

1 **Cost and Revenue Comparisons**

2
3 **Q. You have indicated your disagreement with US West's treatment of loop and port costs**
4 **in its TSLRIC studies. Can you explain in greater detail what is inappropriate about**
5 **the Company's approach?**

6 A. Yes. The subscriber loop and associated switching port are not properly part of the TSLRIC
7 of local service because these costs will be incurred regardless of whether or not local service is
8 provided, so long as various other services continue to be produced.

9 Where network elements are required for multiple telecom services, the cost of these
10 elements should not logically be included in the TSLRIC calculations for any single service. The
11 portion of the firm's total cost that is attributable to network elements that are used by many
12 services will generally be the same, regardless of whether or not any single service is produced
13 or not produced. As the FCC explains:

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15 Certain types of costs arise from the production of multiple products or
16 services. We use the term "joint costs" to refer to costs incurred when two or
17 more outputs are produced in fixed proportion by the same production process
18 (*i.e.*, when one product is produced, a second product is generated by the
19 same production process at no additional cost). [*Interconnection Order*, para.
20 676.]
21

22 Since the second product is generated at no additional joint cost, and TSLRIC focuses only on
23 the *additional* cost of each product, the joint cost should not appear in the TSLRIC amount.
24 Regardless of how well or how poorly TSLRIC is estimated, shared costs (a generic term
25 which encompasses both joint and common costs) should appropriately be excluded from the
26 cost of individual services that share the network elements in question. US West reached a
27 contrary result by essentially ignoring the definition of TSLRIC and adding 100% of the loop
28 costs to its TSLRIC results.

1 Stated differently, if the cost of a particular network element remains the same
2 regardless of whether or not any particular telecommunications service is produced using that
3 element, the cost of that element should not be reflected in the TSLRIC of the individual
4 services. This conclusion follows directly from the definition of TSLRIC. As I explain in
5 Appendix B to my testimony, TSLRIC is defined as a firm's long-run total cost of producing all
6 its goods and services except the service in question, subtracted from the firm's long-run total
7 cost of producing all its goods and services including the service in question. Since the loop and
8 port costs are appropriately included in both sides of this equation, they should have little or no
9 effect on TSLRIC. In mathematical terms, the cost of the loop and port cancel out of the
10 TSLRIC calculations, when they are correctly developed, consistent with the TSLRIC
11 definition.

12
13 **Q. Let's examine US West's TSLRIC study methodology more specifically. Could you**
14 **please define "basic local service"?**

15 A. Certainly. Basic exchange service is defined in the Commission's rules as

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17 Service provided to business or residential customers at a flat or measured rate
18 which affords access to the telecommunications network. [Arizona
19 Administrative Code, Title 14, Chapter 2, Article 5, Section 1, No. 5]
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21 Basic local service allows customers to communicate within a specified local calling area by
22 placing and receiving calls that originate and terminate within that defined geographic area.

23 Accordingly, the portion of the local exchange company's total costs that are most
24 properly and exclusively attributed to basic local service are the usage costs associated with
25 local calling volumes. These costs primarily consist of the usage sensitive central office switching
26 costs, and the costs of interoffice trunking or transport, which is required to handle calls from
27 one part of the local exchange to another. In addition, there are certain other minor costs that

1 can also be directly attributed to basic local service, particularly the cost of billing and collecting
2 the rates charged for this service.

3
4 **Q. Since a customer purchasing basic service obtains access to the network, why**
5 **shouldn't the costs of the loop or port be included in the incremental cost of basic local**
6 **service?**

7 A. While these costs are necessary in order to provide local service, they are equally necessary for
8 the provision of toll, access, and custom calling service. Toll carriers, for example, obtain
9 access to a Phoenix resident over the same line that resident uses to obtain access to other
10 subscribers in the Phoenix metropolitan area. In terms of economic theory, the cost of the
11 access line is a joint or shared costs of the entire family of services that require use of this
12 facility; the cost of the access line is not incremental to any single service within the entire family
13 of services which relies upon that line.

14 Disputes over the appropriate definition and treatment of these joint or shared costs lie
15 at the heart of the longstanding dispute concerning whether, or to what extent, basic local
16 exchange service is "subsidized" by other services. US West is not unique in its treatment of the
17 loop and port costs in this proceeding. Incumbent local exchange carriers often include the
18 entire amount of these joint costs in the local exchange cost estimates they present to regulatory
19 commissions. However, this procedure is not valid, and the resulting total cannot be compared
20 meaningfully to the revenues derived from local exchange service, nor can it be used to draw
21 valid conclusions concerning "subsidies."

22 Local exchange carriers have many revenue sources that depend upon, and are
23 available to help recover, the joint or shared costs of the loop and port. It is highly misleading
24 (as well as economically invalid) to compare these costs with the revenues associated with local
25 exchange service alone. Once the loop and port costs are incurred, the Company is in a
26 position to generate revenues from switched access, toll, call waiting, call forwarding, caller ID,
27 and many other services. Without the loop and port, none of these revenues would be available.

1 By attributing the loop and port entirely to local exchange service, the Company creates the
2 misleading impression that it isn't profitable to serve residential local exchange customers. If all
3 the relevant revenues sources are considered, however, it is readily apparent that most
4 residential customers are profitable to serve.

5
6 **Q. You mentioned that it is sometimes claimed that local service is "subsidized" by other**
7 **services. If revenues are needed from long distance and other services to help cover**
8 **the cost of the loop and port, does this suggest the existence of a subsidy?**

9 A. No, it does not. In his original direct testimony, Mr. Teitzel claims that

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11 Prices for long distance and other services need to be restructured and reduced
12 to meet competitive pressures. **This reduction will remove some of the**
13 **current subsidy which these services provide to residential Basic**
14 **Exchange Service.** If US West does not take immediate steps to respond to
15 competitive pressure, including the establishment of competitive zones and
16 lowering of Long Distance prices, the Company will continue to lose a large
17 portion of the revenue from these services. The high volume Long Distance
18 users are lost, leaving the cost recovery burden on the high cost, low use
19 customers. This means there will be a need for even greater future price
20 increases to the residential customer, to offset losses of traditional subsidy flows
21 and to afford US West the opportunity to earn a reasonable return. [Teitzel,
22 Original Direct, p. 34. Emphasis added.]
23

24 The fallacy behind this argument is the same fallacy that underpins the claim that the rates for
25 residence basic local exchange service are not adequate to recover the incremental cost of that
26 service: the Company assigns the entire amount of loop cost to basic local service, and none of
27 these costs are assigned to the other services that use the loop. This practice fundamentally
28 violates the defining principle of the TSLRIC approach, as I mentioned earlier. If the Company
29 were to apply this same fallacious reasoning to any of the other services that rely upon the loop,
30 it would inevitably reach the same conclusion: none of these services generate enough revenues

1 to recover the full cost of the loop and port, and every one of these services can appear to be
2 subsidized by this line of reasoning

3 In reality, one cannot reach conclusions about subsidy flows by looking at the joint
4 costs required to provide any one of the jointly provided services. If one wants to prepare a
5 TSLRIC analysis which includes loop and port costs, this can only meaningfully be performed
6 for the entire family of services that uses the loop and port. For example, one can meaningfully
7 compare the incremental “costs” of adding another residence customer to the network
8 (including the cost of the loop and port) with the incremental revenues that will be generated by
9 the presence of that customer. But in making such a comparison, it is necessary to consider all
10 of the ancillary revenue sources (e.g., custom calling, toll and switched access) which will
11 increase as a result of the presence of that customer. A meaningful cost-revenue comparison
12 involving the full cost of the loop must include all of the revenues which are generated by the
13 loop.

14 No one service can be expected to recover the entirety of the joint costs incurred in
15 providing multiple services. It is clearly unreasonable to assign 100% of these joint costs to just
16 one service out of the half-dozen or so types of service that benefit from the joint production
17 process (including intraLATA toll, intrastate interLATA switched access, interstate switched
18 access, directory publishing, call waiting, call forwarding, caller ID and more).

19 Not only would it be unreasonable to expect basic exchange ratepayers to pay 100%
20 of the joint costs, that type of cost recovery would be completely inconsistent with the manner
21 in which joint costs are recovered in competitive markets. It simply isn't plausible to argue that
22 demand for these other services is so weak that they would not (or should not) bear any
23 significant share of the joint costs. I provide a more extended discussion of the proper treatment
24 of joint and common costs Appendix C to my testimony.

25 The appropriate question to ask with respect to the existing residential cost/revenue
26 relationships is whether US West is able to recover its costs of providing residential services
27 which require use of a loop from the total revenue stream generated by that loop. In answering

1 this question, it is critically important to look at the entire array of revenues generated by the
2 loop, including switched access, intrastate toll, interstate toll, custom calling and basic local
3 exchange.

4 If there are specific markets (e.g, rural communities) where the total amount of retail
5 revenue generated by a typical loop is insufficient to recover the cost of that loop, there is
6 reason to be concerned, since competitors will be discouraged from entering those particular
7 markets. Assuming such a problem exists in a specific market, there are several potential
8 solutions. Most notably, a “universal service fund” or other regulatory mechanism may be
9 needed, to help cover the high costs of serving these particular markets. However, any such
10 analysis must involve a meaningful and complete picture of the revenues and costs attributable
11 to the customer, or market, in question. To be helpful, the analysis must have a meaningful
12 match of costs and revenues.

13 As I will show later in my testimony, there are at least three different methods that can
14 be used to appropriately compare revenues with costs. None of these methods supports a
15 conclusion that US West residence customers as a whole, or residence basic local exchange
16 services generally, are subsidized in the economic sense by other customers or other services.
17 It is only in the context of US West’s misleading comparison of revenues from local service in
18 comparison with its estimate of local service costs plus 100% of the joint loop and port costs,
19 that the appearance of a general “shortfall” can be developed. This alleged “subsidy” or
20 shortfall disappears if a reasonable allocation approach is used, or if appropriate consideration
21 is given to ancillary sources of revenues attributable to residence customers. In the next section
22 of my testimony I will present alternative TSLRIC studies and revenue/cost comparisons that
23 avoid the errors in US West’s studies.

24
25 **Q. A loop isn’t typically provided to a residence except when they purchase basic local**
26 **exchange service. Does the fact that the loop is “bundled” with local usage affect your**
27 **conclusions concerning US West’s treatment of loop and port costs?**

1 A. No. Intuitively, it may seem reasonable to conclude that basic local exchange customers are
2 morally or economically responsible for the full cost of building and maintaining the local loop
3 that serves them. From this perspective, other revenue derived from the local loop may seem
4 be irrelevant and/or treated as a windfall which might go away at any time, because the ancillary
5 revenues are derived from services which are optional and/or competitive. By this reasoning,
6 the use of the local network by interexchange carriers is treated as if it were purely incidental,
7 and the very substantial revenues received from switched access and toll usage are simply
8 ignored. Similarly, this view simply ignores the fact that US West generates substantial revenues
9 from caller ID, custom calling, directory publishing and other services due to the presence of its
10 residential customers on its local networks. These revenues would largely or completely
11 disappear if the Company didn't provide basic local exchange service, but this too is ignored.
12 While it may be intuitively appealing to some, this line of reasoning is not consistent with the
13 relevant economic theory and it is not consistent with the manner in which ancillary revenues are
14 treated in competitive markets.

15 Succinctly stated, US West's entire presentation concerning basic exchange rates and
16 costs depends upon removing from view most of the revenues that are generated by its local
17 network, while including nearly all of the costs of that network. This misleading view of costs
18 and revenues has been presented many times before in regulatory proceedings, and it has been
19 rejected or ignored nearly as often as it has been presented. The FCC has confirmed that loop
20 costs are joint or shared costs which are necessary for the provision of toll, access, and custom
21 calling service, as well as local exchange service. [FCC Order 96-325, p. 333, ¶ 678] State
22 commissions have often reached similar conclusions, as I indicate in Appendix C to my
23 testimony.

24
25 **Q. You seem to implicitly concede that local exchange service is the primary product**
26 **purchased by many consumers and that toll, custom calling, and other services are**

1 **ancillary in nature. Does this distinction affect the appropriate treatment of the loop**
2 **and port costs?**

3 A. No. Many joint production processes yield a primary product and “byproducts” that are
4 created as a result of the manufacturing or provisioning of the primary product. These
5 byproducts may be waste material, like wood shavings that accumulate in the process of
6 making chairs, or they may be an important product unto themselves, like the leather that is
7 available from cattle that are butchered for their meat. Consider the example of beef and hides,
8 which I discuss in Appendix C. Cattle may primarily be grown for eating purposes, but that
9 doesn’t mean that the entire cost of feeding the cattle will be recovered from purchasers of
10 beef.

11 The same reasoning applies to the provisioning of telephone service. Even if US West
12 primarily installs local loops and ports in order to provide local exchange service, that doesn’t
13 mean that the loop can’t also generate other sources of revenue. To the contrary, whenever
14 additional loops are added to its network in response to increased demand for basic local
15 exchange service, the Company is able to sell more switched access, long distance, caller ID,
16 call waiting, and other optional services to these and other customers. Even if a chair-maker is
17 primarily in business to make chairs, it may be able to generate ancillary revenues from the sale
18 of wood shavings or sawdust. If so, these revenues would be treated as a reduction in the total
19 cost of producing chairs; they would not be ignored or excluded from consideration in deciding
20 how profitable the chair business is.

21 Similarly, US West gains millions of dollars in revenues from switched access and other
22 services which it would not receive if it didn’t provide local exchange service. Economic theory
23 demonstrates that even ancillary or accidental byproducts like wood shavings will help recover
24 a portion of the joint costs of production—the magnitude of this recovery will depend upon
25 demand conditions. If there is a lot of demand for wood shavings, it will bear a relatively large
26 share of the joint costs; if there is no demand for shavings, they will be thrown away or burned,
27 and thus not provide any provide any portion of the firm’s cost recovery.

1 The mere fact that purchasers of caller ID, call waiting, switched access, and other
2 ancillary telecommunications services help pay the costs of the local network does not indicate
3 that these services “subsidize” the cost of providing local exchange service, any more than the
4 purchasers of wood shavings or kindling can be said to “subsidize” the purchasers of wooden
5 chairs. In both cases, purchasers contribute to the joint costs of production in amounts that
6 depend upon the strength of their demand. If demand for wood shavings is strong, the price of
7 chairs will likely go down, because some of the underlying wood costs will be recouped from
8 the sale of shavings. If the market for leather collapses due to competition from plastic
9 substitutes, the price of hamburger and steaks will go up. Similarly, if the market for caller ID or
10 call waiting were to drastically change, so that no one was willing to pay extra for these
11 services, they would be discontinued or given away for free, and the price of the remaining
12 services provided by the carrier would tend to increase.