

1 **II. BA-PA's Competitive Position**

2

3 **Q. Please turn to the second section of your testimony, concerning BA-PA's**
4 **competitive position in Pennsylvania's telecommunications business markets.**

5 **First, what does the Company represent concerning the Chapter 30 checklist?**

6 A. BA-PA represents that all the conditions implied under Chapter 30 are fully met, and
7 that therefore all of its business services should be declared competitive and made
8 subject to reduced regulation. Specifically, BA-PA says its business services pass
9 muster in all the areas the Commission is required to consider under subsection
10 3005(a)(1) of the Public Utility Code, 66 Pa. I will review these claims from my
11 perspective as an economist, focusing on the market conditions which are necessary for
12 competition to be effective. There is considerable room for judgment in interpreting the
13 Chapter 30 checklist. However, it would not be appropriate to reclassify BA-PA's
14 business services as "competitive" unless BA-PA can demonstrate that the "invisible
15 hand" of competitive pressures will provide a reasonable substitute for the "visible
16 hand" of regulatory control. Furthermore, it would not be appropriate to reclassify BA-
17 PA's business services as "competitive" unless BA-PA can demonstrate that the
18 transition to effective competition has progressed far enough to ensure that BA-PA
19 won't be able to halt the transition once these services are reclassified.

20 In developing my analysis, I found three points were particularly important. (1)
21 Ease of market entry. (2) Viability of existing competitors--as reflected in market shares
22 and trends, and the extent to which competitors are dependent upon BA-PA's
23 unbundled network elements and other wholesale offerings. (3) Availability of "like"
24 services, and the extent to which competitive offerings are perceived to be close
25 substitutes for the offerings of BA-PA.

1 **Q. First, regarding ease of market entry, is it true, as the Company says, that**
2 **legal barriers to entry have been eliminated and economic barriers lowered?**

3 A. Yes. Legal barriers to entry have been eliminated from all Pennsylvania
4 telecommunications markets, including local exchange services, as a result of passage of
5 Chapter 30 and the 1996 Telecommunications Act. For the same reason, it is fair to
6 say that economic barriers to entry have been “lowered” somewhat. However, it is not
7 clear that the economic barriers have been lowered sufficiently to create or sustain a
8 competitive market. The Company claims these barriers have been “substantially
9 reduced.”

10
11 It is now possible for competitors to provide all local and toll services, as
12 well as the high margin vertical services, by purchasing unbundled
13 network elements, by purchasing BA-PA’s services at wholesale
14 discounts for resale, by using their own or other carriers’ facilities, or by
15 any combination of these means.... The growing number of competitors
16 offering and providing integrated packages of telecommunications
17 services to business customers in BA-PA’s territory, as described below
18 [in ¶2] confirms the absence of any insurmountable barriers to entry to
19 the business services market.

20
21 BA-PA Petition at 4, 5. As this statement implicitly recognizes, the extent to which
22 barriers to entry persist in a market is shown by, *inter alia*, the absence of competitive
23 entry and penetration into a market. While previously existing legal barriers to entry
24 may have been eliminated, and some economic and technical barriers to entry have
25 been reduced, this does not mean that the remaining economic and technical barriers
26 are insignificant. To the contrary: the 1996 Telecom Act is now more than two years

1 old, and Chapter 30 is even older; yet the total number of active competitive local
2 exchange carriers is still much lower than the number of active competitive long distance
3 providers. Even more tellingly, the extent to which these competitors have actually
4 penetrated into the local exchange market, by developing a market presence, gaining
5 customers, and building revenues, is relatively modest; and their market share, as I will
6 show, is very modest. The mere fact that a certain number of “warm bodies” have
7 shown up and at least nominally announced their intention to offer local telephone
8 service is not indicative of the extent to which meaningful “entry” is actually occurring or
9 feasible. It is one thing to claim that a market is theoretically “contestable”; it is another
10 (and far more significant) thing to show that barriers to entry have been largely or
11 entirely eliminated, or to show that the market is in fact being vigorously contested.
12 Thus, as I said in the first section of my testimony, the proof of BA-PA’s claim of
13 lowered economic barriers to entry effectively rests on the Company’s ability to
14 demonstrate that it already has *significant*, not token, competition *throughout* its
15 service territory, not just in a few niche markets, or highly urbanized areas (e.g., Cell 1).

16
17 **Q. This brings us to the Company’s allied claim--about the actual presence of**
18 **competition for business services. With regard to the category of business**
19 **local exchange services, how significant is that competition?**

20 A. If one judges by the number of announced *competitors*, it may seem substantial;
21 however, if one judges by the extent to which these firms have actually and aggressively
22 entered the market, and are successfully gaining market share, it is far less significant.

23 According to BA-PA,

24 The viability of BA-PA’s competitors in the business telecommunications
25 market is apparent from their large number, the rapidity with which more

1 are entering the market, and their ability to compete successfully for BA-
2 PA's customers.

3
4 BA-PA Petition at 6. Of course, the sheer number of announced competitors by itself
5 reveals very little at this early juncture. A lone whale doesn't get much competition
6 from a school of minnows. Depending upon how many actual *customers* these firms
7 have obtained, the level of revenues they are generating, and the extent to which these
8 customers are profitable (and thus the competitors are likely to remain viable) one can
9 reach vastly different conclusions about how low the economic barriers to entry have
10 been lowered. Consider, for example, how the situation would differ if new entrants are
11 forced to sell their services below cost in order to overcome customer inertia, or to
12 overcome customers' perception that BA-PA's offerings are the "safest" and most
13 reliable choice. Under these circumstances, the economic barriers to entry may remain
14 quite high, despite the nominal presence of a large number of entrants. The telling detail
15 would be the extent to which the new firms have gained market share, and are likely to
16 soon grow large enough to truly challenge BA-PA's dominant position in the market.

17 In judging the extent to which barriers to entry have declined, the market share
18 of the combined competitors--and the distribution of that market share in various
19 geographic submarkets--can reveal much about the true state of the market. On that
20 score, the Company's case looks very weak.

21 For example, for business local exchange service, BA-PA was unable to
22 specifically document its claim that its competitors have demonstrated the "ability to
23 compete successfully for BA-PA's customers," since "BA-PA does not track the
24 number of business local exchange customers that have been lost to competition." BA-
25 PA response to AT&T IR I-11. Instead, Company witness Catherine A. Eichenlaub

1 cited recent cumulative figures of 15,000 resold business lines, 11,000 unbundled
2 loops, and 9,000 ported telephone numbers. BA-PA St. No. 1.0, at 24. There is
3 presumably some overlap between the latter two categories, since some unbundled
4 loops are used in conjunction with ported telephone numbers. The latter two totals may
5 also include some residence lines. *Id.* at 23, fn. 29.

6
7 **Q. Do these data suggest that BA-PA has significant competition in the business**
8 **local exchange market?**

9 A. No. To the contrary, even the most generous interpretation of these data would
10 suggest that competitive entry to date has been very weak. If the barriers to entry had
11 truly declined by as much as the Company implies, and the existing system of regulation
12 had placed BA-PA at a disadvantage (e.g., because the Company can't cut prices in
13 response to competitive inroads), the competitors' combined market share would be
14 more robust.

15
16 **Q. What is the Company's present retail share of the business local exchange**
17 **market over the public switched network in BA-PA's service territory?**

18 A. According to BA-PA's response to AT&T IR II-7, as of January 1, 1998, the
19 Company provided local exchange service over a total of *****BEGIN**
20 **PROPRIETARY END PROPRIETARY** *** business access lines. As I
21 mentioned earlier, the Company does not track the number of business customers or
22 lines lost to its competitors. However, the data supplied by Company witness Catherine
23 A. Eichenlaub indicate a cumulative total of just 15,000 business lines are being resold
24 by competitors along with just 11,000 unbundled loops. This represents less than ***
25 **BEGIN PROPRIETARY END PROPRIETARY** *** percent of BA-PA's

1 business access lines *****BEGIN PROPRIETARY** **END**
2 **PROPRIETARY*****, suggesting that, at least so far, the key elements of the 1996
3 Telecom Act which were designed to reduce economic barriers to entry have not been
4 terribly effective in accomplishing this purpose.

5

6 **Q. The Company claims that its figures “merely scratch the surface in revealing**
7 **the level of competition in BA-PA territory.” BA-PA St. No. 1.0 at 25. Is this**
8 **true?**

9 A. No. The Company might have a point if we were discussing interexchange service,
10 where the picture is complicated by private microwave systems and other “self-supply”
11 options which aren’t reflected in most measurements of market share, and the fact that
12 some large customers carry intraLATA on dedicated circuits that primarily carry
13 interLATA traffic. But, we aren’t discussing the intraLATA toll market, where BA-
14 PA’s nominal market share has fallen to about 84% and can reasonably be expected to
15 continue a fairly rapid decline. See, BA-PA St. No. 1.1 at 2 (Docket No. P-
16 00971293). While there may be additional complications worth evaluating a surface
17 examination of the market share data for local exchange services is so unfavorable to
18 the Company’s arguments, I doubt any further digging below the surface of the data
19 would change the conclusion. Clearly, BA-PA continues to dominate the business local
20 exchange market, and there are substantial economic and/or technical barriers which
21 are slowing entry by new firms.

22 In fact, data supplied by CLECs through the discovery process indicate that
23 four of the largest competitors are cumulatively serving less than 62,000 business
24 access lines in Pennsylvania. Even if we assume a total of roughly 100,000 lines have
25 been “lost” to retail competitors in the aggregate, including both resale and facilities

1 based competition, this represents less than *** **BEGIN PROPRIETARY** **END**
2 **PROPRIETARY** *** percent of BA-PA's statewide business access lines ***
3 **BEGIN PROPRIETARY** **END PROPRIETARY** ***

4 While precise data are not available for specific exchanges, it is reasonable to
5 assume that competitors' market share is primarily concentrated in the more urbanized
6 parts of the state, like Pittsburgh and Philadelphia, where competitors like Teleport
7 have been building facilities for years to gain a customer base. Accordingly, the data
8 suggest that more than two years after passage of the 1996 Telecom Act, and nearly
9 five years after passage of Chapter 30, the Company's share of the business local
10 exchange market remains above 90 percent in urban exchanges, and it exceeds 98% in
11 most of the more rural exchanges. In fact, in many rural locations local exchange
12 competitors have not even begun to enter the market and serve customers--a fact that
13 confirms the continued existence of significant barriers to entry, and suggests just how
14 premature the Company's request for reclassification of its business services is.

15
16 **Q. In the testimony of Ms. Eichenlaub, Mr. Shoohsan, and Dr. Taylor, BA-PA**
17 **denies that its market share is all that dominant, claiming that the proper**
18 **market for consideration is the totality of business services, not individual**
19 **services. Do you agree?**

20 **A.** No. When a monopolist wants to deny control of the market, its obvious strategy is to
21 redefine the market--to enlarge its scope and shrink the monopoly service to apparent
22 insignificance. Thus we see BA-PA's insistence here that the "relevant market" is far
23 broader than business local exchange. According to the Company's Appendix D to its
24 petition,

25

1 [s]ervices provided to Business customers include: local exchange
2 service, toll service, data service, and optional services such as call
3 waiting and remote call forwarding.
4

5 The Company is trying to have it both ways. On the one hand it has clearly
6 distinguished intraLATA toll from other services used by businesses by pursuing its
7 reclassification in a separate petition now under consideration by the Commission in
8 Docket No. P-00971293. As noted, OCA is not contesting that petition. On the
9 other hand the Company is attempting to use the same evidence of competitive activity
10 in the intraLATA toll market in bolstering its argument for reclassifying ALL of its
11 business services. But the facts and figures about business toll competition are clearly
12 distinguishable and essentially irrelevant to the present debate which should properly
13 focus on the remaining service categories included in the Company's petition for
14 reclassification. While it is somewhat plausible to combine local exchange
15 service with optional services like call waiting and remote call forwarding--since the
16 latter services are almost always purchased from the provider of local exchange
17 service--expanding the market definition in this manner will not have a significant impact
18 on the final conclusion. To the contrary, it is self-evident that BA-PA continues to enjoy
19 a dominant share of the business local services market, regardless of whether this
20 market is narrowly defined to focus on basic local exchange service, or more broadly
21 defined to include closely related services like call waiting.

22 I agree with the substance (but not the application) of Dr. Taylor's statement
23 that "if a market is improperly defined, then market shares based on that improper
24 definition will be misleading" BA-PA Statement No. 4.0, at 5. When toll service and
25 high volume data services are properly excluded from consideration in this docket, it

1 becomes obvious that economic barriers to entry remain high, that BA-PA currently
2 monopolizes local telephone service markets within its service territory, and that it is
3 likely to continue to do so for some years--especially in rural areas.

4

5 **Q. How does the Company address the question of the lack of competitiveness in**
6 **business local exchange service?**

7 A. Essentially, by trying to hide the ugly facts in a crowd of prettier ones. BA-PA's
8 position is that

9 it is not appropriate for this Commission to consider whether BA-PA has
10 met the Chapter 30 criteria for competitive classification of business
11 services on a service by service basis. The reality of the marketplace is
12 that business customers expect their telecommunications provider to be
13 able to provide a "bundle" of telecommunications services and find it
14 beneficial to aggregate their traffic with one provider to obtain higher
15 discounts.

16

17 BA-PA Statement No. 1.0, at 4-5. I suggest much the opposite: that it is **entirely**
18 appropriate for the Commission to consider individual service categories **as well as**
19 various combinations of services. The key question is whether or not a service
20 category should appropriately be reclassified as competitive.

21

22 **Q. The Company relies upon the importance of "bundling" different services in**
23 **submitting such an expansive list of service categories for reclassification. Do**
24 **you agree with this reasoning?**

25 A. No. The Company's inability to provide some combinations of fully "bundled"
26 telecommunications service is not due to the noncompetitive status of certain services

1 that might be included within such bundles. Rather, it is due to the fact that we are still at
2 an early stage in the transition to a more competitive market. Eventually, the Company
3 may satisfy the FCC's competitive checklist and be able to offer "one-stop shopping"
4 on a contract basis, including interLATA toll service. This remains true regardless of
5 whether or not any of its business services are reclassified as competitive.
6

7 **Q. Does the trend in the Company's sales support a competitive designation for its**
8 **business local exchange services?**

9 A. No. Despite BA-PA's claimed competitive losses, the total number of business local
10 exchange customers served by the Company and the total number of lines over which
11 those customers are served have not fallen in recent years. To the contrary, both of
12 these sales statistics have continued to increase. At the end of 1995, the Company
13 served *** BEGIN PROPRIETARY END PROPRIETARY***local
14 business customers over ***BEGIN PROPRIETARY END
15 PROPRIETARY***access lines. The analogous figures for 1996 were ***BEGIN
16 PROPRIETARY END PROPRIETARY*** customers and ***BEGIN
17 PROPRIETARY END PROPRIETARY*** lines; and for 1997 they
18 were ***BEGIN PROPRIETARY END PROPRIETARY*** customers
19 and ***BEGIN PROPRIETARY END PROPRIETARY*** lines.

20 BA-PA responses to AT&T IRs I-5 and I-7. It can thus be seen that during the two
21 years since passage of the 1996 Telecom Act, the Company has enjoyed a net gain of
22 ***BEGIN PROPRIETARY END PROPRIETARY*** local business
23 lines. This growth exceeds the cumulative growth of all of its competitors combined.
24 Stated differently, the competitive "losses" that have occurred to date are so small they
25 are outstripped by BA-PA's share of the overall growth of the market. Under the

1 circumstances, about the only thing the Company can solidly claim is that its business
2 local exchange customer base is not expanding as fast as it would prefer. The existing
3 trend hardly calls for a sweeping remedy of the type proposed by the Company in this
4 proceeding

5
6 **Q. What is your opinion concerning the sort of retail market share that BA-PA**
7 **would be expected to retain if barriers to entry didn't exist, and conditions were**
8 **ripe for a rapid transition to a fully competitive market?**

9 A. Because the local telecommunications markets are evolving and no clear precedents
10 exist, no one can say for sure. However, there are some indicators. For example, a
11 survey by People's Choice provides an indication of the potential distribution of market
12 shares that could be expected once an effectively competitive telecom market is
13 established: if given a free choice of carrier, only 63.5 percent of residential customers
14 would stay with their incumbent carrier. The rest would migrate to an IXC, competing
15 utility, or cable company. *Public Utilities Fortnightly*, January 1, 1998, at 15. This
16 finding is consistent with the actual state of the long-distance market, in which the
17 incumbent (AT&T) has steadily lost market share over the past 13 years and now
18 commands barely half. *FCC News*, October 19, 1997.

19 Admittedly, the local and long-distance markets have different characteristics,
20 as do residential local service and business local service. However, these survey figures
21 are indicative of reasonable parameters of expectation. In my opinion, if barriers to
22 entry didn't exist, it would be reasonable to expect BA-PA to rapidly lose somewhere
23 between one-third and one-half of its retail business. Stated, differently, if customers
24 were truly free to choose from amongst a variety of different vendors, one would not
25 expect to see 90 percent of the customers choosing a single firm as their supplier. The

1 substantial gap between BA-PA's present overwhelming dominance of the business
2 local services market and the situation which would exist if customers could freely
3 choose their carrier is another indicator of why it would be inappropriate to reclassify
4 the Company's business services at this time.

5
6 **Q. Company witness Dr. William E. Taylor states that "[m]arket share measures**
7 **are backward-looking and fail to reflect the extent of current and prospective**
8 **competition." BA-PA St. No. 4.0, at 5. Do you agree?**

9 A. In a regulated industry that is subject to some degree of competition in various markets
10 (e.g., the telecommunications industry), market share data can provide a useful
11 indicator of the latent market power of the regulated firm. True, incumbent LECs have
12 been subject to regulation, and thus BA-PA has been constrained in its ability to
13 exercise that power; consequently, there will not be a clear empirical link between
14 market share and monopoly profits or other manifestations of market power. But the
15 market share data, in conjunction with other factors, can still be useful in predicting the
16 consequences of relaxing or removing the regulations that have controlled the firm's
17 behavior.

18 The fact that BA-PA has been traditionally constrained in exercising such
19 power will be little consolation if those regulatory controls are lifted or relaxed. In my
20 opinion, market share and market concentration data can provide extremely useful
21 information in such an analysis, provided that consideration is also given to trends in that
22 data. Evidence of high BA-PA market shares in particular markets would suggest the
23 potential for BA-PA to exercise market power, if its regulatory bindings are untied.
24 Conversely, evidence of low BA-PA market shares would offer greater assurance that

1 BA-PA's latent market power has been sufficiently diluted within that particular market
2 to justify reduced regulation.

3

4 **Q. According to Dr. Taylor, "capacity is a measure of greater competitive**
5 **significance in telecommunications markets than is the historical share of**
6 **customers served." Id. Do you agree?**

7 A. No. Dr. Taylor claims that a more important question than market shares is "whether
8 there are sufficient competitors, *actual or potential*, to serve as disciplining forces on
9 BA-PA's behavior in the markets for the services in question." BA-PA St. No. 4.0, at
10 7, emphasis added. In other words, the mere threat of competition can be enough to
11 keep BA-PA's prices down. In the present context, that apparently means that the
12 Company's actual market share doesn't matter, provided they own enough capacity to
13 potentially serve more customers. I reject this argument. If competitors have installed
14 far more capacity than they are presently able to use in serving customers, this suggests
15 that economic or technical barriers are making it difficult for them to convince
16 customers to change carriers. I don't believe it is plausible to conclude that dozens or
17 hundreds of competitors are "free" to enter the market as deeply and widely as they
18 want but none of them have chosen to do very much with this opportunity. A much
19 more plausible explanation is that the economic and technical barriers to entry remain
20 quite substantial. The implied argument underlying BA-PA's position in this case is that
21 it is hamstrung by regulation and can't compete effectively unless its petition for
22 reclassification is granted. If entry barriers had been eliminated and new firms could
23 quickly and easily convince BA-PA's customers to change suppliers, and if BA-PA
24 were truly a helpless giant that is precluded by existing regulations from defending its

1 markets, the market share data would look much different than they do, nearly five
2 years after the passage of Chapter 30.

3

4 **Q. Is there any direct evidence that economic and technical barriers to entry**
5 **persist?**

6 A. Yes. Commonwealth Telephone has reported numerous complaints from business
7 customers which are allegedly the result of deficiencies in BA-PA's operations support
8 services (OSS). Many of these customers complained that their numbers were not
9 listed in the BA-PA directories, others that their numbers were not available through
10 directory assistance. In a letter to BA-PA, Commonwealth noted as follows:

11 This has been a continuing issue since Commonwealth started doing
12 business with Bell Atlantic. Our customers are not receiving the service
13 that we have guaranteed them. We are also concerned that we are not
14 receiving the commitment made regarding Directory Assistance issues in
15 Section 19.1.2 of the Interconnection Agreement dated October 23,
16 1996.

17

18 Response to BA-PA IR I.6. Commonwealth has also documented substantial
19 problems with BA-PA's missing scheduled order dates for unbundled loops and RSAs.
20 Over a seven-week period in November and December of 1997, BA-PA allegedly
21 missed the requested due date on more than half of Commonwealth's orders. *Id.*

22 It is obvious that a chronic problem with beginning service could do damage to
23 Commonwealth's reputation in the communities in which it is attempting to establish a
24 strong market presence, and will certainly inhibit customers from trying their service. If
25 these problems are truly the result of BA-PA's failure to implement effective OSS
26 procedures in a timely fashion, that would be doubly disturbing. But, regardless of

1 whether the fault lies with BA-PA and its employees or with Commonwealth and its
2 employees, it is clear that technical barriers to entry exist.

3

4 **Q. Are there also economic barriers to entry to the Pennsylvania local exchange**
5 **markets?**

6 A. Yes. Such barriers exist for both facilities-based competitors and resellers. In the case
7 of facilities-based carriers, the most prominent barrier to both entry and exit is the
8 enormous cost of installing new facilities. Given the existence of an entrenched
9 incumbent LEC with a ubiquitous system and deep pockets, building a competing
10 network is a risky venture that few are going to undertake, especially in the face of BA-
11 PA's obligation to roll out its complete broadband network by the year 2015. 66 Pa.
12 C.S. §3003(b).

13 The high cost of installing new facilities is compounded by the fact that new
14 carriers face considerable uncertainty about how quickly they will be able to woo
15 customers, gain market share, and achieve economies of scale. Most facilities-based
16 carriers are likely to start off by installing facilities that are limited in scope and largely
17 confined to servicing large customers in concentrated areas. This reduces the scale of
18 the investment, and allows a more focused business plan. However, it also increases
19 risks, since the carrier will be dependent upon a less predictable income stream than if it
20 were serving hundreds of thousands of smaller customers. Over time I would anticipate
21 new facilities being built in more and more markets. In combination with resale of
22 unbundled elements, one can envision a situation where effective competition emerges
23 over time.

24 However, there seems little prospect, given current technology, of rapid and
25 immediate emergence of multiple facilities-based local networks throughout the

1 Commonwealth. Thus, it is fair to say that the economic barriers to facilities-based entry
2 remain quite high. Within the next few years, the bulk of the Company's competition
3 over much of the Commonwealth can be expected to come from resellers of services
4 and unbundled network elements (UNEs).