

AWAKENING GIANTS

Utilities are poised to be big players in telecom. Here's a roundup of their strategies and challenges

By Liz Singleton and Meghan Schultz

Just when it looked like incumbent carriers might have less competition than in the past, we're beginning to see more utility companies getting involved in providing telecom services. Companies that provide energy services may have the financial resources, technology and existing infrastructure to be successful.

The Business Within A Business

Utilities tend to develop a combination of four types of telecom business models: CLEC, wireless, long haul transport, and carriers' carrier.

Companies often begin a CLEC business if they recognize a lack of competition in a particular market or if they acquire an existing CLEC. CLECs can offer many services, including data, local, and long distance service. CLECs may or may not have their own switches and fiber networks.

Utilities enter the wireless, long haul transport, and carriers' carrier businesses to make use of their existing infrastructures. Specifically, utilities provide wireless services because they have electrical towers where they can place wireless antennas throughout their networks. Utilities with existing long-haul networks become long-haul providers. Utilities become carrier's carriers because they have existing metropolitan and/or long haul networks in which they lease either dark or lit fiber to other service providers. With the capacity that long-haul providers and carrier's carriers have, they have the ability to offer bandwidth trading services. Bandwidth trading is the exchange of rights to move data across telecommunications lines at a future date.

Up and Running

No matter which telecom business model a utility follows, many issues must be overcome for a smooth transition into the industry. Although a utility may have existing rights of way or fiber already in the ground, it still has to manage all of the other components of running a successful telecommunications company. These include sales and marketing, regulatory issues and technology.

Utility companies can leverage the sales and marketing teams of their core businesses to promote their telecom businesses, but they will also need to have experienced telecom sales and marketing professionals to cater to the specific needs of the telecommunications division.

Although utility companies deal with the regulatory bodies that govern their core businesses, the companies have to realize and understand the different legal conditions of their telecom businesses.

Different technologies drive the telecom and utility industries; however, there is some overlap between utility and telecom operations, including Sonet, media converters, dense wave division multiplexing (DWDM) and hybrid fiber-coax (HFC).

Synchronous Optical Network (SONET) is a standard for connecting fiber optic transmission systems.

Media Converters convert from one media to another.

DWDM involves the transmission of multiple wavelengths over a single fiber strand to individual fiber hubs. DWDM uses existing fiber for communications transmission over a utility's network.

HFC is a way of delivering video, voice telephony, data, and other interactive services over coaxial and fiber-optic cables.

From Electricity To Telecommunications

As utilities venture into the telecom industry, they have both advantages and disadvantages that are unique from those that independent companies face. The parent utility companies give their telecom subsidiaries advantages that include capital, rights of way, existing customer base, and name recognition.

Most utility companies offering telecommunication services are already successful at delivering energy and have the capital to expand into other arenas. The companies are well funded, have an existing corporate structure, and are looking to expand their businesses into other new businesses. The investment that it takes to enter telecom is relatively small for a multibillion-dollar company.

Because of their existing rights of way, many utility companies deployed fiber optics as part of their utility network infrastructures. This allows them to save time and money because they do not need to dig up streets or find alternative methods to deploy facilities. The existing means of transmission can be turned into telecommunication networks. As another way to use existing infrastructure, some electric utilities are looking into the use of Power Line Telecom (PLT) technologies that offer a solution for the "last mile."

Telecom subsidiaries have a well-defined target market due to the established customer base of their parent utilities. They are also able to offer customers the benefit of bundled services and consolidated bills.

The utility's established reputation that gives customers confidence in the Company's ability to deliver reliable utility service is also important to potential telecom customers.

Although utilities have certain advantages in the telecom industry, they are not without their hindrances.

The bureaucracy of large utilities slows deployment of new technologies and makes fast network build-out nearly impossible, both of which are essential in creating a successful telecommunications company. Because the telecom operations of utility companies are small in comparison to the overall organizations, it can be difficult for them to break through bureaucracy and get the attention necessary for growth.

Regulatory hurdles may affect a company's growth strategy. Although utilities may have existing ROWs, regulatory issues can influence the future deployment of facilities and hinder wireless providers' ability to deploy towers needed to deliver service. Regulators also often have to approve mergers between companies, negatively affecting a company's ability to grow through acquisition.

Billing and Network Management Systems are not necessarily extendable from the utility to the telecommunications company. In order to offer telecom services, utility companies have to install all new OSS systems aside from the existing utility back office systems.

Security and integrity of the network must be insured in order to deliver telecom service efficiently. The technologies used for security and data sensitivity are different from those used to secure the transport of energy, requiring additional infrastructure and employees who have a new area of expertise.

Aside from the unique problems that utilities face, they, like other telecom companies, have the challenge of recruiting and retaining qualified professionals. This is an issue throughout the industry due to the lack of qualified telecom technicians, engineers, and executives. This makes labor expensive and can ultimately affect a company's ability to grow.

What do they offer?

Utilities have gotten involved in many different sectors of the telecom industry. While many utilities are taking advantage of their long-haul rights of way and offering wholesale service to carriers for these networks, an increasing number of utilities are concentrating on metropolitan access.

The "last-mile" has become the Holy Grail in the delivery of broadband services. While data speeds across the world in milliseconds, it reaches a bottleneck in the legacy metropolitan networks. The utilities are positioned with the existing right-of-way to relieve the bottleneck. Utilities are the only companies that access every single building. This gives an advantage because even an RBOC may not enter a new building if a CLEC is already there.

Bandwidth Trading, a relatively new concept, is also affecting the telecom businesses of utilities. Utility companies are most heavily involved in bandwidth trading and are in a position to influence how the market will continue. The companies have installed excess bandwidth and are leading the way in commoditizing bandwidth so it can be bought and sold as needed by carriers and large end users.

Strength In Numbers

Strategic partnerships can play a big role in a utility's telecom business whether they are formed with other carriers, application developers, or equipment vendors. The utilities seem to be more aware of the benefits of these partnerships than other telecom companies. This may be due to their history of interconnecting with other carriers to extend beyond their territories. Because most utilities are regional, they have created joint ventures with other carriers in order to integrate their networks and build super-regional or national networks. The strategic partnerships allow the utilities to pass the benefits onto their customers by offering services on a network that they can consider their own.

The telecom subsidiaries can offer similar benefits by pooling their resources. Three examples of such alliances are Aerie Networks (Aerie), America's Fiber Network (AFN), and NoaNet.

Twelve pipeline partners that are using existing rights of way to build out a new fiber network formed Aerie. The Company plans to build a national network that connects 194 metropolitan areas with 20,568 route miles.

AFN is a Tulsa, OK, based Company formed by American Electric Power, GPU, Inc., Allegheny Energy, Inc. and First Energy Group (which will merge with GPU in June 2001), as well as telecommunication firms CFW Communications Co. and R&B Communications. The Company is combining the fiber networks of its member Companies to give them a national footprint. NoaNet is a non-profit corporation leasing dark fiber from Bonneville Power Administration in the Pacific Northwest. NoaNet is a coalition of Public Utility Districts within Washington State and is expanding into Oregon, Idaho, and Montana. The members of NoaNet are nonprofit, community-owned electric and water utilities. The utilities seek to make broadband communications accessible to rural areas in the Pacific Northwest. What lies ahead?

Although utilities have come a long way in the telecom industry in recent years, they still have a long way to go. The utilities are essential to the proliferation of the bandwidth trading industry and possess the fiber capacity needed to meet current demands. The companies are doing a good job in supplying this capacity for long-haul transport, mostly on a wholesale basis, but only a few companies are addressing local access. With last mile connectivity being the Achilles Heel in modern communication networks, it is surprising to see how few utilities are taking advantage of their existing infrastructures to address this market. New technologies coupled with existing infrastructure make it is easier than ever for the utilities to get involved in local telecommunications.

Across the utility telecom companies, including CLECs, long haul transport, carrier's carrier, and wireless providers, revenues reached an estimated \$1.7 billion in 2000. Over the next four years, the number is expected to grow to more than \$4.4 billion by year-end 2004. As demand for telecommunications services increases, the utilities will grow and capture a larger segment of the market.

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