

1 **Subloops**

2
3 *Nonrecurring Subloop Costs*
4

5 **Q. Let's turn to nonrecurring subloop costs and charges. Are there some special**
6 **characteristics to non-recurring costs from an economic perspective that should be**
7 **considered by the Commission in this proceeding?**

8 A. Yes. The level of non-recurring costs can have a substantial impact on the transition
9 toward effective competition. If the non-recurring costs imposed on CLECs are high,
10 competition will be slow to emerge, and Verizon will continue to dominate the market
11 within its service territory. Similarly, if the non-recurring costs associated with subloops
12 are higher than the analogous costs imposed on loops, CLECs will be discouraged from
13 renting subloops, the competitive terrain will be less diverse, and the trend toward
14 effective competition will be slowed or halted.

15 The impact of non-recurring costs falls heavily on customers that change carriers,
16 as well as those who move to a new location. In economic terms, non-recurring costs can
17 be classified as "transaction costs," like brokerage fees and credit card processing fees. It
18 is well established that high transaction costs reduce the efficiency of markets, and make
19 it more difficult to achieve effective competition. In general, high transaction costs
20 discourage transactions, inhibit the exercise of consumer choice, and create market
21 friction (i.e., slow down or halt competitive pressures by inhibiting customers from
22 "shopping around" or slowing the movement and impact of changing price signals). An
23 important characteristic of purely competitive markets is that transaction costs are very
24 low, relative to the value of the goods and services being purchased. High transaction
25 costs can be a significant barrier to entry, and will reduce the intensity and effectiveness
26 of the competitive process.

27 These general economic characteristics are particularly significant in the context
28 of this proceeding. If the Commission were to approve high non-recurring charges for
29 subloops, (or other UNEs) it will tend to discourage new local exchange carriers from
30 entering the market, and will tend to discourage customers from changing from one
31 carrier to another. Stated differently, with high non-recurring costs, there is a tendency
32 for customers to become "captive" to whichever carrier they are currently using.
33 Needless to say, this tends to provide an advantage to Verizon since it currently serves a

1 vast majority of the retail market in Pennsylvania. If relatively high levels of non-
2 recurring costs are incurred and imposed on CLECs, it will be relatively costly for end-
3 user customers to switch from Verizon to another local carrier.

4 From a public policy perspective, there is a clear trade-off between the level of
5 transaction costs applicable to the CLECs (and imposed on their customers) and the
6 intensity and degree of competitive pressures which can be expected to emerge over time.
7 With relatively low transaction costs, it will be easier for CLECs to enter the market, and
8 it will be relatively inexpensive for customers to change carrier, in order to “try out” a
9 competing carrier’s service, or to respond to a small price difference. With high
10 transaction costs, movement between Verizon and CLECs, (as well as between different
11 CLECs) will be discouraged. Minor differences in prices and quality will not be
12 sufficient to motivate such changes if the cost of changing carriers is too high.

13 In general, a high level of transaction costs will tend to result in a market that is
14 relatively rigid and inefficient. Customers will be discouraged from changing carriers,
15 and the transition away from monopoly conditions may be greatly slowed, or precluded
16 entirely. Accordingly, from a public interest perspective, it is preferable to keep
17 transaction costs as low as possible.

18 Not only does this general concern about high transaction costs apply to subloops,
19 there is the added concern that high non-recurring costs will discourage CLECs from
20 investing in their own loop facilities. If Verizon’s proposed non-recurring charges make
21 it too costly or impractical to rent subloops, carriers will be limited to an all-or-nothing
22 choice of renting the entire loop, or installing their own loops. The latter option will not
23 be viable in most cases, and thus high non-recurring charges will preclude many carriers
24 from investing in their own loop facilities. Stated another way, high non-recurring
25 subloop charges will make it more difficult for carriers to expand their operations, or to
26 wean themselves from dependency on Verizon’s loop facilities, and this will tend to
27 reduce the diversity and vibrancy of the competitive terrain.

28 From an incumbent carrier’s perspective, of course, these problems may seem like
29 benefits. Thus, if Verizon incurs a high level of non-recurring costs and passes them
30 along to its competitors, that will have three salutary effects for Verizon: it will
31 discourage competitive entry, it will impede the CLECs’ ability to gain market share, and
32 it will discourage CLECs from installing any of their own loop facilities. Since these are

1 all undesirable effects from a public interest perspective, the Commission should view
2 Verizon’s non-recurring cost proposals with great skepticism. Where uncertainty exists
3 concerning the amount of time which will be required to perform functions, or the
4 minimum level of costs which will be required to provide subloops, the Commission
5 should use its discretion to err in the direction of charging relatively low non-recurring
6 rates.

7
8 **Q. Earlier you mentioned a two-step provisioning process for subloops. Can you**
9 **explain this process in more detail?**

10 A. Yes. Several of Verizon’s interconnection agreement amendments, as well as the
11 template amendment, provide:

12
13 (3) ...To obtain access to a Sub-Loop, [CLEC] shall install a COPIC
14 (CLEC outside plant interconnection cabinet) on an easement or Right of
15 Way obtained by [CLEC] within 100 feet of the BA FDI to which such
16 Sub-Loop is connected... Subject to the terms of applicable BA easements,
17 BA shall furnish and place an interconnecting cable between a BA FDI
18 and a [CLEC] COPIC and BA shall install a termination block within such
19 COPIC. ... [See Exhibit 1.]

20
21 To order access to a subloop, the CLEC submits a “Sub-Loop Interconnection
22 Application” and pays a “Sub-Loop Application Fee”. [¶ 5]. The Amendment further
23 provides:

24
25 (6) Within sixty (60) days after it receives a complete Sub-Loop
26 Interconnection Application for access to a Sub-Loop and the Sub-Loop
27 Application Fee for such application, BA shall provide to [CLEC] a work
28 order that describes the work that BA must perform to provide such access
29 (a “Sub-Loop Work Order”) and a statements of the cost of such work (a
30 “Sub-Loop Interconnection Cost Statement”).

31
32 (7) [CLEC] shall pay to BA fifty percent (50%) of the cost set forth in a
33 Sub-Loop Interconnection Cost Statement within sixty (60) days of
34 [CLEC]’s receipt of such statement and the associated Sub-Loop Work
35 Order, and BA shall not be obligated to perform any of the work set forth
36 in such order until BA has received such payment.... Upon BA’s
37 completion of the work that BA must perform to provide [CLEC] with
38 access to a Sub-Loop, BA shall bill [CLEC], and [CLEC] shall pay to BA,

1 the balance of the cost set forth in the Sub-Loop Interconnection Cost
2 Statement for such access. [See Exhibit 1.]
3

4 After paying for the interconnection to the COPIC, CLEC's can then request cross
5 connection of subloops to the COPIC. [Id., ¶ 8]. Paragraph 9 of the Amendment explains
6 the cross connection procedure for "New" and "Loop Through" loops.
7

8 (9) If [CLEC] requests that BA reactivate an unused drop and NID, then
9 [CLEC] shall provide dial tone (or its DSL equivalent) on the [CLEC] side
10 of the applicable BA FDI at least twenty four (24) hours before the due
11 date. On the due date, a BA technician will run the appropriate cross
12 connection to connect the BA Sub-Loop to the [CLEC] dial tone or
13 equivalent from the COPIC. If [CLEC] requests that BA install a new drop
14 and NID, then [CLEC] shall provide dial tone (or its DSL equivalent) on
15 the [CLEC] side of the applicable BA FDI at least twenty four (24) hours
16 before the due date. On the due date, a BA technician shall run the
17 appropriate cross connection of the facilities being reused at the BA FDI
18 and shall install a new drop and NID. If [CLEC] requests that BA provide
19 [CLEC] with access to a Sub-Loop that, at the time of [CLEC]'s request,
20 BA is using to provide service to a Customer, then, after [CLEC] has
21 looped two interconnecting pairs through the COPIC and at least twenty
22 four (24) hours before the due date, a BA technician shall crosswire the
23 dial tone from the BA central office through the BA side of the COPIC
24 and back out again to the BA FDI and BA Sub-Loop using the "loop
25 through" approach. On the due date, [CLEC] shall disconnect BA's dial
26 tone, crosswire its dial tone to the Sub-Loop and submit the [CLEC]'s
27 long-term number portability request.
28

29 **Q. Earlier you mentioned a two-step provisioning process for subloops. Can you**
30 **explain this process in more detail?**

31 A. Yes. Verizon has not proposed standard rates for this step. Instead, it proposes to charge
32 LECs on a "time and material" basis. Recall that a CLEC that wishes to rent a subloop
33 will first submit an application containing information on the location of desired
34 interconnection, and pay a fee to Verizon in order to have this application reviewed.
35 [Sanford and Stern, Direct, pp. 37-38]. Verizon will take that information and evaluate
36 the feasibility of the CLEC's request. If the desired subloop arrangement is determined
37 to be feasible, it will develop a cost estimate which will not be subject to regulatory
38 review and approval. If the CLEC decides to proceed, it will "place a deposit of 50% of

1 the *estimated* cost and the design will be completed and forwarded to construction for
2 implementation.” [Id., p. 38, Emphasis Added]. There are no constraints placed on the
3 amount of money that Verizon will end up spending for the construction, nor is there any
4 incentive for Verizon to complete the work efficiently, or to minimize the cost of the
5 installation. In fact, Verizon has an economic incentive to do the exact opposite; the more
6 time it takes and the more money it spends, the more it will burden its competitors,
7 making it more difficult for them to take end-user customers away from Verizon.

8 Clearly, if subloops are going to be a viable option for CLECs, they need to have
9 reasonable assurance that Verizon will not bill them for an excessive level of cost. There
10 are two ways this problem could be solved. One option would be to allow the CLECs to
11 perform the first phase work, using a qualified telecommunications contractor. The
12 CLEC would select the contractor of its choice, and it would be free to negotiate the
13 terms and conditions applicable to the contractor’s work. This approach provides the
14 CLEC with a reasonable degree of control over both cost and schedule. By taking
15 Verizon out of the picture, its perverse economic incentives are no longer of concern.

16 A second option would be for Verizon to perform the work for a standard rate, as
17 set forth in a tariff approved by the Commission. The main disadvantage to this approach
18 is that there is not sufficient information available in this proceeding to determine the
19 appropriate rate (or set of rates) which should be included in the tariff.

20 Either of these approaches would be far superior to Verizon’s proposal. Verizon
21 has an incentive to make it as difficult and costly as possible for CLECs to gain access to
22 its subloops. If Verizon is provided with discretion over the amount of “time and
23 materials” which CLECs will incur if they attempt to gain access to its subloops, CLECs
24 will be discouraged from renting subloops from Verizon, and competitive pressures will
25 be undermined. Furthermore, under Verizon’s approach it would have the opportunity to
26 discriminate between CLECs. It could take more time, or use a more costly approach
27 when connecting an unaffiliated CLEC, while taking less time and using a less costly
28 approach when connecting its own affiliate, or a CLEC that it favors. Verizon might
29 argue that a CLEC that is discriminated against could file a complaint with the
30 Commission, but the complaint procedure does not provide a good solution to this
31 problem. For one thing, it could be very difficult for a CLEC to know whether it is being
32 discriminated against, and even more difficult to prove. For another thing, the complaint

1 process is time consuming and costly. This would place an undue burden on the CLEC
2 (as well as the Commission). Accordingly, the Commission should reject Verizon's time
3 and materials approach, and either establish standard rates pursuant to tariff, or allow the
4 CLEC to hire a qualified contractor to install the necessary equipment at its expense.

5
6 **Q. Let's discuss "step 2" of Verizon's subloop provisioning process. How has Verizon**
7 **categorized the types of subloops that can be cross connected to the CLEC's**
8 **network?**

9 A. Verizon computes provisioning and installation costs for eight different types of
10 subloops: 2-wire new initial, 2-wire new additional, 2-wire loopthrough initial, 2-wire
11 loopthrough additional, 4-wire new initial, 4-wire new additional, 4-wire loopthrough
12 initial, and 4-wire loopthrough additional. [Non-recurring Cost Study, Section 4.2, p. 2].
13 As implied by these names, Verizon's subloop rates vary depending upon whether the
14 subloop is two wire or four wire, whether it is a new installation or a loopthrough of an
15 existing line, and depending upon the number of subloops which will be connected
16 (initial vs. additional). The following table shows Verizon's proposed rates for these
17 UNEs.

18
19 **Table 8**
20 **Verizon Proposed**
21 **Non-recurring Subloop Rates**
22

UNE/Service Description	Rates
2-wire New Initial	\$ 128.93
2-wire New Additional	58.05
2-wire Loopthrough Initial	222.89
2-wire Loopthrough Additional	130.19
4-wire New Initial	159.25
4-wire New Additional	73.55
4-wire Loopthrough Initial	253.10
4-wire Loopthrough Additional	154.73

These rates are based upon the following estimated provisioning and installation costs.

Table 9
Verizon Non-recurring Subloop Costs
[Begin Proprietary]

UNE/Service Description	Provisioning	Field Installation	Total

[End Proprietary]

The Company provided studies detailing the way in which it developed costs for each of these loop types. First, it identified all of the activities it proposed to perform in provisioning and installing a given subloop type. These activities were, in turn, broken down according to the Verizon division that would conduct them: the Telecom Industry Services Operating Center (“TISOC”), the Regional CLEC Coordination/Maintenance Center (“RCCC/RCMC”), the Mechanized Loop Admin Center (“MLAC”), and Field Installation (“F&I”). [Id., pp. 3-6]. Each of these organizations submitted, through a survey procedure, the average amount of time it anticipated taking to perform various activities pertaining to subloops. Verizon took these time estimates and multiplied them by factors to reflect the anticipated frequency of occurrence and forward looking adjustments. The resulting time estimates were then multiplied by an average labor rate and summed over all activities and organizations to obtain the costs set forth in the above table. [Id., Section 1.3].

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Q. In your view, do these cost estimates appear to be reasonable?

A. No. As I mentioned earlier, Verizon has no incentive to minimize the cost of installing subloops. To the contrary, the more it costs to perform these functions, the more of a burden that will be placed on CLECs that want to rent subloops, and the harder it will be for them to convince customers to switch from Verizon. In my judgment, based upon more than 25 years experience in evaluating cost estimates and other issues in the telecommunications industry, Verizon’s estimated non-recurring costs for subloops are excessive. If these rates are accepted, they will discourage the use of subloops by CLECs and slow the trend toward effective competition.

Q. Do you know why Verizon’s non-recurring cost estimates are so high?

A. In general, it appears that the studies assume that numerous different people and groups need to be involved, performing activities which will supposedly take an inordinate amount of time to perform. Unfortunately, the studies are not well documented, and do not include enough detail to allow one to precisely pinpoint why the time and cost estimates are so high. However, my impression is that the work time estimates are not consistent with the TELRIC concept, because they do not reflect a work environment in which the activities are being accomplished in the least costly, most economically efficient manner.

Q. Can you elaborate upon your concerns?

A. First, I have serious reservations about the process Verizon used to estimate work times. Verizon’s cost methodology description states:

Surveys were transmitted to the field organizations responsible for the ordering and provisioning of wholesale services with instructions to provide the average work times required to complete all work process activities in the most efficient manner possible for each of the non-recurring cost elements under study. [Id., Section 1.3].

The study does not appear to provide any information detailing the number of employees relied upon to complete the surveys, their qualifications, or their experience with performing the subloop activities included in the survey. Verizon does mention that

1 “typical occurrence” factors and forward looking adjustments were used to modify the
2 resulting work times; these were developed by “field managers” and “subject matter
3 experts”. Here again, there is no detail regarding the qualifications and experience of
4 these individuals, nor has Verizon offered testimony from any of these individuals
5 explaining their judgments concerning the tasks which will be performed, the amount of
6 time required for these tasks, the frequency with which these tasks will be performed, or
7 the forward looking adjustments that were made.

8
9 **Q. Are there potential problems associated with these types of surveys?**

10 A. Yes Even if the surveys involved a large sample of employee opinions, which I doubt, I
11 would still be concerned about relying upon these types of time estimates. At best, such a
12 survey will simply reflect employee perceptions or opinions concerning the amount of
13 work required to provide subloops, from the perspective of someone who is likely to be
14 just starting to move down the learning curve in dealing with subloops. These employees,
15 like the entire industry, have very limited experience operating in a wholesale market for
16 subloops.

17 While Verizon has been operating in a retail environment for this entire century, it
18 has been operating in an unbundled element/wholesale environment for a relatively brief
19 period, and it has very limited experience provisioning subloops. The employees who
20 were surveyed (and the entire industry) are working in a rapidly changing environment.
21 As experience is gained with new UNE offerings like subloops, activities which currently
22 seem very difficult and time consuming may become highly routinized and simplified.
23 There is every reason to anticipate that the time required to perform the various functions
24 included in the subloop non-recurring cost studies will significantly diminish as
25 experience is gained, and the most efficient, cost-effective methods are learned.

26 It is clear that Verizon’s time estimates are based upon its limited experience
27 with elements like subloops, encountered at the beginning of the learning curve.
28 However, the rates set in this proceeding should be based upon long-run cost estimates
29 which reflect the time requirements associated with maximally efficient methods of
30 operation which would prevail if subloops were offered in a competitive environment,
31 and the industry had already moved down the learning curve. Although Verizon attempts
32 to account for future improvements in efficiency (through its use of allegedly forward

1 looking adjustment factors) this was not sufficient to overcome weaknesses in the survey
2 process and resulting work time estimates.

3 In any survey, the results can be greatly influenced by the manner in which the
4 questions are worded, and the context in which they are asked. It is not clear what
5 information was conveyed to the employees being surveyed, or what steps, if any, were
6 established to protect against the potential for survey bias.

7 The Commission should be particularly concerned about potential survey bias in
8 this situation. There is a direct linkage between the opinions offered by these Verizon
9 employees and the proposed charges which Verizon will impose on CLECs, if these
10 opinions are accepted by the Commission. If the survey respondents or subject matter
11 experts were aware of the fact that their opinions might be used in developing cost
12 estimates to be submitted in this proceeding, or were otherwise aware of this potential
13 linkage, they would realize that the higher the time estimates they provided, the higher
14 the nonrecurring charges that might be imposed on Verizon's competitors. In turn, higher
15 charges would mean less competitive pressures and less risk of layoffs or reductions in
16 the number of Verizon employees. Some of these employees may have the perception
17 that as the industry is opened to increased competition, it will have an adverse impact on
18 their job security and pay level. Employees may be worried about the potential effects of
19 increased competition from CLECs, and thus would not be eager to see low nonrecurring
20 charges which could translate into rapid growth by competitors. It should be noted that
21 this potential source of bias is in addition to any bias that might be introduced through the
22 structure and wording of the survey.

23
24 **Q. Do you have any evidence to suggest that Verizon's subloop work time estimates are**
25 **in fact too high?**

26 A. Yes. Verizon's estimated nonrecurring subloop costs and rates are much higher than the
27 analogous nonrecurring loop rates approved by the Commission. Admittedly, the
28 activities associated with provisioning a loop UNE and those associated with
29 provisioning a subloop UNE are not exactly the same. For example, with subloops, the
30 cross connection work is performed at the FDI, rather than at the central office.

31 To connect subloops, a trip to the FDI will always be required. To connect loops,
32 a trip to the central office will be required, but this work can often be performed by a

1 technician who would be working at, or need to visit, the wire center in any event. With
2 subloops, the field work may sometimes be performed at the same time as other work
3 (e.g. maintenance), but this sort of efficiency will not be achieved as frequently.
4 Typically, the technician will need to travel specifically to the FDI in order to provide the
5 CLEC with access to a subloop. Accordingly, the effort required to provision subloops
6 can be more closely analogized to the extra effort involved in providing loops which
7 require a “premise visit.” However, the analogy is not perfect. A typical visit to an end-
8 user customer’s premise is likely to be more time consuming than a typical trip to an FDI.
9 For example, with a premise visit, the technician must spend time locating the specific
10 home or business, which may not be an easy task. In contrast, Verizon’s FDI’s tend to be
11 located at the edge of the road, and the technician may even be personally familiar with
12 the location of the FDI he needs to visit. Second, with premise visits, the technician must
13 obtain access to the premises, and may have to interact with the customer, the customer’s
14 dogs, etc. Third, the technician is more likely to be familiar with the configuration of a
15 particular FDI than with the configuration at a particular customer’s premises.

16 Once the CLEC has paid to have its COPIC connected to Verizon’s FDI, the
17 effort involved in cross connecting a subloop is directly analogous to the effort involved
18 in cross connecting an unbundled loop. Admittedly, the initial setup time, and perhaps
19 even the actual cross connection work at the FDI, might be a little more time consuming
20 than if this work were performed at the central office. However, the differences in time
21 and effort should be rather limited. Accordingly, it is reasonable to use the Commission
22 approved nonrecurring loop charges to evaluate the reasonableness of Verizon’s proposed
23 nonrecurring subloop charges. The Commission-approved non-recurring rates for analog
24 two wire loops are presented in the following table:
25

Table 10
Non-recurring Loop Rates
Analog 2 Wire

Tariff Item	Rate
Service Order Processing Charge	\$1.06
Installation Charge, no premises visit (initial and each additional loop)	3.01
Installation Charge, premises visit required (initial loop)	67.66
Installation Charge, premises visit required (each additional loop)	22.86
Disconnect, per loop	1.34

Verizon's subloop nonrecurring cost estimates do not include any service order or disconnect activity. Therefore, the time estimates and associated subloop rate proposals are analogous to the "installation" charges approved for loops. More specifically, Verizon's proposed 2-wire subloop initial charge for a "new" loop is analogous to, and should be no more than, the \$67.66 rate approved for installation of an initial 2-wire loop when a premise visit is required. As I explained earlier, once the CLEC has paid to have its COPIC connected to one of Verizon's FDI's, and once the technician has accessed the FDI, the cross connect activities are similar to the central office activities associated with provisioning a loop UNE. Similarly, the proposed charge for provisioning additional subloops is analogous to, and arguably should be no more than, the \$3.01 charge approved for provisioning additional loops when no premise visit is required. While the work required to cross connect additional subloops, assuming it takes place at the same time as the technician is provisioning an "initial" loop, may be slightly more difficult or time consuming than the work which is encompassed by the \$3.01 rate, it certainly would not be as difficult as the work encompassed by the \$22.86 rate which is charged for additional loop provisioning activities at the customer premises. The latter charge reflects an average of widely varying conditions. Where multiple loops are being dealt with and a customer premise visit is necessary, the technician may confront unique problems which are much more time consuming than the effort involved in cross connecting one more subloop to the CLEC's COPIC. A conservative estimate of the

Direct Testimony of Ben Johnson, Ph.D.
On Behalf of ATX Telecommunications Services, Inc. and NEXTLINK Pennsylvania, Inc.
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1 maximum charge would be reasonable to apply to additional subloops would be the
2 average of the \$3.01 central office rate and the \$12.86 premise rate (\$12.94).