

1 **Competition**

2  
3 **Q. Please turn to the second major section of your testimony. Would you please begin**  
4 **with a brief discussion of the historical and economic contexts surrounding**  
5 **telecommunications competition?**

6 A. During the past several decades, the telecom industry has been slowly evolving away from a  
7 regulated monopoly structure towards a more competitive one. Government policy has  
8 encouraged this trend, in an effort to achieve more rapidly the benefits of effective competition,  
9 including lower prices, higher service quality, and enhanced technological progress.

10 In many state jurisdictions, at the initiative of regulators or legislators or both, utility  
11 regulation has been evolving away from the classic rate of return approach. Today, regulation  
12 often includes price-cap mechanisms, segregation of competitive and monopoly services,  
13 regulatory forbearance, and other procedures designed to maintain universal service and  
14 protect the public from market power, while encouraging a more rapid transition toward  
15 effective competition. Simultaneously, the approach used in designing most telecom rates has  
16 been evolving away from setting prices exclusively based upon embedded cost and value of  
17 service. Prices have increasingly been regulated on the basis of market conditions and forward-  
18 looking economic costs.

19 The 1996 Federal Act represents a giant step forward along this road. Congress has  
20 mandated the removal of many barriers to competitive entry, and it has encouraged further  
21 movement towards pricing based upon economic costs and competitive market forces. The  
22 FCC explains:

23  
24 Historically, regulation of this industry has been premised on the belief that  
25 service could be provided at the lowest cost to the maximum number of  
26 consumers through a regulated monopoly network. State and federal regulators  
27 devoted their efforts over many decades to regulating the prices and practices

1 of these monopolies and protecting them against competitive entry. The 1996  
2 Act adopts precisely the opposite approach. Rather than shielding telephone  
3 companies from competition, the 1996 Act requires telephone companies to  
4 open their networks to competition. [Implementation Order, ¶1]  
5

6 **Q. Do you believe this trend towards increased local exchange competition is in the public**  
7 **interest?**

8 A. Yes, I do. I recognize there are potential pitfalls, and it may not be possible to achieve effective  
9 competition in every market, but the overall thrust of the 1996 Federal Act is sound, and can  
10 reasonably be applied to many Arizona telecommunications markets. As proceedings and  
11 regulatory activities in other jurisdictions attest, both the technological milieu and the tides of  
12 public policy favor local exchange competition.

13 It has been long recognized that rate of return regulation serves as a surrogate for the  
14 competitive market. Regulation was required because competition, for well understood reasons,  
15 has generally been absent. Now, as a result of changing technologies, markets, and attitudes, as  
16 well as innovative approaches to public policy, effective competition has become a viable  
17 prospect. Where competition can successfully be introduced, it should be encouraged to the  
18 fullest extent, and it will gradually become less necessary to rely upon regulation to protect the  
19 public interest.

20 Competition provides consumers with more options, allowing them to choose amongst  
21 a wider variety of products and services, and allowing them to change carriers if they are  
22 dissatisfied. Effective competition forces all firms in the industry to adapt their products and  
23 services to the demands of consumers, drives prices downward toward the actual cost of  
24 service, and promotes productive efficiency, to the benefit of society as a whole.

25 For the public interest to be served, however, competition must be real (i.e., effective)  
26 and not merely nominal. Furthermore, it is in the public interest for the scope of competition to  
27 encompass an entire market or community, rather than limiting it to a small group of customers

1 (e.g. large businesses). Clearly, in many areas telecommunications market conditions of this  
2 description will take considerable time to develop, and require the type of regulatory boost  
3 which is provided by mandatory resale and rental of unbundled network elements.

4 Effective competition can be beneficial to the public interest by increasing consumer  
5 choices, promoting technological and service innovations, and (often, but not always) lowering  
6 prices. However, the simple act of opening a market to competition by no means ensures that  
7 effective competition will emerge. Even in the best of circumstances, there is likely to be an  
8 unstable and hazardous period of transition, indeterminate in duration, as monopoly gives way  
9 to truly competitive conditions.

10 Economic theory defines a purely competitive market in very specific terms. First,  
11 numerous firms must participate, each acting independently and none controlling a share of the  
12 market large enough to significantly influence its prices. Second, the goods or services  
13 produced must be homogeneous (e.g., no product differentiation). Third, there must be no  
14 substantial barriers to entry or exit.

15 There are few real-world markets that conform to this strict theoretical definition of  
16 pure competition. Nevertheless, its characteristics provide a good benchmark for measuring  
17 the degree of competitiveness—how closely does a specific market approach that benchmark? It  
18 is possible for some telecommunications markets to sustain effective competition--where a  
19 relatively large number of firms are competing, no one firm is dominant, and prices are  
20 controlled by the market, rather than by the actions of the dominant firm, or a few individual  
21 firms. If such conditions prevail, customers receive the benefits ascribed to competitive  
22 markets, and many of the regulatory controls required in a monopoly environment will no longer  
23 be needed.

24  
25 **Q. You emphasize the need for effective competition in order to achieve beneficial results.  
26 Could you explain how it has significance in this docket?**

1 A. Yes. Effective competition is present when a market is free of substantial barriers to entry and  
2 exit and when no firm or consortium of firms in it has enough market power to set or strongly  
3 influence market prices. This implies that there are multiple firms operating in the market, selling  
4 essentially the same product for prices determined by market forces. Each such firm is largely  
5 unable to set its own prices; rather, it must take as a given the level of prices determined in the  
6 market place. (If the firm attempts to charge more than this market-determined price level, it  
7 will lose virtually all its customers.)

8 I agree with the official position statement adopted by the National Association of  
9 Regulatory Utility Commissioners (NARUC), as set forth below:

10  
11 The framework for transitioning to industry-wide competition must be properly  
12 laid or we risk having unregulated monopolies, increasing telephone rates,  
13 decreasing subscription levels, diminishing quality of service, and infrastructure  
14 dis-investment for some areas. Because of the incentives and opportunities for  
15 dominant providers to frustrate competition, there must continue to be oversight  
16 of the transition.... The development of competition is a time-intensive, pro-  
17 active effort. Removing statutory and legal barriers to entry is the first step.  
18 However, the subsequent steps which will actually allow competition to develop  
19 will be where the hard work lies. [NARUC Bulletin No. 48, November 28,  
20 1994, p. 5.]  
21

22 Only if there is effective competition will consumers be able to reap the full benefits of  
23 competitive delivery of local telephone service.

24  
25 **Q. You have been distinguishing between the mere presence of competitors and an  
26 effectively competitive market. Would you please elaborate on this distinction?**

27 A. Yes. It is sometimes assumed that a market is competitive if it contains more than one firm.  
28 However, the mere presence or absence of multiple firms does not determine whether the  
29 public is receiving full benefits of true competition. *Effective* competition is present when a

1 market is free of substantial barriers to entry and exit and when no firm or consortium of firms  
2 has enough market power to set or strongly influence market prices. Both buyers and sellers  
3 must view price as a given. All participants in the market must behave as if market prices are  
4 unaffected by their own decisions regarding how much they should purchase or produce.

5 If either buyers or sellers recognize that they can control prices, competitive conditions  
6 do not prevail. The greater the degree of control which can be exercised, the less competitive  
7 forces will prevail. Usually, four conditions are considered sufficient to assure that sellers will  
8 behave as "price takers," or effectively competitive with each other. If any one of these  
9 conditions is largely or entirely absent, the prospects for effective competition are diminished or  
10 eliminated.

11 First, no one firm can have a dominant share of the market. If a firm engages in price  
12 leadership, dominant firm pricing, or price discrimination, its behavior is inconsistent with  
13 competitive behavior. This condition is violated in markets where a carrier's market share is  
14 substantially greater than that of all its competitors combined.

15 Second, the offerings of the supplying firms must be reasonably uniform or similar from  
16 the perspective of the buyers in the market. If consumers view a particular product or service  
17 as uniquely preferable to the alternatives offered by other firms, the supplying firm will not need  
18 to behave as a "price taker." A similar problem can arise if consumers are reluctant to change  
19 suppliers even in the face of substantial inducements (e.g. lower prices).

20 Third, the number of supplying firms must be large enough so that the total amount  
21 supplied to the market cannot be restricted. It always is in the interest of suppliers to limit the  
22 total amount supplied to the market, because by limiting supply, they can charge a higher rate  
23 and earn greater returns (economic profits) than under the conditions of competition.

24 Fourth, as noted in the criteria cited above, firms must be free to enter and exit the  
25 industry. If any firm decides to produce the service, no substantial legal, financial, or other

1 barrier must stand in its way. Patents or trademarks (such as brand names) and other legal  
2 barriers can preclude effective entry.

3  
4 **Q. How do you determine whether effective competition has developed?**

5 A. If anyone of the conditions just discussed is largely or entirely absent, the prospects for  
6 effective competition are diminished or eliminated. Market dominance and the ability to  
7 exercise market power--not the mere presence of alternative suppliers--are the key issues in  
8 deciding whether or not effective competition has emerged or is emerging. Thus, a logical first  
9 step in evaluating the extent of competition is to evaluate relative market shares. If the  
10 incumbent continues to enjoy an overwhelmingly large market share, relative to the new  
11 entrants, it would not be appropriate to assume that competition is effective, and deregulation  
12 would be premature. Unless and until the incumbent's market power is eroded, the continued  
13 regulatory oversight provided by state commissions and the FCC provides valuable protection  
14 from this power. Policy makers at both the state and federal level have taken steps to move  
15 telecommunications markets towards effective competition; however, that doesn't necessarily  
16 indicate that the transition to effective competition has yet been achieved in any particular case,  
17 or that regulatory protections should yet be removed.

18  
19 **Q. Incumbent LECs have claimed in other venues that high market share does "not  
20 necessarily" indicate market power. Would you please comment?**

21 A. Yes. Economic theory demonstrates that there is generally a direct relationship between  
22 market share and market power: i.e., the larger its market share, the greater a firm's ability to  
23 exercise market power and earn excess profits and/or pursue strategies for sustaining its  
24 dominant position in the market. In the extreme situation, a single firm controlling 100% of the  
25 market (i.e., a pure monopolist) will typically have great market power, often allowing it to earn  
26 monopoly profits by establishing prices well above marginal cost and/or engaging in price

1 discrimination. Of course, there are exceptions to this general principle. Consider, for instance,  
2 a firm that controls 100% of the market for a product or service for which there is little or no  
3 demand. If it is forced to sell below cost in order to generate any sales, it obviously won't be  
4 able to generate monopoly profits, and thus it is fair to say that it doesn't benefit from market  
5 power.

6 However, in most markets, including most telecommunications services markets, ample  
7 demand exists, and few substitutes exist. Hence, a high level of market share translates directly  
8 into a high degree of market power. And, of course, market shares below 100% can still  
9 confer considerable market power, particularly where customer allegiances are slow to change.

10 For instance, by controlling 60% of a particular market while the remaining 40% is  
11 divided equally among a dozen firms, a firm is likely to have substantial influence over pricing  
12 and output within a market. Such a market, while technically populated with a reasonable  
13 number of competitors, may be little better than an unregulated monopoly in terms of its  
14 outcome. The extent to which such a market approaches effective competition will depend  
15 upon other variables, including the extent of barriers to entry and exit and the extent to which  
16 customers fluidly move between suppliers or tend to "stay" with a single supplier.

17 Thus, I agree that market share is not the only factor to consider. But, most of the  
18 studies in economics which attempt to analyze or measure market power focus on  
19 concentration ratios (the percentage of industry sales, output, employment, etc. claimed by a  
20 given number of firms--typically four or eight). While they do not provide the complete picture,  
21 concentration ratios are very important, since they provide a practical indicator of market  
22 power.

23 As I explained earlier, an examination of market share data is a logical first step. If the  
24 results of this examination suggest that the incumbent's market dominance has eroded  
25 substantially, then a review of other factors would be appropriate, including the extent of  
26 barriers to entry and exit, the extent to which customers consider the offerings of different firms

1           to be close substitutes, the willingness of customers to change suppliers in response to price and  
2           quality differences, and so forth. The appropriate regulatory response (potentially including a  
3           substantial degree of deregulation) would depend upon the results of this examination.  
4