

Wass Consulting Group, Inc.

Management Insight

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Telecommunications Utility Diversification Closer to Home

Summary

This *Management Insight* is the first in a series which will address potential opportunities for electric utility companies to expand their service offerings outside of electric generation and distribution. This first piece describes the broad range of possible telecommunications services and why electric utilities are in a good position to provide them. Subsequent *Management Insights* will introduce how recent technological advances place electric utilities in a particularly advantageous position to provide internet access and related services to its customers.

Introduction

Deregulation in the United States has been with us for a number of years, and has its advocates and detractors. Deregulation of trucking and the airline industries brought about many changes in how we do work, and how we get to work. Deregulation of natural gas and the breakup of AT&T brought about even more changes, some of which were anticipated and many which were not. These are exciting times, to say the least, and the ongoing deregulation of the electric utility industry is likely to continue to be the same, if not more so.

Many utilities took their first steps toward deregulation in the 1980s and early 1990s when they ventured into the non-regulated marketplace. Various utilities purchased banks, construction companies, commercial real estate, investment

companies, home/commercial security firms, district energy, and many other businesses in their quest for non-regulated income. Although a few were successful, most were not. More recently, several utilities have purchased electric generation and distribution companies (or significant parts of them), both overseas as well as outside their normal service territories (again with mixed results). We believe that it may be time for electric utilities to once again look to their own backyards for future growth opportunities, namely in telecommunications.

Rationale for Entering the Telecommunications Market

Over 97 percent of the U.S. population is served by about 3,200 electric utilities. Of these, about 76 percent are served by Investor Owned Utilities (IOUs), 14 percent by municipal utilities, and the remaining 10 percent by rural cooperatives. This total U.S. population served is slightly greater than the population served by telephone companies, and about 30 percent higher than those served by cable television. In this "battle of the titans", traditional gas and electric utilities are transforming themselves into energy services companies, whereas telecommunications companies are diversifying to offer vertical telecommunications services. But are such divisions necessarily fixed, never to change? We think not. Here are four reasons.

First, energy production and delivery will be

tightly coupled with telecommunications and information services for the foreseeable future. This linkage will be driven by the electric utility's competitive need to deploy both supply-side information technologies for improved operation of their generation, transmission, and distribution facilities, as well as demand-side Energy Information Services (EIS). A two-way communications channel with every customer who subscribes to electric power service is strategically important for several reasons, including:

- Communications technology will be needed to support cost-efficient and reliable electric power delivery
- Communications technology to all customers (industrial, commercial, residential) will be necessary to meet emerging competitive threats to the electric service business
- Communications technology will be necessary for load control programs needed to meet conservation and environmental objectives

Second, most electric utility companies already have considerable experience in, and a substantial investment in telecommunications technologies. For example, many electric utilities have extensive telecommunications/microwave facilities that they now use in the operation and maintenance of their generation and major transmission systems to ensure reliability and service quality. It will not be long before these utilities extend this telecommunications capability to monitor and maintain the local network of electric power substations, power lines, and transformers to distribute power locally. Such a communications capability will allow system operators to locate sources of outages, and in some cases, anticipate and prevent problems by monitoring operating characteristics and spotting signs of impending failure, a common practice in today's telephone networks.

Third, and perhaps most importantly, electric utility companies already possess much of the

infrastructure needed to provide telecommunications services to its customers, as shown in Table 1. Among this infrastructure include a significant local presence and the human and

Table 1: Existing Electric Utility Infrastructure

- Local presence and a "brand" identification.
- Electric lines to each customer.
- Distribution and transmission lines throughout the service territory.
- A local customer service infrastructure.
- A billing and collecting infrastructure.
- An installation and maintenance infrastructure.
- Considerable financial resources and good cash flow.

business systems in place to implement this new business line. Although some separation of regulated and non-regulated business functions will, of course, be necessitated, considerable synergies would nonetheless exist that would not be available to a market entrant completely new to a utility's service territory.

Fourth, the federal government has significantly relaxed the rules which formerly prohibited utilities from providing telecommunications services. The philosophy underlying such reform is that customers would be better off by lowering or eliminating the barriers to entry in various telecommunications markets so that competition can develop. Thus, Section 103 of the Telecommunications Act of 1996, which amends the Public Utility Holding Company Act (PUHCA) of 1935, now allows electric and/or gas companies to form "exempt telecommunications companies (ETCs) under the jurisdiction of the Federal Communications Commission (FCC). Among the services ETCs are specifically permitted to provide include:

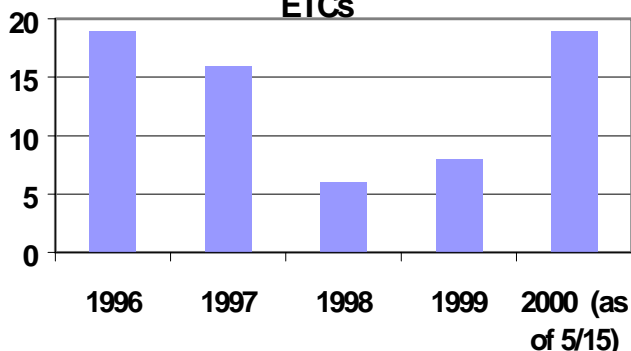
- Telecommunications services
- Information services

- Other services or products subject to FCC jurisdiction
- Products or services related or incidental to those above

Unlike the requirements to form a registered holding company or an exempt holding company with the Securities and Exchange Commission (SEC), the establishment of an ETC is relatively straightforward. In fact, the FCC has taken the view that the Telecommunications Act was meant to provide easy entry for would-be telecommunications operators. As shown in Figure 1, 68 ETCs have already been formed, with more expected to come. While there is some overlap in offerings, a careful review of the various filings reveals a host of different core business entry strategies. Some, for example, suggest an acceptance of mere revenue sharing, while others indicate a deeper appreciation for the catalytic effect communications companies will have on the utilities' core business. With automatic 60 day approval of an ETC application unless the FCC specifically denies the application, any delays are likely to be caused only by the utility applicants themselves.

States too have begun to relax former rules limiting electric utilities from entering the telecommunications market. Over the past several years, eight states including Arkansas, Florida, Missouri, and Texas had imposed such

Figure 1: Growth in the Number of ETCs



requirements. In May, 1999, however, the

Tennessee State Legislature reversed Tennessee's ban, and now allows public utilities to provide cable television, internet, and telephone services. Other such bans are also expected to fall. As a result, several cities (such as Tacoma, WA) and smaller communities in Massachusetts, Georgia, Iowa, and Kentucky have expanded their telecommunications services. Larger communities served by larger utilities will undoubtedly follow.

What Telecommunications Services to Provide?

Even to the casual observer, the area of telecommunications addresses a wide area, including everything from real-time energy trading, power systems control, demand-side management (or more broadly Energy Information Systems (EIS)), telephones, cellular phones, cable television, as well as internet access via a number of routes. These routes include cable modem, Asynchronous Digital Subscriber Line (ADSL), and high speed wireless access via satellite, through Local Multi-point Distribution Services (LMDS), or more recent and robust broadband techniques. Some utilities already provide one or more such services, as mentioned earlier, but oftentimes their involvement has been passive such as leasing infrastructure, rights-of-way, dark fiber, conduits or fiber transport on a wholesale basis, primarily to telecommunications carriers and cable companies. More recently, utility involvement has been on a joint venture or other shared business arrangement.

No single preferred model has yet to dominate the market, and too many variables exist to light the way for a given utility in this brief monologue. It should be apparent, however, that companies should lead with their strength and avoid ruinous competition in the face of a competitor's strength. Thus, head-to-head competition with wired telephone and cellular phone providers, absent some unique local circumstances, is probably low on the priority list for most electric utility companies. The huge investments already made

by such telecommunication giants and the advantages available for extremely wide geographic coverage in these businesses diminish the efficacy of such a strategy for most electric utility companies.

For many utilities, integrating its internal need for two-way communications within its own organization and with its customers while at the same time providing customer access to the internet may make more sense. The internet is, after all, the most likely vehicle for connecting the residential, commercial, and industrial electric meter to the utility's EIS. As such, much (or at least a significant part) of the telecommunications research and development, hardware, and software installation costs and effort may well be included in the utility's rate base, and hence be recoverable. Thus, utilities could provide (and charge for) a value added service (i.e., internet access) while at the same time aggressively defending its core business through its ability to reach all its customers in "real time" with state-of-the-art energy management.

While up to one home in four now has some kind of access to the internet, most people now connect using a dial-up modem. Dial-up modems are easy to use, but their performance is limited, and access to the internet is not continuous nor convenient. As the very popularity of the internet drives the industry to build the infrastructure to bring high bandwidth (i.e., broadband) communications to homes and businesses, new providers will replace current ones who will be unable to provide such broadband services via dial-up access. This is where the real opportunity for utility ISPs becomes apparent as it merges with its own interest in providing continuous two-way communications with its electric service customers. As those who early on offered internet access alone are now confronted with the challenge of "going beyond access" and offering other value-added services, internet phone and internet TV may not be far behind.

Mechanisms by which utility companies can provide such broadband internet access and at the same time overcome the "first 100 feet" obstacle, that is, the connection from the business or residential user to the utility as an Internet Service Provider (ISP) will be discussed in a forthcoming *Management Insight*. Recent technological advances make such connections to a utility much more desirable than is the case for other ISPs, and may make the decision to enter this market much easier and lucrative than it has been in the past.

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The Wass Consulting Group

The Wass Consulting Group (WCG) consists of a unique group of skilled and mature general management consultants to a variety of industries, including electric, gas, and telecommunications utilities. We provide our clients with the proven ability to bring practical and actionable solutions to difficult management concerns faced by senior managers. Our services address the challenges that senior executives and Board members must face in their regulated and non-regulated operations. This includes matters of mission, governance, strategy implementation, organization structure, business process transformation and re-engineering, operational improvement, benchmarking, competitive analysis, merger integration, and market entry. We combine a base of exceptionally experienced partners with an extensive and expert network of professional consulting staff and affiliated firms. Therefore, our clients receive the full capability of a large, diversified consulting firm with the flexibility and cost-efficiency of a smaller one. Our clients obtain personal attention, participation, and oversight of each engagement by at least one experienced partner and, if the assignment requires, more than one partner participates to achieve the needed results.