

1 **Public Policy Goals**

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3 **Q. Please turn to the first major section of your testimony. Would you please briefly**
4 **explain the policy goals you feel should guide the Commission's decision-making**
5 **process in this proceeding?**

6 A. Certainly. Briefly stated, the Commission should strive to ensure that the public receives high-
7 quality telephone service at the lowest practicable cost and that the telecommunications
8 infrastructure not only keeps pace with, but also actively stimulates economic growth and
9 technological progress in Arizona. More specifically, the following public policy goals are
10 important:

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12 (1) The preservation and promotion of affordable, high-quality, universal, basic
13 telecommunications services.
14 (2) The maintenance of fair, just, and reasonable rates (intercustomer equity).
15 (3) The maintenance of a reasonable level of rate continuity.
16 (4) The promotion of economic efficiency.
17 (5) The promotion of technological innovations.
18 (6) The encouragement of effective competition.
19

20 **Q. Please discuss the first of these six goals. How important do you consider universal**
21 **service to be as a policy goal in developing rates?**

22 A. Universal service has been a major goal of utility regulators for the past 70 years, and it
23 continues to be a very important goal. Society, ratepayers, and the Company all benefit from
24 maximum subscriber participation on an interconnected telephone network. It has been clear
25 for a hundred years that the more users a network links together, the more valuable the service
26 for each and every user.

1 **Q. Would you next discuss the second of your recommended policy goals--that of equity**
2 **between rate classes ?**

3 A. Yes. First, I would note that underlying some of the costing debates in this proceeding are
4 fundamental questions of equity. For instance, I strongly disagree with the Company's
5 approach to costing in which it allocates 100% of its local loop costs to basic local exchange
6 service. These loops (which connect customers to their central office) are used in the provision
7 of the entire range of telephone services, including access, toll and custom calling. Hence, it is
8 equitable for subscribers to all these services to share in the cost of the construction and
9 maintenance of these loops.

10 In a competitive industry, the burden of joint costs primarily depends upon the relative
11 strength of demand for each service--the price of more valuable services will incorporate a
12 larger share of the joint and common costs than the price of services considered to be less
13 valuable. In a regulated industry, there are many factors that should influence the share of joint
14 and common costs recovered from each service, and one can reasonably debate the
15 appropriate resolution of this issue. However, it clearly would be inequitable for all of these
16 costs to be paid by basic local exchange customers, or for none of these costs to be borne by
17 custom calling toll and switched access customers. Yet, the Company has relied upon this type
18 of inequitable cost recovery concept to justify its rebalancing proposals in this proceeding. I
19 discuss joint costs and related aspects of the Company's rate proposals in considerable depth
20 later in my testimony.

21 Second, for equitable reasons, a reasonable differential should continue to be
22 maintained between basic service charges for business and residential customers. Not only do
23 business customers have the ability, and willingness, to pay higher telephone rates, but on
24 average, business customers use their lines more intensively than residential customers, and
25 therefore impose higher costs on the network. Similarly, rates for lines serving large private
26 branch exchange ("PBX") equipment and lines connected to key systems have historically been

1 priced higher than rates for individual business lines, in recognition of differences in usage and
2 costs as well as differences in demand characteristics.

3
4 **Q. Would you please discuss the third of your recommended policy goals--the**
5 **maintenance of reasonable rate continuity?**

6 A. Yes. Another longstanding principle of rate making is that customers should not be subjected to
7 sudden and extreme increases in rates, particularly if the increases are unrelated to
8 improvements in service quality or expansions in service offerings, and even more particularly if
9 no reasonable substitute for the service is readily available. Otherwise, the abrupt nature of
10 these increases may cause subscribers to drop off the system, to the detriment of goal of
11 universal service. For equitable and other reasons, regulatory commissions often have found
12 that "rate shock" should be avoided, or minimized. Where customers do not have other viable
13 options (e.g., where effective competition does not exist), extreme or abrupt rate increases are
14 particularly inappropriate and undesirable. As I show in detail later in my testimony, some of the
15 Company's rate proposals violate the rate continuity principle.

16
17 **Q. Would you next discuss the fourth of your recommended policy goals--the promotion of**
18 **efficiency through pricing?**

19 A. Yes. Efficiency is a well recognized goal in utility rate design. Economics describes it as a state
20 in which an optimal level and mix of goods and services is produced, using optimal production
21 methods. In the context of telecommunications regulation, this objective implies that rates
22 should not induce wasteful and inefficient methods of production (either by the utility or by other
23 producers), nor lead to over- or under-consumption of the telecommunication firm's services.

24 Under the widely accepted approach of Vilfredo Pareto, economic efficiency or
25 inefficiency can be defined in terms of waste. When economic efficiency has been maximized,
26 any change will increase waste. To the extent the Commission seeks to improve or maintain
27 economic efficiency, the logical focus is on marginal cost. This is the type of cost that is most

1 relevant to discussions of economic efficiency, and an understanding of the marginal cost
2 concept is essential to any effort to maximize economic efficiency.

3
4 **Q. Would you please discuss the fifth goal--the promotion of economic growth and**
5 **technological progress?**

6 A. Certainly. If universal service is defined merely as applying to voice grade dial tone at the end of
7 a customer's line, then in the coming age of the broadband "telecommunications superhighway"
8 local exchange companies like US West will surely have no problem supplying it at a marginal
9 cost considerably below current rates. I say this because basic voice communications require a
10 small fraction of the total bandwidth required for video on demand and other advanced
11 services. Thus, for example, if a broadband network is developed to provide high speed
12 internet access or video dialtone service, the marginal cost of carrying ordinary voice traffic on
13 such a network will be very small. In turn, if prices are set near the level of marginal cost, it will
14 be easy to ensure that nearly everyone has voice grade telephone service.

15 The past decade has seen a continued downward trend in telecommunications costs.
16 Technological improvements and increasing scale economies have resulted in sharp reductions
17 in the cost of providing most telecommunications services. As costs have declined, profits have
18 generally increased and prices have generally decreased throughout the industry. The
19 Company's proposal to increase rates in this proceeding runs counter to this overall trend. As
20 will become clear in later sections of my testimony, I strongly disagree with the Company's
21 proposals to sharply increase basic exchange rates. However, it should be understood that my
22 opposition to these proposals does not stem from a preference for basic over enhanced
23 services. To the contrary, I have based my testimony on certain economic principles which are
24 equally applicable to the "information superhighway" of the future. Telecommunications, as an
25 industry, is undergoing a competitive technological revolution, which is gradually extending the
26 definition of what services are considered to be "basic" or "vital" to consumers. While there is
27 considerable uncertainty concerning the timing and extent of this trend, I consider it likely that

1 what POTS (plain old telephone service) has been for the 20th century, some form of
2 broadband service will be for the 21st.

3 The economic benefits to be derived from universal service are inherent to the very
4 nature of two-way communications networks. In resolving public policy issues, it is important to
5 remember that the concept of universal service is not simply a question of equity, or the desire
6 to ensure that everyone in society enjoys a minimum standard of living. The strength and
7 efficiency of our economy depends in part on how successful we are in developing and
8 maintaining key elements of our nation's infrastructure--including two-way communications
9 networks in which nearly everyone participates.

10 Society as a whole benefits from the flow of communication. Many systems, including
11 markets, become more efficient when the flow of information improves. Economic theory
12 suggests that such positive externalities should be considered in resolving policy issues, such as
13 the rate rebalancing proposals in this proceeding. Although externalities are not reflected in the
14 development of costs, they have historically been acknowledged by regulators, at least
15 implicitly, when decisions have been made to keep the price of certain services low enough to
16 encourage nearly everyone to join the network, regardless of how low their income may be, or
17 how little they may value a telephone.

18
19 **Q. What do you mean by "effective" competition?**

20 A. When attempting to decide whether a product is produced and marketed under competitive
21 conditions, one must consider pricing behavior. In a fully competitive marketplace, both buyers
22 and sellers view price as a given. All participants in the market behave as if market prices are
23 unaffected by their own decisions regarding how much they should purchase or produce. If
24 either buyers or sellers recognize that they can control prices, competitive conditions do not
25 fully prevail. The greater the degree of control exercised by a buyer or seller, the less
26 competitive forces will prevail.

1 Usually, four conditions are considered sufficient to assure that sellers will behave as
2 "price takers," or effectively compete with each other. If any one of these conditions is absent,
3 the prospects for effective competition are diminished or eliminated.

4 First, no one firm can have a dominant share of the market. If a firm engages in price
5 leadership, dominant firm pricing, or price discrimination, its behavior is inconsistent with
6 competitive behavior. Needless to say, this condition is violated in the provision of any service
7 where a firm's market share is greater than that of all its competitors combined.

8 Second, the products of the supplying firms must be generally uniform (from the
9 perspective of the buyers in the market). If consumers view the product or service as unique,
10 the firm will not need to behave as a "price taker."

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

15 Fourth, as noted in the criteria cited above, firms must be free to enter and exit the
16 market. If any firm decides to produce the service, no substantial legal, financial, or other
17 barrier must stand in its way. Patents or trademarks (such as brand names) and other legal
18 barriers can preclude effective entry.

19
20 **Q. How do you think the Commission should respond in this docket to the trend towards**
21 **competition?**

22 A. Even though this is not the appropriate forum for resolving all of the complex issues that arise
23 from this trend, I believe that the Commission needs to make sure that its decisions in this
24 docket are consistent with the public interest. The Commission should not feel pressured to
25 adopt increases in local rates (e.g. in order to fund reductions in toll and access rates) because
26 of the trend toward greater competition. During the transition towards a more competitive
27 market, the Commission should continue to establish rates based upon the broad public interest,

1 rather than upon the narrow corporate interests of one particular competitor (in this case, US
2 West). The trend toward increased competition can appropriately be accommodated and
3 encouraged in this and subsequent proceedings while maintaining consistency with the public
4 interest. For example, a reasonable balance between business and residential locals can be
5 maintained during the transition to a more competitive market.
6

7 **Q. How have you applied these policy goals and objectives in your evaluation of the**
8 **Company's proposals?**

9 A. In analyzing the Company's proposals and in developing my recommendations, I have
10 attempted to strike a reasonable balance among these policy goals, rather than seek to achieve
11 one goal to the exclusion of all others.

12 For example, it is clear that economic efficiency will be encouraged if rates are reduced
13 toward their relevant cost. However, if such movement cannot be achieved without drastic rate
14 increases for particular groups of customers, I would recommend moderation of the suggested
15 rate change, perhaps through a phase-in, or by taking a smaller step in the direction advocated
16 by the Company. In my opinion, efforts to promote economic efficiency should not totally vitiate
17 considerations of rate continuity and the avoidance of disruptive rate changes.

18 For example, the pricing arrangements of the past several decades, which have
19 required toll carriers and their customers to shoulder a sizable share of the joint costs of the
20 network, have been very successful in creating and maintaining a ubiquitous telephone system
21 that is unparalleled anywhere else in the world. In the United States, nearly everyone is
22 connected to a common telecommunications network. While some changes to the traditional
23 pricing arrangements and rate relationships might be needed to reflect changing conditions (e.g.,
24 increased competition), the Commission should not rush to abandon a longstanding pricing
25 approach that has been so successful in benefitting the public.

26 It is particularly important not to rush into drastic realignments of telecommunications
27 prices at this early stage in the transition toward a more competitive market. If the Commission

1 allows the incumbent carrier to use its monopoly power to manipulate price levels for its own
2 strategic advantage, the result may not only be disruptive, but it may also be anti-competitive--
3 creating unnecessary instability and uncertainty in the market, and making it more difficult, and
4 more risky, for other firms to enter.

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