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E-MARKETPLACES IN THE ENERGY & FUELS SECTOR

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Report



Abstract

Of Europe's 6 leading markets, the UK has the most competitive B2B energy market, and the only one where the residential segment verges on being genuinely competitive. The Dutch market is also competitive in the B2B segment. The other 4 top markets (Spain, France, Germany, Italy) do not yet allow effective competition in end-user supply, while wholesale competition is possible.

Another obstacle to effective competition is the difficulty for new entrants to grow organically, as represented, e.g., by the gap between typical profit margins achievable by incumbent suppliers and new entrants. This gap is especially wide in France, while the Netherlands, the UK and, increasingly, Spain, have more favorable entry conditions.

The competitive landscape in the European power sector is increasingly being dominated by "national champions" spawned by one of the region's top-tier markets: France (EDF), Germany (E.ON and RWE), Italy (Enel) and Spain (Endesa). The seeming exceptions to the "large home market" rule are Belgian-based Electrabel and Swedish-based Vattenfall

Background

The e-business revolution has arrived in the energy efficiency and energy services area. Companies are using e-business approaches to compete electronically, sell services and products—including energy efficiency—to new and existing customers, strengthen relationships with suppliers, contractors, and customers, and provide better customer service.

Energy-efficiency services offered via the Web include home energy audits, estimation of energy costs, aggregated purchasing of energy efficiency products, and building benchmarking.

This report offers insights into the key steps involved in configuring an e-business, and demonstrates how e-business can transform, and is transforming the energy and energy efficiency marketplace.

Introduction

As the Internet and associated technology proliferates, the face of the traditional economy is changing. The Internet creates non-traditional competition opportunities, allows for the application of knowledge and intellectual capital, and alters the way businesses are valued. The energy services sector—including energy efficiency services—is being directly and dramatically affected by these trends.

A study by the University of Texas Center for Research in e-commerce reported that the Internet economy overall grew at an annual rate of 175% from 1995 to 1998. Forrester Research, Inc. found that utilities are second only to the computing and electronics industry in their potential to do on-line business. A related Forrester study predicts that 11% of retail electricity transactions will occur over the Internet by 2005. As the energy services sector embraces the e-business revolution, there are several key principles governing successful e-business orientation in this traditionally "bricks and mortar" industry. A key driver in the new energy services economy is knowledge. The ability to transition from a regulated monopolistic utility to a knowledge-based, dynamic competitor will be the key characteristic of industry leaders over the next few years. This knowledge includes advising customers on energy efficiency opportunities in their homes or businesses.

Principles of E-Business

E-business broadly covers any aspect of energy and efficiency services that can take advantage of the Internet and information technology. In general, e-business goes beyond e-commerce, and encompasses four major areas:

- Branding and Reputation Management (e.g., brochureware);
- Customer Relationship Management;
- Revenue Enhancement (e.g., e-commerce); and
- Business Process Improvement (including knowledge management) and Cost Reduction.

Energy-efficiency services and products can relate to all of the above. For example, utility sites, which offer on-line home energy audits, help the utility manage their brand and reputation for caring customer services in the face of deregulation and customer choice. E-commerce (selling commodity or products over the Internet) is but one dimension of e-business.

In the energy services sector, this has been an important and highly visible dimension. However, the full e-business revolution encompasses all business processes and the complete value chain, including customers, suppliers, employees, and allies/partners. Companies have typically adopted e-business in a phased approach.

The process starts with the establishment of a Web presence to create a low cost marketing platform. E-business is then applied to existing business processes. For example, customers can “interact” with the company through largely self-service processes, such as reviewing their bill on-line or conducting a do-it-yourself home energy audit. An evolutionary advance is to enable customers to “transact” with the company, such as on-line bill payment or purchase of energy-efficient products such as compact fluorescent lamps. The final phase in this continuum is for the company to redefine completely their existing business processes around the e-business model. E-business ceases to be an adjunct to the bricks and mortar company and becomes the essence of the new business model.

E-Business Principles Applied to the Energy Sector

The energy services sector has evolved a variety of product and service concepts and delivery channels. Many of these offerings have been driven by industry restructuring in the electric sector and the advent of competition. However, even regulated wires companies have found the need to embrace improved service delivery driven by performance-based ratemaking, and other drivers, such as the need to deliver cost effective energy efficiency programs. Thus, e-business applications may be found on both the regulated and unregulated sides of the energy sector.

Energy companies may seek to offer retail commodity products, such as electricity or natural gas, specialized commodity products, such as green electricity, or value-added products and services, such as home security, telecommunications, or energy efficiency services and products. In addition to these largely e-commerce applications, customer acquisition and customer service over the Internet are also important applications.

One convenient way to categorize e-business applications in the energy services sector is by market segment: business to business, business to consumer, consumer to business, and business to internal. Example e-business applications in each of these categories are shown in Table 1.

Table 1. Example Energy Services E-Business Applications

Business to Business	Business to Consumer	Consumer to Business	Business to Internal
Energy and News Portals	Sign-on Rebates and Discounts	Priceline.com Concepts for Consumer Price Bidding	Knowledge Management and Sharing
Green Energy Tariffs	E-Billing and Pre-Selected Bill Dates	Consumer Requests for Quotations	HR Services
Extranet Interface with suppliers, distributors and partners	Payment Options	Consumer-Initiated Aggregation	Automated Workflow Processes
Market Nomination/Auctioning Services	Consolidating Billing		Service Routing Requests
Meter Display/ Analysis	Internet and Application Service		Document Mangement
Billing Options	Negotiable Monthly Flat Rate		Extended Teams
On-line Market Clearinghouses	On-line Customer Service/Support		Supplier Procurement Chains
Energy Data Management and Outsourcing	On-line Account Management		
Outdoor lighting Services	Information and Education		
Energy Commodity Trading	Insurance and Warranties		
Load Settlement and Balancing	Interactive FAQs		
Telecom Data Networks	Telecom and Cellular Service		
	Multilingual Services		
	"Green Energy"		
	On-line Real Time Energy and Appliance Usage with Money Saving Suggestions		

As these e-business applications are being launched, lessons learned and critical success factors are being formulated. Critical success factors for obtaining and retaining customers through technology include:

- target the right customers
- own the customer's total experience
- streamline business processes that impact the customer
- provide a 360 degree view of the customer relationship
- let customers help themselves
- help customers do their jobs
- deliver personalized service and foster community

E-business applications are being employed across all vertical segments of the industry. This includes wholesale, trading, transmission and distribution (T&D), and retail, as well as add-on services, such as energy efficiency. Therefore, "customers" may include traders, retailers, aggregators, trade allies, and other market actors in addition to the traditional "end-use" customers of utilities.

E-Business in the Energy Sector

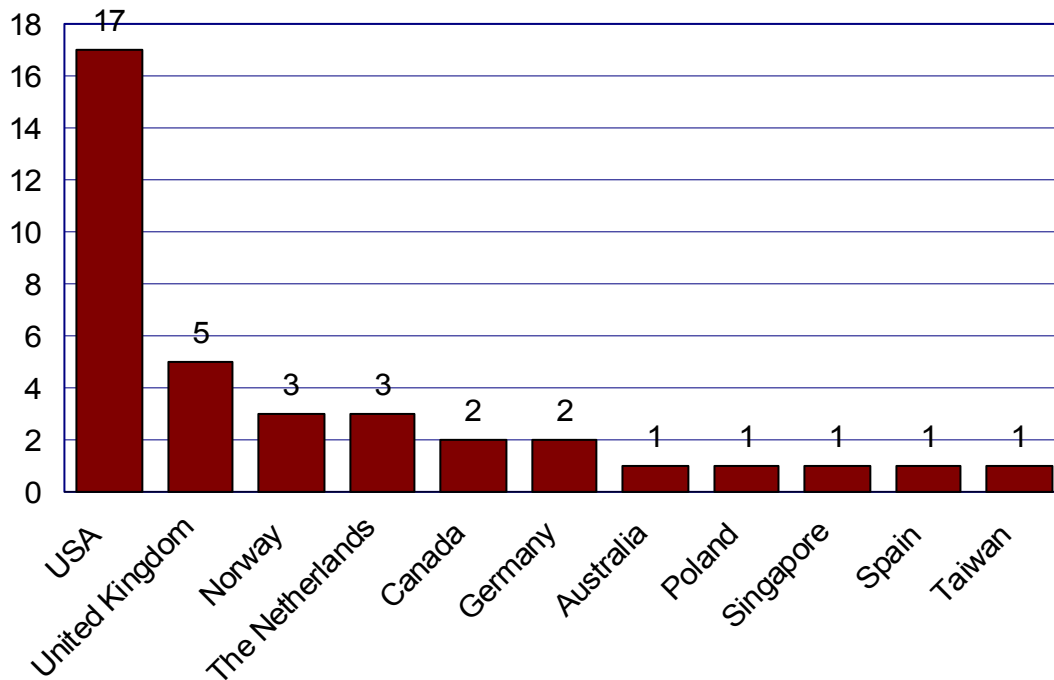
The e-business revolution in energy services is characterized by the magnitude and diversity of applications. Andersen Consulting reported that, of the utilities it surveys, the percentage that had Web sites rose from 10% in early 1998 to 95% in early 1999 (Anderson Consulting 1999). E-business is truly revolutionizing the energy services industry. E-business applications affect wholesale, retail, trading, energy efficiency, and load management. Internal business processes also are being radically altered. The Internet, and information and communications technology advances have fostered a whole new business approach, leading to the proliferation of "new economy" energy services companies. In some cases, these firms are part of traditional utility companies, and in others, they are new startups. Energy efficiency is an integral part of many of these offerings.

The convergence of technology and deregulation has created completely new business opportunities. However, with new opportunity comes new risk. As the energy services industry itself "shakes out," so will the e-businesses in the energy services sector. As technology continues its advance the only thing that is certain is that there will be continued change in the way we both use and transact for energy services, including energy efficiency services and products.

Geographical distribution

Currently there are 37 active energy & fuels industry e-marketplaces in the eMarket Services directory. From a geographical analysis, they seem to be concentrated in the USA, where 17 are headquartered, and also in the United Kingdom with 5 e-marketplaces. Of the analysed e-marketplaces, 16 are active in other markets through a sales office network.

Geographic location of energy & fuels e-marketplaces



Buyers and sellers

Generally speaking, the energy & fuels industry players involved in e-marketplaces are mainly:

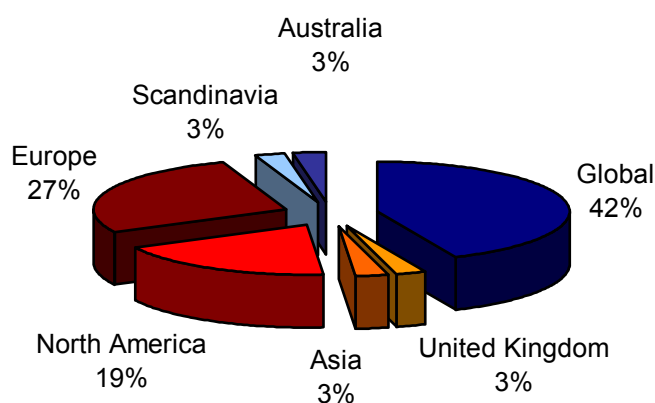
- energy suppliers,
- individual organisations,
- municipalities,
- gas and electricity utilities,
- grid operators,
- major service contractors,
- refiners,
- brokers in crude and refined oil products, and
- end users.

Products and services traded

A wide range of products and services are traded: electricity, crude oil, coal, natural gas, bulk materials, chemicals, green energy and energy equipment and services.

Geographical focus

The focus of the majority of fuel & energy e-marketplaces is worldwide (42%) where transactions involve various countries. Currently, 10 e-marketplaces focus on North America from which only 1 especially on Canada and 4 on the USA.



Name	Country HQ	Trade	Fees	Language
Achilles www.achilles.no	Norway	Procurement	Membership fee	Danish, English, Norwegian, Portuguese, Spanish, Swedish
APX www.apx.nl	The Netherlands	Power Exchange	Entrance fee, fixed contribution	English
EnergieKeuze www.energie-keuze.nl	The Netherlands	Retail	Transaction fee	Dutch
EnergyAction www.energyaction.com.au	Australia	Retail	Transaction percentage, registration fee	English
Enporion www.enporion.com	USA	Procurement	Membership fee	English
European Energy Exchange www.eex.de	Germany	Power Exchange	Different fees	English, German

Eutilia www.eutilia.com	The Netherlands	Procurement	Different fees	English
First Point Assessment Limited www.fpal.com	United Kingdom	Power Exchange	Membership fee	English
Gielda Energii www.polpx.pl	Poland	Power Exchange	Membership fee, transaction percentage	English, Polish
Global Coal www.globalcoal.com	United Kingdom	Power Exchange	Membership fee, transaction percentage	English
HoustonStreet.com www.houstonstreet.com	USA	Power Exchange	Membership fee	English
Hydrocarbon Online www.hydrocarbononline.com	USA	Power Exchange	Variety of fees	English
IndigoPool www.indigopool.com	USA	Procurement	Membership fee	English
IntercontinentalExchange www.theice.com	USA	Power Exchange	Customer Participation Agreement	English
Natural Gas Exchange (NGX) www.ngx.com	Canada	Power Exchange	Minimum net worth requirements	English
Network International www.networkintl.com	USA	Equipment	Registration required	English
OFS Portal www.ofs-portal.com	USA	Equipment	Registration and verification	English
Oil & Gas Journal Exchange www.ogjexchange.com	USA	Equipment	Registration required	English
Oil & Gas Journal Exchange www.ogjpropertyexchange.com	USA	Procurement	Registration required	English
Oil and Gas Online www.oilandgasonline.com	USA	Equipment	Company registration form	English
OmixAsia www.omixasia.com	Singapore	Equipment	Users have to register as a member	English
Pantellos www.pantellos.com	USA	Procurement	Registration required	English

PEPEX www.pepex.net	USA	Power Exchange	Registration required	English
Petroleum Place www.petroleumplace.com	USA	Procurement	Registration required	English
Quicksourc On-Line www.quicksourc-online.com	United Kingdom	Equipment	Registration required	English
Spectron www.spectrongroup.com	United Kingdom	Power Exchange	Registration required	English
SubProductos www.subproductos.net	Spain	Equipment	Registration required	Spanish
SYX www.syx.com	Norway	Equipment	Registration required	English
The Nordic Power Exchange www.nordpool.com	Norway	Power Exchange	The market participants are authorised by Nord Pool	English
Trade-Ranger www.trade-ranger.com	USA	Procurement	Registration and verification required	English
TradeSpark www.tradespark.com	USA	Power Exchange	Registration required	English
United Raw Materials Solutions Inc. www.urms.com	Taiwan	Equipment	Registration required	Chinese, English
Utilyx www.ulyx.com	United Kingdom	Retail	Registration required	English
Watt Exchange Limited www.watt-ex.com	Canada	Power Exchange	Trading is limited to businesses involved in electricity and/or certain financial institutions	English
WindPowerOnline.com www.windpoweronline.com	Germany	Equipment	Registration required	English
World Energy Exchange www.worldenergyexchange.com	USA	Power Exchange	Registration required	English
World Energy Solutions www.wexch.com	USA	Procurement	Registration required	English