	xx	xx	xx	xxx	xx	xx	xx	xx	x	xx	x	xx	x

Needs/Issues/Values	Industrial																
	Apparel	Chemical Products	Commercial Printing	Concrete Products	Electronics	Fabricated Metal Products	Food Products and Beverages	Glass Products	Industrial Machinery	Medical Instruments and Supplies	Motor Vehicles	Municipal Water and Wastewater Treatment	Paper Manufacturing	Plastic and Rubber Products Manufacturing	Primary Metals Manufacturing	Research and Development	Wood Products Manufacturing
Appearance (color, light levels, accent, etc.)	xxx		xxx		xxx	x	xx	x	x	xx	x			x		xxx	
Comfort (space conditioning)	x		xx		x		xx	x		xx	x					xxx	
Community and employee benefits (good corporate citizen)		xx			x						x		x	x	x	x	
Decreased Downtime	xx	xx	xxx	xx	xxx	xxx	xx	xx	xx	xx	xx	xxx	xxx	xxx	xxx	x	xx
Decreased hassle and/or inconvenience		x														x	
Decreased operating costs (energy, maintenance)	xxx	xxx	xx	xxx	xx	xx	xx	xxx	xxx	xxx	xxx	xx	xxx	xx	xxx	x	xxx
External environmental issues (e.g. Green House Gas emissions)		xx		xxx	xx	xx	xx	x	x		xx	xx	xx	xx	xx	x	x
Financing needs (lower cost, easy access to, off-the-books financing)	x		x	x				x	x			x	x		x		x
Increased revenues or benefits (productivity, performance, competitive advantage)	x	xx	x	xx	xx	xx	xx	xx	xx	x	xx		x	xx	xx		x
Internal environmental issues (indoor air quality, mold, odors, pollutants)		xxx	xx		xx		xx			xxx	xx			x		xxx	
Liability mitigation (health, safety, OSHA, EPA)	xx	xxx	xx	xxx	xx	xxx	xx	xx	xx	xx	xxx	xxx	xx	xxx	xxx	xxx	xx
Lost revenues (e.g. equipment breakdown, opportunity cost)	x	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx		xx	xx	xx	xxx	xx
Lower first cost (e.g. from rebates)	x		x				x					xx	x		x		x
New equipment that needs to be replaced		x	x		x			x			x						x
Public Relations (Green image)		xx		x	x		xx	x	x		x	x	x	x	x	x	x
Reduced maintenance cost and hassle	xx	xx	xx	xx	xx	xx	xx	x	x	xx	xx	xx	xx	xx	xx	xx	xx
Reliability (e.g. backup generator)	x	xx	x	x	xxx	xx	xxx	xxx	xx	xx	xx	xxx	xx	xxx	xxx	xx	x
Risk mitigation (e.g. dual fuel)		xx		xx	xx	xxx	xx	x		xx	x		xx	xxx	xxx	x	x
Safety (employees and customers)	x	xx	x	x	x	xx	x	x	x	x	xx	xx	xx	xx	xx	xx	xx
Security (employees and customers)		x			x		x			x	x					xxx	

An Example of a Segment Profile: Data Centers

We take data manipulation, storage, and retrieval for granted, yet even the most mundane modern business or personal transaction often depends on accurate, timely, reliable data streams. When Intel launched its web site in 1994, the site was housed on a single personal computer located under an employee's desk. Today, data processing and communications companies use hundreds of servers to accommodate constantly growing data streams. These companies often locate their Internet servers, data storage devices, and other high density electronic loads at secure facilities specifically designed and operated to serve the needs of such equipment. High-quality, ultra-reliable power is critical to these installations, which in many ways are more similar to industrial than to commercial buildings.[1] As the need for data centers grows, and the power densities (and attendant cooling requirements) of modern computer equipment increase, utilities and other energy service providers (ESPs) will have to hustle to keep up.

Data Center Fast Facts
- Although power quality and reliability are critical attributes of data centers, energy efficiency is rising in importance for many data center developers, especially in areas where electricity costs are high.
- The power densities of 19 data centers in the U.S. increased by an average of 39 percent from 1999 to 2005.[2] Based on new server technologies, the potential exists for significant increases in data center power densities in the next several years, but we suggest that utilities question any projections of dramatic overall load increases from data centers in their service territories.
- Several utilities have found successful strategies to prevent overbuilding of capacity to serve data centers while also meeting customers' needs.
- The variation in energy consumption among HVAC systems in similar-sized data centers can be as much as fivefold.[3]
- Digital information storage, processing, and channeling facilities go by many names, including data centers, co-location facilities, server farms, Internet hotels, managed web-hosting facilities, and fiber nodes. A data center houses the electronic equipment required to manage data and the support infrastructure that keeps that equipment operational.
- The power densities of data centers can be 30 times or more the power density of a typical commercial building.
- The air conditioning system is critical to a data center because servers and routers produce so much heat that they would melt if they weren't actively cooled.

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[1] Doug Nordham, Rachel Reiss, and Jay Stein, "Delivering Energy Services to Internet Hotels and Other High-Density Electronic Loads, Part I: Structure of the HiDEL Industry," E SOURCE Multi-Client Study (May 2001), pp. 1, 19.

[2] Kenneth G. Brill, Executive Director, The Uptime Institute, White Paper, "2005–2010 Heat Density Trends in Data Processing, Computer Systems, and Telecommunications Equipment: Perspectives, Implications, and the Current Reality in Many Data Centers" (2006), www.uptimeinstitute.com (accessed June 26, 2006).

[3] William Tschudi, Evan Mills, and Steve Greenberg, Lawrence Berkeley National Laboratory, and Peter Rumsey, Rumsey Engineers, "Measuring and Managing Energy Use in Data Centers," HPAC Engineering (March 2006), http://hightech.lbl.gov/DCTraining/reading-room.html (accessed June 6, 2006), p. 46.

Keeping temperatures within an acceptable range improves the reliability of the facility.

- Data centers go where there is infrastructure to support them. Some are located in large or medium metropolitan areas close to high-speed fiber-optic networks, Internet backbone fiber nodes, and business centers and financial districts. The dot-com bust left unused infrastructure and excess power capacity in many areas of the country, but most of that infrastructure and capacity has now been absorbed through recent load growth in data centers and other sectors.
- Electricity costs—both short- and long term- are an issue for developers and some locate data centers near water, both for cheap hydro power and for cooling. Google's impressive facility in The Dalles, Oregon, was probably sited there because of cheap electricity, dot-com infrastructure, and water.

Survey of Corporate Energy Managers

What do large customers want and need? For 11 years E SOURCE has surveyed dozens of corporate energy managers from some of the largest and most-influential organizations in the energy marketplace. Their responses to our surveys provide useful advice for key account managers, utility marketers, and others who seek insights into the minds of their largest customers. E SOURCE helps to identify the tools they prefer to use, the products and services they are most interested in, and the ways they prefer to structure their business relationships. The input from these elite energy managers also offers early warnings about coming market trends.

The spring 2006 survey revealed that a majority of firms are setting business strategies around climate-change issues. Nearly half of our survey respondents expressed interest in receiving assistance to develop a plan for managing their emissions. In addition, we tracked the slowly growing popularity of physical and financial hedging as a means for controlling price volatility and found that 9 out of 10 companies claim to be participating in utility-sponsored energy-efficiency programs.

In a new section added to the survey this year, we also compared the perceptions of corporate energy managers to those of key account managers (KAMs) regarding the importance of skills deemed necessary for KAMs to perform well in their jobs. Notable distinctions emerged regarding the importance of understanding wholesale market trends and having the ability to help large customers with sophisticated energy procurement.

Respondent Profile

The survey sample typically represents a who's who of major corporations. On average, the companies in this year's survey had facilities in 22 states. Seventeen percent had facilities in only one state, whereas 20 percent had facilities in 40 states or more. The actual number of facilities ranged from 2 to 8,400, with an average of 22 facilities per company. Thirty-four percent of the firms surveyed had 500 or more facilities. The annual "energy spend" among our survey respondents ranged from less than $5 million to more than $300 million, averaging $148 million per year. Half of our survey respondents spend more than $95 million per year. The total square footage of their facilities ranged from 150,000 square feet (ft^2) to 300 million ft^2, for an average of 36 million ft^2. Eighteen percent of respondents were managing energy for less than 5

million ft^2, whereas 21 percent oversaw between 50 and 100 million ft^2, and 5 percent of survey respondents were responsible for energy use in facilities totaling more than 100 million ft^2.

Energy Management Strategy & Goals

Thirty percent of this year's survey respondents scored the strategic importance of energy management as a 9 or a 10 on a 10-point scale, where 10 was "very important," and an additional 50 percent ranked it as a 7 or 8. In a parallel survey question, 82 percent of the energy managers we surveyed reported that their companies' senior managers were paying more attention to energy management and procurement than in years past. When we asked these elite energy managers if their companies had set specific goals for reducing energy use or costs, 73 percent said their companies had such goals. This was virtually the same percentage as last year (75 percent). When we asked about specifics for those goals, their answers were as diverse as their respondent profiles, and the metrics they used directly reflected the types of businesses they represented. For instance, some companies had goals such as a 10 percent absolute reduction by 2008 compared to a 2001 baseline. Others communicated their goals in terms of a percentage reduction per unit of product, such as a 20 percent reduction per unit of product by 2010. Still others looked toward cumulative savings such as "50 megawatts of energy-efficiency improvements with resulting reduction in energy use in the next 10 years." Overall, their goals ranged, on average, from 3 to 15 percent in annual efficiency improvements.
In response to energy price volatility, energy managers say they are actively pursuing a variety of strategies to reduce risk and manage costs. Seventy-eight percent were making energy-efficiency improvements. Another 12 percent were considering doing so, largely because such investments would ultimately help the bottom line. About 77 percent were turning to long-term energy contracts, some commenting on preferring budget certainties over the potential for savings should prices drop. Physical and financial hedging was also quite popular, with 68 and 74 percent of respondents, respectively, indicating they had adopted such a strategy or were considering doing so. Although 91 percent of respondents told us they had at least one staff member dedicated to the task of energy procurement, fewer felt comfortable implementing a procurement strategy on their own. More than 30 percent said they had sought or were actively seeking assistance with energy procurement. Fuel-switching grew in popularity this year, with 62 percent of energy managers either using or considering this strategy. Around 60 percent are using or considering price-responsive load-management options. When we asked what energy managers considered to be their greatest opportunities for controlling energy costs, we received the following write-in responses: employee awareness and behavior changes, improved access to energy information (consumption, billing), expanded rate and tariff analysis, capital-oriented energy-efficiency projects, preventive maintenance, operational improvements, energy-efficient design standards, recommissioning, more accurate budget projections, on-site generation, sound procurement strategies, and taking advantage of rebates.

Greenhouse Gas Emissions and Green Energy

Half of the companies we surveyed had conducted a greenhouse gas emissions inventory, and another 11 percent had plans to do so. Forty-one percent had official corporate emissions reduction goals, and another 25 percent said they had plans to set such goals in the near future. In answer to a new question, 57 percent of companies indicated they had or were developing business strategies around climate-change issues. In a new question, we asked respondents whether they were interested in receiving assistance from their utilities to develop a plan to

manage emissions. A surprising 46 percent of energy managers scored their interest between 7 and 10 on our 10-point scale. Although we caution our members not to extrapolate too broadly from this finding, you may begin hearing questions from some of your customers regarding these issues. Many of the firms in our survey are actively addressing carbon risks, but bear in mind that we're polling some of the most sophisticated firms in the energy marketplace. It would be incorrect to generalize these findings to the market at large. That said, these U.S. companies are building business cases around climate-change issues not because it's trendy or a moral imperative, but because they perceive that doing so will reduce risk, make them more competitive, and add to their bottom lines. Many of these firms have been dealing with greenhouse gas emissions for years, but press coverage about climate change is increasing. As political pressure raises awareness of this important geopolitical issue, we anticipate that carbon-mitigation strategies will move beyond the confines of these forward-thinking companies and begin to affect the larger marketplace. One-third of this year's survey respondents said they were currently purchasing green energy, and another 7 percent had plans to begin doing so. Among firms purchasing green energy, the percentage of "green" relative to total energy consumption ranged from 1 to 100 percent. But even among the firms in the less than 5 percent category, their annual spending on green energy amounted to millions or tens or millions of dollars. Though we do not name the companies we surveyed directly, several of them were ranked in the U.S. Environmental Protection Agency's Top 25 Green Power Partners.

As we found last year, the overwhelming majority of firms that were purchasing green energy also said they had a corporate plan to reduce greenhouse gas emissions or planned to implement one in the near future. Yet even among the elite energy managers that we survey, the importance they place on the purchase of green energy varied significantly. At one end of the spectrum are firms that consider carbon reduction to be an essential part of their corporate risk mitigation strategy. At the other end of the spectrum are companies that consider low-cost energy to be the dominant driver in their business decisions. In between are companies that buy green energy primarily for the positive boost to public relations they gain for doing so.

Energy Efficiency and Demand Side Management

When we asked how committed companies were to implementing cost effective efficiency measures, more than two-thirds of respondents rated that question a 9 or a 10 on our 10-point scale (where 10 means "very committed"). Clearly, they want opportunities to enhance efficiency and reduce demand, as might be expected from large organizations that consider energy efficiency to be an important part of their risk mitigation strategy. But we expect this trend to extend to mid-market accounts in the year to come, with more companies aggressively looking for cost-effective energy-conservation measures to offset rising energy costs. But that's only half the story. A number of the energy managers we spoke with said it wasn't a lack of interest that stymied their efforts but rather internal competition for capital and personnel. As corporate energy budgets grow to meet rising energy costs, many firms are setting caps on energy budgets even though DSM spending could help reduce overall energy expenses. "It's a catch-22," said one roundtable participant. "When gas was $2 it was less than 1 percent of our product cost, no one was all that interested in increasing efficiency. With gas close to all-time highs, our energy spend is so high the CFO won't let us go beyond the 30 percent increase we've already had." This is why so many of our survey respondents are looking for rebates, incentive credits, free energy audits, tariff reviews, on-bill financing for energy efficiency projects, and other types of financial assistance. Utilities might see a higher response to their energy-

efficiency programs -and potentially greater energy and demand savings - if they target their programs to more closely fit the needs of these customers.

Anticipating the energy managers' calls for financial assistance, we included a new survey question to determine how many companies were actively taking advantage of existing utility energy-efficiency programs. Thirty-six percent of respondents told us that they participate in almost all such programs, and more than half (55 percent) said they take advantage of at least some programs. When we asked why they didn't participate in more utility-sponsored efficiency programs, respondents' reasons varied from a lack of knowledge about what's available to poor timing, complaints about paperwork, and a lack of programs aimed at their biggest needs, such as motor efficiency and refrigeration improvements or recommissioning. The big message here is that 91 percent of the large customers we surveyed take advantage of some - if not all - energy-efficiency programs. This is good news for utilities, in that it demonstrates the acceptance and awareness of the energy-efficiency programs they sponsor as fundamental aspects of the relationship between a utility and its largest customers. It also demonstrates the willingness of energy managers to act on their stated beliefs about the importance of energy management and their intentions to reduce costs through utility programs and partnerships.

Top Energy Services

For the fifth year in a row, the average score given by energy managers for their satisfaction with non-commodity energy services came in at 6.7. Their satisfaction with commodity services was slightly higher this year, with an average score of 7.4. In interviews with our member utility companies, we've learned that satisfaction scores given on surveys that utilities deliver directly to their local clients tend to be more laudatory and more strongly influenced by the personal interactions between key account managers (KAMs) and local facility managers. In our survey, which takes a national outlook, personal relationships have less influence, which we believe is reflected in these scores. We think that corporate-level energy managers may be less enchanted with the non-commodity services available to them because utilities tend to be focused on local or regional customers. That is, a local utility provides services to businesses within its territory largely without considering whether a given firm has facilities in other territories or other states. A perfect example of this was noted by a participant at this year's Energy Managers' Roundtable, who lamented, "My local utility doesn't provide energy usage data in a way that can be rolled up to a national level." In the past five years, despite lost momentum for deregulation, we've seen a significant trend toward the centralization of energy procurement strategies at the corporate level. The factors behind that trend include increased energy market volatility, rising energy prices, and more commodity providers going directly to corporate headquarters with pricing options and contracts. And when these interactions take place on the corporate level, they are designed to meet the needs of the corporate energy manager rather than a local facility manager, which results in slightly higher levels of satisfaction.

2006	2005	2004	2003
Prescriptive rebate programs for energy efficiency[*]	Benchmarking energy performance	Benchmarking energy performance	Energy auditing and technical assistance on energy-efficiency measures
Energy auditing and technical assistance on energy-efficiency measures	Load profile analysis and exception reporting	Commissioning and recommissioning energy equipment and systems	Benchmarking energy performance
Commissioning and recommissioning energy equipment and systems	Commissioning and recommissioning energy equipment and systems	Energy auditing and technical assistance on energy-efficiency measures	Submetering
Benchmarking energy performance	Submetering	Rate analysis	Load profile analysis and exception reporting
Load profiles available over the Internet	Energy auditing and technical assistance on energy-efficiency measures	Load profiles made available over the Internet	Remote monitoring and control
Submetering	Utility accounting services (database and benchmarking)	Load profile analysis and exception reporting	Commissioning and recommissioning energy equipment and systems

We always ask energy managers about the energy services they're most interested in. This year we added several new items to the list, and prescriptive rebates for energy efficiency immediately rose to the top. That's not surprising, given the persistent demand for rebate assistance throughout the survey responses. E SOURCE suggests that utilities might want to consider new, innovative models for rebate programs, such as a bidding system in which companies can bid for financial assistance and program managers can allocate resources based not only upon the merits of the project, but also on the percentage of assistance requested. For example, if two companies bid for lighting rebates, you might fully fund the firm requesting 40 percent assistance and distribute the remaining funds to another company that requested 60 percent assistance. Or you may charge for part of the cost (50 to 100 percent) of an energy audit and then offer that amount as a rebate for companies willing to implement the suggestions. As in the past four years, energy audits and commissioning/recommissioning of energy equipment and systems placed among the top six energy services. We've often repeated the mantra of our corporate energy managers: measure, monitor, target, and act. These basic actions comprise the primary focus of their DSM efforts. Though these elite energy managers may concede that utilities can't tame volatile markets or cap rising prices, they do expect utilities to give them tools that will help them gain better control over their energy usage. They're also looking for people and businesses willing to partner with them to accomplish that. As a Key Account Manager at BC Hydro, puts it, "We're changing the way we talk to our customers. We don't talk about energy usage anymore. Now we talk about energy management. That's what they really want."

Summary

By putting together a library of segment information in succinct short reports, a utility can program designers, program managers, and account managers a sharp picture of a particular business or industry sector *before* they design a program or visit their customers. These segment reports can be a collection of tightly focused profiles that are updated on an ongoing basis. Each report could include a general overview; essential data on geographic distribution, energy

consumption, and expenditures; industry trends; the best opportunities for saving energy; tips for how energy service providers can reach and serve the sector; and reference information for other resources.

Resources for Business Sector information
General Business Resources
Claritas
http://www.claritas.com/claritas/Default.jsp Source for market research and business segmentation data.

Dun & Bradstreet
http://www.dnb.com/us/ D&B is a leading source of business information and insight. D&B's global commercial database contains more than 100 million business records. They are also a leading provider of corporate credit ratings

First Research
http://www.firstresearch.com/ First Research provides business industry intelligence on about 200 industries as well as tools that assist in the sales process

Hoovers
http://www.hoovers.com Hoovers is best suited to looking up individual companies, rather than having an industry overview. Only the high-level metrics are available. There are quick hyper-links for pertinent SEC filings.

InfoUSA
http://www.infousa.com/ For business lists by every segment.

Standard & Poor's
http://www2.standardandpoors.com/servlet/Satellite?pagename=sp/Page/HomePg The S&P Industry Surveys are "comprehensive profiles on 50+ industries, including industry drivers, trends, key industry ratios and statistics, and comparative company analysis." Sub-industry reviews are much shorter, not nearly as in-depth.

U.S. Department of Labor
http://www.bls.gov/home.htm
Includes labor and employment statistics and trends

Natural Resources Canada: Databases
www.oee.nrcan.gc.ca/neud/dpa/data_e/databases.cfm?PrintView=N&Text=N
Includes a list of various energy use databases maintained by Natural Resources Canada's Office of Energy Efficiency.

Statistics Canada
www.statcan.ca
The Statistics Canada web site provides free tabular data on Canadian communities, economic conditions, and manufacturing and construction. Additional products and services may be viewed on a pay-as-you-go basis, and hardcopy data products are available for purchase.

U.S. Census: County Business Patterns
www.census.gov/epcd/cbp/view/cbpview.html
The County Business Patterns site provides subnational economic data by industry. Most of the nation's economic activity is covered. Data are tabulated by industry as defined in the Standard Industrial Classification (SIC) manual (1987). Data compiled after 1998 uses the North American Industry Classification System. The online database provides total number of establishments and payroll by employment size classes. Geographic coverage includes all 50 states and the District of Columbia. Additional data such as the Annual Survey of Manufacturers and zip code business patterns are also available on this site.

U.S. Chamber of Commerce
www.uschamber.org
The U.S. Chamber of Commerce is the world's largest business federation, encompassing both large and small private-sector organizations. It lobbies on a wide range of issues that affect business, and it offers many services. This site includes a directory of state chambers, and you can search for local chambers as well.

U.S. Department of Energy (DOE): Energy Information Administration (EIA), energy-related links
www.eia.doe.gov/links.html
The EIA organizes and provides links in the following categories: U.S. DOE sites, national labs, federal energy sites, federal information and statistics sources, state energy sites, university research centers, international energy statistics, energy suppliers (upstream and downstream), energy services companies, energy trade associations, and other energy-related sites.
http://www1.eere.energy.gov/industry/ has industrial segment technologies
http://www.eere.energy.gov/buildings/ has commercial building segment information

U.S. DOE: Regional Support Offices
www.eere.energy.gov/regions/
These six offices are the main gateways for businesses to access the DOE's various energy-efficiency programs. They also offer project advice and assistance.

ValueLine
http://www.valueline.com/ Valueline track companies, financial and investment information.

Industrial Resources

Canadian Industrial End-Use Energy Data and Analysis Center (CIEEDAC)
www.cieedac.sfu.ca/CIEEDACweb/mod.php?mod=NAICSdatabase&menu=1602
This research center at Simon Fraser University in British Columbia, Canada, maintains a database of industrial energy consumption and greenhouse gas emissions that can be queried online.

Industrial Assessment Centers
www.oit.doe.gov/iac/index.shtml#Overview
The Industrial Assessment Centers (IACs) perform assessments for small and midsize manufacturing firms under the auspices of the IAC Program (formerly the Energy Analysis and Diagnostic Center Program). The program is funded by the U.S. DOE's Industrial Technologies Program and seeks to assist the industry in energy conservation, waste reduction, and productivity improvements. Assessments are performed by teams from engineering schools at universities that are composed of faculty and students and are provided at no cost to the manufacturer. Approximately 30 universities operate IACs. Data from the assessments are available through the Office of Industrial Productivity and Energy Assessment at Rutgers University (iac.rutgers.edu/database).

Industrial Product Bulletin
www.ipb.com
The Industrial Product Bulletin is a long-established industrial shopping guide for manufacturing and industrial design products that's now online. Users of the web site can enter search categories and subcategories to find many industrial products. Energy-related categories include energy efficiency, power transmission, meters, sensors, switches, lighting systems and fixtures, and much more. Hundreds of products are profiled, and specs and ordering information are provided online.

National Association of Manufacturers (NAM)
www.nam.org
NAM is a 14,000-member multitrade organization. Established in 1895, the organization was created to promote a pro-manufacturing business environment and regulatory framework. Through the NAM web site, members can access information on plant siting, e-commerce applications, trade shows, news, and a variety of other services. NAM also acts as a political advocate, lobbying Congress on behalf of U.S. manufacturers.

Office of Energy Efficiency, Natural Resources Canada: Industrial Facilities
http://oee.nrcan.gc.ca/english/b_industrial/index.cfm?attr=0
Through this portal hosted by Canada's Office of Energy Efficiency (OEE) in the Natural Resources Canada (NRCan) Ministry, you can find advice on conducting an energy audit, listings of energy services professions, and access to publications on energy-efficiency technologies and strategies. This portal also links you to the Canadian Industry Program for Energy Conservation (CIPEC). CIPEC is a voluntary government-industry alliance dedicated to helping industry stay competitive and limit greenhouse gas emissions through energy efficiency. It publishes Sector Benchmarking Reports for a variety of industrial business types. CIPEC also hosts an Energy Managers' Network, with free membership for energy managers in companies that have offices in Canada and who are responsible for energy management at the corporate or plant level.

Society of Manufacturing Engineers
www.sme.org
Founded in 1932, the Society of Manufacturing Engineers is a worldwide organization represented by 60,000 members in 70 countries. Its web site provides easy access to the resources that the society offers its members. For example, members can join up to seven Technical Community Networks to share best practices and get solutions to technical problems. There is also a news page that monitors technology updates and manufacturing events. In addition to receiving the print version, members also have online access to Manufacturing Engineering magazine and Forming & Fabricating magazine.

U.S. DOE: Industrial Technologies Program
www.eere.energy.gov/industry
The Industrial Technologies Program (ITP), formerly the Office of Industrial Technologies, works with industry, trade groups, government agencies, and other organizations to research, develop, and deliver advanced energy efficiency, renewable energy, and pollution-prevention technologies for industrial customers. The site has links to news, information, tools, and technology delivery. ITP's Best Practices discuss technologies that can save energy, increase efficiency, and reduce pollution. Industries of the Future is a collaborative process to develop research programs for eight energy-intensive industry sectors: aluminum, chemicals, forest products, glass, metal casting, mining, petroleum, and steel.

U.S. Environmental Protection Agency (EPA): Office of Compliance
http://es.epa.gov/oeca/sector/index.html
The EPA's Office of Compliance publishes a series of Sector Notebooks that provide background information on specific industries, covering pollution emission profiles and related processes. Suggestions for reducing emissions are included.

Commercial Resources

Building Owners and Managers Association (BOMA)
www.boma.org
BOMA is an advocacy organization for commercial real estate. One of the most valuable resources provided by BOMA is the annual "Experience Exchange Report," which provides detailed data on operating expenditures for commercial real estate, broken down by city and size of building.

Commercial Buildings Energy Consumption Survey (CBECS)
www.eia.doe.gov/emeu/cbecs
CBECS is the most comprehensive survey of commercial building energy consumption in the United States. E Source uses this data for national and regional comparisons of energy use by different building types, including schools, lodging, offices, and others. The survey is conducted every four years. The 2003 survey results are to be released in 2005 and will include updated methodology for estimating end-use breakdowns (such as the percentage of energy used for lighting, cooking, and so on). Formatted tables are available for download, as are public data files in text and ASCII formats.

Commercial and Institutional Building Energy Use Survey (CIBEUS)
www.oee.nrcan.gc.ca/neud/dpa/data_e/cibeus_description.cfm
This is Canada's commercial building energy use survey. Data was first collected between 2000 and 2001 and is available as Microsoft Excel tables, PDF documents, or hardcopy. This survey does not include end-use breakdown estimates.

American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE)
www.ashrae.org
ASHRAE is a 50,000-member international organization with chapters throughout the world. The society advances the practices associated with heating, ventilation, air conditioning and refrigeration through research, standards writing, continuing education, and publications.

Energy-Efficient Building Association (EEBA)
www.eeba.org
This nonprofit organization promotes energy-efficient and environmentally responsible buildings and communities. The EEBA offers several conferences, publications, and workshops concerning all building types.

FacilitiesNet
www.facilitiesnet.com
This site is for professionals who design, construct, manage, or maintain buildings. It features updated industry news, bulletin boards for peer-to-peer exchange, Building Operating Management and Maintenance Solutions magazines, a powerful site-wide search engine, and information on the latest products and equipment.

New Buildings Institute
www.newbuildings.org
The New Buildings Institute is a national collaborative for supporting workable energy codes and design guidelines. Its primary mission is to encourage the efficient use of energy in buildings, and to support the development of codes, standards, and guidelines for improved

energy systems and designs in buildings. The site offers a codes and standards section as well as links to state, regional, and national code agencies. You can also find the Advanced Buildings Benchmark materials that will help you cooperate with your customers in planning and construction of energy-efficient buildings.

U.S. DOE: Building Standards and Guidelines Program (BSGP)
www.energycodes.gov
This comprehensive resource on national energy codes and standards is guided and funded by the DOE Office of Codes and Standards.

U.S. DOE: Energy Efficiency and Renewable Energy Network (EREN)
www.eren.doe.gov/EE/buildings.html
This is a collection of resources and programs from the U.S. DOE and its affiliate organizations that offers research, information, and assistance related to energy efficiency in buildings.

U.S. EPA: Energy Star Buildings Program
www.energystar.gov
This is a voluntary energy-efficiency program for U.S. commercial buildings. The program offers workshops, publications, software, and other services, including benchmarking of building energy performance using the Portfolio Manager online tool. Portfolio Manager can be accessed via the Energy Star website, and also through some bill auditing software sold by commercial vendors.