Another way to classify on-line electricity exchanges

On-line B2B and B2C energy exchanges in the U.S. have taken to differentiating themselves by focusing on one link in the electricity value chain. But classifying exchanges by the type of trading they enable—rather than by business model or ownership—requires a closer look at the evolving structure of American electricity markets

By Jon T. Brock

Although on-line energy trading in the U.S. is booming, most analysts agree that so many electricity exchanges have sprung up that a shakeout is inevitable. In fact, evidence suggests that a shakeout has already begun. The raft of launch, consolidation, and closure announcements made over the past two years has made understanding the state of the exchange market as much of a complex, real-time process as energy trading itself. To help clarify the picture, this article examines exchanges from a different perspective: It classifies them according to the link in the electricity value chain they serve.

Any analysis of the U.S. on-line electricity exchange space must be considered ephemeral because the process of retail deregulation is ongoing, and being done differently by different states. What's more, changes in the way power is sold at retail affect the way it is traded at the wholesale level. Adding to the complexity, creating a framework for retail competition is understandably proving quite difficult for a sector that has spent nearly a century tailoring its business processes for a monopoly, cost-plus industry model.

But perhaps the biggest obstacle to creation of a cohesive electricity trading environment is the lack of coordination of federal and state initiatives to foster competition. While some states are putting the brakes on their deregulation programs in reaction to the California power crisis, the Federal Energy Regulatory Commission (FERC) is requiring the formation of regional transmission organizations (RTOs). Uncertainties about the role these new entities will play only add to those introduced when most—but not all—states encouraged the investor-owned utilities they regulate to sell off some of their power plants and unbundle their vertically integrated businesses.

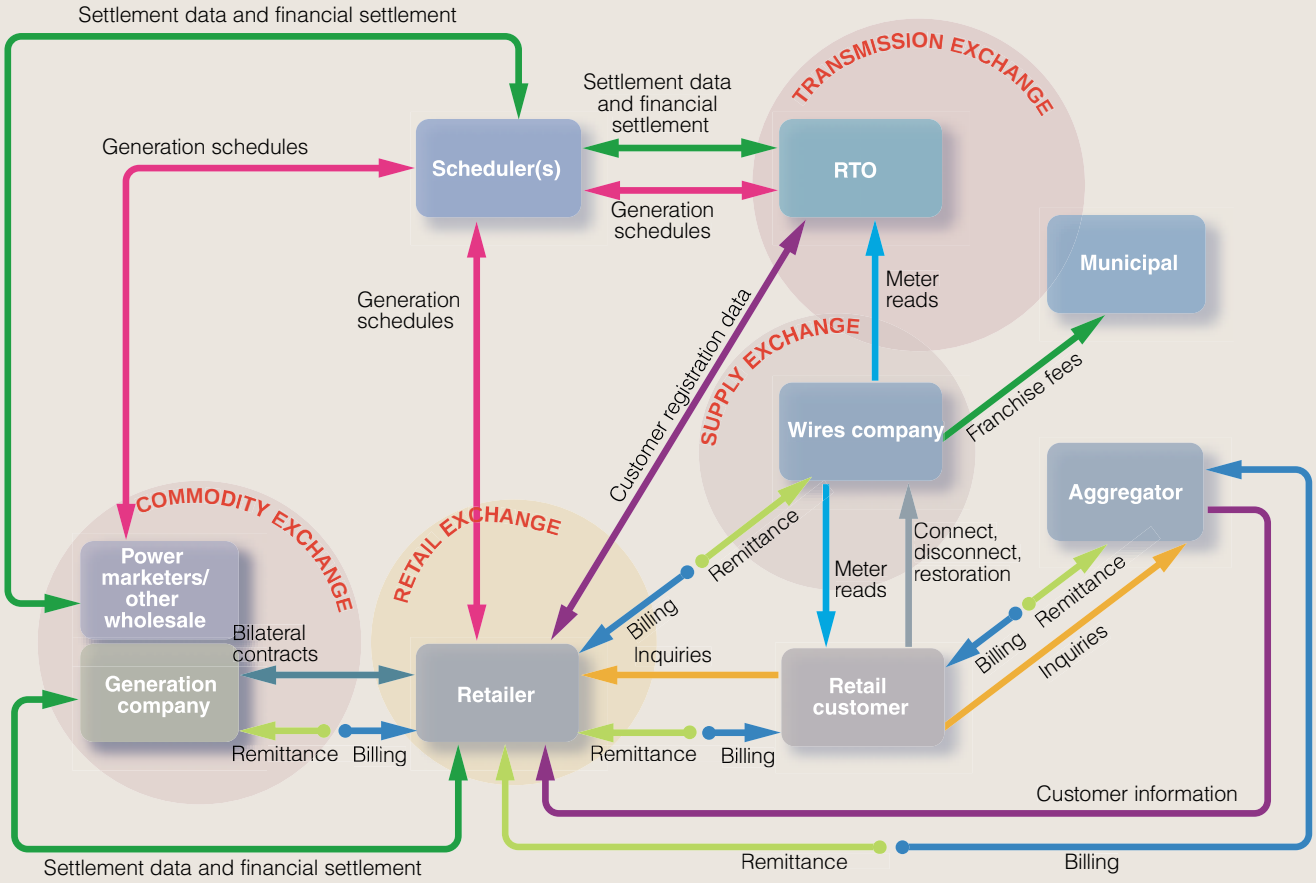
Although evolution always holds the promise of surprises (Global Energy Business, July/August 2001, p. 16), it now seems safe to say that in the near term, the U.S. electricity environment will be populated by the following entities: generators (wholesalers) of commodity electricity, transmission "supergrid" operators (RTOs), distribution (wires) companies, and retail services providers. Accordingly, this article identifies and discusses the strategies and tactics of the firms emerging as leaders in the four electricity exchange market segments: commodity, retail, supply chain, and transmission (figure).

Commodity trading: Home of the big boys

Most electricity exchanges also facilitate the trading of energy in its other forms—natural gas, coal, heating oil, etc. Within this group, the exchanges can also be classified by ownership: private (Dynegydirect, EnronOnline), independent (HoustonStreet, TradeSpark), and consortium-owned (Intercontinental Exchange).

Because EnronOnline was first to market in November 1999, it naturally assumed a leadership position. Its list of products stands at an overwhelming 1,600, and it supports trad-

Classifying U.S. electricity exchanges by participant



Shown in red are the four types of exchanges expected to serve the U.S. electricity industry for the near future. Among the participants in them will be:

- RTOs (regional transmission organizations), the entities now being formed nationwide to maintain power system reliability and ensure that regional transmission grids are operated in non-discriminatory fashion.
- Schedulers (or scheduling agents), which will be responsible for submitting to the regional RTO a generation plan that accommodates the balancing of the load the scheduler manages.
- Wires companies, which own and operate electricity distribution networks.
- Generation companies, the independent entities that own and operate power plants.
- Retailers, companies authorized to sell electricity to retail customers. They get their supplies wholesale from generation companies and/or power marketers—with or without the help of an on-line electricity exchange.
- Aggregators, which bundle the electricity demand of individual consumers or companies. Their goal is to amass buying power for the purpose of getting a lower rate.

ing in 13 different currencies. EnronOnline reached an important milestone in the first quarter of this year when the number of transactions conducted on it surpassed the number of those conducted through Enron using traditional, manual methods.

Dynegydirect, launched in November 2000, currently has more than 180 corporate participants and has done more than 35,000 transactions to date. It charges no commissions for transacting deals for electricity, natural gas, gas derivatives, natural-gas liquids, coal, and SO_2 emissions allowances. To this list of commodities, Dynegydirect plans to add bandwidth, NO_x emissions allowances, and weather derivatives in the future.

Exemplifying how consolidation in

Creating a framework for retail competition is proving difficult for a sector that has spent nearly a century tailoring its business processes for a monopoly, cost-plus model

While preparing for competition, PECO reportedly spent in excess of $60 million on its own billing system. Size will definitely be a prerequisite for success in the on-line retail electricity business

the U.S. electricity exchange market is taking place, Dynegy and The Williams Companies have each invested $25 million for minority equity stakes in the trading infrastructure firm eSpeed. Then eSpeed invested $2 million in TradeSpark, another exchange. TradeSpark plans to create on-line marketplaces for natural gas, electricity, coal, weather derivatives, and NO_x and SO_2 emissions allowances; the eSpeed infrastructure will allow TradeSpark to offer phone as well as Internet-based trading.

Retail: Not for the impatient

To date, on-line retail electricity trading has been a tough nut to crack. A successful model has yet to emerge. However, some energy firms remain convinced that retail can indeed be a profitable business. The few existing retail exchanges are providing platforms for on-line sales of retail services, primarily to residential and small commercial customers. Examples include The New Power Company and Essential.com.

Launched in May 2000, The New Power Company was the first national provider of electricity, gas, and related energy services to residential and small businesses. Its initial funding of $120 million came from heavyweights such as Enron, IBM, and America Online. Apropos of its retail orientation, New Power is led by AT&T Consumer Services' former president and chief marketing officer, H. Eugene Lockhart.

New Power apparently has learned from prior experience that winning residential customers one at a time is very difficult and expensive. Now, their growth strategy is to acquire blocks of customers. That shift seems to have worked at least by one measure; New Power now has nearly one million customers. But the company is still unprofitable. For the second quarter of 2001, its parent, NewPower Holdings, posted a loss of $55.6 million. The company expects to lose another $70 million in the third quarter of this year, and "only" $45 million in the fourth.

But at least New Power remains in business. Its main rival—Essential.com—is rumored to have recently closed its doors. Of Essential's original $100 million in venture capital funding, $90 million is believed to have gone into back-office and customer care operations. Yet the firm was able to gain only 70,000 customers—not nearly enough to turn a profit. Many firms underestimate the complexity of back-office retail operations. While preparing for competition in Pennsylvania, PECO reportedly spent in excess of $60 million on its own billing system. Size will definitely be a prerequisite for success in the on-line retail electricity business.

Supply chains: The low-hanging fruit

The promise of selling efficiency to energy companies with complex supply chains has long attracted consultants, systems integrators, services providers, and application developers for years. Supply chains are often characterized as "low-hanging fruit" because most electric and gas utility supply chains are so inefficient that gains are easy to come by. Pantellos and Enporion were the early leaders in this space. These exchanges' value proposition was a more efficient matching—via the Internet—of buyers and sellers of equipment such as wire, transformers, and generation equipment.

Launched in March 2000, Pantellos was originally funded by 14 of America's largest utilities. Five others have joined the consortium since. Pantellos also recently announced it would be starting up an Australian operation. Pantellos' chief competition in the supply-chain segment has been Enporion, which opened its virtual doors in the fall last year. It was originally funded by five U.S. utilities as large as those behind Pantellos; four others have come on board since.

Transmission: Is the ICE melting?

In March 2000, four large U.S. utilities—American Electric Power Co., Carolina Power & Light Co., Duke Energy, and Unicom—announced the launch of what they said was an on-line exchange for electricity wholesalers and traders to arrange for transmission capacity. But since then, the Intercontinental Exchange (ICE) seems to have evolved into a platform for trading various energy commodities—and metals as well.

Based in Atlanta, the ICE today does what a commodity exchange is expected to do: bring buyers and sellers together without a broker in the middle. It measures its success by transaction volume and commodity value. This April, the ICE reported that since going live in August 2000, it had facilitated 100,000 trades of more than $100 billion in product. More than 1,000 energy and metals traders worldwide have used ICE, which lists more than 600 products—including some for settlement and delivery of power over a multitude of time periods. ■

Jon T. Brock is director of strategic and competitive intelligence for Scientech, Inc., Albuquerque, N.M., an international provider of consulting and technical services for government, electric utilities, telecommunications, and security clients. He can be reached at jbrock@scientech.com.