

# Early Entry to Energy-Telecommunications Convergence

By

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The Telecommunications Act of 1996 was enacted with great promise and expectation. Politicians and pundits alike promised that all consumers would receive a plethora of competitive telecommunications and information services. However, for the most part, these promises have yet to become a reality. The principal culprit is the lack of sufficient facilities-based entry into the markets. Without such facilities-based entry, the promised new competitive services can only be provided on the resold leased property of their incumbent provider. Without facilities-based entrants, the economic benefits commonly associated with competition and good market performance, that is, declining prices and additional new services and products, are quite limited. Only so many economic benefits can be squeezed out of existing facilities. Without new facilities, so-called competitive services can be discounted only so far and only so much can be gained from the repackaging of or piggybacking onto existing services.

For the promise and expectations of the Telecommunications Act of 1996 to be realized fully, there needs to be facilities-based competition. Electric-telecommunications convergence could provide such facilities-based competition.

The convergence of telecommunications and energy providers is desirable for several reasons. Where two previously unrelated markets for services or products are brought together through advances in technology, the synergies brought about by the newly available technology can: first, provide for the availability of traditional services at a lower cost; second, add value to traditional services; and, third lead to new products and services that increase consumer value. Examples of reducing the utility's cost of servicing the customer include automatic meter reading, automated billing, remote connection or disconnection, theft and tampering detection, and outage detection and handling. Examples of increasing the value of traditional electric service include providing real time pricing, energy information and education, bill feedback, energy and demand management, energy and customer monitoring, and power quality monitoring. Just a few examples of the new non-energy products and services that could be offered include educational programming, telephone ser-

vice, data and information servicing (including internet access), entertainment service, home and business security and fire protection, videoconferencing, telemedicine, interactive television, and distance learning. Most of these are made possible two-way interactive communications.

Economies of scale also tend to favor, in the long-run, the installation of fiber optic technology for two-way interactive communications. However, there is a high initial cost of fiber optic technology, primarily concerning its installation. As such, fiber optics tends to be installed only where there is sufficient demand to justify the cost of installation. Many electric utilities, however, have already invested in fiber optics for the real-time control and operation of their transmission system. For these electric utilities, the cost of existing fiber optics is already embedded, with zero marginal capital costs. Currently, electric and gas companies own over 600,000 miles of high-capacity fiber-optic cable. Indeed, it was estimated in 1997 that electric utilities already accounted for 12 percent of all telecommunications networks in the United States. Most of this telecommunications capacity is under- or unutilized. According to a 1997 study of the Electric Power Research Institute, electric utilities typically use only about 3 percent of their communications capacity for their own purposes.<sup>1</sup> As one utility executive puts it, "we're sitting on a gold mine." Nor is the fiber optics that runs along the utility transmission system the only potential utility for electric-telephone convergence. In addition, the power line can act as a narrowband medium at relatively low cost, with immediate potential applications, without compression, of remote meter reading, outage detection, real-time pricing, and load control.

So what are the barriers to electric-telecommunications convergence? Section 103 of the Telecommunications Act of 1996 eliminates the federal barrier of entry faced by electric and gas companies entering the telecommunications field. Section 103 permits both

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<sup>1</sup>Electric Power Research Institute, *Powering Progress: The Electricity Technology Roadmap Initiative—Background Report: A Preliminary Vision of Opportunities* (Palo Alto, California: Electric Power Research Institute, 1997), 8.

registered and exempt holding companies under the Public Utility Holding Company Act of 1935 (PUHCA) to provide telecommunications and other information services to the public by means of wholly-owned subsidiaries, each organized exclusively for this purpose and designated an exempt telecommunications company (ETC) by the Federal Communications Commission (FCC).

As such, the ETC holding company exemption provides electric utilities with a major opportunity to diversify their activities into telecommunications services. Further, electric utilities can establish a quick presence in an otherwise unfamiliar market through a merger, joint venture, or a strategic alliance. Such an approach might especially appeal to electric utilities that are facing retail electric competition because they can gain from the marketing experience that a telecommunications firm can offer.

Yet, electric-telecommunications convergence raises legitimate state concerns, the very consideration of which in a deliberative process, can both slow and raise the cost of entry. There are several such issues associated with this; many of them address certification, licensing, and consumer protection. Three issues in particular immediately spring to mind; each are related to a major mission of state regulators: to prevent utilities from subsidizing competitive services by shifting costs to regulated services.

First, there is the classic problem of joint-cost allocation: the problem of mutton and wool. The electric utilities have fiber optics and power lines as a part of their electric transmission and distribution system. They are necessary for its operation. To the extent that the cost of the under- or unutilized fiber optics can be identified and allocated, then one method of allocating costs is through a fully allocated cost of service study. However, any economist worth his or her salt would immediately point out that the capital cost of the fiber optics is already sunk and that the real cost of the fiber is its incremental cost. Others might even contend that the right method of joint-cost allocation would be to look at the replacement cost new of the fiber. Choosing a joint-cost allocation method here is significant. Not only will the state commission determine what portion of the joint costs belong in the competitive and regulated markets, but the method used for the calculation will create costs and delay for the potential electricity-telecommunications convergence entity. The state commission concern, of course, is to be certain that the costs of excess

communications capacity that would be useful for competitive services are not foisted onto the backs of ratepayers of regulated services. However, if a state commission wanted to promote entry of electricity-telecommunications convergence entities, it would tend to favor cost allocation methodologies that are both less burdensome to calculate, and lead to a lower allocation of costs in the competitive market.

Second, there is the issue of affiliate transactions. If an electric utility were to form an entity such as an ETC, what would the ETC charge the electric utility for the use of its communications system? The third issue, alternatively is what would the electric utility charge the ETC for the use of its rights-of-way. State commissions have both a right and duty to make certain that an ETC fairly compensates its electric utility for the use of both its facilities and its rights-of-ways. The temptation for state regulators is to attempt to recapture at least a portion of the economies of scope produced by the revenues of electricity-telephone convergence in order to at least partially offset retail electricity rates.

State public utility commissioners might use the occasion of or the potential for the establishment of an electricity-telecommunications convergence entity (whether an ETC or otherwise) to develop and implement a regulatory framework to promote facilities-based competition in the telecommunications market. To do so, state regulators would need to have available an expedited review procedure or a "rocket docket" for review and approval, including the more difficult problems of cost allocation and affiliate transactions. One suggestion might be to provide for a more generous (incremental-cost-based) joint-cost allocation, with low right-of-way charges, conditioned upon the entity providing its service on a common carrier basis, thus adding an additional facilities-based competitor to the local exchange market, who would in turn open the door to dozens or hundreds of other service providers. By pursuing such a pro-entry, pro-competitive course, state regulators might :

- speed competition along in local telecommunications and information service,
- spur the introduction of new telecommunications and information products and services, and
- provide the technology needed to decrease the cost of providing and increasing the value of electricity

service, without raising the cost of electricity service.

However, if state regulators focus solely on their more traditional mission of preventing and eliminating cross-subsidies, electric utilities will likely continue to merely sit on their gold mine.

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