

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of

Review of the Section 251 Unbundling
Obligations Of Incumbent Local
Exchange Carriers

CC Docket No. 01-338

Implementation of the Local
Competition Provisions of the
Telecommunications Act of 1996

CC Docket No. 96-98

Deployment of Wireline Services
Offering Advanced Services Capability

CC Docket No. 98-147

REPLY COMMENTS OF CORNING, INC.

Timothy J. Regan
Senior Vice President
Government Affairs
CORNING, INC.
1350 I St., N.W.
Suite 500
Washington, D.C. 20005
(202) 682-3140

Gregory J. Vogt
Joshua S. Turner
WILEY REIN & FIELDING, LLP
1776 K St., N.W.
Washington, D.C. 20006
(202) 719-7000

Its Attorneys

July 17, 2002

Summary

As Corning showed in its initial comments, large scale deployment of fiber to the home technology offers a great deal of promise to the American consumer, industry generally, and the telecommunications sector specifically. Fiber to the home provides transmission capacity far in excess of other widely available “broadband” technologies, uniquely meets the Section 706 definition of “advanced services,” and in new build and overlay situations is available at prices comparable to traditional (and far less capable) copper infrastructure.

Despite these advantages, ILEC deployment of fiber to the home is lagging. In a report commissioned by Corning, Cambridge Strategic Management Group (“CSMG”) found that the existence of mandatory unbundling creates substantial regulatory drag on ILEC incentives to build out fiber to the home overlays, making ILEC overlays unprofitable in 80 percent of the situations where they would otherwise make economic sense. CSMG also determined that, far from being “impaired” in their ability to offer fiber to the home service, CLECs face no cost disadvantage in deploying fiber to the home when compared with ILECs, and indeed have forged far ahead in the number of houses passed by fiber.

In the initial round of this proceeding, CLEC commenters attempted to lump fiber to the home in with all other ILEC services, in order to gain through regulation as large a competitive advantage as possible. However, none of these commenters presented *any* evidence that refutes the findings contained in the CSMG study. Instead, the comments contain general assertions about supposed CLEC barriers and purported ILEC advantages that do not stand up to even minimal scrutiny. Both ILECs and CLECs are new entrants in the fiber to the home market; as a brand new sector, there simply are no “incumbents” in fiber to the home offerings. As a result,

both ILECs and CLECs must address challenges such as how to aggregate demand to make specific build-outs profitable, and how to generate the capital necessary to build out new systems. Further, the existence of an ILEC legacy network is essentially irrelevant to the deployment of new fiber technology, and provides the ILEC with no cost advantages when compared to CLECs.

The recent decision in *USTA v. FCC* calls into question the breadth of the factors used by the Commission in the *UNE Remand Order*, and strengthens the case against regulation of fiber to the home. There, the court found that the Commission had not properly considered the competitive nature of broadband services (a category that includes fiber to the home), and indeed in other proceedings had emphasized the level of competition in this sector.

Moreover, Corning has shown that even under the FCC's standards articulated in the *UNE Remand Order*, fiber to the home does not meet the requirements for the imposition of mandatory unbundling. CLECs have access to the same technology at the same (or lower) costs than ILECs; this parity ensures that ILECs possess no advantages in cost, timeliness, quality, ubiquity of service, or any other operational factors. Both CLECs and ILECs begin from the same starting point when it comes to fiber to the home deployment. In addition, the CSMG study provides the kind of "precise assessment" of the disincentive effects of regulation that the court in *USTA v. FCC* held would be ideal for the Commission to consider when studying the costs and benefits of unbundling. Because no impairment can be shown, the FCC cannot continue to impose mandatory unbundling on fiber to the home.

The Commission should also be wary of promoting "artificial" competition based on regulatory arbitrage at the expense of real facilities investment. In those limited areas where

ILECs have deployed fiber to the home facilities and unbundling rules could conceivably create competition, any new entry will be transient and last only as long as regulations continue to favor it. However, such entry will have the effect of driving out those firms who actually could craft a legitimate, long-term business model based on lasting facilities deployment.

Finally, in order to ensure that uneven state regulation will not establish further barriers to fiber to the home deployment, the Commission should not wait for state action to remove fiber to the home from the list of unbundled network elements (“UNEs”). Instead, the agency should explicitly indicate that fiber to the home does not meet the “necessary” or “impair” tests, and that states are therefore prohibited from adding fiber to the home to their own lists of UNEs.

Table of Contents

I.	Introduction.....	1
II.	ILECs Possess No Inherent Advantages In FTTH Deployment	4
A.	Fiber To The Home Requires An Entirely New Network	4
B.	Infrastructure Challenges Are The Same For ILECs And CLECs.....	8
1.	Aggregation of Demand	8
2.	Access To Poles And Conduits.....	9
3.	Access to Capital	11
4.	The Actual Deployment Figures Speak For Themselves	12
III.	Fiber To The Home Does Not Meet The Requirements For Unbundling	13
A.	The Recent D.C. Circuit Decision Eliminates Fiber To The Home Facilities From The List of Potential UNEs	14
B.	In Any Event, Fiber To The Home Does Not Satisfy The Necessary And Impair Standards As These Were Previously Articulated	15
1.	Cost	17
2.	Timeliness	18
3.	Quality	18
4.	Ubiquity	19
5.	Operational Factors.....	19
C.	The FCC Cannot Order Unbundling In The Absence Of Impairment	19
D.	The CSMG Report Provides A “Precise Assessment” Of The Disincentive Effects Of Mandatory Unbundling.....	22
E.	The Act Is Intended To Encourage Facilities-Based Competition.....	23
IV.	The FCC Should Ensure Uniform National Rules On Fiber To The Home.....	24
A.	Delisting Of Fiber To The Home Should Proceed Without State Involvement	25
B.	States Should Not Be Permitted To Add Fiber To The Home To Their UNE Lists	26
V.	Conclusion.....	27

I. Introduction

Pursuant to Section 1.415 of the Commission's Rules,¹ Corning, Inc. ("Corning") hereby submits the following replies to comments filed in response to the Commission's above-referenced Notice of Proposed Rulemaking.

As the Commission is well aware, the telecommunications industry is in a serious state of investment decline. Over 500,000 people have lost their jobs, over 63 firms have gone bankrupt, and over half a trillion dollars in investments have evaporated.² The Commission can reverse these negative trends by taking *expeditious action* in this proceeding, such as that proposed by Corning in its comments, to stimulate telecommunications investment.

As with its initial comments, Corning restricts its replies to the importance of eliminating the unbundling obligations on fiber to the home. Corning's position as the largest U.S. producer of optical fiber, optical cable, and photonic components gives it a unique level of experience with this issue, and Corning believes that it is with respect to this topic that its comments can be most helpful to the Commission.

In the initial comment round, Corning outlined the benefits inherent in deploying fiber to the home.³ Corning's comments showed that fiber provides unmatched bandwidth capabilities,

¹ 47 CFR § 1.415.

² Peter S. Goodman, *Telecom Sector May Find Past In Its Future*, Washington Post, July 7, 2002, at A1.

³ Comments of Corning, Inc., *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Services Capability*, CC Docket No. 01-338, at 10, 16 (filed April 5, 2002) ("Corning").

and is capable of offering services that more common “broadband” technologies cannot.⁴ Indeed, fiber to the home is uniquely able to meet the true statutory definition of “advanced services” (and the accompanying mandate to ensure reasonable and timely deployment) under Section 706 of the Communications Act.⁵ Corning also showed that fiber to the home can be deployed today for costs comparable to other technologies,⁶ and supplied a study conducted by CSMG using real-world pricing and demand data that demonstrated the pernicious effect unbundling rules are having on build-out of fiber to the home.⁷ CSMG concluded that mandatory unbundling makes it uneconomic to overbuild fiber in 84 percent of the situations where ILECs otherwise would have an incentive to do so.⁸

A number of commenters in the initial round urge the FCC to retain unbundling rules on as broad a cross-section of network elements as possible. In doing so, many of these commenters roll their discussion of fiber to the home in with other network elements. Because of the unique nature of the investment associated with fiber to the home, this technique is unavailing. As Corning illustrated in its initial comments, and reiterates in more detail below, fiber to the home infrastructure shares very few or no components with traditional legacy networks. As a result, ILECs and CLECs are both starting from scratch in the deployment of

⁴ *Id.* at 11-13.

⁵ *Id.*

⁶ *Id.* at 13-15.

⁷ See, generally, Cambridge Strategic Management Group, *Assessing the Impact of Regulation on Deployment of Fiber to the Home: A Comparative Business Case Analysis* (April 5, 2002), attached as Attachment A to *Corning* (“CSMG Study”).

⁸ *Id.* at 30. The study concludes that fiber to the home would be economically feasible in wire centers serving 31 percent of the households in a “free market” scenario versus 5 percent in a “regulated” scenario. The decline from 31 percent to 5 percent represents an 84 percent drop.

fiber to the home facilities. Indeed, the CSMG study notes that ILECs are at a marked disadvantage in the deployment of fiber to the home due to the regulatory costs imposed by mandatory unbundling.⁹ This is borne out by the fact that CLECs are far ahead of ILECs in actual deployment of fiber to the home; CLEC fiber to the home facilities pass 26,000 homes, compared to only a few hundred passed by the ILECs.¹⁰ A number of companies, including Paceon and Pirelli, have already submitted reply comments in support of the conclusions reached by the CSMG study and the position advocated by Corning.¹¹

As Corning and CSMG have shown, continued regulation is not necessary to ensure CLEC access to fiber facilities. Indeed, no action by the Commission can give CLECs access to that which does not exist. The regulatory drag of mandatory unbundling requirements prevents ILECs from economically building out fiber to the home facilities. At the same time, by

⁹ *Id.* at 14.

¹⁰ *Id.* at 51.

¹¹ Reply Comments of Paceon Corporation, *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Services Capability*, CC Docket No. 01-338, (filed June 14, 2002); Reply Comments of Pirelli Communications Cables and Systems North America, *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Services Capability*, CC Docket No. 01-338, (filed May 30, 2002); Reply Comments of Atlantic Engineering Group, *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Services Capability*, CC Docket No. 01-338, (filed June 18, 2002); Reply Comments of Intertainer, Inc., *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Services Capability*, CC Docket No. 01-338, (filed May 22, 2002); Reply Comments of Zero dB, *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Services Capability*, CC Docket No. 01-338, (filed June 5, 2002).

promising eventual low-cost access to ILEC facilities, these regulations destroy CLEC incentives to take the economic risk of building out their own facilities, and only hinder, rather than advance, future deployment of fiber to the home.

II. ILECs Possess No Inherent Advantages In FTTH Deployment

AT&T, WorldCom, and a number of other CLEC commenters urge the Commission to view fiber to the home as an area dominated by the ILECs. However, as the data and comments submitted by Corning demonstrate, ILECs possess no systemic advantages in building out fiber to the home, and in fact those ILECs subject to unbundling lag far behind CLECs and other carriers in deployment of this important new technology. Fiber to the home requires an entirely new network, which obviates any ILEC ability to leverage existing plant. Moreover, while commenters identify challenges to rapid fiber to the home deployment, these issues are not unique to CLECs, and must be dealt with by ILECs, as well.

A. Fiber To The Home Requires An Entirely New Network

AT&T contends that when ILECs construct “fiber to the curb” facilities, they merely “extend the fiber from the existing remote terminals closer to customers’ homes” and “only replac[e] part of an existing loop.”¹² This allows ILECs to “rely on...existing economies of scale, scope and density, which no competitor can match.”¹³ WorldCom makes a similar

¹² Comments of AT&T Corp., *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Services Capability*, CC Docket No. 01-338, at 116-117 (filed April 5, 2002) (“AT&T”).

¹³ *Id.* at 116.

argument about the power of ILECs to leverage economies of scale.¹⁴ However, these commenters too easily brush aside the major differences between fiber to the home facilities and legacy systems. As Corning illustrated in its comments, a fiber to the home network shares few, if any, components with the legacy infrastructure ubiquitous in ILEC territories.¹⁵ Deploying true fiber to the home requires the installation of new network plant (and an entirely different network architecture) from the central office to the customer's home.¹⁶ While ILECs have deployed some fiber feeder facilities, this deployment is nowhere near extensive or deep enough to make fiber to the home an incremental addition to the ILECs' networks. The simple fact is, most of the remote terminals or digital loop carriers are not served by a sufficient number of fibers to feed fiber to the home architectures. Moreover, as a matter of network design, ILECs prefer to locate the active opto-electronics associated with fiber to the home in the central office which is hardened and where the equipment is more easily accessible. Copper telephone plant remains the overwhelming constituent technology in ILEC networks, and this plant has no more relevance to the deployment of fiber to the home than do telegraph wires.

Because of the fundamental differences in facilities and equipment between existing ILEC plant and fiber to the home, there is no merit to the contention that ILECs are uniquely able to leverage economies of scale. ILECs have no purchasing advantage when it comes to fiber-specific plant; for a given deployment area, an ILEC will purchase exactly as much fiber

¹⁴ Comments of WorldCom, Inc., *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Services Capability*, CC Docket No. 01-338, at 99-100 (filed April 5, 2002) (“WorldCom”).

¹⁵ *Corning* at 19.

¹⁶ *Id.*

and associated equipment as will a CLEC, and is unlikely to receive any special pricing advantages as a result. Indeed, it is possible that CLECs like AT&T and Comcast, as major purchasers of hybrid fiber coaxial equipment for their cable television systems, may have greater economies of scale in the purchase of certain fiber-related equipment than would any of the ILECs. WorldCom and other interexchange carriers have also spent large amounts of human and capital resources on the purchase and installation of long-haul fiber capabilities, experience that could potentially be leveraged in future build-outs of local fiber to the home systems.

Even if ILECs do enjoy economy of scale advantages with respect to certain, limited components, this is neither unfair nor unreasonable. As the D.C. Circuit recently held, “average unit costs are necessarily higher at the outset for any new entrant into virtually any business.”¹⁷ None of the commenters in this proceeding can show that such cost advantages, if they exist, cover “*the entire extent of the market*”; without such a link, the court found that cost disparities by themselves were insufficient to justify mandatory unbundling.¹⁸

AT&T further argues that ILECs gain an advantage in the deployment of fiber to the home because monopoly revenues from “their captive customer base” allows them “to raise capital for building local networks.”¹⁹ This argument is irrelevant to the “necessary” and “impair” analyses that Congress directed the Commission use in determining whether a network element should be unbundled.²⁰ As Corning demonstrated in its initial comments, excluding

¹⁷ *United States Telecom Association v. FCC*, 290 F.3d 415, 427 (D.C. Cir. 2002) (“*USTA*”).

¹⁸ *Id.* at 427 (emphasis in original).

¹⁹ *AT&T* at 117.

²⁰ 47 USC § 251(d)(2).

fiber to the home from the unbundling rules would not “materially diminish” the ability of a CLEC to provide fiber service,²¹ because CLECs can self-provision fiber to the home. CLECs and ILECs must purchase the same equipment and perform the same construction tasks in order to deploy fiber to the home, and CLECs face no pricing disadvantages for either labor or materials (indeed, CLECs may benefit from lower labor costs than ILECs).²² As a result, CLECs would not be “impaired” in offering fiber to the home service without access to unbundled ILEC facilities. Also, neither the statute nor Commission precedent contemplates an inquiry into the sources of revenue for individual competitors when conducting the impair analysis.²³ The goal of the Act is to promote competition generally, rather than the individual welfare of any specific competitor. A network element that is otherwise equally available to CLECs and ILECs does not suddenly meet the impairment analysis because one company has greater revenues than another.

Further, AT&T’s claim that it is disadvantaged by the revenues generated from the “captive customer base” of the ILECs rings hollow. As one of the largest cable television providers in the country, AT&T has its own pool of “captive customer[s]” to draw revenue from in building out new network infrastructure.²⁴ AT&T is far from alone; other cable companies enjoy healthy revenue streams from their video subscriber base, and have been using these revenues to compete aggressively with incumbent local telephone carriers.

²¹ *Corning* at 24.

²² *Id.*

²³ *See, generally*, 47 USC § 251; *see also Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, Third Report and Order and Fourth Further Notice of Proposed Rulemaking, 15 FCC Rcd 3696 (1999) (“*UNE Remand Order*”).

²⁴ That AT&T intends to sell of its cable systems is irrelevant. A CLEC cannot manufacture impairment by shedding assets.

B. Infrastructure Challenges Are The Same For ILECs And CLECs

Commenters have identified a number of barriers to increased deployment of fiber to the home. Contrary to the claims of some, however, these challenges are not unique to CLECs, but are instead faced by every carrier considering roll out of this new, advanced technology.

1. Aggregation of Demand

WorldCom notes, in the business context, that CLECs have a difficult time aggregating sufficient demand to build fiber out to individual buildings.²⁵ AT&T makes a similar argument with respect to residential customers, claiming that one advantage ILECs have over CLECs is a large, installed customer base, whereas CLECs “must overcome...the operational problems of convincing customers to switch service.”²⁶

Both of these arguments misapprehend the nature of fiber to the home deployment. Fiber to the home is not an incidental service that can simply be added to existing infrastructure. Because it requires entirely new network facilities, fiber to the home must either be deployed in new build (i.e., where no facilities exist or where fiber is built as an overlay) or in total rehabilitation situations.

Where no existing copper facilities are in place, or where the copper plant is being removed and replaced, fiber makes economic sense for both ILECs and CLECs, because it offers enhanced performance for similar cost.²⁷ In overlay scenarios, as CSMG illustrated in its report, ILECs must count on incremental revenues from services like high-speed data and video in order

²⁵ *WorldCom* at 17.

²⁶ *AT&T* at 117.

²⁷ *Corning* at 14-15.

to justify fiber build-out.²⁸ These are not services for which the ILEC already has a set group of customers. On the contrary, in order to win these customers, the ILEC must go up against entrenched incumbents, such as cable television or digital satellite providers, with no guaranteed success rate. Even absent regulation, the CSMG report concludes that demand aggregation will pose a barrier to ILEC fiber to the home deployment, at least initially, in a number of circumstances.²⁹ However, the report also clearly shows that the imposition of unbundling requirements only exacerbates this problem, rather than solving it. By decreasing the return ILECs can earn on their investment, mandatory unbundling makes fiber build-out decisions justifiable from a business and economic perspective only in the wire centers with the heaviest demand, and reduces the overall level of ILEC fiber deployment by over 80 percent.³⁰ As the D.C. Circuit recently acknowledged, “[i]f parties who have not shared the risks are able to come in as equal partners on the successes, and avoid payment for the losers, the incentive to invest plainly declines.”³¹

2. Access To Poles And Conduits

A number of commenters focused on ILEC access to poles, conduits, and other rights-of-way as an advantage in the build-out of network elements generally and fiber specifically.³²

²⁸ *CSMG Study* at 19.

²⁹ *Id.* at 16.

³⁰ *Id.* at 12; *see also* footnote 8, *supra*.

³¹ *USTA* at 424-25.

³² *See, e.g.,* Comments of Covad Communications Company, *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Services Capability*, CC Docket No. 01-338, at 54 (filed April 5, 2002) (“Covad”); Comments of El Paso Networks, LLC, CTC Communications Corp., and Con

Reply Comments of Corning, Inc.
Review of the Section 251 Unbundling Obligations
of Incumbent Local Exchange Carriers
CC Docket Nos. 01-338, 96-98, and 98-147
July 17, 2002

Congress anticipated this issue, and provided for it in the 1996 Act. Under Section 251 of the Act, each local exchange carrier must afford non-discriminatory access to its “poles, ducts, conduits, and rights-of-way” to all “competing providers of telecommunications services.”³³ Competitive carriers thus not only have the right to access ILEC rights-of-way, they also have access to the rights-of-way of their CLEC competitors, as well. Access to these facilities is a completely separate issue from the “necessary” and “impair” analyses under Section 251(d)(2).

Any claim that CLECs are unfairly disadvantaged by state and local regulations governing the access to municipal and government rights-of-way is without merit.³⁴ Under federal law, such regulations must generally be non-discriminatory, and apply to both CLECs and ILECs.³⁵ If state or local regulations unreasonably hamper carriers’ efforts to install new

(Continued . . .)

Edison Communications, LLC, *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Services Capability*, CC Docket No. 01-338, at 20-23 (filed April 5, 2002) (“*Dark Fiber Commenters*”); Comments of NuVox, Inc., KMC Telecom, Inc., E.Spire Communications, Inc., TDS Metrocom, Inc., Metromedia Fiber Network Services, Inc., and SNIP LINK, LLC, *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Services Capability*, CC Docket No. 01-338, at 26, 28-29 (filed April 5, 2002) (“*CLEC Coalition*”); Comments of NewSouth Communications, *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Services Capability*, CC Docket No. 01-338, at 16 (filed April 5, 2002) (“*NewSouth*”), *AT&T* at 146-148.

³³ 47 USC § 251(b)(4).

³⁴ *AT&T* at 118.

³⁵ 47 USC § 253.

poles or conduit, the Commission has the authority to preempt such regulations under Section 253(d) of the Act.³⁶

The Commission would promote greater competition by enforcing Section 251 and using its preemption power under Section 253, rather than tying the hands of one group of competitors with uneconomic unbundling requirements. Attempting to correct inequities in state and local permitting requirements by imposing additional unbundling requirements would fail to address the root cause of the stated concerns, and would simply add another layer of confusion to the “necessary” and “impair” analyses.

3. Access to Capital

Almost universally, the CLEC commenters in this proceeding emphasize the difficulty that competitive carriers are having securing capital financing from both equity and debt markets, in light of the general economic slowdown and the difficulties faced by the telecom sector specifically.³⁷ Corning is certainly familiar with the harsh economic realities facing the telecommunications industry. However, the FCC should not be swayed by the CLEC claims of economic hardship.

³⁶ 47 USC § 253(d).

³⁷ *See, e.g.*, Comments of the Association for Local Telecommunications Services, C Beyond Communications, LLC, DSLNET Communications, LLC, El Paso Networks, LLC, Focal Communications Corporation, New Edge Network, Inc., Pac-West Telecomm, Inc., Paetec Communications, Inc., RCN Telecom Services, Inc., and US LEC Corp., *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Services Capability*, CC Docket No. 01-338, at 44-45 (filed April 5, 2002 (“ALTS”)); AT&T at 124, 141, Comments of Competitive Telecommunications Association, *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Services Capability*, CC Docket No. 01-338, at 71-72 (filed April 5, 2002) (“CompTel”), *Covad* at 15-16, *Dark Fiber Commenters* at 7-8.

First, far from affecting only CLECs, the recent downturn has impacted everyone in the telecommunications field, from CLECs to ILECs to equipment suppliers. Not even the largest players are immune from declining levels of investment.³⁸

Second, and most importantly, the goal of the Act is to promote competition generally, rather than the interests of any specific competitor. The current bleak conditions in the CLEC segment are no less transient than the exuberant market valuations of the same segment two to three years ago. The Commission must not base policy decisions on temporary economic conditions. Instead, the agency should focus on sound fundamentals, such as adopting policies that encourage accelerated build-out of advanced technologies regardless of the state of the market. As CSMG demonstrated, the best way to ensure that the market favors the build-out of fiber to the home is to lift unbundling restrictions, which distort the investment incentives of ILECs.³⁹

4. The Actual Deployment Figures Speak For Themselves

The deployment to date of fiber to the home systems provides ample evidence that CLECs face no serious impediment to building out these facilities. As Corning has emphasized previously, CLECs have deployed fiber to the home systems that pass 26,000 homes, a figure that dwarfs the small-scale projects put in place so far by those ILECs that are subject to mandatory unbundling.⁴⁰ In fact, CLECs account for a full 77 percent of the fiber to the home deployments to date. It is this fundamental fact that belies all of the arguments that CLECs have

³⁸ See, e.g., Mike Angell, "Telecom Hitting Bottom—Maybe," *Investor's Business Daily*, May 7, 2002 (citing announcements that BOCs would cut capital spending in 2002 by 14 to 44 percent).

³⁹ *CSMG Study* at 4.

⁴⁰ *Id.* at 51.

made in this proceeding about the inherent advantages ILECs possess in deploying fiber to the home.

The implicit position of all CLEC commenters in this proceeding is that ILECs should bear all risk of loss from fiber to the home deployment, while allowing CLECs to piggy-back on to these facilities (once built) at TELRIC prices. As CSMG's comprehensive analysis concluded, it is precisely these regulatory distortions that are preventing faster roll out of fiber to the home by both ILECs and CLECs.⁴¹ ILECs remain wary of investing in new, advanced facilities that must be immediately sold to competitors at TELRIC rates, and CLECs cannot justify large-scale investments in fiber to the home facilities when they know that they could gain access to the same facilities at much cheaper prices if and when the ILECs decide to construct them. The D.C. Circuit recognized these effects when it found that "mandatory unbundling comes at a cost, including disincentives to research and development by *both* ILECs *and* CLECs."⁴² The FCC must act to end this regulatory stand-off, especially considering the evidence submitted by Corning that shows CLECs face no systemic disadvantages in self-provisioning fiber to the home.

III. Fiber To The Home Does Not Meet The Requirements For Unbundling

As Corning has demonstrated, fiber to the home facilities do not meet the "necessary" and "impair" standards under Section 251. The D.C. Circuit has found that the FCC has not justified imposing unbundling requirements on broadband facilities given the high level of competition in that sector. Beyond that, fiber to the home does not meet any of the

⁴¹ *Id.* at 14.

⁴² *USTA* at 429 (emphasis added).

Commission’s previously announced criteria in the “necessary” and “impair” analyses. Nothing further is required for the FCC to find that these facilities are not subject to mandatory unbundling requirements. Indeed, once it determines that fiber to the home facilities do not meet the Section 251 standards, the Commission is obligated to lift those unbundling requirements. While the arguments made by some commenters that Sections 10 and 706 do not allow deregulation until competition is fully implemented are thus not relevant, lifting unbundling requirements will also serve the Section 706 goal of improving access to advanced services.

A. The Recent D.C. Circuit Decision Eliminates Fiber To The Home Facilities From The List of Potential UNEs

The recent *USTA* decision starkly illustrates the need for changes in the current unbundling rules, and brings into sharp relief the fact that certain network elements do not meet the statutory test for unbundling. Fortunately, the Commission had already begun asking the relevant questions about unbundling rules in this proceeding prior to the resolution of the *USTA* case. The timely nature of this proceeding will allow the Commission to rapidly incorporate the changes urged by the *USTA* decision.

The *USTA* decision deals most explicitly with the propriety of unbundling broadband facilities, a category that includes fiber to the home infrastructure. In its ruling, the D.C. Circuit found that the Commission “completely failed to consider the relevance of competition in broadband services.”⁴³ In fact, the court noted that the Commission’s own reports “repeatedly confirm both the robust competition, and the dominance of cable, in the broadband market.”⁴⁴ The court went on to hold that “nothing in the Act” requires the Commission to unbundle ILEC

⁴³ *Id.* at 428.

⁴⁴ *Id.* at 428-29.

broadband facilities “under conditions where it ha[s] no reason to think doing so would bring on a significant enhancement of competition.”⁴⁵

Corning showed in its initial comments that, while fiber to the home offers capabilities far beyond those of popular broadband technologies such as DSL and cable, data services offered over fiber will still have to compete with these established alternatives,⁴⁶ in a market that the Commission and the courts have found to already be fully competitive.⁴⁷ Corning also provided data that shows the wholesale fiber facilities market *itself* is fully competitive, with both ILECs and CLECs possessing the same ability to build out new fiber and ILECs holding no meaningful cost or logistical advantages in doing so.⁴⁸ In short, all of the available evidence indicates that fiber to the home exists in a competitive market. Because the Commission cannot order unbundling without “a reason to think doing so would bring on a significant enhancement of competition,” the agency cannot include fiber to the home facilities on the list of unbundled network elements.

B. In Any Event, Fiber To The Home Does Not Satisfy The Necessary And Impair Standards As These Were Previously Articulated

Section 251(d)(2) of the Communications Act sets forth the sole test that the FCC must use to determine whether a given network element will be subject to mandatory unbundling. Corning’s initial comments explained in detail the reasons that fiber to the home does not meet

⁴⁵ *Id.* at 429.

⁴⁶ *Corning* at 32.

⁴⁷ *USTA* at 428-29.

⁴⁸ *Corning* at 24.

the statutory standard for unbundling.⁴⁹ A non-proprietary network element qualifies for unbundling only if “the failure to provide access...would impair the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer.”⁵⁰ The Commission has noted that an element meets the “impair” standard if lack of access “materially diminishes” a requesting carrier’s ability to offer service, after “taking into consideration the availability of alternative elements outside the incumbent’s network, *including self provisioning by the requesting carrier.*”⁵¹ CLECs clearly meet the “self-provisioning” standard by virtue of the fact that they account for 77 percent of the fiber to the home deployments throughout the country. Thus, the “impair” standard is not met with respect to the fiber to the home network element.

The Fiber/Switch-Based CLEC Coalition correctly notes that the Commission has developed five factors to aid in determining whether carriers have adequate alternatives to incumbent networks.⁵² The factors that the FCC has identified are cost, timeliness, quality, ubiquity, and operational factors.⁵³ These factors are at odds with the recent decision in *USTA*. There, the court found with respect to cost disparities that, in order to require unbundling, the

⁴⁹ *Id.* at 22-26.

⁵⁰ 47 USC § 251(d)(2). As Corning explained in its earlier filing, certain fiber to the home architectures may be better classified as proprietary network elements, as that term is defined in the *UNE Remand Order*. Because proprietary elements are subject to a stricter standard, and must only be unbundled if they are “necessary” to provide service, it follows that because fiber to the home does not meet the non-proprietary “impair” standard, it also does not meet the proprietary “necessary” standard. *Corning* at 23.

⁵¹ *UNE Remand Order*, 3705 (emphasis added).

⁵² *CLEC Coalition* at 23.

⁵³ *Id.*; see also *UNE Remand Order*, 3731.

“necessary” and “impair” standards required the Commission to find something more than the basic cost disadvantages that all new entrants to any market face.⁵⁴ The court’s ruling requires that the Commission substantially revise its use of cost in determining impairment. The agency must apply a more stringent standard that looks to “the entire extent of the market,” and not use the “open-ended notion of what kinds of cost disparity are relevant” that it articulated in the *UNE Remand Order*.⁵⁵ The same logic can be applied to the other factors that the Commission previously announced; all focus on disadvantages faced by new entrants, but none of these challenges are unique to new entrants in the telecommunications field. As a result, the Commission should review and modify each of its factors in light of the *USTA* decision. However, even if the Commission were to consider fiber to the home solely on the basis of the factors in the *UNE Remand Order*, there would still be no justification for ordering mandatory unbundling.⁵⁶

1. Cost

Because ILECs do not have pre-existing facilities, substantial new investment is required of either the ILEC or the CLEC before fiber to the home can be implemented. Construction costs for ILECs and CLECs are similar, as CSMG reported in its study; if anything, CLECs should enjoy a cost advantage, given that these entities generally have lower labor costs.⁵⁷ As described in detail in Section II, *supra*, ILECs have no economy of scale advantages over

⁵⁴ *USTA* at 427.

⁵⁵ *Id.* at 427, 426.

⁵⁶ *Corning* at 24-26.

⁵⁷ *CSMG Study* at 3.

CLECs, given the differences in facilities and equipment between fiber to the home infrastructure and legacy copper plant. Moreover, commenters in this proceeding have provided no evidence that either directly indicates the existence of ILEC cost advantages in fiber to the home or rebuts Corning's showing that such cost disparities do not exist.

2. Timeliness

Given that fiber to the home facilities must be deployed from scratch either by the ILEC or the CLEC, there is no disadvantage presented by CLEC self-provisioning. AT&T contends that CLECs are at a disadvantage in self-provisioning because they are forced to sign up customers and then ask them to wait while a network is built,⁵⁸ but this ignores that there are very few ILEC fiber to the home facilities currently available, either. Prospective customers (of either the ILEC or the CLEC) would thus have to endure the same wait for ILEC-constructed facilities that they would for CLEC-constructed infrastructure.

3. Quality

The quality of CLEC-provisioned fiber to the home infrastructure should be indistinguishable from that of ILEC plant. CLEC and ILEC fiber to the home facilities are sourced from the same relatively small pool of fiber technology and equipment suppliers, so the equipment and physical plant will likely be identical. While the overall quality of service will of course depend on a wide variety of factors, there is nothing that would prevent a CLEC from constructing a network of identical quality to one constructed by an ILEC.

⁵⁸ *AT&T* at 118.

4. Ubiquity

ILEC networks offer no advantage in terms of ubiquity. The ILECs currently have a much smaller build-out footprint of fiber to the home than do the CLECs.⁵⁹ Moreover, the incremental services offered over fiber to the home (such as high speed data and video) do not demand network ubiquity in order to be marketed successfully.

5. Operational Factors

With respect to other operational factors, there should also be no difference between CLEC and ILEC provisioning. For the reasons set forth above, CLECs have the opportunity to establish networks identical to those that ILECs will construct. The concern expressed by the CLEC Coalition that CLEC networks will be less reliable than ILEC networks because they are sourced from multiple vendors has no bearing on fiber to the home.⁶⁰ There is no reason to believe that ILECs could construct any more robust a network than CLECs, where both parties are starting from scratch.

C. The FCC Cannot Order Unbundling In The Absence Of Impairment

A number of commenters contend that the Commission should look beyond the “necessary” and “impair” analysis specified in the statute. The decision in *USTA* re-emphasized that the Commission’s inquiry under the statute is targeted and specific, and should not take into account overly broad criteria for what constitutes impairment.⁶¹ The court’s opinion should

⁵⁹ *Corning* at 4.

⁶⁰ *CLEC Coalition* at 33.

⁶¹ *USTA* at 428 (Commission’s concept of impairment is “broad and unrooted...of the competing values at stake in the implementation of the Act”).

preclude the Commission from ordering unbundling where the “necessary” and “impair” standards are not met.

Allegiance argues that, under Section 10, the Commission cannot forbear from enforcing Section 251(c) unbundling obligations until it determines that Section 251 has been “fully implemented.”⁶² AT&T makes a similar argument.⁶³ While the FCC may need to make a finding of full implementation before generally forbearing from enforcement of Section 251(c), the agency need not invoke any forbearance authority in order to find that fiber to the home is inappropriate for mandatory unbundling. Section 251(d) directs the agency to determine which network elements must be unbundled in order to avoid impairment of competitive service. The Commission’s mandate, therefore, is to establish which network elements do and do not need to be unbundled, and to do so according to the criteria set forth in the statute (and discussed in detail in Sections III(A) and (B) , *supra*). Once the Commission has determined, as Corning has shown, that fiber to the home does not meet the relevant criteria and should not be unbundled, the Act gives the agency both the authority and the obligation to remove fiber to the home from the list of unbundled network elements. Forbearance, therefore, is irrelevant because the statutory obligation does not apply in the first instance.

CompTel urges the FCC, when conducting the “impair” analysis, to look at whether CLECs can profitably self-provision network elements.⁶⁴ As CompTel recognizes, this factor

⁶² Comments of Allegiance Telecom, Inc., *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Services Capability*, CC Docket No. 01-338, at 13 (filed April 5, 2002).

⁶³ *AT&T* at 86.

⁶⁴ *CompTel* at 71.

has not been a part of the Commission's determination in the past. Adding a profitability test would open a hornet's nest of misleading and limitless inquiries, as there is no principled way of determining whether any given undertaking can be done "profitably." Whether an entity can make a profit depends on a large number of company-specific factors, such as organizational efficiency, personnel skill and experience level, soundness of the business plan, ability to negotiate supplier contracts, and many others too numerous to list. Moreover, the opportunities for profit in the business world can change rapidly. As many CLECs in this proceeding point out, the market has shifted dramatically in a very short period of time, causing many business plans to be retooled. Were the Commission to adopt a profitability test, it would be forced not only to consider a bewildering variety of fact-specific inquiries in search of an ultimately elusive universal answer, but would also have to do so on a frequently recurring basis. Such an expansive and intrusive analysis runs counter to the narrow focus that the D.C. Circuit required the FCC to employ in making its "necessary" and "impair" findings.

CompTel also contends delisting broadband facilities (such as fiber to the home) will skew ILEC investment decisions, leading to distortions in the types of network technologies that are ultimately installed.⁶⁵ This argument is not relevant to the "necessary" and "impair" standards contained in the statute. The Act focuses on whether an element is or is not required for competitive provision of service. It does not mandate that ILECs invest in any one specific kind of technology if another, more efficient, method exists. Moreover, the CSMG study demonstrates that it is the *presence* of mandatory unbundling, rather than its absence, that is

⁶⁵ *Id.* at 46.

leading to distortions in ILEC investment decisions.⁶⁶ Eliminating unbundling requirements would remove the costs of regulation from ILEC investment decisions and allow investment to proceed according to market demand.⁶⁷

D. The CSMG Report Provides A “Precise Assessment” Of The Disincentive Effects Of Mandatory Unbundling

In *USTA*, the D.C. Circuit observed that the mere existence of some investment “tells us little or nothing about incentive effects.”⁶⁸ To fully understand the impact of unbundling on facilities deployment requires a comparison of actual deployment with “what would have occurred in the absence of the prospect of unbundling.”⁶⁹ The court noted that it did not expect the Commission to “offer a precise assessment of disincentive effects,” but requested “some confrontation” of the issue.⁷⁰

While it would be unduly burdensome to expect the Commission to conduct detailed studies of the effects of unbundling on every network element prior to establishing unbundling rules, in the case of fiber to the home, CSMG has already performed this work for the Commission. The CSMG study is a detailed examination of the negative impact unbundling requirements have on fiber to the home deployment. As described in the study itself and in Corning’s initial comments in this proceeding, the study uses real world cost data and accurate decision-making models to conclude that unbundling rules eliminate 80 percent of the ILEC

⁶⁶ *CSMG Study* at 11-13.

⁶⁷ *Id.*

⁶⁸ *USTA* at 425.

⁶⁹ *Id.*

⁷⁰ *Id.*

fiber to the home build-out that otherwise would be economic. As such, this study provides exactly the “precise assessment of [the] disincentive effects” of unbundling regulation that the court found would be ideal in making policy decisions on unbundling.⁷¹ The Commission should afford special weight to the CSMG study and its conclusions.

E. The Act Is Intended To Encourage Facilities-Based Competition

As noted above, the question of whether fiber to the home should be included on the list of unbundled network elements can be answered in the negative simply by applying the Section 251(d) “necessary” and “impair” standards. However, it is also undeniable that a primary goal of the Act is to encourage development of facilities-based competition, especially in the realm of advanced services. The Commission should bear this in mind, and take action where possible to promote this important goal.

While ALTS states that competition through UNEs can have positive effects,⁷² UNEs were intended from the outset to be a stepping stone to true, facilities-based competition. Section 706 mandates that the Commission encourage the deployment of “advanced telecommunications capability,” and “remove barriers to infrastructure investment.”⁷³ Moreover, the Commission itself has said that the “unbundling rules...seek to promote the development of facilities-based competition.”⁷⁴

⁷¹ *USTA*.

⁷² *ALTS* at 16-17.

⁷³ Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56, Title VII § 706, (1996) (reproduced in notes under 47 USC § 157).

⁷⁴ *UNE Remand Order*, 3701.

Moreover, with fiber to the home, there is no real alternative to promoting facilities-based deployment. Because of the regulatory drag of mandatory unbundling obligations, ILECs have simply not been able to economically build out fiber to the home facilities.⁷⁵ As a result, very few ILEC customers are passed by such facilities. No degree of government regulation can give CLECs access to what is not there. The primary effect of imposing unbundling obligations on yet-to-be-deployed facilities is to increase the cost of (and decrease the return from) these facilities and make their deployment uneconomic. Unfortunately, a secondary effect is to encourage CLECs to delay their own deployments.

To the extent that competition is created in the few areas where ILEC fiber facilities are deployed, it will be based on regulatory arbitrage rather than a real opportunity to craft a lasting, solid business model. The recent collapse of many non-facilities based CLECs suggests that the promotion of resale and UNE-based models at the expense of facilities investment leads to only transient success, at best. Instead of creating rules that encourage “artificial” competition that can exist only while regulatory rules and economic conditions are optimal, the Commission should work to establish regulations that encourage lasting, real investment by both ILECs and CLECs. Eliminating mandatory unbundling on fiber to the home will do so, while continuing with the present unbundling requirements will only further delay deployment of fiber to the home, and will harm ILECs, CLECs, and consumers.

IV. The FCC Should Ensure Uniform National Rules On Fiber To The Home

The evidence before the Commission shows that fiber to the home does not meet the “necessary” and “impair” tests under Section 251. A uniform national policy with respect to

⁷⁵ *CSMG Study* at 51.

fiber to the home is critical to facilitate deployment of this new technology. The Commission need not wait for state input to act, and should make clear that states do not have the authority to add fiber to the home to their individual UNE lists once the FCC has removed it from the national list.

A. Delisting Of Fiber To The Home Should Proceed Without State Involvement

Allowing states to determine whether or when fiber to the home would be delisted would severely hamper investment in fiber to the home facilities. Most carriers considering fiber to the home investment operate on a regional or national basis. Subjecting fiber to the home to different regulations in different states would skew the investment decisions of these carriers, and would deny the deployment of true advanced telecommunications capability to certain consumers based only on their state of residence. Moreover, a number of important telecommunications markets, such as New York City and Washington, D.C., straddle several state jurisdictions. Inconsistent treatment of fiber to the home would be particularly detrimental to customers in these areas, and could cause network deployments that would otherwise be economic to go unbuilt in these markets.

Inconsistent state regulation has other, less direct, but no less pernicious, effects on fiber to the home deployment. As the Commission has observed, inconsistent regulation can confuse financial markets, which would hamper access to capital for *all* fiber to the home projects. The CLEC commenters correctly point out that financial markets are currently wary of telecommunications investment, and a slew of varying requirements at the state level would exacerbate this concern. Inconsistent regulation will also almost certainly lead to litigation from both sides. Such litigation would drain resources better spent on building out infrastructure, and

would inevitably lead to delays in deployment as carriers waited for judicial resolution in any number of different fora.

B. States Should Not Be Permitted To Add Fiber To The Home To Their UNE Lists

As Corning explained in its initial comments, it is clearly within the Commission's authority to prevent states from adding fiber to the home to their individual lists of UNEs.⁷⁶ While the Commission in the past has allowed states to add network elements to their lists, it has only done so for elements that the agency has not specifically considered itself. Section 251(d)(3) prohibits the states from enacting any regulations that are inconsistent with Section 251.⁷⁷ The Commission should find that fiber to the home does not meet the "necessary" and "impair" tests, and should explicitly state that any finding to the contrary by state authorities would be inconsistent with Section 251.

An explicit statement preventing states from adding fiber to the home to their lists of UNEs is necessary to ensure regulatory certainty. Permitting states to add fiber to the home to their UNE lists would have all of the negative consequences explored in Section IV(A), above. However, the threat of future regulation would engender even greater uncertainty than simple inconsistency at the state level. Carriers would be loath to invest the substantial capital resources on fiber to the home build-out if states could impose unbundling requirements after the networks were built. Indeed, given the justifiable concern over the possibility of regulation, capital for such projects would likely be difficult or impossible to raise, even if the carrier decided that it wished to tolerate the risk and proceed with the investment.

⁷⁶ *Corning* at 30.

⁷⁷ 47 USC § 251(d)(3).

V. Conclusion

For the foregoing reasons, the Commission should conclude that fiber to the home does not meet the statutory requirements for mandatory unbundling, and should remove fiber to the home from its list of unbundled network elements.

Respectfully submitted,

CORNING, INC.

/s/ Gregory J. Vogt

Timothy J. Regan
Senior Vice President
Government Affairs
CORNING, INC.
1350 I St., N.W.
Suite 500
Washington, D.C. 20005
(202) 682-3140 (voice)
(202) 682-3130 (fax)

Gregory J. Vogt
Joshua S. Turner
WILEY REIN & FIELDING, LLP
1776 K St., N.W.
Washington, D.C. 20006
(202) 719-7000 (voice)
(202) 719-4287 (fax)

Its Attorneys

July 17, 2002