

1 **Q. Can you please provide the Commission with a brief explanation of the historical**
2 **context and economic rationale for offering unbundled network elements at regulated**
3 **prices?**

4 A. Yes. To fully understand the mandatory unbundling requirements (and related costing and
5 pricing requirements) in the 1996 Telecom Act, it is helpful to place this law into its historical
6 and economic context.

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

11 In the FCC jurisdiction and in the majority of the states, regulatory policy has been
12 evolving over the last decade away from the traditional rate of return form of regulation toward
13 alternative approaches which recognize, and encourage, a movement away from monopoly
14 conditions. In most state jurisdictions, at the initiative of regulators or legislators or both,
15 regulation has been evolving away from the classic rate base, rate of return approach. Today,
16 regulation often includes price-cap mechanisms, segregation of competitive and monopoly
17 services, and other procedures designed to maintain universal service and protect the public
18 from market power, while encouraging a more rapid transition toward effective competition.
19 Simultaneously, the approach used in designing most telecom rates has been evolving away
20 from setting prices exclusively based upon embedded cost and value of service. Prices have
21 increasingly been regulated on the basis of market conditions and forward-looking economic
22 costs.

23 The 1996 Telecom Act represents another giant step forward along this road.
24 Congress has mandated further movement away from the traditional regulated monopoly
25 industry structure, and towards pricing based upon economic costs and competitive market
26 forces. The FCC explains:

1 Historically, regulation of this industry has been premised on the belief that
2 service could be provided at the lowest cost to the maximum number of
3 consumers through a regulated monopoly network. State and federal regulators
4 devoted their efforts over many decades to regulating the prices and practices of
5 these monopolies and protecting them against competitive entry. The 1996 Act
6 adopts precisely the opposite approach. Rather than shielding telephone
7 companies from competition, the 1996 Act requires telephone companies to open
8 their networks to competition.
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11 FCC, First Report and Order, *Implementation of the Local Competition Provisions in the*
12 *Telecommunications Act of 1996, et al.*, Docket No. 96-98 (FCC August 8, 1996) (“the
13 Implementation Order”), ¶1. As many economists have pointed out, it is not enough for the
14 government to simply declare monopoly protections a thing of the past and to allow competitors
15 to enter the local exchange markets. Because of the enormous capital requirements involved
16 and the reluctance of many consumers to change carriers, the transition from monopoly to
17 competitive conditions is likely to take many years.

18 There are several reasons why the industry is unlikely to evolve towards effective
19 competition without substantial governmental encouragement. First, in static terms
20 telecommunications is a declining cost industry, in which economies of scale, scope, and density
21 are prominent. Hence, the vast infrastructures assembled by the incumbent LECs under
22 protected monopoly conditions cannot be readily duplicated, at least within just a few years.
23 Technological changes and the dynamic trend towards declining costs mitigate this problem, but
24 in the absence of mandatory resale and unbundling requirements, the task facing a new entrant
25 is still overwhelming. Economies of scale and scope create a significant barrier to entry,
26 because new facilities-based carriers face very high costs per unit until they can gain a
27 substantial share of the market. This entry barrier is reinforced by difficulties faced by new
28 entrants in quickly capturing market share from the incumbent carriers. Most notably, many
29 customers will be reluctant to experiment with a service so vital to their business operations or

1 daily lives, and few will willingly endure the costs and aggravation of changing their telephone
2 numbers.

3 The approach adopted in the 1996 Telecom Act imposes regulatory requirements on
4 the incumbent carriers that will have the effect of reducing barriers to entry and encouraging
5 competitors to enter the market. The Act allows competitors to enter the market in at least
6 three different ways, and two of these options will require relatively little capital, since they do
7 not require the new carrier to build all of its own facilities. As the FCC explains:

8
9 The Act contemplates three paths of entry into the local market -- the
10 construction of new networks, the use of unbundled elements of the incumbent's
11 network, and resale. The 1996 Act requires us to implement rules that eliminate
12 statutory and regulatory barriers and remove economic impediments to each.
13 We anticipate that some new entrants will follow multiple paths of entry as
14 market conditions and access to capital permit. Some may enter by relying at
15 first entirely on resale of the incumbent's services and then gradually deploying
16 their own facilities. This strategy was employed successfully by MCI and Sprint
17 in the interexchange market during the 1970's and 1980's. Others may use a
18 combination of entry strategies simultaneously -- whether in the same geographic
19 market or in different ones. Some competitors may use unbundled network
20 elements in combination with their own facilities to serve densely populated
21 sections of an incumbent LEC's service territory, while using resold services to
22 reach customers in less densely populated areas.
23

24 Id., ¶12. In effect, the 1996 Telecom Act reduces barriers to entry by requiring the incumbent
25 LEC to provide its competitors with the right to resell their retail services at discounted
26 wholesale prices, and by requiring the incumbent LEC to rent portions of its network to
27 competitors on an unbundled basis, at relatively regulated, cost-based prices.
28

29 **Q. How will consumers be affected by the unbundled element prices that are established**
30 **by the Commission?**

31 A. While consumers will not pay these rates directly, they will be affected indirectly. In general, if
32 the unbundled element rates are set at relatively high levels, barriers to entry will remain

1 relatively high, the evolution towards increased competition will be slowed, the incumbent local
2 exchange carriers will tend to be shielded from downward pricing pressures, and the public will
3 be slower to gain the benefits of effective competition. I do not mean to suggest, however, that
4 lower unbundled element prices are always better for consumers, regardless of how low the
5 price is set. To the contrary, if the unbundled element rates are set at very low levels, new
6 entrants will have little incentive to invest in their own network facilities. Under these
7 circumstances, competitive activity in the retail portion of the market may be intense, but the
8 scope and extent of this activity will be somewhat limited if none of the new entrants substitute
9 their own facilities for the unbundled elements of the incumbent LEC's network.

10 In general, lower unbundled element rates will tend to have predictable impacts on Bell
11 Atlantic-Del, competing carriers (e.g. AT&T and MCI) and the public. Lower unbundled rates
12 will tend to:

- 13 1. Reduce Bell Atlantic-Del's revenues from its competitors.
- 14 2. Reduce Bell Atlantic-Del's profits.
- 15 3. Reduce costs for competing carriers
- 16 4. Encourage more rapid entry by competing carriers into the market.
- 17 5. Encourage a more rapid reduction in Bell Atlantic-Del's retail market share.
- 18 6. Encourage a faster transition toward competition.
- 19 7. Increase the likelihood of downward competitive pressure on retail rates.
- 20 8. Reduce the incentive for competing carriers to build their own facilities.
- 21 9. Increase profits for competing carriers that do not install their own facilities.

22
23 Conversely, if the Commission establishes relatively high prices for unbundled network
24 elements, this pricing policy will tend to have the opposite effects from those listed above. At
25 the risk of oversimplifying, it is fair to say that lower unbundled element rates are generally
26 beneficial for competing carriers and the consuming public. However, if the rates are set too

1 low, this could discourage competitors from installing their own network facilities, and it could
2 financially weaken the incumbent LECs, thereby jeopardizing service quality and reliability.
3 Hence, it would not be desirable for the Commission to set extremely low unbundled element
4 rates, since this would be unfair to the incumbent LEC and could ultimately work to the
5 disadvantage of consumers.
6

7 **Q. What does the 1996 Telecom Act specify concerning the costing and pricing of**
8 **unbundled network elements?**

9 A. Section 252 (d) of the Act sets forth the pricing standards that the FCC and state commissions
10 must adhere to. The pricing of interconnection and of unbundled network elements is to be cost
11 based and developed from the “bottom up.” Cost is to be determined “without reference to a
12 rate-of-return or other rate-based proceeding” must be nondiscriminatory, and “may include a
13 reasonable profit.” §252(d)(1).
14

15 **Q. What has the FCC concluded concerning the appropriate costing method to use in**
16 **pricing unbundled network elements?**

17 A. In its Implementation Order, the FCC developed its own variation on the TSLRIC approach to
18 costing. The FCC coined the term TELRIC (total *element* long run incremental cost) to
19 describe the method of economic cost calculation it believes is most appropriate.
20

21 672. *Overview.* Having concluded in Section II.D., above, that we have the
22 requisite legal authority and that we should establish national pricing rules, we
23 conclude here that prices for interconnection and unbundled elements pursuant to
24 sections 251(c)(2), 251(c)(3), and 252(d)(1), should be set at forward-looking
25 long-run economic cost. In practice, this will mean that prices are based on the
26 TSLRIC of the network element, which we will call Total Element Long Run
27 Incremental Cost (TELRIC), and will include a reasonable allocation of forward-
28 looking joint and common costs. The 1996 Act encourages competition by
29 removing barriers to entry and providing an opportunity for potential new entrants
30 to purchase unbundled incumbent LEC network elements to compete efficiently
31 to provide local exchange services. We believe that the prices that potential

1 entrants pay for these elements should reflect forward-looking economic costs in
2 order to encourage efficient levels of investment and entry.
3

4 By coining its own term, TELRIC, the FCC has highlighted certain distinctions between
5 its approach to costing network elements and the TSLRIC concept as it has generally been
6 applied to telecom services. First, in its Order, the FCC required that certain shared or
7 common costs be included in TELRIC, even if they do not vary with the presence or absence
8 of the element in question. Since the FCC's requirements in this regard are not consistent with
9 the standard definition of TSLRIC in its pure form, by coining a distinct term (TELRIC), the
10 FCC has avoided some potential confusion in this regard. Second, when the TSLRIC concept
11 is applied to elements (rather than services), the magnitude of the joint and common cost
12 problem tends to be reduced, for reasons I will explain below. Here again, by coining a
13 separate term, the FCC has avoided confusion concerning this issue.

14 TELRIC and TSLRIC are identical in one respect: they are both long-run economic
15 cost concepts. The long run is a theoretical in which all, or nearly all, inputs are variable,
16 including the scale and type of plant used by the firm.
17

18 **Q. Do you think it is reasonable to price unbundled network elements on the basis of**
19 **long-run costs?**

20 A. Yes. The long run is a very useful concept that provides an appropriate foundation for pricing
21 decisions. When properly implemented, it yields cost estimates that have certain well
22 understood and important qualities. While the 1996 Telecom Act does not mandate the use of
23 long-run economic cost data, I think it is reasonable to use this type of cost estimate in pricing
24 unbundled network elements, as recommended by the FCC. I discuss the long run concept in
25 detail below in the fourth section of my testimony.
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