

1 **Cost /Revenue Comparisons**

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3 **Q. Please turn to your studies concerning the relationship between revenues and**
4 **cost for the four rate groups in New jersey. Are existing revenues sufficient to**
5 **cover these costs for most customers?**

6 A. Yes. For the majority of Bell's customers, the existing basic local exchange rate plus
7 the touch tone charge and the FCC's subscriber line charge collectively covers the
8 Total Service Long Run Incremental Cost (TSLRIC) of providing basic local exchange
9 service. This is true both for a "pure" approach focusing only on the direct costs, as
10 well as an approach which considers an allocated share of the joint costs. In fact, for
11 many of these customers, this comparison shows a substantial surplus of revenues in
12 excess of TSLRIC.

13 In order to provide the Board with detailed information concerning the revenue
14 to cost relationships, and the related question of whether and to what extent subsidies
15 exist under the current rate structure, I have prepared a series of different analyses
16 comparing costs with revenues, for the four rate groups. I studied each rate group using
17 three different approaches to joint costs and three different TSLRIC studies (each
18 focusing on a different increment). As discussed previously, these approaches differ
19 primarily in terms of how joint and common costs are treated.

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21 (1) A "pure" TSLRIC approach: This analysis excludes joint costs. To the
22 extent direct revenues exceed direct costs, this analysis measures the
23 surplus that is available as a contribution to joint and common costs.

24 (2) An "allocation" approach: This analysis includes an allocated share of
25 joint costs (using an allocation factor of 50%).

1 opportunity to look at studies in which a reasonable share of the loop costs are
2 allocated to basic local exchange service. For example, on August 31, 1995, the
3 Pennsylvania Public Utility Commission, in a proceeding to update the state's universal
4 service polices, stated:

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6 We agree with the PTA and the OCA that local loop costs are joint or
7 shared costs since the local loop is jointly utilized to provide a wide array
8 of telecommunications services, among which are basic universal
9 service. [Order, Docket No. I-00940035, at 12].

10
11 Yet, having accepting this theoretical point, the Pennsylvania Commission
12 nevertheless wanted to review studies in which some of the loop costs were included.
13 Accordingly, the Commission required that all studies filed in that investigation assign
14 "an appropriate portion of loop costs" to basic universal service. I am providing an
15 example of this "allocation" approach, in case the Board finds this to be of some value.
16 Under an allocation approach, the pivotal question becomes one of the appropriate
17 share of joint costs to be allocated to basic exchange service. The results I am
18 presenting use a flat percentage allocator of 50% of these joint costs to basic service.
19 This approach assumes that upwards to 25% of the joint costs are allocated to the
20 interstate long distance carriers (consistent with current separations practice) and that
21 the remaining fraction is allocated to intraLATA toll, intrastate interLATA switched
22 access, custom calling and miscellaneous intrastate services.

23
24 **Q. Would you please provide a further explanation of your 50% allocation factor?**

25 A. Yes. As I have said, joint costs are required for the provision of local exchange,
26 custom calling, switched access, and toll service. There is no universally accepted
27 method of allocating these costs, and differences in the allocation percentage or method
28 can result in very significant differences in the cost study results. For that reason, I

1 believe that to the extent the Board wants to review a basic local exchange cost study
2 that includes a share of joint costs, the Board is best served by a relatively simple
3 allocation approach that is also fully stable. Clearly, a uniform 50% factor meets both
4 criteria.

5 This 50% factor is similar to the percentage allocation that would be assigned to
6 basic local service under other, more sophisticated allocation approaches, such as
7 revenue-based methods, usage-based methods, and direct cost-based methods. For
8 example, the Washington Commission in Docket No. U-85-23 assigned loop costs
9 25% to interstate toll, 16.95% to intrastate toll, and 58.05% to local services (including
10 optional services). [See reference in WUTC Order in Docket No. UT-950200, p. 79.]

11 Revenue-based allocations assign shares of joint costs based upon the services'
12 percentages of total revenues. For example, if basic service accounts for 45% of total
13 revenues, it might be allocated 45% percent of the joint costs. Usage-based allocations
14 assign shares of joint costs by relative minutes of use, perhaps weighted in some way to
15 distinguish toll from local and/or peak from offpeak, etc. Finally, the joint costs of
16 switched services could be allocated in proportion to the direct costs of these services.

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18 **Q. Why do you prefer a flat 50% allocation, rather than a revenue-based**
19 **allocation method?**

20 A. Revenues reflect the manner in which the cost of service is already being recovered.
21 However, in a regulated industry a problem arises, because revenues are essentially a
22 function of pricing, and pricing may change, depending upon the outcome of the cost
23 analysis, and the resulting pricing decisions. Where revenue based allocations are used,
24 the cost study will reflect the existing pricing philosophy. To the extent the pricing
25 approach changes, the allocations will also change, and thus a problem of circular

1 reasoning may arise. (Prices may be increased, which increases the revenue-based
2 allocation of costs, which creates the appearance that prices must increase even further)
3 Given this potential problem with circularity, I prefer to use a uniform flat percentage
4 approach--in this case, 50%.

5
6 **Q. You also refer to usage-based allocation methods. What are they?**

7 A. The two most familiar are the use of a Subscriber Line Usage (SLU) factor and the use
8 of a Subscriber Plant Factor (SPF). Both SLU and SPF reflect differences in usage;
9 however, SLU factors simply reflect the relative minutes of use for the various services
10 (for instance, an intrastate toll SLU factor is calculated by dividing the intrastate toll
11 minutes of use, originating and terminating, by total minutes of use for the service area in
12 question). On the other hand, the SPF is more complex. It relies on SLU data, but it
13 introduces weighting into the computations, the effect of which is to put greater
14 emphasis on toll usage than on local usage, in order to reflect certain demand factors,
15 such as distance, and the repression effect from attaching a price tag to toll minutes.

16
17 **Q. Why have you not used a usage-based allocation in apportioning loop costs?**

18 A. To precisely apply the SPF methodology to New Jersey Bell's cost data would require
19 the assemblage of a great deal of data and the introduction of considerable complexity
20 into the analysis, without producing any significant advantage over the flat 50%
21 allocation that I have chosen. In my experience, when a SPF approach is used for both
22 interstate and intrastate, the resulting allocation to basic local exchange is typically
23 somewhere in the vicinity of 40% to 60%.

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1 **Q. You have now discussed both the “pure” TSLRIC approach and the joint cost**
2 **allocation approach. You mentioned that you also use d a third approach. Could**
3 **you explain this approach, in which you consider 100 percent of the loop costs?**

4 A. Yes. Since joint and common costs are a substantial fraction of a local exchange
5 carrier’s overall costs, it is useful to analyze these costs from a variety of different
6 perspectives. One approach is to look at an incremental group of customers, and ask
7 the question: *What incremental revenues will the firm generate if it serves this*
8 *group of customers?* These incremental revenues would then be matched with the
9 incremental costs that are required to serve that group of customers.

10 For any one customer, the incremental revenue level may vary widely. If the
11 customer never places or receives a long distance call, and never uses any of the
12 optional services that are offered by the firm, the incremental revenues may amount to
13 little more than the revenues from basic local exchange service and the FCC’s
14 subscriber line charge. Even in this is extreme case, however, some other incremental
15 revenues will arise.

16 For example, consider directory publishing revenues. The incumbent local
17 exchange carriers earn very substantial revenues (and profits) from yellow page
18 advertising. These rates vary directly with the number of subscribers included in (and
19 receiving) the directory. As additional customers are added to the network, directory
20 publishing revenues and profits will expand. These incremental revenues can
21 appropriately be considered in evaluating the impact of policies that encourage, or
22 require, carriers to maximize the participation rate.

23 The situation is analogous to that of many publications. A magazine evaluating
24 its subscription efforts should consider not just the direct revenues generated by new
25 subscriptions, but also all the incremental revenues associated with those subscriptions.

1 New revenues will come from the additional ads sold as the circulation base expands,
2 from the higher advertising rates chargeable as the number of subscribers increases, and
3 from the sale to new subscribers of books, videos, or other ancillary products.

4 In the same way, a local exchange carrier can anticipate ancillary revenue from
5 the sale of boldfaced white page listings, which grow more numerous as the directory
6 becomes longer. All such incremental revenue streams (net of the incremental costs)
7 must be considered in a fair evaluation of a program to expand the subscriber base.

8 As the increment of customers increases, so does the expected revenue stream
9 from adding customers to the network. Consider, for example, what revenues a carrier
10 can expect as it compares two scenarios: one in which nearly 80% of all businesses and
11 residences have telephone service and one where nearly 100% of them have a
12 telephone. As the number of customers increases in the range from 80% to 100%, the
13 LEC can anticipate substantial incremental revenues and profits from numerous different
14 sources. Directory advertising revenues will increase as the directory expands to
15 include nearly everyone in the community. Circulation will increase, and the directory
16 will be used more frequently, and become more useful to subscribers. As a result, the
17 number and size of ads will tend to increase further, as will the rates per column inch.

18 Similarly, the volume of switched access minutes sold to interexchange carriers
19 will increase with the number of subscribers, since expansion of the network will
20 unquestionably translate into substantially higher volumes of access traffic. Not only will
21 the incremental customers place more outgoing toll calls, they will also receive
22 numerous long distance calls. Furthermore, the value of switched access service
23 clearly will increase as participation rates increase, and the LEC may also find it
24 feasible to charge higher access rates per minute as its network grows to include nearly
25 everyone in the area, resulting in higher incremental revenues.

1 Moreover, many of these incremental customers, once they decide to purchase
2 basic telephone service, will also opt to purchase one or more discretionary services.
3 For example, call waiting service is very popular. As participation varies between just
4 the “core group” of residential customers and all of the customers, including the
5 “marginal” customers, the carrier can reasonably anticipate that many of the marginal
6 customers will purchase call waiting service. In fact, incremental call waiting revenues
7 may also be generated from within the core group of customers, as the overall volume
8 of local calling expands, and customers become more concerned about the possibility
9 of missing an important call because the line is already in use.

10 As a final example, consider the likelihood that some of the marginal customers
11 will purchase inside wire maintenance. Whether or not this is a wise purchasing decision
12 (some consider it greatly overpriced insurance), the carrier may reasonably anticipate
13 incremental revenues from this ancillary source, as marginal customers are added to the
14 network--some of whom will agree to pay a monthly fee in order to have their inside
15 wires maintained.

16 I have not attempted to analyze all of these incremental revenue streams in
17 complete detail, nor have I analyzed them on a wire center by wire center basis. The
18 expected revenue stream will tend to vary somewhat, depending upon the demographic
19 and other characteristics of each wire center and the group of incremental customers
20 being studied. For instance, in some locations the local calling scope is very small, and
21 customers are required to place an intraLATA toll call in order to reach their
22 employers, major retailers, the nearest hospital, and the like. In such locations, the
23 carrier can anticipate a higher volume of intraLATA toll revenues than in a wire center
24 where the local calling area encompasses most of the customers’ immediate daily
25 needs. While I recognize this diversity exists, the data needed to analyze these patterns

1 in detail were not readily available. Therefore, I have followed a simplified approach. I
2 have estimated a conservative level of revenues (and corresponding contribution to joint
3 and common costs) that I believe can reasonably be anticipated when a typical
4 customer is added to the network.

5 On page 3 of schedule 6 I have included this estimate of ancillary revenue
6 sources in a separate column labeled "Other Direct Revenues." My estimate of the
7 corresponding direct costs is included in the column labeled "Other Direct Costs." By
8 including these columns, along with the direct costs and revenues associated with basic
9 local service page 3 provides a fairly comprehensive picture of the various revenues
10 and costs that a carrier can anticipate as it expands its network to include the relevant
11 incremental group of customers, as well as the core group of customers that would be
12 present in either event.

13 The column labeled "Contribution or Subsidy" shows the extent to which these
14 incremental customers can be expected to generate incremental revenues sufficient to
15 cover their incremental costs, including all of the joint costs of the loops that connect
16 them to the network, and an allowance of 10% towards common costs. To the extent a
17 positive figure is shown in the final column, the customer is generating an additional
18 contribution towards the firm's common costs.

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