

1     **5.   BA-Del's Proposed Rates and Charges**

2  
3     *Interconnection*

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5     **Q.   Let's now discuss Interconnection. Would you begin by defining what is meant by**  
6     **interconnection rates?**

7     A.   Yes. In this context, *interconnection rates* means the rates charged by one LEC to another  
8     for the switching and transport of local calls. Prior to the passage of the 1996 Telecom Act,  
9     some incumbent LECs (including Bell Atlantic) advocated charging relatively high rates for this  
10    service, similar to those charged interexchange carriers (IXCs) for the switching and transport  
11    of long distance calls. However, there is no legal or logical reason why the rates applied to the  
12    termination of local calls must be the same as the *carrier access rates* charged by a LEC for  
13    the origination and termination of toll calls. The FCC notes as follows:

14           1034. We recognize that transport and termination of traffic, whether it  
15           originates locally or from a distant exchange, involves the same network  
16           functions. Ultimately, we believe that the rates that local carriers impose for the  
17           transport and termination of local traffic and for the transport and termination of  
18           long distance traffic should converge. We conclude, however, as a legal matter,  
19           that transport and termination of local traffic are different services than access  
20           service for long distance telecommunications. Transport and termination of local  
21           traffic for purposes of reciprocal compensation are governed by sections  
22           251(b)(5) and 252(d)(2), while access charges for interstate long-distance traffic  
23           are governed by sections 201 and 202 of the Act. The Act preserves the legal  
24           distinctions between charges for transport and termination of local traffic and  
25           interstate and intrastate charges for terminating long-distance traffic.

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27           1035. We conclude that section 251(b)(5) reciprocal compensation obligations  
28           should apply only to traffic that originates and terminates within a local area...  
29           We find that the reciprocal compensation provisions of section 251(b)(5) for  
30           transport and termination of traffic do not apply to the transport or termination of  
31           interstate or intrastate interexchange traffic.

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33           FCC Implementation Order. As I mentioned earlier, the pricing rules developed by the FCC in  
34           47 C.F.R. Part 51 have been stayed by the federal Court of Appeals for the 8<sup>th</sup> Circuit, and

1           thus the FCC’s conclusions are not currently binding on the Commission. In any event, from  
2           my perspective as an economist, I believe it is appropriate to distinguish these two concepts  
3           (local termination rates and carrier access rates), even if they involve identical network facilities.  
4           Maintenance of this distinction between local termination rates and carrier access rates is  
5           consistent with longstanding patterns in the market, which are deeply rooted in perceived  
6           differences in value.

7           Most consumers perceive long distance calls as having greater value than most local  
8           calls, and prices paid by consumers have historically recognized this difference. Similar pricing  
9           distinctions based upon perceived value exist in other markets as well. For instance, the price  
10          Federal Express charges to deliver a package from my office in Tallahassee to an office in  
11          downtown Wilmington differs greatly, depending upon whether it is delivered by 8 a.m., 10  
12          a.m., or 3 p.m. the next day. Yet the package will likely be flown on the same plane in any  
13          case, and the time and effort required to transport it within the Wilmington area will be very  
14          similar. It may be more impressive to deliver a package before 8 am, and if someone is in a  
15          rush, this service may be very valuable; but the carrier’s cost is likely to be about the same  
16          regardless of the delivery time. The differences in delivery price are mostly, if not entirely, based  
17          upon differences in perceived value, rather than differences in the cost of transporting the  
18          package. These pricing differences persist because the market perceives different delivery times  
19          as distinctly different services, with differing value and demand characteristics.

20          Similarly, in economic terms, terminating a local call is a distinctly different service from  
21          terminating a long distance call, even if the engineering functions involved are the same. The  
22          latter function is typically perceived as having greater value and historically has commanded a  
23          higher price, even where the cost was roughly the same.

24          The FCC has indicated (in the section quoted earlier) that it believes that “the rates that  
25          local carriers impose for the transport and termination of local traffic and for the transport and  
26          termination of long distance traffic should converge” in the future. It isn’t clear whether the FCC

1 was expressing an opinion about how prices will evolve under increasingly competitive  
2 conditions, or hinting at future changes it plans in regulation of interstate switched access rates.  
3 Even if it wants to reduce interstate access rates in the future, it may not be in a position to force  
4 a complete convergence to occur, assuming the Court of Appeals concludes that the 1996  
5 Telecom Act does not provide the FCC with the authority to completely control intrastate rates.  
6 Most likely, toll access rates (regulated by the FCC in the case of interstate traffic) will continue  
7 to be distinct from local interconnection rates (which are the subject of this proceeding) for the  
8 indefinite future.

9 If toll access rates continue to trend downward, they will tend to converge towards the  
10 current level of local interconnection rates (which are relatively low in most instances). In my  
11 opinion, there is no reason to anticipate an upward trend in local interconnection rates, nor  
12 would it be appropriate to price this service at levels which are similar to those applicable to  
13 switched access service. While the same facilities may be used for both types of traffic  
14 termination, it is reasonable to set distinctly different rates, with the price charged for terminating  
15 local calls being much lower than the price applicable to long distance calls, consistent with  
16 historic pricing relationships.

17 Most customers effectively pay a lower price per minute for local calls than they do for  
18 long distance calls. For instance, if a residential customer uses the phone for 480 minutes per  
19 month for outgoing local calls, and is paying a flat rate of \$12 per month, the effective rate is  
20 just 2.5 cents per minute. Similarly, if a business customer uses the phone for 900 minutes of  
21 outgoing local calls and pays \$28 for this service, the effective rate is just 3.1 cents per minute.  
22 This is less than the toll rates paid by most customers. Furthermore, in many markets, local  
23 exchange service is priced as a flat amount per month, regardless of the volume of local calls  
24 placed and received. This provides consumers with an extremely low, or zero, price signal at  
25 the margin. The pricing of local interconnection service has typically been consistent with this  
26 pattern of prices in the retail market. Where adjacent LECs send traffic back and forth within a

1 single toll-free local calling area, the financial arrangements have typically not involved  
2 substantial net payments by either LEC. In a typical EAS arrangement, for example, a smaller  
3 independent LEC serving a suburban community might send far more traffic to the urban areas  
4 served by the Bell company than it receives from that area. As a result, the smaller LEC might  
5 make a net payment each month to the Bell company, but the amounts involved would typically  
6 be relatively small -- less than a penny a minute.

7  
8 **Q. Has the FCC made any recent determination with respect to local interconnection**  
9 **(transport and termination) rates?**

10 A. Yes. Paragraph 1054 of the Implementation Order requires interconnecting carriers to use a  
11 forward-looking economic cost-based approach in pricing mutual transport and termination.

12 Furthermore, the Order specifies that the cost of traffic termination must not include loop costs:

13 1057. We find that, once a call has been delivered to the incumbent LEC end  
14 office serving the called party, the "additional cost" to the LEC of terminating a  
15 call that originates on a competing carrier's network primarily consists of the  
16 traffic-sensitive component of local switching. The network elements involved  
17 with the termination of traffic include the end-office switch and local loop. The  
18 costs of local loops and line ports associated with local switches do not vary in  
19 proportion to the number of calls terminated over these facilities.[note deleted]  
20 We conclude that such non-traffic sensitive costs should not be considered  
21 "additional costs" when a LEC terminates a call that originated on the network of  
22 a competing carrier. For the purposes of setting rates under section 252(d)(2),  
23 only that portion of the forward-looking, economic cost of end-office switching  
24 that is recovered on a usage-sensitive basis constitutes an "additional cost" to be  
25 recovered through termination charges.  
26

27 The FCC's focus on economic costs, as well as its emphasis on usage sensitive costs, is fully  
28 consistent with the language of the 1996 Telecom Act, and to that extent the FCC's approach  
29 is a reasonable one for the Commission to follow, even if the FCC's rules are not binding on the  
30 Commission. However, the FCC has gone further, and attempted to limit state regulators to just  
31 three methods for setting local termination rates:  
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1                   1055. States have three options for establishing transport and termination rate  
2                   levels. A state commission may conduct a thorough review of economic studies  
3                   prepared using the TELRIC-based methodology outlined above in the section on  
4                   the pricing of interconnection and unbundled elements. [note deleted]  
5                   Alternatively, the state may adopt a default price pursuant to the default proxies  
6                   outlined below. If the state adopts a default price, it must either commence  
7                   review of a TELRIC-based economic cost study, request that this Commission  
8                   review such a study, or subsequently modify the default price in accordance with  
9                   any revised proxies we may adopt. As previously noted, we intend to commence  
10                  a future rulemaking on developing proxies using a generic cost model, and to  
11                  complete such proceeding in the first quarter of 1997. As a third alternative, in  
12                  some circumstances states may order a "bill and keep" arrangement, as discussed  
13                  below.  
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15                  If this language is upheld on appeal, it would preclude consideration of marginal cost, or any  
16                  type of economic cost estimate other than one prepared in strict conformity with the TELRIC  
17                  methodology adopted by the FCC.  
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19                  **Q. As you mentioned, the FCC's pricing rules have been stayed by the Court of Appeals.**  
20                  **As an economist, do you think the Commission should follow the FCC's approach to**  
21                  **pricing local termination anyway?**

22                  A. Yes. While it may not be necessary for the Commission to limit its options to the narrow range  
23                  specified by the FCC, in this instance the general approach adopted by the FCC is a  
24                  reasonable one, and the TELRIC methodology is unlikely to yield results that deviate greatly  
25                  from other methodologies which would also be appropriate (e.g., marginal cost). The FCC's  
26                  TELRIC approach will result in a price of local termination that is a relatively low amount per  
27                  unit of traffic (e.g., per minute). I think this is a reasonable result, because it is consistent with  
28                  historic patterns of cost recovery in the telecommunications industry, and it will help encourage  
29                  a more rapid transition towards effective competition, since new entrants will not face the  
30                  burden of paying enormous amounts to the incumbent carrier in the event their traffic volumes  
31                  are not in balance.

1           The FCC’s approach to the costing and pricing of local interconnection and termination  
2 service will result in a relatively low rate per minute of local traffic, which is appropriate and  
3 consistent with historic pricing patterns. Admittedly, a similar result could be achieved by setting  
4 prices based upon marginal cost (rather than TELRIC). A marginal cost approach has  
5 theoretical appeal, and it may actually conform more closely to the language in the 1996  
6 Telecom Act referencing the “additional cost” of terminating traffic. However, in this context a  
7 marginal cost approach is unlikely to yield results that differ substantially from the results of a  
8 TELRIC approach. If the Commission uses the FCC’s TELRIC methodology, it will not have  
9 to revisit the issue in the event this portion of the FCC’s Implementation Order is upheld on  
10 appeal.

11           In setting rates in this proceeding the Commission should primarily be concerned with  
12 advancing the broad public interest in a manner which encourages effective competition in the  
13 local exchange markets throughout Delaware. The Commission should carefully balance the  
14 legitimate interests of all major parties concerned: BA-Del, the potential entrants (both facilities-  
15 based and resellers), and consumers.

16           I recommend that the Commission focus on long-term economic costs, not embedded  
17 costs, and that element prices be set at a low enough level to reduce barriers to entry, while  
18 ensuring that the incumbent carriers are treated fairly, and facilities-based competition is not  
19 unduly discouraged.

20  
21 **Q. Is the precise level of local termination rates crucial?**

22 A. No. Regardless of whether these rates are based upon TELRIC or marginal cost or some other  
23 reasonable estimate of the “additional” (traffic sensitive) costs of completing calls, the rates will  
24 likely be less than a cent per minute. Although the exact rate level could vary by a few tenths of  
25 a cent per minute, depending upon the costing methodology used and the extent to which a  
26 mark-up is allowed, such variations are unlikely to have a substantial impact on the transition to

1 effective competition, assuming the same rates are charged by both the incumbent LEC and the  
2 new entrants. Where the rates are symmetrical, the exact rate level will only affect the  
3 profitability of each LEC to the extent their originating and terminating traffic are not in balance.

4 Consider, for example, the situation confronting a competitive LEC with outgoing traffic  
5 volumes that differ from their incoming volumes by 20%. If this carrier's average residential and  
6 business customers have 480 and 900 minutes, respectively, of outgoing traffic each month,  
7 variations in the local termination rate of .1 cent per minute would have a monthly impact of  
8 about 10 cents per residential customer and 18 cents per business customer. Accordingly, if the  
9 local termination rates charged by the incumbent and competitive LECs are symmetrical, the  
10 precise level of these rates is unlikely to have a substantial impact.

11 The FCC has concluded that the rates for transport and termination of traffic should be  
12 treated as presumptively symmetrical, ¶ 1089, and that the rates for the dominant incumbent  
13 LEC, established on the basis of such a cost study, should be the rates for all competing  
14 carriers in the incumbent's service area. The rationale advanced by the FCC is as follows:

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16 Both the incumbent LEC and the interconnecting carriers usually will be  
17 providing service in the same geographic area, so the forward-looking  
18 economic costs should be similar in most cases. We also conclude that  
19 using the incumbent LEC's forward-looking costs for transport and  
20 termination of traffic as a proxy for the costs incurred by interconnecting  
21 carriers satisfies the requirement of section 252(d)(2) that costs be  
22 determined "on the basis of a reasonable approximation of the additional  
23 costs of terminating such calls." Using the incumbent LEC's cost studies  
24 as proxies for reciprocal compensation is consistent with section  
25 252(d)(2)(B)(ii), which prohibits "establishing with particularity the  
26 additional costs of transporting or terminating calls." [note deleted] If  
27 both parties are incumbent LECs (e.g., an independent LEC and an  
28 adjacent BOC), we conclude that the larger LEC's forward-looking costs  
29 should be used to establish the symmetrical rate for transport and  
30 termination. We conclude that larger LECs are generally in a better  
31 position to conduct a forward-looking economic cost study than smaller  
32 carriers.  
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1 Implementation Order ¶1085. I agree with this reasoning and believe it is appropriate for the  
2 Commission to establish symmetrical rates. I would also note that the 1996 Telecom Act  
3 specifies that local termination rates are for “mutual and reciprocal recovery” of costs by each  
4 carrier. While the costs of termination could potentially differ from carrier to carrier, it is  
5 reasonable to assume that the costs are about the same, absent a showing to the contrary.  
6 Hence, great precision is not necessary in the development of these rates.

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