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**Broadband over Power Line: Key Regulatory Issues for Utilities**

Although legislation in 1996 allowed a holding company to acquire an interest in an “exempt telecommunications company” without the need for SEC approval or the potential for later review, the ETC provision was not without its tradeoffs for utilities. Indeed, the new Section 34 of the Public Utility Holding Company Act provides state public utility commissions with limited authority to oversee the relationship among ETCs, their holding company parents, and their utility affiliates.

This is the second in a series of articles that addresses some of the opportunities and challenges for broadband over power line, or BPL, a group of technologies that allows digital information using Internet Protocol (IP), an open network protocol, to be transmitted over utility power lines. After a long period during which expectations exceeded actual implementations for BPL, the technological and logistical issues are now being resolved. This may enable service to be available in remote areas of the country, and may reduce the cost of service through increased competition in broadband services. Beyond the technical and operational issues that must be considered in the deployment of a BPL platform, myriad legal and regulatory issues must be taken into account in a properly structured BPL program. This series of articles, which is being published over several issues of *The Electri-*
city Journal, is intended to provide a context for the evaluation of these issues and to begin to provide a checklist of areas that should be considered.

The first article, which appeared in the May 2005 issue of the Journal, provided an introduction to broadband, and the acronyms, terms and relationships of various technologies associated with the implementation of BPL and the services that potentially will ride on a BPL platform. The article also provided an overview of some of the key legal issues facing entities that provide services and content riding on a BPL platform.

In this article we provide an overview of the key regulatory issues applicable to BPL beyond the radiofrequency interference issues (RFI) that have been the focus of recent proceedings at the Federal Communications Commission. In those proceedings, the FCC has adopted new technical rules applicable to BPL designed to foster its deployment while addressing RFI concerns of licensed spectrum users. In the final article of this series, tax and related billing and payment administration issues will be discussed, and considerations for structuring and contracting with customers and suppliers will be suggested.

I. Background

Broadband technology continues to be viewed as a critical economic driver. Consumers and businesses are increasingly reliant on widely available, cost-effective broadband networks, particularly broadband access networks providing last-mile connectivity. One conundrum has been, however, that both consumer adoption rates as well as the deployment of ubiquitous, robust, and competitive last-mile broadband networks have been viewed as somewhat lackluster. While there are many explanations for this apparent chicken-and-egg problem – for example, the lack of premium on line content and the lack of legal and technical solutions to online piracy of such digital content – policymakers continue to look for ways of increasing the rollout of competitive broadband access networks and the service improvements and price reductions that such facilities-based competition is expected to bring.

Electric utility provision of broadband, video, or data service is often raised as an additional competitive “pipe” into homes and businesses, and an important part of this policy debate. In the years immediately following the passage of the Telecommunications Act of 1996, numerous utilities sought to “commercialize” their investment in internal wireless and fiber systems through the creation of telecom affiliates, and the continued expansion of these networks.

A number of utilities around the country, both on the investor-owned and municipal side, have also made significant investments in last-mile broadband networks. Historically referred to as “over-builders,” because these local networks were typically limited to a second cable television system in a market that “overbuilt” the plant of the existing cable monopoly, newer local broadband networks built by utility ventures and others since passage of the 1996 Act typically provide bundled offerings comprising multichannel video, high-speed Internet access, and local telephone offerings, known as the “triple play,” which compete with the offerings of both local telephone companies and incumbent cable operators.

The last several years has seen a retrenchment by many utilities in their telecom investments, particularly on the regional fiber side, which has tracked the overall telecom downturn, and a focus on the part of many utilities on their core electric business. That being said, many utilities continue to press forward with their telecom investments. Most recently, there has been a renewed push in the industry and interest among telecom policymakers in BPL as a competitive broadband access technology.
Broadly speaking, powerline carrier technologies allow telecommunications traffic to be transmitted by high-frequency radio waves over a shared electrical power distribution network. The FCC’s recent report and order on BPL signals a renewed federal interest in the technology, particularly as a potential broadband access service.

The BPL Report and Order focused primarily on the technical issues associated with inserting RF signals on power lines, and declined to seek comment on the more traditional regulatory issues that arise when a utility seeks to use its plant for the provision of non-core services. For example, although the 1996 Act liberalized utility entry into telecommunications and broadband markets, there remains a complex patchwork of state and federal oversight affecting affiliate transactions, the sharing of customer information, and antitrust considerations endemic to electric utilities that are implicated by the provision of BPL services over utility lines. Many of these issues have been examined in the context of utility entry into telecom in the post-1996 Act environment, and have implications for utility offerings of BPL services.

II. Issues Relating to a Utility’s Relationship with a BPL Affiliate

A. Public Utility holding Company Act

Prior to the 1996 Act, registered holding companies were generally prohibited under PUHCA from entering telecom markets without prior approval from the Securities and Exchange Commission (SEC), and exempt holding companies faced potential after-the-fact scrutiny of their telecom investments by the SEC. The 1996 Act removed the SEC from the equation by allowing a holding company to acquire an interest in an “exempt telecommunications company” (ETC) without the need for SEC approval or the potential for later review.

The ETC provision was not without its tradeoffs for utilities, and new Section 34 of PUHCA provides state utility commissions with limited authority to oversee the relationship among ETCs, their holding company parents, and their utility affiliates. In the context of BPL services offered by utility holding companies that have formed ETCs, this means that the relationship and transactions between the utility and a telecom affiliate providing BPL services may not be without scrutiny. Section 34 contains several provisions relating to affiliate transactions that are of note:

1. Sale of utility assets to the ETC

Under Section 34(b), a utility may not transfer or sell to an ETC any asset in its rate base as of Dec. 19, 1995, without approval of the state commission having jurisdiction over the utility. This provision had obvious significance for utility ventures in the post-1996 Act that involved the significant commercialization of fiber assets and the transfer of those assets to a telecom affiliate. The provision could also be important in the BPL context, since under PUHCA, asset sales also include, by definition, the lease of assets. This in turn influences how deals involving access to utility facilities are structured. To the extent access to rate-based assets are structured as a license or similar arrangement, rather than a lease, Section 34(b) might not apply.
2. Purchase of products or services by a utility from an affiliated ETC

Under Section 34(i), a utility may acquire products or services from an affiliated ETC only if the state utility commission approves (or waives approval of) the contract. This provision has relevance to BPL services to the extent a BPL affiliate provides any sort of services back to the utility, including, for example, broadband access services for internal utility functions. Under this provision, to the extent a BPL affiliate were an ETC, services provided by that affiliate back to the regulated utility would be subject to state commission approval, unless the state commission waives approval.

3. General regulatory oversight

Finally, under Section 34(j), state commission jurisdiction to generally oversee the relationship between utilities and their ETC affiliates is preserved. In particular, state commission jurisdiction is preserved to determine whether a utility may recover the costs of products or services purchased from or sold to an affiliated ETC in a subsequent rate case.

B. State affiliate transaction provisions

Apart from the federal affiliate transaction scheme adopted as part of PUHCA, which is limited to holding companies and their affiliated ETCs, state utility codes provide state commissions with varying degrees of jurisdiction over affiliate transactions. For example, at one end of the spectrum, the public utility codes of certain states require prior approval of virtually all transactions between utilities and their affiliates. Others, while not providing for the regulation, per se, of affiliate transactions, may consider the propriety of particular transactions as part of later rate-making processes. Even in states appropriately compensated for an additional use being made of electric distribution plant. How to structure and price an affiliate’s access to power lines to provide BPL services should provide much fodder for state commission staffs, consumer counsel, and the utilities themselves, if prior transactions between utilities and their telecom affiliates are any indication.

With regard to services sold back to the utility by the BPL affiliate, regulators may be concerned that potentially inflated prices for such transactions might be used to subsidize the affiliate at the expense of utility ratepayers. One way of addressing this concern is through a requirement that the utility pay the lower of the affiliate’s cost or an estimate of the market price for the service where the affiliate operates in a competitive market. Some states have realized that capping the rate for such sales at the market price (what is charged to third parties) provides adequate protection to utility ratepayers.

While not a perfect analogy to a BPL affiliate’s license to use power lines, utility sale or lease of fiber to telecom affiliates provide a useful jumping off point for thinking about these issues. The goal of this exercise is to structure a deal between the utility and the affiliate that closely mimics an arms-length transaction in a competitive market. In such situations, state commissions have required that existing fiber be transferred at the higher of...
book cost or an estimate of market value. State commissions reason that if the utility were to sell at market prices in instances in which market price is below cost, the utility would take a loss on the sale on which the affiliate would then earn positive returns. While state commissions may insist on hearings with experts to value the fiber, commissions have also approved transactions relying on an independent appraisal as a proxy for market value of the fiber, combined with a package back to the utility, which might include either capacity, discounted services, or a use fee to the utility in the form of a percentage of revenue from sales to third parties over the facilities. 12

C. Customer information and use of utility intellectual property

A broadband affiliate’s access to utility customer information is an obvious benefit to marketing BPL service. The flow of proprietary customer information between utilities and their affiliates, however, is also regulated by the states. Such customer proprietary information includes the customer’s name, address, and telephone number, the customer’s utility usage, and the customer’s payment history. Sharing of this information generally is covered by affiliate rules or codes of conduct. Generally, such customer information rules state that utilities can share information with their affiliates, but must also make such shared information available to competing providers, as well. 13 These affiliate rules tend not to address telecommunications affiliates directly. Broad affiliate rules, on the other hand, may capture telecommunications affiliates, although some states differentiate between energy and non-energy affiliates. Some states require written customer consent, which may merely involve confirmation that the customer has not “opted out” of information sharing. 14 A separate issue is the extent to which the BPL service may be branded with the utility name and logo. Most states permit affiliates to use the utility’s name and logo for marketing purposes. In such instances, however, states may impose limitations or require a specific disclaimer regarding the relationship between the parties. 15

III. Telecom Regulatory and Antitrust Issues

There are a number of different ways that BPL services can be deployed that have implications for the regulatory treatment of the offering from a telecom regulatory perspective, as well as raise antitrust considerations. BPL is fundamentally a broadband access technology used to provide high-speed connectivity from a customer’s premises to a local IP network, which aggregates local broadband traffic and hands it off to the public Internet. On one level this access service can be wholesaled to Internet service providers (ISPs), which would essentially interconnect a local managed IP network with the BPL broadband access service. Alternatively, the utility itself could deploy its own local IP network, and provide a bundled high-speed/ISP offering to endusers. The telecom regulatory treatment of these different offerings is presently uncertain and in a state of flux. In telecom parlance, there are three basic categories of service under the Communications Act—“telecommunications,” “telecommunications services,” and “information services.” “Telecommunications” is defined as communication between two points designated by the user of content chosen by the user, without a change in its form or content, and is a generic reference to internal and private networks and well as common carrier services. 16 “Telecommunications service” is the offering of telecommunications to the public, 17 which the FCC and courts have held is tantamount to the offering of basic common carrier services. 18 In contrast, “information services” are unregulated offer-
ings that combine telecommunications with data manipulation, retrieval, or other types of advanced functionality.\textsuperscript{19} The FCC has said that the bundled offering of Internet access with ISP services is an information service.\textsuperscript{20} At present, both retail DSL offerings and cable modem service to end users that are bundled with ISP services are treated as interstate information services,\textsuperscript{21} and it would be expected that the provision of bundled Internet access services over BPL to end users would likewise be treated as an unregulated information service.

What gets tricky is whether a utility providing a BPL service would be required to provide an unbundled wholesale offering to third-party ISPs, referred to in the industry as “open access.” Currently, given the FCC’s conclusion that cable modem service is an information service, cable operators have not been required to wholesale their cable modem service directly to third-party ISPs. However, the Ninth Circuit U.S. Court of appeals, in a case that has been argued before the Supreme Court and is awaiting decision, has determined that the underlying transmission component of cable modem service should be regulated as a telecommunications service and offered on a stand-alone basis to ISPs on a common carrier basis.\textsuperscript{22}

The FCC has also found that wholesale DSL offerings by telephone companies to third-party ISPs (who bundle the broadband service with ISP services), are interstate access services—a telecommunications service regulated on a common carrier basis.\textsuperscript{23} It is relatively clear that BPL providers could offer wholesale broadband access services wholesale to ISPs on a common carrier basis. What remains uncertain from a regulatory standpoint is whether they ultimately may be required to do so to the extent a utility decided to provide a bundled offering and not deal with third-party ISPs.

Utilities should also be free to use BPL to provide voice telephony using Voice over Internet Protocol (VoIP), without being subject to traditional common carrier regulation.\textsuperscript{24} The offering of VoIP services over BPL would be a powerful combination of services from a consumer perspective, combining billing, customer relationship, and other efficiencies with respect to electrical, telephone, and information services, and is a relatively low-cost strategy for utility entry into the voice telephone market.

The FCC has found that VoIP is an interstate service, and hence a utility’s offering of VoIP over BPL would not be subject to entry and rate regulation by state commissions.\textsuperscript{25} The FCC has also authorized VoIP providers directly to obtain telephone numbers to assign to their customers, rather than obtain numbers through third-party telecommunications carriers.

The ultimate regulatory treatment of VoIP and the application to VoIP of particular obligations applicable to telephone companies, such as universal service contributions, the payment of charges to connecting carriers, and 911 obligations, however, remain under consideration at the FCC.\textsuperscript{26} In particular, the ability of VoIP providers to complete emergency 911 calls that identify the customer’s location has been the subject of some controversy, and the FCC is commencing a separate rulemaking proceeding to address this issue.\textsuperscript{27}

In addition, telecommunications providers, under the Communications Assistance for Law Enforcement Act (CALEA),\textsuperscript{28} are required to ensure that their networks have the capability to provide access to law enforcement for wiretapping and electronic surveillance. The FCC has tentatively concluded, in an ongoing rulemaking proceeding, that operators of broadband access networks, such as BPL, as well as providers of managed VoIP services, must ensure that their networks are CALEA-compliant.\textsuperscript{29}
There also may be antitrust issues relevant to the provision of BPL-based services that should be considered. These include the extent to which a utility may refuse to provide access to its distribution facilities to a third-party BPL provider, and whether a BPL affiliate of a utility may refuse to deal with third-party ISPs and exclusively offer bundled broadband access/ISP services. On the former question, there are both technical and business reasons why it would be reasonable for utility to decline to provide access to third-party BPL providers, and competitive broadband access providers also remain free to deploy their own facilities, in any event. On the latter question, in most markets there are multiple sources of broadband access, including DSL and cable modem services. We also note that major cable operators, which had approximately 75 percent of the broadband access market on a national basis as of December 2003, for the most part do not provide “open access” to their networks to third-party ISPs.

IV. Local Requirements

As a final matter, there remains a question as to what approvals and additional payments local governmental entities might seek in connection with the provision of BPL services. BPL rides on existing utility facilities that are located in public rights-of-way, and requires additional attachments to utility poles. The question is whether local governments will charge utilities or their BPL affiliates for any additional, limited use of the public rights-of-way, or attempt to use this supplemental use of the rights-of-way as a basis to impose any sort of broader regulation or charges on BPL services.

A BPL affiliate’s license to use power lines to provide broadband access might be analogous to a wireless carrier’s acquisition of backhaul capacity from a telecom carrier in order to provide wireless services, which courts have held did not constitute use of local right-of-way by the wireless carrier that would give rise to a franchising or permitting requirement by the city. Here, unlike the wireless backhaul cases, a BPL affiliate’s physical access to poles and right-of-way, albeit limited, may give cities a hook.

Local jurisdictions, for example, have charged wireless providers for attachments to utility poles located in public rights-of-way, and may seek to charge utilities for incidental attachments associated with the provision of BPL. Telecommunications carriers have used Section 253 of the Communications Act to challenge unreasonable rights-of-way practices. That provision prohibits local governmental laws and regulations that prohibit or have the effect of prohibiting the provision of telecommunications services, including unreasonable rights-of-way access practices and fees. That provision, however, would not be available to BPL providers to challenge unreasonable rights-of-way fees, to the extent BPL services are not telecommunications services provided on a common carrier basis.

Endnotes:

1. See Report and Order, Amendment of Part 15 Regarding New Requirements and Measurement Guidelines for Access Broadband over Power Line Systems; Carrier Current Systems, including Broadband over Power Line Systems, 19 FCC Rcd 21265 (2004), reconsideration pending (“BPL Report and Order”). RFI issues arise from BPL operation because electric power lines are not shielded. As a result, portions of any RF energy they may carry can be radiated, causing interference to licensed users operating on the same frequency bands as those on which BPL signals are transmitted. Id., ¶ 7.


3. The 1996 Act sought to remove barriers to entry among different segments of the industry and eliminate unnecessary and outmoded regulation. With respect to utilities, the 1996 Act eliminated the Public Utility Holding Company Act (or PUHCA) as...
an impediment to entry by utility holding companies into the nation’s telecom and related markets, allowing public utility holding companies, for the first time, easily to enter the nation’s communications markets. See Pub. L. No. 104-104, 110 Stat. 56, 81, § 103 (codified at 15 U.S.C. § 79z-5c (1996)). Previously, PUHCA significantly limited the ability of utility holding companies to enter into non-core businesses, including the provision of telecommunications and related services. The 1996 Act removed PUHCA as a barrier to holding company entry into telecommunication markets by allowing holding companies to acquire an interest in an “exempt telecommunications company” (ETC). A search of the Lexis FCC database indicates that the FCC has acted on well over 100 ETC-related applications since passage of the 1996 Act. For a list of FCC ETC-related actions since 1999, see Exempt Telecommunications Company (ETC) and associated links, available at http://www.fcc.gov/wcb/cpd/other_adjud/Archive/99etc.html.


5. As the FCC observed in its BPL Report and Order (at ¶ 1):

[BPL] offers the potential for the establishment of a significant new medium for extending broadband access to American homes and businesses. Given that power lines reach virtually every residence and business in every community and geographic area in this country, Access BPL service could be made available nearly everywhere. This new broadband delivery medium could also serve to introduce additional competition to existing cable, DSL, and other broadband services.

6. The ETC concept is broadly defined as any entity that is determined to be, upon application to the FCC, exclusively engaged in telecommunications services, information services and related activities. See PUHCA, Section 34(a)(1), 15 U.S.C. § 79z-5c(a)(1).


9. 15 U.S.C. § 79z-5c(j). In addition, state commissions have certain examination and audit rights with respect to the books and records of utilities and their affiliated ETCs. 15 U.S.C. § 79z-5c(l).


12. Id., 20–23.

13. See, e.g., CODE ARK. R. 126-03-017-2.02; ILL. ADMIN. CODE tit. 83, § 450.70.


18. See Matter of AT&T Submarine Systems, 13 FCC Rcd 21585, ¶ 6 n.12 (1998), review den., 198 F.3d 921 (D.C. Cir. 1999) (“The 1996 Act indicates that the definition of telecommunications services is intended to clarify that telecommunications services are common carrier services.”).

19. The Communications Act defines information service as the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications. 47 U.S.C. § 153(20).


22. See Brand X Internet Servs. v. FCC, 345 F.3d 1120 (9th Cir. 2003), cert. granted, 125 S. Ct. 655 (2004).


24. Voice over Internet Protocol (VoIP) services is an application that uses Internet protocol to provide voice transmission. VoIP calls are originated on an IP network, and after riding the Internet, are typically terminated on the public switched telephone network. VoIP has become a mass...
market offering that, while at its early stages, is increasingly competitive with traditional telephone service.


27. See Texas Office of the Attorney General, Press Release, Texas Attorney General Abbott Takes Legal Action to Protect Internet Phone Customers, Mar. 22, 2005 (announcing lawsuit against Vonage Communications, country’s largest VoIP provider, for failing to make clear to consumers that the company’s current service does not include access to traditional emergency 911 service), available at http://www.oag.state.tx.us/oagnews/release.php?id=850; Michigan Office of the Attorney General, Press Release, Cox Takes Action Against Vonage to Protect Internet Phone Customers, Apr. 29, 2005 (reporting that Vonage faces legal action for misleading consumers about the company’s emergency 911 service), available at http://www.michigan.gov/ag/0,1607,7-164-34739-116865--00.html; Communications Daily, Apr. 28, 2005 (reporting that FCC Chairman Martin testified at House Appropriations Subcommittee hearing that he directed FCC staff to accelerate timeframe for developing proposed regulations to make VoIP compliant with 911 service).

28. 47 USC § 1001, et seq.


34. See Quest v. City of Berkeley, 146 F. Supp. 2d 1081, 1094-95 (D. Cal. 2001) (Section 253 applies only to the activities of common carriers).

Clarification:

Moynihan’s Many Fine Sentiments Did Not Include This One

Recent contributor Wayne P. Olson writes:

In the hurly-burly of revising proofs, a quotation in my paper, Secrecy and Utility Regulation (May ’05), was attributed to Sen. Patrick Moynihan rather than to Tom Welch, former chairman of the Maine Public Utilities Commission, in his book, Reinventing Electric Utility Regulation (Vienna, VA: PUR, 1995). Now, having his words credited to a distinguished policymaker, ambassador, academic, and author may not necessarily be a bad thing. But, to give credit where credit is due—and in the interest of accuracy and completeness—an expanded quotation and citation is provided below.

[regulators are creations of their legislatures, and should therefore resist the temptation to identify themselves as the makers—as distinct from the implementers—of public policy. There is, nevertheless, such a broad area of discretion within which regulators have a free hand with respect to public policy that it would be foolish and disingenuous to pretend that public utility regulators are not integral to the process of government in the broad—and not merely the narrow—sense. Regulators have traditionally walked, and must continue to walk, the fine line between pandering to public opinion and recognizing that decisions that lack broad public support (at least of the process by which those decisions were reached) are ultimately unsustainable.

It is (perhaps) not inappropriate, at this juncture, to note that Chairman Welch did an exceptional job, during his tenure in Maine, in following this advice. Actions speak louder than words.