

*Crafting an Appropriate Regulatory Framework  
for Broadband Over Powerline Systems*

Remarks by Commissioner Kathleen Q. Abernathy  
D.C. Bar Panel Discussion  
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Thank you for inviting me to participate in today's panel discussion on broadband over powerline, or BPL, systems. I am especially pleased to join my federal and state colleagues — in fact, Nora Brownell and I have done this before on two occasions at NARUC meetings, so I hope we're getting the routine down.

I want to leave plenty of time for questions, but I thought it would be helpful if I spent a few minutes describing my outlook on the appropriate regulatory framework for BPL, including the respective roles for federal and state regulators.

As a regulator, I have a strong interest in BPL technology for a number of reasons. One of my central objectives as an FCC commissioner is to facilitate the deployment of broadband services to all Americans. I also fundamentally believe that the FCC can best promote consumer welfare by relying on market forces, rather than heavy-handed regulation. The development of BPL networks has the potential to serve both of these key goals. It can bring broadband to previously unserved communities, and the introduction of a new broadband pipeline into the home would foster the kind of competitive marketplace that will eventually enable the Commission to let go of the regulatory reins.

Consumers should have a choice of multiple, facilities-based providers, including not only cable and DSL, but also, to the extent possible, BPL, wireless, and satellite services. It will

take time before these newer platforms compete on a broad scale, but the continuing development of BPL technology is clearly a step in the right direction.

Before I talk about my policy views, let me provide a little background on how BPL systems work. You'll have to cut me some slack, because I am not an engineer, but here goes.

BPL uses existing electrical power lines as a transmission medium to convey information by coupling radio frequency (RF) energy onto the power line. Historically, various unlicensed devices have used carrier current techniques to couple RF energy to the AC electrical wiring for the purpose of communication. Until recently, however, such devices have operated with relatively limited communications capability on frequencies below 2 MHz. The availability of faster chip sets and the development of sophisticated modulation techniques have produced new digital BPL designs that operate over a wide frequency range — up to 80 MHz, for example — and are capable of high data rates.

*Access BPL* is used to bring Internet and other broadband applications to the home. *In-House BPL* is used to network computers and printers, as well as smart appliances, within the home. Given that Access BPL can be made available in conjunction with the delivery of electric power, it may provide an effective means for “last-mile” delivery of broadband services and may offer a competitive alternative to DSL, cable modem services and other high-speed broadband technologies. In-House BPL offers similar functionality to Wi-Fi and Ethernet systems.

When it comes to the appropriate regulatory framework, my views reflect my general preference for avoiding heavy-handed regulation of broadband technologies. It is tempting for regulators to take every new technology or service that comes along and apply the same rules that govern more traditional services, such as the voice and data services provided by local telephone companies. After all, regulatory parity and a level playing field are intuitively

appealing concepts. But I believe that it would be a big mistake to carry forward legacy regulations whenever new technology platforms are established. Many of our regulations are premised on the *absence* of competition, and when that rationale is eroded, we must not reflexively hold on to regulations that no longer serve their intended purpose. In fact, many of our old rules not only become unnecessary as markets evolve, but they can be fatal to new services that need room to breathe. This is especially true in the nascent broadband marketplace, where companies exploiting BPL technology are undoubtedly new entrants, even if they enjoy market power in the transmission or distribution of electrical power.

This policy of restraint is something I have described as the Nascent Services Doctrine. By avoiding the imposition of anachronistic regulations, regulators can best allow new technologies and services to flourish. Once facilities-based competition has taken root, regulators can begin to dismantle legacy regulatory regimes, rather than extend those regimes to include the new platforms. In essence, short-term regulatory disparities are tolerated to generate the long-term consumer benefits associated with facilities-based competition.

Regulatory restraint is a necessary part of fostering such competition, because there is little doubt that overregulation can do substantial damage to nascent technologies and platforms. Companies take enormous risks when they invest heavily in communications networks — particularly broadband networks that must compete with more entrenched competitors. To avoid creating additional disincentives to invest — beyond those risks that are inherent in the marketplace — we must resist the reflexive tendency to apply legacy regulations to new platforms.

A policy of regulatory restraint does not mean an absence of all regulatory oversight. I have always emphasized that there are core functions that regulators must continue to play, even

where market power is absent. Most importantly in this context, the FCC must ensure that BPL does not cause harmful interference to licensed spectrum users, such as amateur radio operators or governmental entities that operate in adjacent spectrum bands. In addition, where a service provider has market power in providing a different service — as many electric utilities do with respect to the provision of electricity — regulators have a legitimate interest in preventing cross-subsidization or related conduct that could harm competition and consumers.

Because this latter concern is one that will be addressed primarily by FERC, I will focus on the prevention of interference — which has been the FCC’s primary interest from a rulemaking standpoint.

I have been pleased that our rulemaking proceeding has been limited to the technical interference issues, rather than attempting to establish economic regulations concerning price, service quality, entry, or related issues. And while the matter continues to spark some controversy, I have been satisfied that the Commission has adopted an effective framework to allow BPL to be deployed without causing harmful interference.

Specifically, last October, after working closely with FERC and NTIA, the FCC adopted rules that require Access BPL devices to have the capability to “notch” — which means the capability to avoid using particular frequencies. Access BPL devices also must be capable of being shut down remotely. We designated certain frequency bands that BPL devices must avoid altogether, and we also identified frequencies that operators must avoid in areas that are close to Coast Guard stations and radio astronomy stations. In addition, our order established a consultation process for public safety users, created a publicly available notification database, and improved our procedures for measuring carrier current emissions.

Now that the FCC has adopted formal rules, a remaining question is what role state regulators should play. I very much appreciate the work of NARUC's task force on BPL deployment, and I am encouraged that the report that was just released generally calls for a light-handed regulatory touch. I thought that the task force was on the mark in identifying right-of-way management, pole attachment issues, and critical infrastructure protection as appropriate for state regulators to consider. These and related issues strike me as primarily local in nature. While the FCC and FERC can issue federal guidelines on, say, right-of-way management, there is little doubt that such issues will require significant attention by state and local officials. In related contexts, such as the regulation of VOIP, I have also noted that state attorneys general have broad power to enforce generally applicable consumer protection laws, such as statutes that bar unfair and deceptive trade practices.

While states clearly have an important role to play, I believe that there are definitely some limits to the kinds of issues that should be addressed on a state-by-state basis. For example, I do not believe that individual states should decide whether BPL services are information services or telecommunications services, or whether economic regulations such as open-access requirements will apply to BPL services. These threshold issues, in my view, need to be resolved at a national level. As the FCC unanimously recognized in its order preempting state regulation of VOIP services, as well as in our wireline and cable broadband proceedings, broadband networks and services are being deployed on a regional and national basis. Subjecting these services to a patchwork of potentially inconsistent state rules threatens to chill investment and innovation substantially. State regulators should have significant input into the FCC's rulemaking processes, and to that end, the FCC recently appointed new members to the Joint Conference on Advanced Services. Ultimately, however, I believe the nation will need

consistent and uniform answers regarding the service classification and the fundamental question of whether economic regulations will be imposed. The NARUC task force did not appear to take a definitive position on the appropriateness of having individual states apply common carrier-type regulations apply to BPL services, but some passages suggest an openness to state-by-state resolution of such matters. I hope that state commissions will focus on right-of-way management, pole attachments, and the other matters I identified earlier, rather than attempting to craft burdensome regulatory frameworks that could severely impede broadband deployment.

### **Conclusion**

In sum, while the FCC has a legitimate interest in regulating new technologies like BPL to prevent harmful interference, we should employ regulation narrowly. Unless and until BPL becomes established in the marketplace, there is no reason for federal or state regulators to consider imposing regulations designed for monopoly providers.

Thank you, and I look forward to discussing these issues and answering questions from our audience.