#### OCA STATEMENT No. 1

### BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Investigation Regarding Intrastate Access	)	
Charges and IntraLATA Toll Rates of Rural	)	Docket No. I-00040105
Carriers, and the Pennsylvania Universal	)	
Service Fund	)	

### **DIRECT TESTIMONY OF DR. ROBERT LOUBE**

#### **ON BEHALF OF**

#### PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

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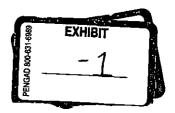
PA PUBLIC UTILITY COMMISSION SEBRETARY'S BUREAU

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1		1. maodaction and Summary
2	Q:	Please state your name and business address.
3	A:	My name is Robert Loube. My business address is 10601 Cavalier Drive.
4		Silver Spring, Maryland 20901.
5	Q:	By whom are you employed and in what capacity?
6	A:	I am the Vice President of Rolka Loube Saltzer Associates.
7	Q:	Please provide us with information regarding your relevant
8		experience.
9	A:	My consulting practice centers on providing expert advice to state
10		agencies involved in telecommunications regulation. Prior to joining
11		Rolka Loube Saltzer Associates, I worked for the Federal
12		Communications Commission, the Public Service Commission for the
13		District of Columbia, and the Indiana Utility Regulatory Commission. At
14		those commissions, I worked on issues associated with universal service,
15		incremental cost, rate design, competition and separations. My vita is
16		attached to this testimony as Exhibit RL-1.
17	Q:	On whose behalf are testifying?
18	A:	I am testifying on behalf of the Pennsylvania Office of Consumer
19		Advocate ("OCA").
20	Q:	What is the purpose of your testimony?

The purpose of my testimony is to the address the following issues identified by the Pennsylvania Public Utility Commission ("Commission") in its April 9, 2008 Order. First, I determine the appropriate benchmark for the rural incumbent local exchange carriers ("ILEC") residential rate for basic local exchange service. Second, I examine whether Pennsylvania Universal Service Fund ("Pa USF") support should be provided to rural ILECs in order to allow the rural ILECs to maintain residential rates that are no higher than the benchmark. As part of that examination, I also review whether such additional support should include previously banked revenue. Finally, I discuss the impact of providing additional support on competition and on the sustainability of providing the additional support.

#### Q: Please summarize your testimony?

A:

A:

My testimony begins with my recommendation that the appropriate residential benchmark should be equal to 120 percent of the Verizon PA weighted average residential rates. Such a benchmark would keep the rates paid by rural ILEC customers comparable to the rates paid by Verizon PA residential customers. A comparability standard for determining the reasonableness of rates is also used by the Federal Communications Commission ("FCC") and other state commissions. However, because the current benchmark would be \$15.64, which is less than the current \$18.00 residential cap, I recommend that the current \$18.00 cap be retained as long as the benchmark is less than \$18.00. I also recommend that, when the comparability standard allows rates to exceed \$18.00, any increases in the

benchmark above the \$18.00 cap should be constrained by an affordability standard. The details of the affordability standard are discussed in the testimony of OCA witness Roger Colton. I support my recommendation that the residential cap should not be increased at this time by examining the evidence regarding the incremental cost of basic exchange service. This evidence consists of the previously published results of cost estimates made using the FCC's Synthesis Model and results that I have generated using the Synthesis Model on data supplied to me by Embarg and Armstrong Telephone Company through discovery in this case. This data suggests that the rural ILEC incremental cost of basic exchange service is less than \$18.00 and, thus, residential rates are currently contributing to the support of the joint and common costs of the rural carriers. Next, I recommend that the Pa USF should provide support to rural ILECs to offset rate increases that would have increased the residential rate above the current \$18.00. This recommendation should be applied not only to future rate increases but also to banked revenue. However, if the carrier has banked revenue rather than increased rates up to the \$18.00 cap, then the carrier should not receive additional support for those amounts.

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II. The Appropriate Benchmark for the Rural ILEC Residential Rate

Q: The Commission's April 9, 2008 Order specifically provides that one of the reasons why this investigation is reopened is to address 

"whether the cap of \$18.00 on residential monthly service rates and

any corresponding cap on business monthly service rates should b
raised." What is your response to that question?

The \$18.00 rate cap should not be raised at this time but there are

circumstances under which it should be raised in the future, as I discuss

below. Those circumstances specifically pertain to the appropriate

benchmark for the rural ILEC residential rate for basic local exchange

service that is also the subject of this investigation.

### Q: What do you think the appropriate benchmark for the rural ILEC residential basic local service rate should be?

The benchmark for the Rural ILEC residential rate in Pennsylvania should be based on the principles of comparability and affordability. It should also acknowledge the existing \$18.00 rate benchmark. With regard to comparability, a reasonable Pennsylvania benchmark should be tied to Verizon PA's rates. Verizon PA's rural rates should be considered because rural ILEC customers should not be charged rates that are substantially higher than neighbors living in rural Verizon rate zones. At the same time, Verizon's urban rates should be considered because the Telecommunications Act of 1996 established as a general ratemaking standard that rural rates should be comparable to urban rates. Similarly, Pennsylvania law requires that customers pay only reasonable charges for protected services. After reviewing the findings of the FCC and other

A:

<sup>&</sup>lt;sup>1</sup> 66 Pa.C.S. § 3011(3).

states, I am recommending that the rural residential rates should be no higher than 120 percent of the Verizon PA's weighted residential rate.

Therefore, based on the comparability standard, the Rural ILEC residential benchmark would be \$15.64, which is 120 percent of the weighted average of Verizon PA's current residential rates. However, as long as the comparability principle generates a rate less than \$18.00, the existing \$18.00 rate benchmark should remain in place. On the other hand, if the comparability principle generates a rate that exceeds the current \$18.00 benchmark then changes in the Rural ILEC residential rate benchmark should also reflect concerns regarding the affordability of basic local service at that time. OCA witness Roger Colton will address affordability concerns and recommend a basis for establishing a constraint on potential increases to the benchmark in the future.

Q:

A.

### How did you calculate the Rural ILEC residential benchmark based on Verizon PA's rates?

I calculated the benchmark based on Verizon PA's current rates and retail residential customer counts. Determining this benchmark is complicated by the fact that Verizon has rates for four cells, and each rural cell has three rate groups. Moreover, Verizon's response to an OCA data request did not contain residential lines by rural rate group because Verizon stated that: "The data requested is not available; the data provided below is

similar to that requested."<sup>2</sup> Given the data that I received, I was required to make an assumption about the distribution of customers in the three rate groups by cell. I assumed that the lines were evenly distributed across the rate groups. Based on that assumption, I calculated the weighted Verizon PA's residential rate to be \$13.03.<sup>3</sup> Multiplying the weighted average by 120 percent generates the Rural ILEC residential benchmark of \$15.64.

A:

# Q: Should the Commission adopt the comparability benchmark as the Rural ILEC residential rate benchmark in this proceeding?

Because the average of the comparability benchmark is below the current \$18.00, the Commission should not adopt that average as the Rural ILEC residential rate benchmark. Instead, the Commission should retain the \$18.00 Rural ILEC residential rate benchmark as long as the average of the comparability benchmark is less than \$18.00. Lowering the \$18.00 benchmark at this point would put unnecessary strain on the Pa USF at this time. Once the average of the comparability benchmark reaches \$18.00 then the Rural ILEC residential rate benchmark may increase to the extent increases in the benchmark rate are affordable.

# Q. Can you please provide an example of how the benchmark you propose would be applied to the rural carriers' rates?

<sup>&</sup>lt;sup>2</sup> Verizon's Response to OCA Set 1, Interrogatory No. 2.

<sup>&</sup>lt;sup>3</sup> The calculation of the weighted average is shown in proprietary Exhibit RL-2. The exhibit is proprietary because Verizon provided the OCA the residential retail lines counts on a proprietary basis.

ì A: The benchmark will remain at \$18.00 as long as Verizon's weighted 2 average rate is at or below \$15.00 (i.e., \$15.00 x 120% equals \$18.00). 3 Given the approximate 50 cents per year per line increase that Verizon has 4 received over the past four years (see Exhibit RL-3), if that trend 5 continues, the benchmark will likely remain at \$18.00 for approximately four years. Once Verizon's weighted average rate exceeds \$15.00, the 6 7 \$18.00 rural ILEC benchmark should be adjusted upward, as long as it 8 continues to meet the affordability standard set forth in Mr. Colton's 9 testimony.

10 Q: Is the principle of comparability used in other jurisdictions as a

11 guideline for establishing rates or for providing universal service fund

12 support to carriers?

A: Yes. The FCC is required to use the principle of rate comparability in designing the federal universal service fund, and other states have used comparability in determining rates and state universal funding as well.

16 Q: Please explain how the FCC is required to use the principle of comparability in designing the federal universal service fund.

A: The FCC must design the federal universal service fund based on six explicit principles and it may add additional principles to the six listed if it finds that the additional principles are in the public interest.<sup>4</sup> The third

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<sup>&</sup>lt;sup>4</sup> 47 U.S.C §254(b).

principle states, in part, that "consumers... in rural, insular, and high cost areas should have access to telecommunications and information services ... at rates that are reasonably comparable to rates charged for similar services in urban areas."

### Q: Has the FCC been able to determine the meaning of reasonably comparable rates?

The FCC has twice attempted to establish criteria for reasonably 7 A: comparable rates. 6 In both instances, these criteria were remanded back to 8 the Commission by the US Court of Appeals for the 10<sup>th</sup> Circuit.<sup>7</sup> In the 9 FCC's first attempt, the FCC found that it would provide support to the 10 non-rural carriers in a state if a state's forward-looking cost is greater than 11 12 135 percent of the national average forward-looking cost of all non-rural carriers.8 In the FCC's second attempt, the FCC found that rates would be 13 14 comparable if the rates in a particular state were within two standard deviations of the national average rate.9 15

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<sup>&</sup>lt;sup>5</sup> 47 U.S.C. §254(b)(3).

<sup>&</sup>lt;sup>6</sup> In the Matter of the Federal-State Joint Board on Universal Service, CC Docket No. 96-45, Ninth Report and Order, FCC 99-306, released November 2, 1999, (Ninth Report and Order); Order on Remand, 18 FCC Rcd 22559 (2003) (Order on Remand).

<sup>&</sup>lt;sup>7</sup> <u>Qwest Corp v FCC</u>, 258 F, 3d 1191 (10<sup>th</sup> Cir. 2003); <u>Qwest v. FCC</u>, 398 F.3d 1222 (10<sup>th</sup> Cir. 2005).

<sup>&</sup>lt;sup>8</sup> Ninth Report and Order, Order, ¶ 10.

<sup>&</sup>lt;sup>9</sup> 9th Order on Remand, ¶38.

1	Q:	If the FCC constructs a comparability criterion that is acceptable to
2		the Courts would Pennsylvania be bound by the FCC's criterion?
3	A:	While I cannot provide a legal opinion on this issue, it appears to me that
4		Pennsylvania would not be bound by the FCC's criterion because various
5		states have established their own criteria and used those criteria in
6		conjunction with their state universal service funds. I will note, however,
7		that the FCC is currently examining universal service issues within the
8		context of its intercarrier compensation proceeding. 10 Action from the
9		FCC is expected in that proceeding soon.
10	Q:	What other states have established a comparability standard for
11		determining rates or implementing a state universal service fund?
12	. <b>A:</b>	Maine, New Hampshire, Wyoming, Nebraska, and California use a
13		comparability or rate benchmark to determine rates or implement their
14		state universal service funds.
15	Q:	Please discuss how Maine uses a comparability standard to determine
16		rates or implement its state universal service fund.

<sup>&</sup>lt;sup>10</sup> In the Matter of High-Cost Universal Service Support, Intercarrier Compensation for ISP-Bound Traffic, WC Docket No. 05-337, CC Docket No. 99-68, Order on Remand and Report and Order and Further Notice of Proposed Rulemaking, FCC 08-262, released November 5, 2008, (Further Notice).

- 1 A: In order to be eligible for Maine universal service funding, a rural carrier
  2 must adopt Verizon Maine's basic local exchange rates. 11 Upon adopting
  3 the Verizon Maine rates, the rural carrier is eligible to receive funding
  4 such that it is able to earn a reasonable return on its rate base. 12
- Q: Please discuss how New Hampshire uses a comparability standard to
   determine rates or implement its state universal service fund.
- In New Hampshire, when a rural carrier applies for an alternative
  regulation plan, the plan limits the maximum basic local exchange rate
  such that the rural carrier's rate cannot exceed the comparable rates
  charged by the largest ILEC operating in the state. The New Hampshire
  Public Utilities Commission recently approved a petition by several rural
  carriers that was consistent with the requirement that the rural carriers
  cannot exceed the rates of the largest ILEC operating in New Hampshire. The New Hampshire.
- 14 Q: Please discuss how Wyoming uses a comparability standard to
  15 determine rates or implement its state universal service fund.

If Given the recent sale of the Verizon Maine service territory to FairPoint, this criterion is equal to the FairPoint non-rural service territory (the successor of the Verizon service territory). At the present time, Maine's universal service fund may not have been adjusted to reflect the new ownership status of the former Verizon service territory; see also, Maine Public Utility Commission, Chapter 288.

<sup>&</sup>lt;sup>12</sup> Id.

<sup>&</sup>lt;sup>13</sup> New Hampshire RSA, Title XXXIV, Public Utilities, Chapter 374, 374:3-b, HI(b).

<sup>&</sup>lt;sup>14</sup> New Hampshire Public Utilities Commssion, Kearsage Telephone Co., Wiltion Telephone Co., Hollis Telephone Co. and Merrimack County Telephone Co., Petitions for Approval of Alternative Form of Regulation, DT 07-027, Order Regarding Joint Settlement Agreement, Order No. 24.852, April 23, 2008.

- 1 A: The Wyoming state universal service fund provides rate support such that
  2 no customer bill is greater than 130 percent of the state-wide average
  3 rate. 15
- 4 Q: Please discuss how Nebraska uses a comparability standard to
  5 determine rates or implement its state universal service fund.
- The Nebraska Commission decreases a carrier's universal service support 6 A: 7 if the carrier has failed to increase its local residential and business rates to 8 the local rate rebalancing targets. "The reduction shall equal the revenue foregone by not rebalancing rates by the full amount required by this 9 Order."16 The Order established the local rate rebalancing targets at 10 \$17.50 for residential basic local exchange service and \$27.50 for single 11 line business basic local exchange service. 17 Due to the magnitude of the 12 required rate changes, each carrier was required to follow a transition plan. 13 14 Each plan sets out how rates would be increased over a multi-year period. 18 The Nebraska Commission revised the residential rate 15

<sup>&</sup>lt;sup>15</sup> 2007 Annual Telecommunications Report, Wyoming Public Service Commission, page 37.

<sup>&</sup>lt;sup>16</sup> In the Matter of the Application of the Nebraska Public Service Commission, on its own motion seeking to conduct an investigation into intrastate access charge reform, Application NO. C-1628, Order, entered: January 13, 1999.

<sup>&</sup>lt;sup>17</sup> Id., page 5.

<sup>&</sup>lt;sup>18</sup> Id., page 3.

benchmark in 2006, increasing the benchmark to \$19.95. At that time, the Nebraska Commission noted that the average urban rate was \$17.95.19 2

3 Please discuss how California uses a comparability standard to O: determine rates or implement its state universal service fund. 4

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The California Public Utilities Commission sponsors two high cost A: universal service funds. The California High Cost Fund -A (CHCF-A) is limited to the 17 small rural carriers, the California High Cost Fund –B (CHCF-B) supports the Pacific Telephone Company and mid-sized carriers. The CHCF-A provides the difference between the rural carrier's revenue and revenue requirement. The revenue requirement has been recently calculated using a 10 percent cost of capital. A carrier's rate design is evaluated based on a benchmark of a local rate equal to 150 percent of the California urban rate. The carrier's support is the difference between the revenue and requirement for any revenue requirement needs that cannot be met by increasing the local rate to 150 percent of the California urban rate. In addition, CHCF-A reduces this support over a six year period, where support levels are 100 percent of the support requirements for three years, then decreases to 80 percent in year four, 50 percent in year five and 0 percent in year six. The process of decreasing support percentages is re-established each time a carrier files a general rate

<sup>&</sup>lt;sup>19</sup> In the Matter of the Nebraska Public Service Commission, on its own motion, to make adjustments to the universal service fund mechanism established in NUSF-26, Application No. NUSF-50, Order, December 19, 2006, ¶¶ 22, 31-34.

case. Thus, each carrier has incentive to file a rate case on a regular basis, unless it cannot earn more than the allowed rate without any universal service support.<sup>20</sup>

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Support under CHCF-B equals the difference between the forward-looking cost of service and a benchmark. The difference was calculated for every Census Block Group served by the carrier. Support is equal to the number of lines times the difference between the forward-looking cost and benchmark for each census block group and then summed across all block groups served. Originally, the benchmark was the lesser of the state average cost or the carrier's local rate. The state average forward-looking cost was \$20.35. Thus, if the local rate was \$14.00, the benchmark was \$20.35, but if the local rate was \$24.00, the benchmark increased to \$24.00. In this instance, the local rate is the sum of the rate for basic exchange service and the Subscriber Line Charge.<sup>21</sup> Recently the benchmark was increased to \$36.00.22 The new benchmark is based on the national average expenditure on telephone service. Those expenditures include not only expenditures for basic local service but also expenditures related to the Subscriber Line Charge and vertical services.

<sup>&</sup>lt;sup>20</sup> Public Utilities Commission of the State of California, Resolution T-17122, January 10, 2008.

<sup>&</sup>lt;sup>21</sup> California Public Utilities Commission, Decision No. 96-10-066, Rulemaking No. 95-01-020 (Filed January 24, 1995), Investigation No. 95-01-021 (File January 24, 1995), released October 25, 1996.

<sup>&</sup>lt;sup>22</sup> Before the Public Utilities Commission of the State of California, Order Instituting Rulemaking into the Review of the California High Cost Fund B Program, Decision 07-09-020, September 6, 2007.

1	Q:	What is your conclusion with regard to whether or not the \$18.00 cap
2		on residential basic local exchange service should be raised?

The cap should not be raised at this time and it should only be raised once the Verizon weighted average rate exceeds \$15.00. This would create a 120% comparability standard that is consistent with federal and state law and actions of other states.

Q:

A:

A:

#### III. Economic Cost Studies and the Rate Benchmark

Please summarize your testimony with regard to using economic costs studies to provide necessary information for the establishment of the appropriate benchmark?

The Commission's April 9, 2008 Order specifically allows parties to submit economic cost studies as part of this proceeding. In this section of my testimony, I will show, in support of my recommendation above, that the appropriate cost study to use to establish a benchmark is an incremental cost study. Second, I will discuss the use of the FCC Synthesis Model as a way to determine the incremental cost of a service. Third, I will discuss previously published results of the FCC Synthesis Model and possible problems with those results. Fourth, I will discuss how I have attempted to revise the FCC Synthesis Model inputs in an effort to avoid previous problems with the model. Finally, I will compare

the new results of the FCC Synthesis Model to the previously published results and my proposed benchmark.

## Why is it appropriate to consider an incremental cost study in evaluating a residential rate benchmark?

O:

One test of a residential rate benchmark is that the benchmark is set at a subsidy-free level. A generally accepted definition of a subsidy is that a service is subsidized if its price is less than incremental cost and the service pays a subsidy if its price is above the stand-alone cost.<sup>23</sup> An economic cost study can be used to estimate the incremental cost of a service and, thus, the study provides information related to whether the benchmark is subsidy-free.

While the economic principles are straight forward, constructing a model that measures the incremental cost of a service can be difficult. Such a model must combine a significant amount of input data with engineering and economic knowledge. Moreover, the estimate generated by a model is based on the assumptions that allow certain costs to be counted and do not allow other costs to be counted as an incremental cost of a particular service.

For example, incremental cost is measured by forward-looking costs rather than embedded costs. Forward-looking costs are based on using the most

<sup>&</sup>lt;sup>23</sup> G.R. Faulhaber, 1975, Cross-subsidization: pricing in public enterprise, *American Economic Review* 65, 966-977.

1	efficient technology currently available combined in the lowest cost
2	network configuration and are based on using the current prices for each
3	input purchased. Embedded costs are based on an existing set of
4	technologies that had been deployed over time and are based on the prices
5	that existed at the time the technologies were deployed.

# 6 Q: How does an economic model estimate the cost of the network that 7 provides telephone services?

Q:

A: Most economic models of telephone costs start with the investment inputs required to build the telephone network that can meet the total demand for the current services that use the network. The investment cost is transformed into a monthly cost of service using a rate of return on the investment and the depreciation of the investment combined with expenses and common overheads.

### How is the total cost of the network as estimated by the economic model different from the incremental cost of a service?

A: Once the total cost of the network has been determined, it is necessary to derive the incremental cost of a particular service, where the incremental cost is the difference in the carrier's total cost with and without the service.<sup>24</sup> Thus, facilities that must be in place to produce the carrier's other services would not be included in the incremental cost of the service

<sup>&</sup>lt;sup>24</sup> William J. Baumol and J. Gregory Sidak, *Toward Competition in Local Telephony*, MIT Press, 1994, page 57.

under examination. In particular, as Chairman Cawley has recently stated, the cost of the loop is not incremental to basic exchange service because that loop also is required to provide access service, data service and in some instances, video services.<sup>25</sup>

An estimate of the incremental cost of basic residential service can be calculated using the FCC Synthesis Model. That model estimates the cost of building a network that can provide the services that the FCC found to be the supported services, along with other services generally produced in combination with the supported services. By building a network that could support multiple services, the cost of such a model reflects the economies of scale and scope associated with the joint provision of those services. The incremental cost of basic exchange service as estimated by the Synthesis Model would be the total cost of the network minus the cost of the loop.

### Q: Does Chairman Cawley's statement agree with the FCC findings regarding loop costs?

Yes. The FCC noted that "the cost of the local loops and their associated line cards in local switches, for example, are common with respect to interstate access service and local exchange service, because once these

<sup>&</sup>lt;sup>25</sup> Motion of Vice Chairman James H. Cawley, Docket Nos. C-20077332 and C-20066987, August 7, 2008.

<sup>&</sup>lt;sup>26</sup> In the Matter of the Federal-State Joint Board on Universal Service, CC Docket No. 96-45, Report and Order, FCC 97-157, released May 8, 1997; Fifth Report and Order, FCC 98-279, released October 28, 1998; Tenth Report and Order, FCC 99-304, released November 2, 1999.

1		facilities are installed to provide one service they are able to provide the
2		other at no additional cost."27 The order also noted that while TELRIC
3		(total element long run incremental cost) is similar to TSLRIC (total
4		service long run incremental cost), the fact that TELRIC is pricing
5		elements (loops, switches and transport facilities) significantly reduces the
6		amount of common costs that remain outside of the costing exercise. <sup>28</sup>
7	Q:	Has the FCC recently reviewed its position regarding loop common
8		costs?
9	A:	Yes. In its current Further Notice of Proposed Rulemaking on High Cost
10		Universal Service Support, the FCC stated that:
11		
12		For example, a copper loop can be used to provide analog
13		voice service as well as data service using DSL technology.
14		The cost of the loop is therefore common to both voice and
15		DSL services. The incremental cost of voice service,
16		assuming that DSL is already provided, therefore, does not
17		include any of the long run incremental cost of the loop
18		itself. Similarly, the incremental cost of DSL, assuming
19		voice is already provided, includes only that portion that
20		may be required to condition the loop to meet the higher
21		quality standards that may be required for the data transmission. <sup>29</sup>
22 23		transmission.
24		Thus, it is clear that the FCC continues to assert that loop costs are
25		common costs incurred to provide a number of services and are not the
26		incremental cost of basic local exchange service.

<sup>&</sup>lt;sup>27</sup> In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98, First Report and Order, FCC 96-325, rel. August 8, 1996, (Local Competition Order), ¶ 678.

<sup>&</sup>lt;sup>28</sup> Id.

<sup>&</sup>lt;sup>29</sup> In the Matter of High Cost Universal Service Support, Further Notice of Proposed Rulemaking, WC Docket No. 05-337, released November 5, 2008, Appendix A, ¶ 247.

1 O: Have other state commissions found that the loop is not an incremental cost to a particular service? 2 Yes. The Washington Utilities and Transportation Commission 3 A. ("WUTC"), for example, found that "the local loop is not appropriately 4 included in the incremental cost of local exchange service. The local loop 5 facilities are required for nearly every service provided by the Company to 6 a customer."30 This finding recognizes that all services, including local 7 exchange, vertical, state and interstate toll service, rely on the loop. None 8 9 of these services could be provided without the loop. After excluding the loop cost from the calculation of the service cost study, the WUTC found 10 11 that the service incremental cost should be based on all of the other forward-looking total incremental costs included in the cost study.<sup>31</sup> In 12 13 addition, the WUTC found that "because the cost of the loop is considered to be a shared cost for the provision of voice and advanced services, we 14 15 conclude that a portion of the cost of the loop should be recovered from

#### Q: What is the source of the publicly available FCC model results?

basic voice grade service.

LECs providing advanced services and specifically digital subscriber line

services."32 Thus, the WUTC again recognized that the loop is an input

used by multiple services and should not be assigned as a direct cost of

21 A: There are two sets of publicly available results of the FCC Synthesis
22 Model. The first set was produced by the FCC staff. This set of results
23 contains results for the non-rural companies such as Verizon PA (formerly

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Washington Utilities and Transportation Commission v. U.S. West Communications, Inc., Docket No. UT-950200, Fifteenth Supplemental Order, page 83.

<sup>31</sup> Id., page 90.

<sup>&</sup>lt;sup>32</sup> In the Matter of the Continued Costing and Pricing of Unbundled Network Elements, Transport, and Termination, Docket No. UT-003013, Thirteenth Supplemental Order, ¶ 57.

1		known as Pennsylvania Bell) and Verizon North (formerly known as
2		GTE). <sup>33</sup> The second set was produced by AT&T and provided to the FCC
3		staff as back-up material to the Rural Task Force Analysis. This set
4		contains results for the rural Pennsylvania carriers.
5	Q:	Please discuss the model results for Verizon PA and Verizon North.
6	A:	An analysis of the results shows that total cost per line declines as density
7		increases, loop cost as percentage of total cost are relatively constant
8		across a range of densities, and non-loop costs are, in general, less than
9		\$18.00 per month.
10	Q:	How did you determine that the total cost per line declines as density
11		increases?
12	A:	As shown in Exhibit RL-4, I compared the total monthly cost per-line to
13		the density for each of Verizon's 465 modeled wire centers. Density is
14		measured as the number of lines per-square mile. Verizon's wire center
15		density varies from approximately four lines per-square mile to
16		approximately 39,000 lines per-square mile. At low densities, the costs
17		are above \$100.00 per line while at high densities the costs are below
18		\$20.00 per line. The cost per-line declines in a regular fashion
19		approximating a logarithmic trend line. This chart verifies the general
20		hypothesis that it is more expensive to serve rural areas than it is to serve
21		urban areas.
22	Q:	How did you determine that the loop cost as percentage of total cost
23		remains relatively constant across a range of densities?
24	A:	As shown in Exhibit RL-5, I divided the loop cost into the total cost.
25		There is a very slight linear decline in this percentage as density increases.

<sup>33</sup> The former Quaker State and Contel study areas, that are now part of Verizon North, were not included in the non-rural company analysis.

I		However, loop cost as percent of total cost, in general, remains within a
2		narrow band. The percentage was between 80 and 90 percent for 366 of
3		the 465 wire centers. The percentage was below 80 for only 10 wire
4		centers and between 90 and 95 percent for 89 wire centers.
5	Q:	How did you determine that monthly non-loop costs are generally less
6		than \$18.00 per-line?
7	A:	Model non-loop costs include port, end-office usage, transport and
8		signaling. I determined these costs by subtracting loop costs from total
9		costs per-line. Monthly non-loop cost per-line were above \$18.00 for only
10		four of the 465 modeled wire centers. These costs were between \$10.00
11		and \$18.00 for 17 wire centers and between \$3.00 and \$10.00 for 237 wire
12		centers. The remaining 207 wire centers had monthly non-loop per-line
13		costs below \$3.00. <sup>34</sup>
14	Q:	Why is it important to note that, for most wire centers, the monthly
15		non-loop costs are below \$18.00?
16	A:	Given that loop costs are joint costs and not part of the incremental cost of
17		local service, the incremental cost of local service cannot be higher than
18		the non-loop costs. Because non-loop costs for almost all of the Verizon
19		wire centers, including those wire centers that are in low density areas, are
20		below \$18.00, this result supports that rural non-loop costs are also below
21		\$18.00, the current rate cap for residential basic exchange service. This
22		supports the fact that the rural carrier incremental cost of basic exchange
23		service may be below \$18.00.
24	Q:	Please discuss the model results for the rural carriers?

<sup>&</sup>lt;sup>34</sup> See, Exhibit RL-6.

1	A:	The rural carrier results were similar to the Verizon results in that loop
2		costs as a percent of total cost is very high, and that non-loop costs are
3		below the \$18.00 residential rate cap.
4	Q:	How did you determine that rural loop cost as a percent of total cost is
5		very high?
6	A:	As shown in Exhibit RL-7, I divided loop cost into total cost for each rura
7		carrier. These percentages range from 83 to 91 percent. This range is
8		similar to the range report above for Verizon.
9	Q:	How did you determine that monthly non-loop costs were below
10		<b>\$18.00?</b>
11	A:	As shown in Exhibit RL-7, I subtracted loop costs from total costs to
12		determine the non-loop costs. For every carrier, this cost was below
13		\$18.00. The monthly non-loop cost per-line range was from \$2.53 to
14		\$16.42. Again, this range is similar to the range reported above for
15		Verizon.
16	Q:	Why is it important to compare rural Pennsylvania results to the
17		results for Verizon?
18	A:	It is important to compare these results because the FCC adopted the
19		model for determining universal support for non-rural carriers such as
20		Verizon but did not adopt the model for use in determining universal
21		service funding for rural carriers. If I had only reviewed the rural carriers
22		results then, due to the fact that the FCC did not adopt the model for rural
23		carriers, it could be argued that the results for the rural carriers should not
24		be given great weight. However, because the rural carriers' results match
25		the pattern of results shown for Verizon, it supports the conclusion that the
26		\$18.00 cap for residential basic service charged by rural Pennsylvania
27		carriers is above the incremental cost of service.

Ī	Q:	Are the non-loop costs the incremental cost of residential service?
2	A:	No. The non-loop cost estimates are the total company non-loop costs.
3		They include the joint cost of serving both basic exchange residential and
4		business customers, and for the provision of vertical services such as
5		Caller ID.
6	Q:	When were the rural and non-rural costs in the FCC model
7		estimated?
8	A:	The two sets of results were estimated in 2000.
9	Q:	How have telephone costs changed since the year 2000?
10	A:	Since 2000, non-loop costs have remained relatively constant. On the
11		other hand, there has been a slight upward trend in loop costs. Thus,
12		relative loop costs have increased. Thus, I would expect, if there is any
13		measured change in the cost of service, that loop cost as a percent of total
14		cost would have increased since 2000 and that non-loop cost would
15	•	remain below \$18.00.
16	Q:	Are there problems associated with using the Synthesis Model to
17		estimate rural carrier costs?
18	A:	Yes. The Rural Task Force identified a number of problems associated
19		with using the Synthesis Model to estimate rural carrier costs. The Task
20		Force report noted that:
21		• Estimated line counts by wire center did not match actual
22		line counts by wire center
23		Estimated average loop lengths did not match actual
24		average loop length by wire center
25		• The type of outside plant (aerial, buried or underground)
26		was not reasonably consistent with the type of outside
27		plant used by the rural carriers

ł		Many input values did not match the rural carrier input
2		costs <sup>35</sup>
3	Q:	Is it possible to correct problems identified by the Rural Task Force?
4	A:	Yes. In discovery in this case, I asked the rural companies in this case
5		questions that related to each of the inputs necessary to run the Synthesis
6		Model for each company. If the carriers had been able to answer my
7		questions in OCA Data request III with the proper amount of specificity, I
8		would have been able to correct many of the problems that the Rural Task
9		Force identified. For example, I asked the carriers to provide me the
10		number of lines by wire center, the addresses of their customers, the
11		percent of the plant that is aerial, buried or underground, and many of their
12		current input costs.
13	Q:	Did you have difficulties using the responses that the carriers
14		provided you in response to discovery in this case?
15	A:	Yes. The greatest difficultly occurred when I tried to translate the carrier
16		customer addresses into geo-coded locations. I used several different geo-
17		coding protocols, but I was only able to convert one carrier's information,
18		Armstrong Telephone Co., into information that the Synthesis Model was
19		able to use for all customers. In addition, Embarq provided geo-coded
20		information that I was able to use for many, but not all, of its customers.
21	Q:	In your model analysis, what inputs did you update?
22	A:	I updated the outside plant inputs using data supplied to me by Armstrong
23		and Embarq. With regard to Armstrong, there were a number of inputs for
24		which current data were not available. In those cases, I used data

<sup>&</sup>lt;sup>35</sup> A Review of the FCC's Non-Rural Universal Service Fund Method and the Synthesis Model for Rural Telephone Companies, Rural Task Force White Paper 4, September, 2000, <a href="http://www.wutc.wa.gov/rtf">http://www.wutc.wa.gov/rtf</a>.

1 representative of similarly situated small rural carriers. With regard to 2 Embarq, I was able to update most of the Synthesis Model's inputs with 3 Embarq data. 4 O: Did you retain any data from the Synthesis Model? 5 Yes, I retained the older cost data for wire centers costs for three reasons. A: 6 First, the FCC's analysis of switching cost included a negative time trend. 7 This implies that current switching cost should be lower than older 8 switching costs. Retaining the older cost, thus, implies that I would be 9 producing costs that are biased towards having high incremental basic exchange service cost and, therefore, do not under-estimate those costs.<sup>36</sup> 10 11 Second, the switch and transport price indices that I have reviewed in several UNE cases have indicated that switch and transport prices have 12 either declined or remained flat over time.<sup>37</sup> Third, recent evidence 13 suggests that newer soft-switches are cheaper than older circuit switches. 14 Thus, the forward-looking cost of switching would decline to reflect the 15 reduced cost of the newer technology.<sup>38</sup> 16 With regard to Armstrong Telephone, please compare the current 17 Q: 18 model results to the Rural Task Force model results.

<sup>&</sup>lt;sup>36</sup> In the Matter of the Federal-State Joint Board on Universal Service, CC Docket No. 96-45, Tenth Report and Order, FCC 99-304, released November 2, 1999, Appendix C.

<sup>&</sup>lt;sup>37</sup> Filed initial and reply testimony of Robert Loube on behalf of TelNet Worldwide, Inc., ACD Telecom, Inc., TC3 Telecom, Inc., Michigan Access, Inc., JAS Networks, Inc., DayStarr, LLC, Clear Rate Communications, Inc., and Arialink Telecom. (the "CLECs"), In the matter on the Commission's own motion, to review the total element long run incremental costs and the total service long run incremental costs for Verizon North Inc. and Contel of the South, Inc. d/b/a Verizon North Systems, to provide telecommunications services, April 7 and June 26, 2008; Filed a declaration of Robert Loube on behalf of The Utility Reform Network in re: Investigation on the Commission's Own Motion into Open Access and Network Architecture Development of Dominant Carrier Networks, Verizon UNE Phase, Investigation 93-04-002, filed August 6, 2004.

<sup>&</sup>lt;sup>38</sup> In the Matter of High-Cost Universal Service Support, WC Docket No. 05-337, Order on Remand and Report and Order and Further Notice of Proposed Rulemaking, FCC 08-262, released November 5, 2008, Appendix A, ¶ 257.

The two model results are remarkably similar. The ratio of loop to total A: cost is very similar, with current ratio of 91 percent for Armstrong and the Rural Task Force ratio of 89 percent. The non-loop costs are \$6.01 for the current Armstrong estimate and \$6.68 for the Rural Task Force estimate. Thus, the estimates show that the incremental cost of basic exchange service was, and still is, well below the existing and proposed residential rate benchmark. 

### Q: With regard to Embarq, please compare the current model results to the Rural Task Force model results.

The current model generated total network, loop and non-loop costs for 61 Embarq wire centers. In Exhibit RL-8, I compare the current model results for Embarq to the Rural Task Force model results. The results in only one of 122 cases show that non-loop costs are above \$18.00. For the other 121 cases, the non-loop costs are below \$18.00. Thus, it is reasonable to assert that the Embarq results demonstrate that the rural rate benchmark of \$18.00 that I recommend in this proceeding is greater than the incremental cost of basic local exchange service.

#### Q. Did you conduct any further analysis of the results?

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A:

Yes. In order to compare the current loop costs to the Rural task force loop costs, I also estimated the Spearman rank correlation coefficient among the two groups of estimates. The Spearman rank correlation coefficient measures whether the two sets of estimates are similar. That is, whether a wire center with high loop costs in current model results will also have high loop costs in the Rural Task Force results. The Spearman rank correlation coefficient can vary from positive one to negative one. If a positive one is obtained then the rankings are perfectly and directly correlated. That is, the wire center with the highest loop cost in the

1		current model results is also the wire center with the highest loop costs in
2		the Rural Task Force results, and the wire center with the second highest
3		loop costs in the current model results is also the wire center with the
4		second highest loops costs in the Rural Task Force results. In this
5		instance, I calculated a Spearman rank coefficient among the wire center
6		loop costs of 0.87, implying that loop costs are generally ranked similarly.
7	Q:	What conclusions do you reach by reviewing the existing cost studies
8		and conducting these economic cost studies?
9	A:	I conclude that model non-loop cost estimates are a reasonable proxy for
10		the incremental cost of basic local exchange service, and that, in almost all
11		instances, the estimated incremental cost of the Rural ILECs is less than
12		the \$18.00 residential rate benchmark. This further supports the 120%
13		comparability standard I discussed previously.
14 15		IV. Enhancing the Pennsylvania Universal Service Fund
16	Q:	The Commission's April 9, 2008 Order also asks "whether funding for
17		the Pa USF should be increased." What is your response to that
18		question?
19	A:	The Pa USF should be adjusted if necessary to maintain the comparability
20		standard discussed above. That is, the Pa USF should be used to allow all
21		rural ILEC current residential basic local service rates to be no more than
22		120% of Verizon's weighted average rate. On a going forward basis, the
23		Pa USF should be large enough to maintain that level of comparability to
24		Verizon's rates as those rates cause the current \$18.00 cap on residential

1		basic local exchange service to increase. Doing so would be consistent
2		with federal and state law and the actions of numerous other states.
3	Q:	Should the Pa USF replace revenue that would have otherwise been
4		recovered from increases in basic exchange rates above \$18.00 and
5		changes to access service rates?
6	A:	Yes. If the Commission adopts the OCA proposed limits on basic rate
7		changes, and if the Commission maintains its freeze on access rate
8		increases, then it may be necessary to allow rural carriers the opportunity
9		to recover Chapter 30 revenue increases from the Pa USF if the carrier
10		meets the prerequisite established for obtaining support.
11	Q:	What are the prerequisites for obtaining additional support from the
12		Pa USF?
13	A:	The two prerequisites are that 1) the carrier's rates are greater than the
14		proposed rate benchmark, and 2) the carrier is eligible for a rate increase
15		according to the Chapter 30 standards.
16	Q:	The Commission's April 9, 2009 Order also inquires about the role of
17		non-expired "banked revenues" on using Pa USF funding to support
18		rural ILECs who incrementally pierce the appropriate residential rate
19		cap. What is the impact on the prerequisites of "banked revenue" in
20		such a situation?
21	A:	The impact on the prerequisites of banked revenue depends on whether the
22		carrier's rates would have exceeded the rate benchmark if the carrier had
23		not banked the revenue. That is, if the carrier had chosen to increase rates

1 instead of banking the revenue and if the increased rates had exceeded the 2 rate benchmark, then the carrier would be able to request the Pa USF to 3 replace the banked revenue. However, if the carrier banked revenue rather than increasing the rate up to the benchmark, then the carrier cannot 4 5 request additional funding from the Pa USF to replace the banked revenue. 6 Why is it appropriate to enhance universal service support when the Q: carrier meets the prerequisites? 7 8 A: It is appropriate to provide additional universal service support because it 9 is necessary to keep rural rates comparable and affordable, and also to enable rural companies to meet their Chapter 30 broadband requirements. .10 11 Chapter 30 allows carriers to increase revenues through increasing rates 12 for non-competitive services. The two biggest sources of non-competitive revenue are revenues from basic exchange service and access services. 13 14 Increases in access and basic exchange services could have theoretically funded the Chapter 30 required broadband investment initiative. 15 16 However, the Commission has previously frozen or reduced access rates, and both Chapter 30 and this Commission's prior order maintain limits on 17 18 basic exchange rate increases. As a result, without access to the universal 19 service fund, the rural carriers would have only limited sources of 20 additional revenue. For example, they could increase rates for vertical 21 services such as Caller ID or for miscellaneous services such as non-22 published numbers. Such rates are already high, however, and generally 23 may not be able to withstand any further increases.

1	Q:	How does the enhanced network affect the cost of providing basic
2		exchange service?
3	A:	The enhanced network that provides both basic exchange service and
4		broadband services increases the joint cost of providing telephone
5		services. At the same time, an enhanced network also reduces the
6		incremental cost of providing telephone service.
7	Q:	What is the impact on basic exchange rates of the freeze on access
8		rates?
9	A:	The freeze on access rates substantially increases the impact of a Chapter
10		30 rate increase on basic exchange rates. For example, if the only two
11		non-competitive services are basic exchange and access services, and each
12		service supplies approximately 50 percent of the non-competitive revenue
13	,	then the freeze on access rates effectively doubles the basic exchange rate
14		increase. That is, if inflation is 3 percent and the only rate that can be
15		increased is the basic service rate and fifty percent of the revenue is
16		generated by basic services then basic service rates must increase by 6
17		percent, double the inflation rate, to generate the required Chapter 30
18		revenue. In practice, many rural carriers have banked revenue increases
19		rather than let the large increases fall on their basic service customers.
20	Q:	Why is it necessary to have additional revenue to support the Chapter
21		30 build-out given that most carriers will finish building their
22		enhanced network by December 31, 2008?

1	A:	It may still be necessary to have additional revenue because it is necessary
2		to pay for the return on equity and debt and the depreciation associated
3		with the build-out, even though the build-out is complete.
4	Q:	The Commission's April 9, 2008 Order also asks whether the potential
5		availability of Pa USF support to those rural ILECs that pierce the
6		appropriate residential rate cap has any anti-competitive or other
7		adverse affects. Do you see any?
8	A:	No. It is the failure to provide additional support that may cause anti-
9		competitive impacts rather than the provision of such support. Rural
10		ILECs have a unique obligation to provide broadband service to all of
11		their customers by a date certain. Other carriers that provide telephone
12		service in rural areas do not have that obligation. Therefore, the Rural
13		ILECs have additional investment and maintenance expenses that other
14		carriers can avoid. Without the provision of additional universal service
15		support, the Rural ILECs would be at a competitive disadvantage. OCA
16		witness Colton also discusses the affordability issues at play here.
17	Q:	Why does the commitment to provide broadband services to all
18		customers place an additional burden on the Rural ILECs?
19	A:	When a carrier provides broadband services, that carrier, in general, makes
20		additional investments and receives additional revenues, such as DSL
21		service revenue. The additional revenues allow the carrier to recover the
22		cost of the additional investment. However, in general, the cost of
23		providing broadband services increases as the percent of customers who

are offered the service increases. That is, on a customer basis, it is more expensive to extend service to 90 percent of the customers than 85 percent and it is also more expensive to extend service to 95 percent of the customers than 90 percent.<sup>39</sup> Thus, if one competitor is required to serve all customers and other competitors do not have to serve all customers, the competitor with the obligation to serve is at a disadvantage.

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### V. <u>Pennsylvania Universal Service Contribution Method</u>

The Commission's April 9, 2008 Order also provides that this

investigation is to consider "whether funding for the Pennsylvania

11 Universal Service Fund should be increased." How do you respond to 12 that question? The Pa USF should be increased only if necessary to maintain the 13 A: 14 comparability standard discussed above and the affordability standard 15 discussed in Mr. Colton's testimony. Having said that, when considering 16 whether funding for the Pa USF should increase, it is important to 17 consider whether the contribution method should also be changed. Given 18 that the contribution base has been declining, the fund contribution factor 19 is increasing even without any additional requirements on the fund. If the 20 fund is required to support greater increases in order to maintain the

\$18.00 cap, while also freezing or reducing access charges, the

<sup>&</sup>lt;sup>39</sup> Prefiled Joint Rebuttal Testimony of Michael L. Harrington, Michael S. Brown and John Smee on behalf of FairPoint Communications Regarding Topic Groups II and III, August 22, 2007, Maine Public Utilities Commission, Docket No. 2007-67; Surrebuttal testimony of Robert Loube,

1		contribution factor may otherwise increase substantially. The increase in
2		the contribution factor is an adverse effect of the current limited
3		contribution base.
4	Q:	What is the contribution base?
5	A:	The contribution base is the state revenue of the carriers who are required
6		to contribute to the fund.
7	Q:	Who are the current contributors to the Pa USF?
8	A:	The current contributors include Pennsylvania local exchange and
9		interexchange carriers.
10	Q:	How would you increase the contribution base?
11	A:	If necessary to meet the state universal service fund requirements in the
12		future, I would increase the contribution base by requiring wireless and
13		voice over internet protocol ("VoIP") carriers to contribute to the fund. I
14		understand that the Commission has determined to exclude consideration
15		of wireless carriers in conjunction with Pa USF funding obligations at this
16		time. If additional funding is needed in the future, however, I would urge
17		the Commission to consider the expansion of the contribution base. This
18		is appropriate, in part, because all telecommunications users benefit by
19		being able to reach rural customers who are connected to the public
20		switched telephone network. Indeed, that has been one of the underlying
21		bases of universal service telecommunications policy since the federal
22		Communications Act of 1934. The more people who are connected to the

Ph.D. on behalf of the Office Public Advocate, October 1, 2007, Maine Public Utilities Commission, Docket No. 2007-67.

telephone network, then the more that all users of all telecommunications 1 2 services will benefit. Both federal and state universal service policies recognize the special need to apply this principle to rural consumers who 3 are more difficult and costly to serve. 4 5 VI. Conclusions and Recommendations 6 Please summarize your conclusions and recommendations in this case. 7 Q: 8 A: I recommend that the PUC adopt the following guidelines and principles 9 in this proceeding: 10 Establish a rural residential benchmark equal to 120% of the Verizon PA 11 weighted average residential rate. 12 Retain the current rural residential benchmark of \$18.00 until the Verizon PA weighted average residential rate exceeds \$15.00; 13 14 Once the Verizon PA weighted average residential rate exceeds \$15.00. 15 allow the rural residential benchmark to increase based on the 120% comparability standard but subject to the affordability standard developed 16 17 in Mr. Colton's testimony; Allow carriers with residential rates greater than the residential benchmark 18 19 to obtain additional funding from the Pa USF;

Recognize that the \$18.00 benchmark exceeds the incremental cost of

basic local exchange service; and

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- If the Pa USF must be expanded in the future, consider the expansion of
   the contribution base to all types of telecommunications services,
   including wireless and VoIP providers.
- 4 Q: Does this conclude your testimony?
- Yes. I note, however, that, as I briefly indicated above, the FCC is 5 A: currently conducting a major examination of intercarrier compensation 6 rates. The result of that examination may have an impact on intrastate 7 access rates which are the very rates being considered in a subsequent 8 9 phase of this proceeding. While this investigation has been delayed several times to avoid any conflicts with the FCC proceeding, the FCC is 10 11 now expected to act on its case soon. To the extent it is relevant to this portion of the proceeding, I would like to reserve the right to address any 12 FCC action in further testimony in this case if necessary. 13

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### Vita

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Ph.D., Economics, Michigan State University, 1983

M.A., Economics, University of Massachusetts-Amherst, 1971

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### Utility Regulation

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April 2007 to Present

#### Responsibilities include:

- Filed an expert report on behalf of the U.S. Department of Justice, the United States District Court for the Western District of Texas, San Antonio Division, AT&T Inc, Plaintiff, v. United States of America, Defendant, Civil No. SA-07-CA-0197-OG, October 14, 2008.
- Filed reply testimony on behalf of the Maryland Office of the People's Counsel, In the Matter of Appropriate Forms of Regulating Telephone Companies, Maryland Public Service Commission, Case No. 9133, August 28, 2008.

- Filed initial and reply testimony on behalf of TelNet Worldwide, Inc., ACD Telecom, Inc., TC3 Telecom, Inc., Michigan Access, Inc., JAS Networks, Inc., DayStarr, LLC, Clear Rate Communications, Inc., and Arialink Telecom. (the "CLECs"), In the matter on the Commission's own motion, to review the total element long run incremental costs and the total service long run incremental costs for Verizon North Inc. and Contel of the South, Inc. d/b/a Verizon North Systems, to provide telecommunications services, April 7 and June 26, 2008.
- Testified on behalf of the City of Kitchener, the Consumers Council of Canada, and the Vulnerable Energy Consumers Coalition in the Union/Enbridge 2008 Rates Cases, Ontario Energy Board, EB 2007-0606 and EB2007-0615, April 1, 2008.
- Testified on behalf of the New Hampshire Office of Consumer Advocate in Kearsarge Telephone Company, Wilton Telephone Company, Hollis Telephone Company and Merrimack County Telephone Company Petition for an Alternative Form of Regulation, New Hampshire Public Utilities Commission, Case No. DT 07-027, December 5, 2007.
- Filed testimony on behalf of the City of Kitchener, the Consumers Council of Canada, and the Vulnerable Energy Consumers Coalition in the Union/Enbridge 2008 Rates Cases, Ontario Energy Board, EB 2007-0606 and EB2007-0615, October 22, 2007.
- Testified on behalf of the Maine Office of the Public Advocate in the Joint Application for Approvals Related to Verizon's Transfer of Property and Customer Relations to Company to be Merged with and into Fairpoint Communications, Inc. Maine Public Utilities Commission Docket No. 2007-67 on October 2, 2007.
- Prepared comments on behalf of the Washington Public Counsel and The Washington Electronic Business and Telecommunications Coalition, In the Matter of the Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C.§ 160(c) in the Denver, Minneapolis-St. Paul, Phoenix and Seattle Metropolitan Statistical Areas, WC Docket No. 07-97, August 31, 2007.

# Director, Economic Research Rhoads & Sinon, LLC

April 2001 to March 2007

#### Responsibilities include:

- Testified on behalf of the Washington Public Counsel in the Matter of the Petition of Qwest Corporation to be Regulated Under An Alternative Form of Regulation, WUTC Docket No. UT-061625, March 14, 2007.
- Filed rebuttal testimony on behalf of the Pennsylvania Office of Consumer Advocate in the 2006 Annual Price Stability Index/Service Price Index of Buffalo Valley Telephone Company, Conestoga Telephone & Telegraph Company, and Denver & Ephrata Telephone & Telegraph Company, PA PUC Docket No. P-0098142F1000, filed January 5, 2007.
- Testified on behalf of the Attorney General Michael A. Cox, In the Matter of the Notice by AT&T Michigan Pursuant to sections 304(d) and 310a of the Michigan Telecommunications Act of an increase to the rate for primary basic local exchange service in the amount not to exceed AT&T Michigan's intrastate end user line charge in effect on July 1, 2005, MPSC Case No. 15036, filed January 30, 2007.
- Prepared comments on behalf of the Pennsylvania Office of the Consumer Advocate, FCC Intercarrier Compensation Workshop and Solicitation of Comments on the Missoula Plan, Pennsylvania Public Utility Commission Docket No. M-000061972.
- Prepared an affidavit on behalf of the National Association of Utility Consumer Advocates (NASUCA) and the Maine Office of the Public Advocate, In the Matter of Jurisdictional Separations and Referral to the Federal-State Joint Board, CC Docket No. 80-286, filed August 22, 2006.
- Advisor to the Maryland office of the People's Counsel, In the Matter of Cavalier Telephone Midwest Atlantic for Breach of Interconnection Terms by Verizon Maryland, Inc., Case No. 9046.

- Testified on behalf of the Maine Office of Public Advocate in the Investigation Into Verizon Maine's Alternative Form of Regulation, Phase I, Docket No. 2005-155, October 17 and October 18, 2006.
- Prepared comments on behalf of the National Association of State Utility Consumer Advocates (NASUCA) In the Matter of the Federal-State Joint Board on Universal Service, CC Docket No. 96-45, filed March 27, 2006 (with David Gabel and the NASUCA Telecommunications Committee).
- Advisor to the Washington State Public Counsel in the Investigation of the Sprint-Nextel Merger, Washington Utilities and Transportation Docket No. UT-051291.
- Filed direct testimony on behalf of the Maine Office of Public Advocate in the Investigation Into Verizon Maine's Alternative Form of Regulation, Phase II, Docket No. 2005-155, January 13, 2006.
- Testified on behalf of the Maine Office of Public Advocate in the Investigation into Line Sharing, Maine Docket No. 2004-809, November 18, 2005.
- Testified on behalf of the Maine Office of Public Advocate in Verizon Communications, Inc. and MCI, Inc., Review of Joint Application for Approval of Merger, Maine Docket No. 2005-154, September 29, 2005.
- Filed direct, rebuttal and surrebuttal testimony on behalf of the Office of Consumer Advocate in Pennsylvania Docket No. C-20027195, June 8, June 29, and July 11 2005.
- Filed a rebuttal declaration regarding price floor issues on behalf of The Utility Reform Network in re: Investigation on the Commission's Own Motion into Open Access and Network Architecture Development of Dominant Carrier Networks, Verizon UNE Phase, Investigation 93-04-002, filed April 1, 2005.
- Filed a price floor declaration on behalf of The Utility Reform Network in re: Investigation on the Commission's Own Motion into Open Access and Network Architecture Development of Dominant Carrier Networks, Verizon UNE Phase, Investigation 93-04-002, filed January 28, 2005.

- Filed direct testimony on behalf of Public Counsel and AARP in re: WUTC v. Verizon, Docket No. UT-040788, before the Washington Utilities and Transportation Commission, December 17, 2004.
- Filed a rebuttal declaration on behalf of The Utility Reform Network in re: Investigation on the Commission's Own Motion into Open Access and Network Architecture Development of Dominant Carrier Networks, Verizon UNE Phase, Investigation 93-04-002, filed November 9, 2004
- Prepared a report on the State of Telecommunications Services in Nevada for the subcommittee to study telecommunications service in Nevada, August 2004,
- Filed a declaration on behalf of The Utility Reform Network in re: Investigation on the Commission's Own Motion into Open Access and Network Architecture Development of Dominant Carrier Networks, Verizon UNE Phase, Investigation 93-04-002, filed August 6, 2004
- Filed expert rebuttal testimony on behalf of the Staff of the South Carolina Commission in re: Implementation of requirements Arising from Federal Communications Commission Triennial UNE review: Local Circuit Switching for mass market customers, SC PSC Docket No. 2003-326-c.
- Testified on behalf of the Pennsylvania Office of Consumer Advocate in re: Investigation into the Obligations of Incumbent Local Exchange Carriers to Unbundle Network Elements, PA PUC Docket No. I-0030099.
- Prepared an Affidavit for the National Association of State Utility Consumer Advocates in the Matter of the Review of Commission's Rules Regarding The Pricing of Unbundled Network Elements And the Resale of Service by Incumbent Local Exchange Carriers, WC Docket No. 03-173 (with David Gabel).
- Provided expert advice to the Cities of Austin, Dallas, Fort Worth, and Hereford in Southwestern Bell Telephone Company's Filing To Establishing Surcharges Resulting From District Court Remand Of PUC Final Order In Docket No. 18509, SOAH Docket No. 473-03-1620, Texas PUC Docket No. 26719.
- Filed expert testimony on behalf of the Staff of the Nevada Public Utilities in The Petition of Nevada Bell for an Order commencing a proceeding to determine the costs and rates for unbundled network elements, Docket No. 00-7012

- Prepared comments for the National Association of State Utility Consumer Advocates in the Matter of Cost Review Proceeding for Residential and Single-Line Business Subscriber Line Charge Cap, FCC CC Docket No. 96-262 (with David Gabel)
- Technical Adviser to the Alabama Public Service Commission in the Generic Proceeding to Establish Prices for Interconnection Services and Unbundled Network Elements - Docket No. 27821
- Prepared reply comments for the Office of the People's Counsel of the District of Columbia In the Matter of Developing a Unified Inter-carrier Compensation Regime, FCC CC Docket No. 01-92.
- Assisted the Universal Service Administrative Company in managing the interstate common line and model support programs.

# Industry Economist, GS 301-15 Federal Communications Commission May 1996 to April 2001

### Responsibilities include:

- Established the criteria for choosing the universal service economic cost model;
- Evaluated and modified telephone cost models;
- Determined the input values used in telephone cost models;
- Served on the FCC staff of the Federal State universal service joint board;
- Developed and evaluated alternative universal service funding proposals;
- Developed and compared alternative jurisdiction separations allocators with regard to the impact of the allocators on state and federal jursidictional responsibilities;
- Reviewed orders of other divisions to ensure that those orders complement the tasks and mandates of the Accounting Policy Division;
- Conducted special studies for use by the Chairman, Commissioners, Bureau Chief or Division Chief

 Provided technical economic advice to the division legal staff regarding common carrier operations and regulatory policy.

Director, Office of Economics Public Service Commission of the District of Columbia, July 1993 to May 1996

# Responsibilities include:

- Supervised the preparation of staff testimony in telephone, electric and gas utility cases.
- Represented the Commission on the Staff of Federal State Separations Joint Board.
- Prepared and presented testimony on the strategic approach to electricity demand side management and least cost planning principles.
- Represented the Commission on the National Association of Regulatory Utility Commissioners Communications Committee's universal service and access reform working groups.

Acting Director, Office of Economics Public Service Commission of the District of Columbia, February 1993 to July 1993

#### Responsibilities include:

- Prepared comments on FERC Notices of Proposed Rulemaking.
- Represented the Commission on the telephone quality of service and low-income program working groups.

Senior Telecommunications Economist Public Service Commission of the District of Columbia, May 1989 to the February 1993

#### Responsibilities include:

 Prepared and presented testimony regarding telephone rate structure, competition in telephone markets, embedded cost studies, and long run incremental cost studies.

- Represented the Commission on digital deployment and generic cost manual working groups.
- Represented the Commission on the staff of the 410B Joint Federal/State Conference on Open Network Architecture.
- Prepared comments on FCC Notices of Proposed Rulemaking.

# Econometrician, Indiana Utility Regulatory Commission, March 1988 to May 1989

Responsibilities include:

- Developed electric energy and demand forecasts.
- Supervised consultants developing economic and demographic models for utility service territories.
- Represented the Commission on the Executive Committee on Intrastate Access Charges.

Principal Utility Analyst, Indiana Utility Regulatory Commission, January 1986 to March 1988

Responsibilities include:

- Prepared and presented testimony regarding demand forecasting for telephone and electric services, cost of equity and long run marginal cost.
- Contributed to staff reports on energy and demand forecasts.
- Developed financial forecasts for electric utilities.

### International Consulting

Telephone Organization of Thailand, conducted a Tariff and Cost Workshop for Senior Management and Staff, Bangkok, February 5-7, 2001. Contractor: Booz, Allen & Hamilton, Inc.

Ministry of Communications, Indonesia, drafted a report on best practices guidelines for Universal Service Obligations, and conducted round-table with the Ministry of Communications staff and with the U. S. telecommunications community, Jakarta, August 20-September 9, 2000. Contractor: Nathan Associates, Inc.

# Teaching

Assistant Professor, James Madison University, September 1983 to December 1985

Instructor,
James Madison University,
September 1979 to June 1983

Courses Taught:

Industrial Regulation, Industrial Organization (undergraduate and MBA), Intermediate Macroeconomic Theory, Economic Analysis (MBA), Principles (Macro and Micro)

#### Other

Economist in the Office of Director, Bureau of Economic Analysis, Department of Commerce, Washington D.C., November 1972 to September 1975

#### Publications

"The Telecommunications Act of 1996: Residential Rates and Competition," Utilities Policy, September 2004.

"Universal Service: How much is enough?" Journal of Economic Issues, June 2003.

"Public Interest Regulation, Common Costs and Universal Service," eds. Edythe S. Miller and Warren J. Samuels, An Institutionalist Approach to Public Utilities Regulation, Michigan State University Press, 2002.

"Price Cap Regulation: Problems and Solutions," Land Economics, Vol. 71, Number 3, August 1995.

"Measuring the Total Service Long-Run Incremental Cost," Ninth NARUC Biennial Regulatory Information Conference, September 1994 (with David Gabel and Mark Kennet).

- "The Proper Use of Stand Alone Cost Studies," Ninth NARUC Biennial Regulatory Information Conference, September 1994.
- "State Experience in InterLATA Toll Deregulation," Journal of Economic Issues, Vol. XXVIII, No. 2, June 1994 (with Labros Pilalis).
- "Price Caps and Cross-subsidization," Eighth NARUC Biennial Regulatory Information Conference, Ohio State University, 1992.
- "The Institutional Conditions for Technological Change: Fiber to the Home," *Journal of Economic Issues*, Vol. XXV, No. 4, December 1991.
- "Fiber to the Home: A Competitive Analysis," Seventh NARUC Biennial Regulatory Information Conference, Ohio State University, 1990.
- "The Return of the Electric Utility Holding Company and the Future of the Electric Supply Industry," Journal of Economic Issues, Vol.XXIII, No. 2, June 1989.
- "Impact of the National Appliance Energy Conservation Act on Residential Energy Consumption within a Service Territory," Sixth NARUC Biennial Regulatory Information Conference, Ohio State University, 1988 (with Katri Clodfelder).
- A Summary of Future Demand Trends and Capacity Plans for Major Electric Utilities in Indiana, Public Service Commission of Indiana, Indianapolis, Indiana, 1987 (with Wayne Lash, et al).
- Electric Demand and Supply Planning for the State of Indiana, Public Service Commission of Indiana, Indianapolis, Indiana, 1985 (with Wayne Lash, et al).
- "District Heating and Regulatory Reform," Proceedings of the Seventy-Fifth Annual Conference of the International District Heating Association, Washington D.C.:IDHA 1984.
- State and Local Regulation of District Heating and Cooling Systems: Issues and Options, Argonne, Illinois: Argonne National Laboratory, 1981 (with Philip Kier, et al).
- "Michigan's Hydroelectric Potential," The Michigan State Economic Record, Volume 20, Number 7 (July-August 1978), Division of Research, Graduate School of Business, Michigan State University.

# Staff Testimony

#### Before the Public Service Commission of the District of Columbia:

Formal Case No. 929 The Application of Potomac Electric Power Company for an Increase in its Retail Rates for the Sale of Electric Energy.

Principal Issues: Class Revenue Responsibility, Rate Structure and Low Income Rates.

Formal Case No. 926 The Application of The Chesapeake and Potomac Telephone Company for Authority to Establish a Revenue Requirement and to Increase and Restructure its Schedule of Rates and Charges Principal Issues: Centrex burden and the Centrex embedded cost study.

Formal Case No. 917

Phase II

The Application of Potomac Electric Power Company For Approval of its Third Least Cost Plan

Principal Issues: The Strategic Approach to DSM Develop and Implementation, Level of DSM Spending, Appropriate Standards by Which DSM Expenses Should Be Judged Prudent, and Rate Design and Least-Cost Planning Principles.

Formal Case No. 891 The Application of Chesapeake and Potomac Telephone Company to Offer Return Call and Caller ID Within the District of Columbia Principal Issues: Tying Arrangements Between Sales of Equipment and Services, and Public Policy Issues Associated With the Offering of Caller ID

Formal Case No. 850 Investigation into the Reasonableness of the
Authorized Return on Equity, Rate of Return,
and Current Charges and Rates for
Telecommunications Services Offered by the
Chesapeake and Potomac Telephone Company
Principal Issues: Rate Design, Incremental Cost and Embedded
Cost Studies

Formal Case No. 814

Phase III Investigation into the Impact of AT&T Divestiture and Decisions of the Federal Communications

Commission on the Chesapeake and Potomac Telephone Company's Jurisdictional Rates

Principal Issues: Flexible pricing, incremental cost studies, tests for the existence of competition, criteria for measuring alternative regulatory plans.

Formal Case No. 814 Investigation into the Impact of AT&T
Divestiture and Decisions of the Federal
Communications Commission on the Chesapeake
and Potomac Telephone Company's
Jurisdictional Rates

Principal Issues: The Use of Cross Elasticity Studies and Market Surveys to Define Markets for Telecommunications Services

### Telephone Tariff

91-3 Investigation of the Chesapeake and Potomac Telephone Company's General Regulations Tariff No. 201, Section 1 Principal Issues: Regulatory safeguards and costs of preapproval of special assemblies

# Before the Indiana Utility Regulatory Commission:

Cause No. 38665 Joint Petition of Century Telephone
Enterprises, Inc., Odon Telephone Co., Inc.
and Colonial Telephone Company, Inc.
Principal Issue: Approval of the Purchase of Odon by Century

Cause No. 38560 Petition of Northern Indiana Public Service
Company
Principal Issues: Economic Development Rates and Long Run
Marginal Cost

- Cause No. 38426 Petition of GTE-Indiana
  Principal Issues: Revenue Adjustment, CrossSubsidization, Cost Methodology and Demand Repression
- Cause No. 38415 Petition of Public Service Company of Indiana Principal Issue: Financing Authority
- Cause No. 38302 Joint Petition of Indiana Gas Company, Inc. and Westport Natural Gas Company, Inc. Principal Issue: Acquisition Adjustment
- Cause No. 38158-S1 Investigation to Determine the Extent of Regulation of Pay Telephone Equipment Principal Issue: Regulation of IXC-Owned Pay Phones

- Cause No. 38158 Investigation to Determine the Extent of Regulation of Pay Telephone Equipment Principal Issues: Deregulation and Rate Structure
- Cause No. 38061 Petition of Midwest Natural Gas Corporation Principal Issue: Cost of Equity
- Cause No. 38059 Petition of Indiana Bell Telephone Company, Inc.
  Principal Issues: Local Measured Service and Long Run
  Marginal Cost
- Cause No. 38045 Petition of Northern Indiana Public Service
  Company
  Principal Issues: Demand Forecasting, Financial Viability
  and Regulatory Policy with Regard to Excess Capacity
- Cause No. 38034 Petition of Odon Telephone Company, Inc.
  Principal Issues: Acquisition Adjustment, Cost of Equity,
  Financing Authority, and Service Improvement Program
- Cause No. 37938 Petition of Northern Indiana Public Service Company Principal Issues: Economic Development Rates
- Cause No. 37927 Petition of United Telephone of Indiana Principal Issues: Cost of Equity
- Cause No. 37866 Petition of Hoosier Energy Rural Electric Cooperative, Inc., et al.
  Principal Issues: Economic Development Rates and Long Run Marginal Cost
- Cause No. 37814 Petition of United Telespectrum of Indiana, Inc. Principal Issue: Certificate of Territorial Authority
- Cause No. 37735 Petition of Westport Natural Gas Company, Inc. Principal Issue: Cost of Equity
- Cause No. 37706 Petition of Midwest Natural Gas Corporation Principal Issue: Cost of Equity
- Cause No. 37686 Petition of Indiana Bell Telephone Company, Inc. Principal Issue: Demand Repression
- Cause No. 37414 Petition of Public Service Company of Indiana

Principal Issues: Forecasting Methodology and Capacity Planning

#### Lectures

- "Network Neutrality and Service Quality," and "Telecommunications Pricing," NARUC Advanced Regulatory Studies Program, June 2006.
- "Public Utility Pricing," "Retail Pricing in Telecommunications," and "Cost Models in Telecommunications," NARUC Annual Regulatory Studies Program, August 2004.
- "Retail Pricing in Telecommunications," NARUC Annual Regulatory Studies Program, August 2003.
- "The Evolution of Telecommunications Pricing," NARUC Annual Regulatory Studies Program, August 2002.
- "Federal Restructuring of the Telecommunications Industry,"
  "Federal Universal Service Programs," and "State Universal
  Service Programs," NARUC Annual Regulatory Studies Program,
  August 2001.
- "Cost Modeling in Telecommunications," NARUC Annual Regulatory Studies Program, August 2000.
- "Cost Modeling in Telecommunications," NARUC Annual Regulatory Studies Program, August 1999.
- "Cost Modeling and Universal Service," NARUC Annual Regulatory Studies Program, August 1998.
- "Cost Modeling in Telecommunications," NARUC Annual Regulatory Studies Program, August 1997.
- "Policy Issues Raised by Performance-Based Incentive Systems," Public Policies Toward Competition in the Electric Power Industry, Wisconsin Public Utility Institute, October 1994.
- "Cost Allocations in Broadband Networks," NARUC Annual Regulatory Studies Program, August 1994.
- "Pricing Concepts and the Control of Price Discrimination in Advanced Telecommunications Networks: Issues and Methods," NARUC Advanced Regulatory Studies Program, January 1994.

"Cost Allocation in Advanced Telecommunications Networks: Issues and Methods," NARUC Annual Regulatory Studies Program, August 1993.

"A Review of Incentive Regulation," CAMPUT 7th Annual Regulatory Conference, Banff Canada, May 1993.

"New Social Contracts: Telecommunications Policy for the 21st Century," Annual Meeting of the Association of Evolutionary Economics, January 1993.

"Modernization: Who Pays? Who Benefits?," NARUC Annual Regulatory Studies Program, August 1992.

"Who Determines the Costs and Prices for Access to the Infrastructure," Telecommunications Policy: Agenda for the 21st Century Conference, The Michigan Divestiture Research Fund, March 1992.

"The New Social Contract," State Policies for Developing the Telecommunications Infrastructure Forum, Wisconsin Public Utility Institute, December 1991.

"RBOC Strategic Reactions to Entry," Atlantic Economic Society Annual Conference, Washington, D.C., October 1991.

#### Industry Committees

Federal Staff of the Federal-State Joint Board of CC Docket No. 80-286 (June 1999 to April 2001).

Federal Staff of the Federal-State Joint Board of CC Docket No.96-45 (May 1996 to April 2001).

National Association of Regulatory Utility Commissioners (NARUC) Staff Subcommittee on Communications (1994-1996).

State Staff of the Federal-State Joint Board of CC Docket No.80-286 (1991-1996).

### Professional Associations

Member:

American Economic Association Association for Evolutionary Economics

# Information Alleged to be Proprietary has been Redacted

Exhibit 2: Verizon Weighted Average Residential Rate

	zone 1	zone2	zone 3	zone 4	total	
rate	15.14	15.44	12.25	12.65		
residential lines	PROP	PROP	PROP	PROP	PROP	
weighted rate	PROP	PROP	PROP	PROP	PROP	
				weighted average		13.03
				120 percent		15.64

Source: Verizon PA Tariff

Verizon PA's Response to OCA Data Request No. I-2

Ex RL-3 Verizon PA's Annual Rate Increases

	<u>Cell 1</u>	Cell 2	Cell 3	Cell 4
2005 PCO	\$0.80	\$0.80	\$0.80	\$0.80
2006 PCO	\$0.40	\$0.40	\$0.36	\$0.36
2007 PCO	\$0.51	\$0.51	\$0.53	\$0.53
2008 PCO	\$0.43	\$0.43	\$0.43	\$0.43
2009 PCO	\$0.47	\$0.47	\$0.47	\$0.47

Source: Verizon PA's Annual Submission

Ex RL-4: Chart 1:Total Monthly Cost per Line

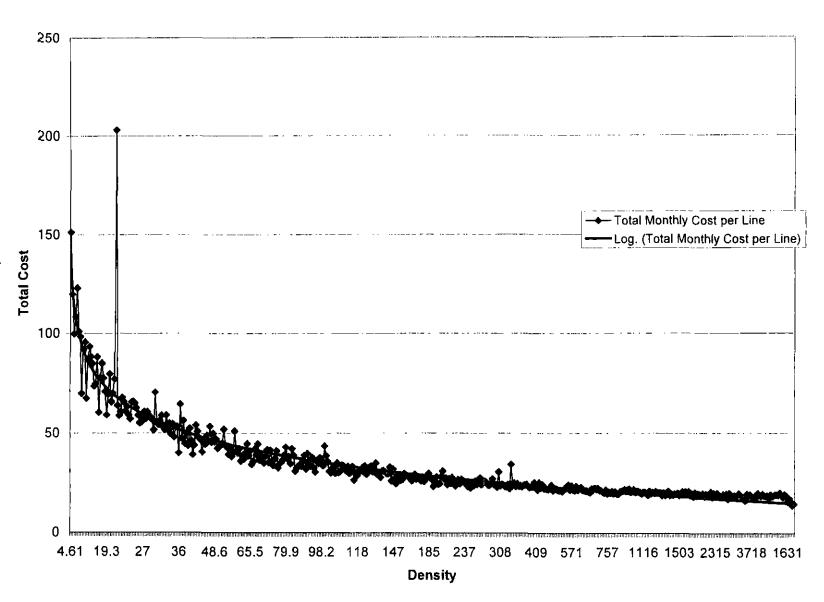
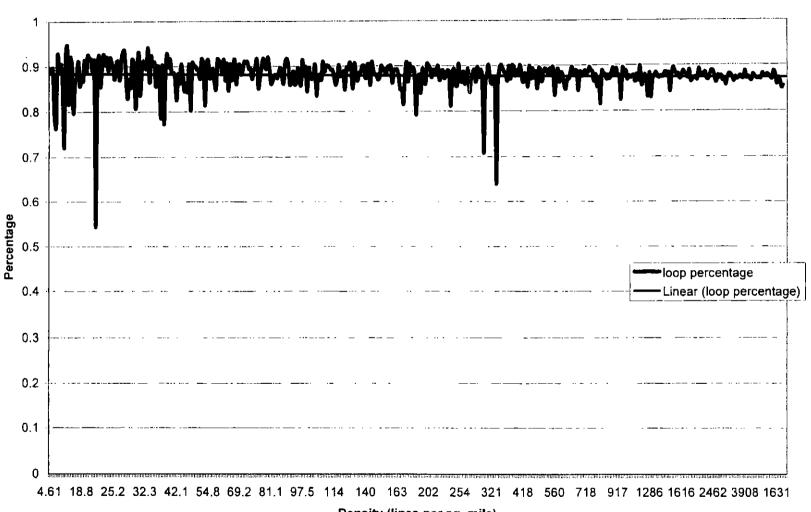


Exhibit RL-5: Chart 2: Loop Cost as a Percent of total cost



Density (lines per sq. mile)

SDVYPAXG					
Monthly   Cost per   Inon-loop   Cost		Exhibit RI	L-6		
### CHTRPACH	CILI	Loop	Monthly Cost per	ł '	cost
SDVYPAXG					
CIVLPAXC 68.94 95.75 26.81 CINDVPAEN 85.64 108.34 22.7 4 MRVLPAMA 76.41 93.55 17.14 AUSTPAAU 135.71 151.26 15.55 ARLTTPARO 58.67 73.64 14.97 BSHKPABU 50.64 64.48 13.84 44.97 BSHKPABU 56.85 70.38 13.53 13.53 13.53 13.53 14.66 BRCKPAES 43.46 56.29 12.83 BWFLPANF 21.93 34.28 12.35 BREW PARE 66.92 78.07 11.15 SPREBPAXS 81.24 92.24 11 11 11 MNSLYPAXW 77.35 88.34 10.99 11 SSTSTPASS 87.83 98.42 10.59 11 BSFRPAXN 42.86 53.39 10.53 11 BALFAPAAL 50.19 60.53 10.34 14 EPRPALE 67.46 77.73 10.27 11 JLYSPAUL 89.54 99.79 10.25 10 MTJWPAMJ 64.88 74.87 9.99 1.KARPALA 42.25 51.91 9.66 42 HMLNPAHM 44.43 53.8 9.37 33 BSHAPAMA 47.1 56.29 9.19 48 BSLT1 10.22 11 MTJWPAMJ 64.88 74.87 9.99 1.KARPALA 47.1 56.29 9.19 48 BSLT1 48 BSLT1 48 BSLT1 48 BSLT1 51.91 9.66 48 BSLT1 51.93 60.75 8.82 60 BSLTPAXP 47.15 66.96 85.1 10 BSLTPAXP 48.96 86 86 86 86 86 86 86 87 86 87 86 87 86 87 87 88 87 88 87 88 88 88 88 88 88 88	·			<del></del>	1
SPENDYPAEN   85.64   108.34   22.7   44					
MRVLPAMA 76.41 93.55 17.14 AUSTPAAU 135.71 151.26 15.55 ARTTPARO 58.67 73.64 14.97 SSHKPABU 50.64 64.48 13.84 ABSHKPABU 50.65 70.38 13.53 EKCMPALC 106.55 120.03 13.48 68 ABSHKPABU 50.65 70.38 13.53 EKCMPALC 106.55 120.03 13.48 68 ABSHKPABU 50.65 70.38 13.53 EKCMPALC 106.55 120.03 13.48 68 ABSHKPABL 12.35 ABSHKPABL 12	·			<del></del>	
AUSTPAAU 135.71 151.26 15.55 28 14.97 3.64 14.97 3.68 14.97 3.68 14.97 3.64 14.97 3.68 14.97 3.97 3.97 3.68 14.97 3.97 3.97 3.68 14.97 3.97 3.97 3.97 3.97 3.68 14.97 3.97 3.97 3.97 3.97 3.97 3.97 3.97 3			<del></del>	<del></del>	
RLTTPARO 58.67 73.64 14.97 3SHKPABU 50.64 64.48 13.84 20 DVYPALV 56.85 70.38 13.53 3		<del></del>			
SSHKPABU   50.64   64.48   13.84   42.00   64.65   70.38   13.53   64.66   64.48   13.84   44.61   68.75   68.65   70.38   13.53   65.66   64.48   65.55   70.38   13.53   65.66   64.48   65.55   70.38   13.53   65.66   64.48   65.55   70.38   13.53   65.66   64.48   65.55   70.38   13.48   66.67   66.65   70.38   70.47   70.55   70.65   7			•		
DVYPALV		·	+		3
CREMPALC   106.55   120.03   13.48   68		<del></del>		1	
### SPRICKPAES   43.46   56.29   12.83	·		<del></del>		
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REW_PARE 66.92 78.07 11.15 9 SPRBPAXS 81.24 92.24 11 10.59 NSLYPAXW 77.35 88.34 10.99 11 STSTPASS 87.83 98.42 10.59 12 NBFRPAXN 42.86 53.39 10.53 11 ALFAPAAL 50.19 60.53 10.34 14 LEPRPALE 67.46 77.73 10.27 15 JLYSPAUL 89.54 99.79 10.25 16 CPSVPAXC 74.89 85.11 10.22 17 MTJWPAMJ 64.88 74.87 9.99 LKARPALA 42.25 51.91 9.66 22 HMLNPAHM 44.43 53.8 9.37 33 GPIAPAMA 47.1 56.29 9.19 42 RGVLPARI 21.61 30.53 8.92 53 ELDDPAEL 51.93 60.75 8.82 64 MVTWPAES 49.46 57.96 8.5 74 NVLPAXL 76.87 85.1 8.23 9 ENVLPAXL 76.87 85.1 7.74 10 ENVLPAXL 76.87 76.87 76.87 11 ENVLPAXL 76.87 11 ENVLPAXL 76.8			<del> </del>		
SPRBPAXS         81.24         92.24         11         10           NSLYPAXW         77.35         88.34         10.99         17           STSTPASS         87.83         98.42         10.59         12           NBFRPAXN         42.86         53.39         10.53         13           ALFAPAAL         50.19         60.53         10.34         14           EPRPALE         67.46         77.73         10.27         15           JLYSPAUL         89.54         99.79         10.25         16           CPSVPAXC         74.89         85.11         10.22         17           MTJWPAMJ         64.88         74.87         9.99         10.25         16           CPSVPAXC         74.89         85.11         10.22         17           MTJWPAMJ         64.88         74.87         9.99         10.25         16           CPSVPAXC         74.89         85.11         10.22         17         17         10.22         17           MTJWPAMJ         64.88         74.87         9.99         19         42         44         18         25         19.19         44         18         18         18         18				<del></del>	
NSLYPAXW         77.35         88.34         10.99         1           STSTPASS         87.83         98.42         10.59         12           NBFRPAXN         42.86         53.39         10.53         13           ALFAPAAL         50.19         60.53         10.34         14           LEPRPALE         67.46         77.73         10.27         15           JLYSPAUL         89.54         99.79         10.25         16           CPSVPAXC         74.89         85.11         10.22         17           MTJWPAMJ         64.88         74.87         9.99         10.25         16           CPSVPAXC         74.89         85.11         10.22         17         17         19         9.66         2         17         10.22         17         10         22         17         10         22         17         10         22         17         11         10         22         17         10         22         17         12         12         12         12         12         12         12         12         12         12         12         12         12         12         12         12         12         12	<del></del>		<del>†                                      </del>		
STSTPASS       87.83       98.42       10.59       12         NBFRPAXN       42.86       53.39       10.53       13         ALFAPAAL       50.19       60.53       10.34       14         LEPRPALE       67.46       77.73       10.27       15         JLYSPAUL       89.54       99.79       10.25       16         CPSVPAXC       74.89       85.11       10.22       17         MTJWPAMJ       64.88       74.87       9.99       10.25       16         MTJWPAMJ       64.88       74.87       9.99       10.25       17         MTJWPAMJ       64.88       74.87       9.99       10.22       17         MTJWPAMJ       64.88       74.87       9.99       10.25       11         MMLNPAHM       44.43       53.8       9.37       3       3         GPIAPAMA       47.1       56.29       9.19       4       4       4       30.53       8.92       5       5         ELDDPAEL       51.93       60.75       8.82       6       6       4       4       4       4       4       4       4       4       4       4       4       4       4 </td <td></td> <td></td> <td></td> <td></td> <td></td>					
NBFRPAXN 42.86 53.39 10.53 11 ALFAPAAL 50.19 60.53 10.34 14 LEPRPALE 67.46 77.73 10.27 15 JLYSPAUL 89.54 99.79 10.25 16 CPSVPAXC 74.89 85.11 10.22 17 MTJWPAMJ 64.88 74.87 9.99 18 LKARPALA 42.25 19.91 9.66 24 14.43 153.8 9.37 36 GPIAPAMA 47.1 156.29 9.19 48 RGVLPARI 21.61 20.63 20.75 8.82 82 84 MVTWPAES 49.46 57.96 8.5 8.5 MLPKPAES 56.62 64.94 8.32 88 ROVLPAXL 76.87 85.1 8.23 88 PRTNPAXP 43.35 51.02 7.67 11 NALXPAWA 62.38 70.04 7.66 12 ALXNPAAX 45.45 53.09 7.64 13 8CTWPAXS 41.33 48.96 7.63 14 8CTWPAXS 51.27 58.81 7.54 16 8CSPPAXS 47.43 54.85 7.42 17 HVRVPASH 47.89 55.05 7.16 18 8SESPPAXS 81.36 88.44 7.08 20 NUMDPANU 59.11 65.96 6.85 20 NUMDPANU					
ALFAPAAL  EPRPALE  67.46  77.73  10.27  15  JLYSPAUL  89.54  99.79  10.25  16  PSVPAXC  74.89  85.11  10.22  17  MTJWPAMJ  64.88  74.87  9.99  LKARPALA  42.25  51.91  9.66  24  HMLNPAHM  44.43  53.8  9.37  36  GPIAPAMA  47.1  56.29  9.19  48  RGVLPARI  21.61  30.53  8.92  51  ELDDPAEL  MVTWPAES  49.46  57.96  8.5  MLPKPAES  56.62  64.94  8.32  85  NVLPAXL  76.87  85.1  82.3  82  83.4  84.35  85.1  82.3  85  RVLPAXL  76.87  85.1  87.74  10  10  10  10  10  10  10  10  10  1					
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SPECTOR   SPEC		<del></del>			
CPSVPAXC       74.89       85.11       10.22       17         MTJWPAMJ       64.88       74.87       9.99       2         LKARPALA       42.25       51.91       9.66       2         HMLNPAHM       44.43       53.8       9.37       3         GPIAPAMA       47.1       56.29       9.19       4         RGVLPARI       21.61       30.53       8.92       5         ELDDPAEL       51.93       60.75       8.82       6         MVTWPAES       49.46       57.96       8.5       8         MVPKPAES       56.62       64.94       8.32       8         NVLPAXL       76.87       85.1       8.23       9         SWSHPASS       47.39       55.13       7.74       10         PRTNPAXP       43.35       51.02       7.67       11         VALXPAWA       62.38       70.04       7.66       12         ALXNPAAX       45.45       53.09       7.64       13         SCTWPAXS       41.33       48.96       7.63       14         FCVLPAFR       93.35       100.89       7.54       16         SYTWPAXS       51.27       58.81					
### ATJWPAMJ					
ARRPALA   42.25   51.91   9.66   22				<del></del>	
### HMLNPAHM				<del></del>	
GPIAPAMA       47.1       56.29       9.19       4         RGVLPARI       21.61       30.53       8.92       5         ELDDPAEL       51.93       60.75       8.82       6         MVTWPAES       49.46       57.96       8.5       7         MLPKPAES       56.62       64.94       8.32       8         NVLPAXL       76.87       85.1       8.23       9         SWSHPASS       47.39       55.13       7.74       10         PRTNPAXP       43.35       51.02       7.67       11         VALXPAWA       62.38       70.04       7.66       12         ALXNPAAX       45.45       53.09       7.64       13         GCTWPAXS       41.33       48.96       7.63       14         GCVLPAFR       93.35       100.89       7.54       15         GYTWPAXS       51.27       58.81       7.54       16         GYMLPASM       47.43       54.85       7.42       17         HVRVPAXH       47.89       55.05       7.16       18         HSNGPAHA       38.87       46       7.13       19         GESPPAXS       81.36       88.44				<del></del>	
RGVLPARI 21.61 30.53 8.92 55 ELDDPAEL 51.93 60.75 8.82 60 MVTWPAES 49.46 57.96 8.5 70 MLPKPAES 56.62 64.94 8.32 80 MVPKPAES 56.62 64.94 8.32 80 MVPKPAES 56.62 64.94 8.32 80 MVPKPASS 47.39 55.13 7.74 10 MVPKPAXP 43.35 51.02 7.67 11 MVPKPAXP 43.35 51.02 7.67 11 MVPKPAXP 45.45 53.09 7.64 13 MVPKPAXS 41.33 48.96 7.63 14 MVPKPAXS 51.27 58.81 7.54 16 MVPKPASM 47.43 54.85 7.42 17 MVRVPAXH 47.89 55.05 7.16 18 MVRVPAXH 47.89 55.05 7.16 6.85 22		4			
ELDDPAEL 51.93 60.75 8.82 6 MVTWPAES 49.46 57.96 8.5 7 MLPKPAES 56.62 64.94 8.32 8 NVLPAXL 76.87 85.1 8.23 9 SWSHPASS 47.39 55.13 7.74 10 PRTNPAXP 43.35 51.02 7.67 11 NALXPAWA 62.38 70.04 7.66 12 ALXNPAAX 45.45 53.09 7.64 13 SCTWPAXS 41.33 48.96 7.63 14 SCTWPAXS 51.27 58.81 7.54 16 SYTWPAXS 51.27 58.81 7.54 16 SYTWPAXH 47.89 55.05 7.16 18 HSNGPAHA 38.87 46 7.13 19 SESPPAXS 81.36 88.44 7.08 20 NWWLPAXN 37.74 44.61 6.87 21 NUMDPANU 59.11 65.96 6.85 22	<u> SPIAPAMA</u>		<del></del>		
MVTWPAES         49.46         57.96         8.5           MLPKPAES         56.62         64.94         8.32         8           LNVLPAXL         76.87         85.1         8.23         9           SWSHPASS         47.39         55.13         7.74         10           PRTNPAXP         43.35         51.02         7.67         11           NALXPAWA         62.38         70.04         7.66         12           ALXNPAAX         45.45         53.09         7.64         13           SCTWPAXS         41.33         48.96         7.63         14           SCVLPAFR         93.35         100.89         7.54         15           SYTWPAXS         51.27         58.81         7.54         16           SPMLPASM         47.43         54.85         7.42         17           HVRVPAXH         47.89         55.05         7.16         18           HSNGPAHA         38.87         46         7.13         19           SESPPAXS         81.36         88.44         7.08         20           NWWLPAXN         37.74         44.61         6.87         21           NUMDPANU         59.11         65.96	RGVLPARI	21.61	30.53	8.92	
MURKPAES         56.62         64.94         8.32         8           INVLPAXL         76.87         85.1         8.23         9           INVLPAXL         76.87         85.1         8.23         9           INVLPASS         47.39         55.13         7.74         10           PRTNPAXP         43.35         51.02         7.67         11           NALXPAWA         62.38         70.04         7.66         12           ALXNPAAX         45.45         53.09         7.64         13           SCTWPAXS         41.33         48.96         7.63         14           SCVLPAFR         93.35         100.89         7.54         15           SYTWPAXS         51.27         58.81         7.54         16           SPMLPASM         47.43         54.85         7.42         17           HVRVPAXH         47.89         55.05         7.16         18           HSNGPAHA         38.87         46         7.13         19           SESPPAXS         81.36         88.44         7.08         20           NWWLPAXN         37.74         44.61         6.87         21           NUMDPANU         59.11 <td>ELDDPAEL</td> <td>51.93</td> <td></td> <td></td> <td>6</td>	ELDDPAEL	51.93			6
INVLPAXL         76.87         85.1         8.23         9           SWSHPASS         47.39         55.13         7.74         10           PRTNPAXP         43.35         51.02         7.67         11           VALXPAWA         62.38         70.04         7.66         12           ALXNPAAX         45.45         53.09         7.64         13           SCTWPAXS         41.33         48.96         7.63         14           FCVLPAFR         93.35         100.89         7.54         15           SYTWPAXS         51.27         58.81         7.54         16           SPMLPASM         47.43         54.85         7.42         17           HVRVPAXH         47.89         55.05         7.16         18           HSNGPAHA         38.87         46         7.13         19           SESPPAXS         81.36         88.44         7.08         20           NWWLPAXN         37.74         44.61         6.87         21           NUMDPANU         59.11         65.96         6.85         22					
SWSHPASS       47.39       55.13       7.74       10         PRTNPAXP       43.35       51.02       7.67       11         WALXPAWA       62.38       70.04       7.66       12         ALXNPAAX       45.45       53.09       7.64       13         SCTWPAXS       41.33       48.96       7.63       14         FCVLPAFR       93.35       100.89       7.54       15         SYTWPAXS       51.27       58.81       7.54       16         SPMLPASM       47.43       54.85       7.42       17         HVRVPAXH       47.89       55.05       7.16       18         HSNGPAHA       38.87       46       7.13       19         SESPPAXS       81.36       88.44       7.08       20         NWWLPAXN       37.74       44.61       6.87       21         NUMDPANU       59.11       65.96       6.85       22					
PRTNPAXP 43.35 51.02 7.67 11 WALXPAWA 62.38 70.04 7.66 12 ALXNPAAX 45.45 53.09 7.64 13 SCTWPAXS 41.33 48.96 7.63 14 FCVLPAFR 93.35 100.89 7.54 15 SYTWPAXS 51.27 58.81 7.54 16 SYTWPAXS 51.27 58.81 7.54 16 HVRVPAXH 47.89 55.05 7.16 18 HSNGPAHA 38.87 46 7.13 19 SESPPAXS 81.36 88.44 7.08 20 NWWLPAXN 37.74 44.61 6.87 21 NUMDPANU 59.11 65.96 6.85 22	LNVLPAXL	<u> </u>			
WALXPAWA       62.38       70.04       7.66       12         ALXNPAAX       45.45       53.09       7.64       13         SCTWPAXS       41.33       48.96       7.63       14         FCVLPAFR       93.35       100.89       7.54       15         SYTWPAXS       51.27       58.81       7.54       16         SPMLPASM       47.43       54.85       7.42       17         HVRVPAXH       47.89       55.05       7.16       18         HSNGPAHA       38.87       46       7.13       19         SESPPAXS       81.36       88.44       7.08       20         NWWLPAXN       37.74       44.61       6.87       21         NUMDPANU       59.11       65.96       6.85       22	SWSHPASS	+		7.74	10
ALXNPAAX 45.45 53.09 7.64 13 SCTWPAXS 41.33 48.96 7.63 14 SCTWPAKS 93.35 100.89 7.54 15 SYTWPAXS 51.27 58.81 7.54 16 SPMLPASM 47.43 54.85 7.42 17 HVRVPAXH 47.89 55.05 7.16 18 HSNGPAHA 38.87 46 7.13 19 SESPPAXS 81.36 88.44 7.08 20 NWWLPAXN 37.74 44.61 6.87 21 NUMDPANU 59.11 65.96 6.85 22		43.35	51.02	7.67	11
SCTWPAXS       41.33       48.96       7.63       14         FCVLPAFR       93.35       100.89       7.54       15         SYTWPAXS       51.27       58.81       7.54       16         SPMLPASM       47.43       54.85       7.42       17         HVRVPAXH       47.89       55.05       7.16       18         HSNGPAHA       38.87       46       7.13       19         SESPPAXS       81.36       88.44       7.08       20         NWWLPAXN       37.74       44.61       6.87       21         NUMDPANU       59.11       65.96       6.85       22	WALXPAWA	62.38	70.04	7.66	12
FCVLPAFR         93.35         100.89         7.54         15           SYTWPAXS         51.27         58.81         7.54         16           SPMLPASM         47.43         54.85         7.42         17           HVRVPAXH         47.89         55.05         7.16         18           HSNGPAHA         38.87         46         7.13         19           SESPPAXS         81.36         88.44         7.08         20           NWWLPAXN         37.74         44.61         6.87         21           NUMDPANU         59.11         65.96         6.85         22	ALXNPAAX	45.45	53.09	7.64	13
SYTWPAXS     51.27     58.81     7.54     16       SPMLPASM     47.43     54.85     7.42     17       HVRVPAXH     47.89     55.05     7.16     18       HSNGPAHA     38.87     46     7.13     19       SESPPAXS     81.36     88.44     7.08     20       NWWLPAXN     37.74     44.61     6.87     21       NUMDPANU     59.11     65.96     6.85     22	SCTWPAXS	41.33	48.96	7.63	14
SPMLPASM     47.43     54.85     7.42     17       HVRVPAXH     47.89     55.05     7.16     18       HSNGPAHA     38.87     46     7.13     19       SESPPAXS     81.36     88.44     7.08     20       NWWLPAXN     37.74     44.61     6.87     21       NUMDPANU     59.11     65.96     6.85     22	FCVLPAFR	93.35	100.89	7.54	15
HVRVPAXH       47.89       55.05       7.16       18         HSNGPAHA       38.87       46       7.13       19         SESPPAXS       81.36       88.44       7.08       20         NWWLPAXN       37.74       44.61       6.87       21         NUMDPANU       59.11       65.96       6.85       22	SYTWPAXS	51.27	58.81	7.54	16
HSNGPAHA       38.87       46       7.13       19         SESPPAXS       81.36       88.44       7.08       20         NWWLPAXN       37.74       44.61       6.87       21         NUMDPANU       59.11       65.96       6.85       22	SPMLPASM	47.43	54.85	7.42	17
HSNGPAHA       38.87       46       7.13       19         SESPPAXS       81.36       88.44       7.08       20         NWWLPAXN       37.74       44.61       6.87       21         NUMDPANU       59.11       65.96       6.85       22	HVRVPAXH	47.89	55.05	7.16	18
SESPPAXS         81.36         88.44         7.08         20           NWWLPAXN         37.74         44.61         6.87         21           NUMDPANU         59.11         65.96         6.85         22	HSNGPAHA	38.87	46	7.13	
NWWLPÄXN 37.74 44.61 6.87 21 NUMDPANU 59.11 65.96 6.85 22	SESPPAXS	81.36	88.44		
NUMDPANU 59.11 65.96 6.85 22	NWWLPAXN	+	+		
	NUMDPANU		<del></del>		<del></del>
	GLCMPAGL	72.87	79.69	6.82	

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	Cybibit Di	6		
CLLI	Exhibit Ri	Total Monthly Cost per Line	non-loop	count by cost
FSCKPAFC	36.74	43.52	6.78	24
MRCHPAMA	70.42	77.16	6.74	25
TIDTPATI	52.4	59.08	6.68	26
WNBRPAWI	52.25	58.91	6.66	27
BLVRPABO	50.61	57.24	6.63	28
AVMRPAXA	41.07	47.62	6.55	29
TNSTPATI	63.27	69.8	6.53	30
SGGVPASG	61.31	67.77	6.46	31
PLSVPAXP	52.7	59.12	6.42	32
MLHMPAMI	57.72	63.88	6.16	33
NFLDPANE	52.84	58.99	6.15	34
SHLVPAXS	34.91	41.03	6.12	35
SLSBPAXS	64.8		6.06	36
CTHLPACH	38.37	44.4	6.03	37
GATNPAGA	61.46	67.42	5.96	38
RSSLPARU	55.1	61.02	5.92	39
WDLDPAWO	59.53	65.45	5.92	40
FYTWPAXF	44.97	50.86	5.89	41
CRTWPACA	36.18	42.04	5.86	42
PRWDPAPA	56.82	62.65	5.83	43
DVDVPAXD	34.08	39.67	5.59	44
GLLYPAGL	21.15	26.69	5.54	45
FYCYPAFC	27.94	33.46	5.52	46
SMCKPASM	37.83	43.32	5.49	47
RENVPARE	60.24	65.71	5.47	48
HWLYPAHW	34.6		5.38	49
MCTWPAMC	35.56		5.37	50
FWGVPAXF	49.17	54.51	5.34	51
CNFLPAXC	55		5.33	52
SXTNPASA	40.81	46.13	5.32	53
PATNPAPA	38.57	43.86	5.29	54
WMDLPAWM	36.09	41.38	5.29	
MTGRPAMG	32.82			56
NNGOPAXN	32.34			57
WLRCPAWO	39.46	<del></del>		58
	64.21			59
BLCLPABL	48			60
JNTWPAXJ	36.9	<del></del>	5.2	61
BGRNPABR	53.69			
WMPMPAWA	37.12		<del> </del>	
AVLAPAAV	50.27	<del> </del>	<del></del>	
SYVLPASY	22.27			
WSHVPAWA	58.36		1	
DWSNPADA	42.01	<del>†                                      </del>		67

	Exhibit RI			
		Total		۱.,
		Monthly		count by
	<b>!</b> .	Cost per	non-loop	cost
CLLI	Loop	Line	cost	bracket
BRBOPABA	29.92	34.86	4.94	68
SABGPAXS	34.24	39.17	4.93	69
CLVIPACL	46.88	51.8	4.92	70
WGVLPAXW	27.84	32.75	4.91	71
DUNBPADU	35.61	40.49	4.88	72
BSWLPAXB	32.21	37.09	4.88	73
CRESPAES	45.03		4.82	74
WTBGPAXW	60.97	•	4.81	75
CNCYPAXC	52.01	56.81	4.8	76
SAYRPAXS	26.3		4.72	77
ARVLPAXA	48.29		4.7	78
ROBSPAXR	29.52	34.22	4.7	79
PRYPPAPE	28.56		4.69	80
FRCHPAFA	30.06		4.65	81
RKWDPAXR	52.47	57.1	4.63	82
CLARPACL	19.82	24.44	4.62	83
JHTWPAXB	28.75		4.61	84
MYDLPAXM_	47.03	51.62	4.59	85
MHFYPAMA	82.4	86.99	4.59	86
TBYHPATO	34.26		4.58	87
OSMLPAES	41.19	45.75	4.56	88
CMSPPAXC	42.84	47.4	4.56	89
PTMRPAPM	37.77	42.31	4.54	90
WMLSPAXW	28.09	32.57	4.48	91
GIVLPAGR	23.5		4.48	92
EBRLPAXE	32.16	36.59	4.43	93
MTUNPAMU	39.25	43.68	4.43	94
PTALPAPA	34.69	39.12	4.43	95
BERVPAXB	42.28	46.71	4.43	96
NWSLPANS	31.18	35.59	4.41	97
BRLNPAXB	54.38		4.41	98
DELTPAXD	37.36	41.74	4.38	99
HTDLPAHZ	41.48	45.84	4.36	100
YNVLPAYO	43.67	48.03	4.36	101
BROGPAXB	47.95	52.31	4.36	102
VNDGPAXS	31.33	35.67	4.34	103
TTVLPAXT	32.16	36.47	4.31	104
MRCKPAMC	40.2	44.45	4.25	105
SMPTPASM	35.71	39.94	4.23	106
DAPHPADA	34.64	38.86	4.22	107
STBGPAES	25.44	29.66	4.22	108
MSTWPAMA	24.03		4.22	109
EDNBPAXE	29.88		4.19	110
EAGLPAEG	27.34		4.19	111

	Exhibit RI			
		Total		
	ļ	Monthly		count by
		Cost per	non-loop	cost
CLLI	Loop	Line	cost	bracket
HOTWPAHO	41.33	45.47	4.14	112
BVDLPAXB	40.66	44.8	4.14	113
MTPCPAMP	30.86	35	4.14	114
BSMRPABE	34.84	38.96	_4.12	115
VNDGPAXM	21.8	25.91	4.11	116
PLSGPAPG	22.76	26.85	4.09	117
MSCWPAMW	38.07	42.16	4.09	118
UNCYPAXU	31.95	36	4.05	119
CRWVPACU	39.69	43.68	3.99	120
CRRYPAXC	34.23	38.22	3.99	121
TNVLPATA	34.56	38.55	3.99	122
MLVLPAMI	53.23	57.21	3.98	123
KANEPAKA	28.56	32.54	3.98	124
SWTWPAXS	35.1	39.07	3.97	125
KMVLPAKV	30.93	34.9	3.97	126
JHTWPAXW	20.02	23.98	3.96	127
BOALPABO	26.29	30.23	3.94	128
MNCHPAXM	27.02	30.96	3.94	129
WNDBPAXW	26.81	30.74	3.93	130
METWPAXM	24.14	28.05	3.91	131
HNTGPAHU	26.94	30.84	3.9	132
BLWDPABE	32.05	35.93	3.88	133
MRCTPAMA	56.85	60.72	3.87	134
PRTGPAPO	24.16	28.01	3.85	135
YORKPAXW	23.66	27.5	3.84	136
ABVLPAES	45.73	49.56	3.83	137
HLFXPAHX	33.47	37.28	3.81	138
TAYLPATA	17.91	21.72	3.81	139
NWPHPANP	27.86	31.66	3.8	140
SPGVPAXS	30.12	33.9	3.78	141
GRRDPAXG	28.13	31.9	3.77	142
JHTWPAXN	36.28	40.02	3.74	143
NRTEPAXN	29.65	33.37		
SWRDPAXS	50.56	t		
SPTWPASP	34.93	<del> </del>		
WHHNPAWH	40.33			
JRSHPAJS	31.46			
AVDLPAAV	26.98			
CTWSPAES	39.21			
SMRTPAXS	28.78			
LDNBPALB	29.19		<del></del>	_
CRDLPACA	21.5			
KLMTPAKU	16.03			
НҮВКРАНВ	29.94			-
THE PLANT		1 33.33	<u> </u>	100

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	Evhibit Di	e		
	Exhibit Ri	Ե Total	<del></del>	
		Monthly		count by
		Cost per	non-loop	cost
CLLI	Loop	Line	cost	bracket
BLVNPABV	20.2	23.78	3.58	156
CLYMPACL	46.5	50.08	3.58	157
GRLAPAGL	29.69	33.26	3.57	158
BLLFPABE	26.13	29.68	3.55	159
DNRAPADO	20.74	24.29	3.55	160
HMCYPAHO	30.96	34.51	3.55	161
CRSNPACR	26.87	30.41	3.54	162
DAVLPADA	23.61	27.14	3.53	163
CDPTPACO	27.87	31.39	3.52	164
BTTWPABU	36.55	40.06	3.52	165
IMPRPAIM	25.72	29.23	3.51	166
TYRNPATY	25.12		3.51	167
PHBGPAPH	26.42	29.91	3.49	168
BRFRPABR	22.87	26.35	3.49	
EBNSPAEB	30.27	33.74	3.46	169
CLFDPACL	22.26		3.47	170
SFRKPAXS	35.07	38.53		171
			3.46	172
BMNSPABM	39.55	42.99	3.44	173
DRRYPADE	29.88 21.15	33.32 24.59	3.44	174
WLSTPAWS	37.52		3.44	175
EYBGPAEL			3.43	176
RYVLPARE	32.98		3.43	177
NCLDPANC	18.68	22.11	3.43	178
WYNGPAWY	16.63		3.4	179
CSSPPACS	34.35		3.39	180
PLMOPAPL	18.9		3.39	181
MONSPAMO	16.73	20.12	3.39	182
DLBGPAXD	30.19	33.58	3.39	183
GLRKPAXG	29.57		3.38	184
GLNMPAGL	32.63	36.01	3.38	185
NRLDPAAA	22.41	25.78	3.37	186
JRMYPAJE	21.36			
DOVRPAXD	30.34		3.35	188
WTHRPAWE	30.89		3.34	189
NNTCPANA	20.2			190
ANVLPAAN	25.8		3.32	191
ASLDPAAL	22.63		3.3	192
MCKNPAXM	35.3		3.29	193
MCADPAMC	20.94		3.29	194
PIVLPAPV	34.26		3.25	195
SCDLPASC	19.92		3.25	196
MOSCPAMC	17.36		3.25	197
CRVVPACA	35.49		3.23	198
MRCRPAME	31.74	34.96	3.22	199

	Exhibit Ri			-
		Total		
		Monthly		count by
		Cost per	non-loop	cost
CLLI	Loop	Line	cost	bracket
OKDLPAOA	26.58	29.79	3.21	200
FELDPAFR	23.47	26.67	3.2	201
NSQHPANE	23.58	26.78	3.2	202
CLFRPACA	22.08	25.28	3.2	203
MTCRPAMC	19.32	22.51	3.19	204
PLMYPAPA	20.93	24.11	3.18	205
WGRVPAWG	29.23	32.41	3.18	206
HSDLPAHO	27.2	30.36	3.16	207
OXFRPAOX	27.8			208
HPVLPAHE	33.96		<del></del>	209
HERMPAHE	29.11		3.14	210
BCHMPABU	30.23	+	-	211
SHMKPASH	21.47		4	
LCHNPAES	20.09	23.22	3.13	213
PRBGPAPB	24.75	<u> </u>		214
HUMLPAHM	20.95	24.06	3.11	215
SRVLPASH	26.02	29.12	3.1	216
MHCYPAMC	20.38	23.48	3.1	217
KNSQPAKS	20.06	23.16	3.1	218
HLBGPAHO	24.31	27.4	3.09	219
WNTNPAWN	27.43	30.51	3.08	220
WRRNPAWA	22.88	25.96	3.08	221
MNDNPAMH	26.74	29.82	3.08	222
MNVIPAMI	21.13	24.21	3.08	223
FLYVPAFI	28	31.08		224
LGNRPALI	32.68			225
BLVIPABL	21.57	<del> </del>		226
CNLVPACO	22.8		3.06	227
PUNXPAPU	28.86	<del></del>		
SHNDPASH	18.58	21.62	3.04	229
ORBGPAOR	24.69		3.04	230
LWTWPALE	21.23	+		
TAMQPATA	21.1	24.13	3.03	232
WTFRPAXW	48.68	51.7	3.02	233
BWVLPABR	26.59	29.6	3.01	234
CHRLPACH	19.2	22.21	3.01	235
DRVLPADO	27.28	30.29	3.01	236
DUBSPADU	24.82			237
MLTNPAMI	21.64	24.63	2.99	1
JHTWPAXG	19.92	22.91	2.99	2
ELZBPAEL	24.75			3
LHTNPALE	18.78			4
FAVLPAFR	18.63	+		
HRLVPAHV	17.13	<del> </del>		6

CLLI						
CLLI						
CLLI         Loop         Cost per Line         non-loop cost bracket           JMTHPAJT         24.4         27.35         2.95         7           PSVLPAPV         27.95         30.9         2.95         8           YORKPAXS         23.13         26.07         2.94         9           ELZTPAET         22.18         25.12         2.94         10           MIVLPAMI         24.17         27.11         2.94         11           LTRBPALA         20.42         23.36         2.94         12           FKLNPAXF         27.08         30.01         2.93         13           MCDDPAMC         24.57         27.5         2.93         14           RDLNPAXR         23.78         26.71         2.93         15           PGTWPAPT         32.21         35.13         2.92         16           MDLDPAMI         27.46         30.38         2.92         17           MNGHPAMO         18.86         21.76         2.9         18           NWHPPANH         23.35         26.25         2.9         19           CNBGPACA         21.38         24.27         2.89         21           SCHNPASC         19.31			1			
CLLI         Loop         Line         cost         bracket           JMTHPAJT         24.4         27.35         2.95         7           PSVLPAPV         27.95         30.9         2.95         8           YORKPAXS         23.13         26.07         2.94         9           ELZTPAET         22.18         25.12         2.94         10           MIVLPAMI         24.17         27.11         2.94         11           LTRBPALA         20.42         23.36         2.94         12           FKLNPAXF         27.08         30.01         2.93         13           MCDDPAMC         24.57         27.5         2.93         14           RDLNPAXR         23.78         26.71         2.93         15           MDLDPAMI         27.46         30.38         2.92         17           MNGHPAMO         18.86         21.76         2.9         18           NWHPPANH         23.35         26.25         2.9         19           CNBGPACA         21.35         24.25         2.9         20           SNBYPASU         21.38         24.27         2.89         21           SCHNPASC         19.31						
JMTHPAJT         24.4         27.35         2.95         7           PSVLPAPV         27.95         30.9         2.95         8           YORKPAXS         23.13         26.07         2.94         9           ELZTPAET         22.18         25.12         2.94         10           MIVLPAMI         24.17         27.11         2.94         11           LTRBPALA         20.42         23.36         2.94         12           FKLNPAXF         27.08         30.01         2.93         13           MCDDPAMC         24.57         27.5         2.93         14           RDLNPAXR         23.78         26.71         2.93         15           MDLDPAMI         27.46         30.38         2.92         17           MNGHPAMO         18.86         21.76         2.9         18           NWHPPANH         23.35         26.25         2.9         19           CNBGPACA         21.35         24.25         2.9         20           SNBYPASU         21.38         24.27         2.89         21           SCHNPASC         19.31         22.19         2.88         22           FLWDPAFL         26	Í			non-loop	1	
PSVLPAPV 27.95 30.9 2.95 8 YORKPAXS 23.13 26.07 2.94 9 ELZTPAET 22.18 25.12 2.94 10 MIVLPAMI 24.17 27.11 2.94 11 LTRBPALA 20.42 23.36 2.94 12 FKLNPAXF 27.08 30.01 2.93 13 MCDDPAMC 24.57 27.5 2.93 14 RDLNPAXR 23.78 26.71 2.93 15 PGTWPAPT 32.21 35.13 2.92 16 MDLDPAMI 27.46 30.38 2.92 17 MNGHPAMO 18.86 21.76 2.9 18 NWHPPANH 23.35 26.25 2.9 19 CNBGPACA 21.35 24.25 2.9 20 SNBYPASU 21.38 24.27 2.89 21 SCHNPASC 19.31 22.19 2.88 22 FLWDPAFL 26 28.87 2.87 23 MDTNPAMI 19.5 22.37 2.87 25 PTTVPAPO 17.16 20.02 2.86 26 BMBGPABL 20.42 23.26 2.84 27 BNTTVPAPO 17.16 20.02 2.86 26 BMGPABL 20.42 23.26 2.84 27 BNTTVPAPO 17.16 20.02 2.86 26 BNTTVPAPO 17.16 20.02 2.86 28 BNTTVPAPO 17.16 20.02 2.87 BNTTVPAPO 17.16 20.02 2.87 BNTTVPAPO 17.16 20.02 2.87 BNTTVPAPO 17.16 2					bracket	
YORKPAXS         23.13         26.07         2.94         9           ELZTPAET         22.18         25.12         2.94         10           MIVLPAMI         24.17         27.11         2.94         11           LTRBPALA         20.42         23.36         2.94         12           FKLNPAXF         27.08         30.01         2.93         13           MCDDPAMC         24.57         27.5         2.93         14           RDLNPAXR         23.78         26.71         2.93         15           PGTWPAPT         32.21         35.13         2.92         16           MDLDPAMI         27.46         30.38         2.92         17           MNGHPAMO         18.86         21.76         2.9         18           NWHPPANH         23.35         26.25         2.9         19           CNBGPACA         21.35         24.25         2.9         20           SNBYPASU         21.38         24.27         2.89         21           SCHNPASC         19.31         22.19         2.88         22           FLWDPAFL         26         28.87         2.87         23           POTTVPAPO         17.16 <td></td> <td></td> <td></td> <td></td> <td>7</td>					7	
ELZTPAET 22.18 25.12 2.94 10 MIVLPAMI 24.17 27.11 2.94 11 LTRBPALA 20.42 23.36 2.94 12 FKLNPAXF 27.08 30.01 2.93 13 MCDDPAMC 24.57 27.5 2.93 14 MCDDPAMC 24.57 27.5 2.93 15 PGTWPAPT 32.21 35.13 2.92 16 MDLDPAMI 27.46 30.38 2.92 17 MNGHPAMO 18.86 21.76 2.9 18 NWHPPANH 23.35 26.25 2.9 19 CNBGPACA 21.35 24.25 2.9 20 SNBYPASU 21.38 24.27 2.89 21 SCHNPASC 19.31 22.19 2.88 22 FLWDPAFL 26 28.87 2.87 23 PNBGPAPB 21.95 24.82 2.87 24 MDTNPAMI 19.5 22.37 2.87 25 PTTVPAPO 17.16 20.02 2.86 26 BMBGPABL 20.42 23.26 2.84 27 BATHPABT 25.75 28.58 2.83 28 KZTNPAKZ 23.22 26.04 2.82 29 BVFLPABF 21.36 24.17 2.81 30 HZTNPAHZ 17.95 20.76 2.81 31 ELCYPAEC 22.28 25.09 2.81 32 SCHWPASU 32.36 24.17 2.81 30 HZTNPAHZ 17.95 20.76 2.81 31 ELCYPAEC 22.28 25.09 2.81 32 SCHWPASU 32.36 24.17 2.81 30 HZTNPAHZ 17.95 20.76 2.81 31 ELCYPAEC 22.28 25.09 2.81 32 SCHWPASU 32.36 24.17 2.81 30 HZTNPAHZ 17.95 20.76 2.81 31 ELCYPAEC 22.28 25.09 2.81 32 SCHWPASU 32.37 2.87 25 BADNPABA 20.63 23.43 2.8 35 JHTWPAXJ 18.77 21.57 2.8 36 HLTWPAHE 21.22 24.01 2.79 37 ZLNPPAZE 23.54 26.33 2.79 38 GVCYPAGR 20.21 23 2.79 39 OLCYPAXO 28.01 30.79 2.78 40 INDIPAIN 19.17 21.95 2.78 41 INDIPAIN 19.17 21.95 2.78 41 INDIPAIN 19.17 21.95 2.78 41 INDIPAIN 19.17 21.95 2.78 44 HMBGPAHB 24.84 27.61 2.77 43 MCMRPAMC 20.93 23.69 2.76 44						
MIVLPAMI         24.17         27.11         2.94         11           LTRBPALA         20.42         23.36         2.94         12           FKLNPAXF         27.08         30.01         2.93         13           MCDDPAMC         24.57         27.5         2.93         14           RDLNPAXR         23.78         26.71         2.93         15           PGTWPAPT         32.21         35.13         2.92         16           MDLDPAMI         27.46         30.38         2.92         17           MNGHPAMO         18.86         21.76         2.9         18           NWHPPANH         23.35         26.25         2.9         19           CNBGPACA         21.35         24.25         2.9         20           SNBYPASU         21.38         24.27         2.89         21           SCHNPASC         19.31         22.19         2.88         22           FLWDPAFL         26         28.87         2.87         23           PNBGPAPB         21.95         24.82         2.87         24           MDTNPAMI         19.5         22.37         2.87         25           PTVPAPO         17.16	YORKPAXS			2.94		
LTRBPALA 20.42 23.36 2.94 12 FKLNPAXF 27.08 30.01 2.93 13 MCDDPAMC 24.57 27.5 2.93 14 RDLNPAXR 23.78 26.71 2.93 15 PGTWPAPT 32.21 35.13 2.92 16 MDLDPAMI 27.46 30.38 2.92 17 MNGHPAMO 18.86 21.76 2.9 18 NWHPPANH 23.35 26.25 2.9 19 CNBGPACA 21.35 24.25 2.9 20 SNBYPASU 21.38 24.27 2.89 21 SCHNPASC 19.31 22.19 2.88 22 FLWDPAFL 26 28.87 2.87 23 PNBGPAPB 21.95 24.82 2.87 24 MDTNPAMI 19.5 22.37 2.87 25 PTTVPAPO 17.16 20.02 2.86 26 BMBGPABL 20.42 23.26 2.84 27 BATHPABT 25.75 28.58 2.83 28 KZTNPAKZ 23.22 26.04 2.82 29 BVFLPABF 21.36 24.17 2.81 30 HZTNPAHZ 17.95 20.76 2.81 31 ELCYPAEC 22.28 25.09 2.81 32 ELCYPAEC 22.28 25.09 2.81 32 ELCYPAEC 22.28 25.09 2.81 32 BADNPABA 20.63 23.43 2.8 35 JHTWPAXJ 18.77 21.57 2.8 36 HLTWPAHE 21.22 24.01 2.79 37 ZLNPPAZE 23.54 26.33 2.79 38 GVCYPAGR 20.21 23 2.78 41 CNPNPACE 24.24 27.01 2.77 42 HMBGPAHB 24.84 27.61 2.77 43 MCMRPAMC 20.93 23.69 2.76 44				<u> </u>		
FKLNPAXF         27.08         30.01         2.93         13           MCDDPAMC         24.57         27.5         2.93         14           RDLNPAXR         23.78         26.71         2.93         15           PGTWPAPT         32.21         35.13         2.92         16           MDLDPAMI         27.46         30.38         2.92         17           MNGHPAMO         18.86         21.76         2.9         18           NWHPPANH         23.35         26.25         2.9         19           CNBGPACA         21.35         24.25         2.9         20           SNBYPASU         21.38         24.27         2.89         21           SCHNPASC         19.31         22.19         2.88         22           FLWDPAFL         26         28.87         2.87         23           PNBGPAPB         21.95         24.82         2.87         24           MDTNPAMI         19.5         22.37         2.87         25           PTTVPAPO         17.16         20.02         2.86         26           BMBGPABL         20.42         23.26         2.84         27           BATHPABT         25.75						
MCDDPAMC         24.57         27.5         2.93         14           RDLNPAXR         23.78         26.71         2.93         15           PGTWPAPT         32.21         35.13         2.92         16           MDLDPAMI         27.46         30.38         2.92         17           MNGHPAMO         18.86         21.76         2.9         18           NWHPPANH         23.35         26.25         2.9         19           CNBGPACA         21.35         24.25         2.9         20           SNBYPASU         21.38         24.27         2.89         21           SCHNPASC         19.31         22.19         2.88         22           FLWDPAFL         26         28.87         2.87         23           PNBGPAPB         21.95         24.82         2.87         24           MDTNPAMI         19.5         22.37         2.87         25           PTTVPAPO         17.16         20.02         2.86         26           BMBGPABL         20.42         23.26         2.84         27           BATHPABT         25.75         28.58         2.83         28           KZTNPAKZ         23.22		20.42	23.36	2.94		
RDLNPAXR         23.78         26.71         2.93         15           PGTWPAPT         32.21         35.13         2.92         16           MDLDPAMI         27.46         30.38         2.92         17           MNGHPAMO         18.86         21.76         2.9         18           NWHPPANH         23.35         26.25         2.9         19           CNBGPACA         21.35         24.25         2.9         20           SNBYPASU         21.38         24.27         2.89         21           SCHNPASC         19.31         22.19         2.88         22           FLWDPAFL         26         28.87         2.87         23           PNBGPAPB         21.95         24.82         2.87         24           MDTNPAMI         19.5         22.37         2.87         25           PTTVPAPO         17.16         20.02         2.86         26           BMBGPABL         20.42         23.26         2.84         27           BATHPABT         25.75         28.58         2.83         28           KZTNPAKZ         23.22         26.04         2.82         29           BVFLPABF         21.36 <td>\<u>-</u></td> <td></td> <td></td> <td></td> <td><del></del></td>	\ <u>-</u>				<del></del>	
PGTWPAPT         32.21         35.13         2.92         16           MDLDPAMI         27.46         30.38         2.92         17           MNGHPAMO         18.86         21.76         2.9         18           NWHPPANH         23.35         26.25         2.9         19           CNBGPACA         21.35         24.25         2.9         20           SNBYPASU         21.38         24.27         2.89         21           SCHNPASC         19.31         22.19         2.88         22           FLWDPAFL         26         28.87         2.87         23           PNBGPAPB         21.95         24.82         2.87         24           MDTNPAMI         19.5         22.37         2.87         24           MDTNPAPO         17.16         20.02         2.86         26           BMBGPABL         20.42         23.26         2.84         27           BATHPABT         25.75         28.58         2.83         28           KZTNPAKZ         23.22         26.04         2.82         29           BVFLPABF         21.36         24.17         2.81         30           HZTNPAHZ         17.95 <td></td> <td></td> <td></td> <td></td> <td></td>						
MDLDPAMI         27.46         30.38         2.92         17           MNGHPAMO         18.86         21.76         2.9         18           NWHPPANH         23.35         26.25         2.9         19           CNBGPACA         21.35         24.25         2.9         20           SNBYPASU         21.38         24.27         2.89         21           SCHNPASC         19.31         22.19         2.88         22           FLWDPAFL         26         28.87         2.87         23           PNBGPAPB         21.95         24.82         2.87         24           MDTNPAMI         19.5         22.37         2.87         25           PTTVPAPO         17.16         20.02         2.86         26           BMBGPABL         20.42         23.26         2.84         27           BATHPABT         25.75         28.58         2.83         28           KZTNPAKZ         23.22         26.04         2.82         29           BVFLPABF         21.36         24.17         2.81         30           HZTYPAHZ         17.95         20.76         2.81         31           ELCYPAEC         22.28 <td></td> <td></td> <td></td> <td></td> <td></td>						
MNGHPAMO         18.86         21.76         2.9         18           NWHPPANH         23.35         26.25         2.9         19           CNBGPACA         21.35         24.25         2.9         20           SNBYPASU         21.38         24.27         2.89         21           SCHNPASC         19.31         22.19         2.88         22           FLWDPAFL         26         28.87         2.87         23           PNBGPAPB         21.95         24.82         2.87         24           MDTNPAMI         19.5         22.37         2.87         25           PTTVPAPO         17.16         20.02         2.86         26           BMBGPABL         20.42         23.26         2.84         27           BATHPABT         25.75         28.58         2.83         28           KZTNPAKZ         23.22         26.04         2.82         29           BVFLPABF         21.36         24.17         2.81         30           HZTNPAHZ         17.95         20.76         2.81         31           ELCYPAEC         22.28         25.09         2.81         32           SCHWPASV         23.5						
NWHPPANH         23.35         26.25         2.9         19           CNBGPACA         21.35         24.25         2.9         20           SNBYPASU         21.38         24.27         2.89         21           SCHNPASC         19.31         22.19         2.88         22           FLWDPAFL         26         28.87         2.87         23           PNBGPAPB         21.95         24.82         2.87         24           MDTNPAMI         19.5         22.37         2.87         25           PTTVPAPO         17.16         20.02         2.86         26           BMBGPABL         20.42         23.26         2.84         27           BATHPABT         25.75         28.58         2.83         28           KZTNPAKZ         23.22         26.04         2.82         29           BVFLPABF         21.36         24.17         2.81         30           HZTNPAHZ         17.95         20.76         2.81         31           ELCYPAEC         22.28         25.09         2.81         32           SCHWPASV         23.5         26.3         2.8         33           MTPTPAMP         20.06	MDLDPAMI	27.46	30.38	2.92		
CNBGPACA         21.35         24.25         2.9         20           SNBYPASU         21.38         24.27         2.89         21           SCHNPASC         19.31         22.19         2.88         22           FLWDPAFL         26         28.87         2.87         23           PNBGPAPB         21.95         24.82         2.87         24           MDTNPAMI         19.5         22.37         2.87         25           PTTVPAPO         17.16         20.02         2.86         26           BMBGPABL         20.42         23.26         2.84         27           BATHPABT         25.75         28.58         2.83         28           KZTNPAKZ         23.22         26.04         2.82         29           BVFLPABF         21.36         24.17         2.81         30           HZTNPAHZ         17.95         20.76         2.81         31           ELCYPAEC         22.28         25.09         2.81         32           SCHWPASV         23.5         26.3         2.8         33           MTPTPAMP         20.06         22.86         2.8         34           BADNPABA         20.63	MNGHPAMO	18.86	21.76	2.9		
SNBYPASU         21.38         24.27         2.89         21           SCHNPASC         19.31         22.19         2.88         22           FLWDPAFL         26         28.87         2.87         23           PNBGPAPB         21.95         24.82         2.87         24           MDTNPAMI         19.5         22.37         2.87         25           PTTVPAPO         17.16         20.02         2.86         26           BMBGPABL         20.42         23.26         2.84         27           BATHPABT         25.75         28.58         2.83         28           KZTNPAKZ         23.22         26.04         2.82         29           BVFLPABF         21.36         24.17         2.81         30           HZTNPAHZ         17.95         20.76         2.81         31           ELCYPAEC         22.28         25.09         2.81         32           SCHWPASV         23.5         26.3         2.8         33           MTPTPAMP         20.06         22.86         2.8         34           BADNPABA         20.63         23.43         2.8         35           JHTWPAZE         23.54	NWHPPANH	<del></del>		2.9		
SCHNPASC         19.31         22.19         2.88         22           FLWDPAFL         26         28.87         2.87         23           PNBGPAPB         21.95         24.82         2.87         24           MDTNPAMI         19.5         22.37         2.87         25           PTTVPAPO         17.16         20.02         2.86         26           BMBGPABL         20.42         23.26         2.84         27           BATHPABT         25.75         28.58         2.83         28           KZTNPAKZ         23.22         26.04         2.82         29           BVFLPABF         21.36         24.17         2.81         30           HZTNPAHZ         17.95         20.76         2.81         31           ELCYPAEC         22.28         25.09         2.81         32           SCHWPASV         23.5         26.3         2.8         33           MTPTPAMP         20.06         22.86         2.8         34           BADNPABA         20.63         23.43         2.8         35           JHTWPAXJ         18.77         21.57         2.8         36           HLTWPAHE         21.22	CNBGPACA	21.35	24.25		<del></del>	
FLWDPAFL         26         28.87         2.87         23           PNBGPAPB         21.95         24.82         2.87         24           MDTNPAMI         19.5         22.37         2.87         25           PTTVPAPO         17.16         20.02         2.86         26           BMBGPABL         20.42         23.26         2.84         27           BATHPABT         25.75         28.58         2.83         28           KZTNPAKZ         23.22         26.04         2.82         29           BVFLPABF         21.36         24.17         2.81         30           HZTNPAHZ         17.95         20.76         2.81         31           ELCYPAEC         22.28         25.09         2.81         32           SCHWPASV         23.5         26.3         2.8         33           MTPTPAMP         20.06         22.86         2.8         34           BADNPABA         20.63         23.43         2.8         35           JHTWPAXJ         18.77         21.57         2.8         36           HLTWPAHE         21.22         24.01         2.79         37           ZLNPPAZE         23.54		21.38	24.27	2.89		
PNBGPAPB         21.95         24.82         2.87         24           MDTNPAMI         19.5         22.37         2.87         25           PTTVPAPO         17.16         20.02         2.86         26           BMBGPABL         20.42         23.26         2.84         27           BATHPABT         25.75         28.58         2.83         28           KZTNPAKZ         23.22         26.04         2.82         29           BVFLPABF         21.36         24.17         2.81         30           HZTNPAHZ         17.95         20.76         2.81         31           ELCYPAEC         22.28         25.09         2.81         32           SCHWPASV         23.5         26.3         2.8         33           MTPTPAMP         20.06         22.86         2.8         34           BADNPABA         20.63         23.43         2.8         35           JHTWPAXJ         18.77         21.57         2.8         36           HLTWPAHE         21.22         24.01         2.79         37           ZLNPPAZE         23.54         26.33         2.79         38           GVCYPAGR         20.21 <td></td> <td>19.31</td> <td>22.19</td> <td>2.88</td> <td></td>		19.31	22.19	2.88		
MDTNPAMI         19.5         22.37         2.87         25           PTTVPAPO         17.16         20.02         2.86         26           BMBGPABL         20.42         23.26         2.84         27           BATHPABT         25.75         28.58         2.83         28           KZTNPAKZ         23.22         26.04         2.82         29           BVFLPABF         21.36         24.17         2.81         30           HZTNPAHZ         17.95         20.76         2.81         31           ELCYPAEC         22.28         25.09         2.81         32           SCHWPASV         23.5         26.3         2.8         33           MTPTPAMP         20.06         22.86         2.8         34           BADNPABA         20.63         23.43         2.8         35           JHTWPAXJ         18.77         21.57         2.8         36           HLTWPAHE         21.22         24.01         2.79         37           ZLNPPAZE         23.54         26.33         2.79         38           GVCYPAGR         20.21         23         2.79         39           OLCYPAXO         28.01	FLWDPAFL	26	28.87	2.87		
PTTVPAPO         17.16         20.02         2.86         26           BMBGPABL         20.42         23.26         2.84         27           BATHPABT         25.75         28.58         2.83         28           KZTNPAKZ         23.22         26.04         2.82         29           BVFLPABF         21.36         24.17         2.81         30           HZTNPAHZ         17.95         20.76         2.81         31           ELCYPAEC         22.28         25.09         2.81         32           SCHWPASV         23.5         26.3         2.8         33           MTPTPAMP         20.06         22.86         2.8         34           BADNPABA         20.63         23.43         2.8         35           JHTWPAXJ         18.77         21.57         2.8         36           HLTWPAHE         21.22         24.01         2.79         37           ZLNPPAZE         23.54         26.33         2.79         38           GVCYPAGR         20.21         23         2.79         39           OLCYPAXO         28.01         30.79         2.78         40           INDIPAIN         19.17	PNBGPAPB	21.95	24.82	2.87		
BMBGPABL       20.42       23.26       2.84       27         BATHPABT       25.75       28.58       2.83       28         KZTNPAKZ       23.22       26.04       2.82       29         BVFLPABF       21.36       24.17       2.81       30         HZTNPAHZ       17.95       20.76       2.81       31         ELCYPAEC       22.28       25.09       2.81       32         SCHWPASV       23.5       26.3       2.8       33         MTPTPAMP       20.06       22.86       2.8       34         BADNPABA       20.63       23.43       2.8       35         JHTWPAXJ       18.77       21.57       2.8       36         HLTWPAHE       21.22       24.01       2.79       37         ZLNPPAZE       23.54       26.33       2.79       38         GVCYPAGR       20.21       23       2.79       39         OLCYPAXO       28.01       30.79       2.78       40         INDIPAIN       19.17       21.95       2.78       41         CNPNPACE       24.24       27.01       2.77       42         HMBGPAHB       24.84       27.61	MDTNPAMI			2.87		
BATHPABT       25.75       28.58       2.83       28         KZTNPAKZ       23.22       26.04       2.82       29         BVFLPABF       21.36       24.17       2.81       30         HZTNPAHZ       17.95       20.76       2.81       31         ELCYPAEC       22.28       25.09       2.81       32         SCHWPASV       23.5       26.3       2.8       33         MTPTPAMP       20.06       22.86       2.8       34         BADNPABA       20.63       23.43       2.8       35         JHTWPAXJ       18.77       21.57       2.8       36         HLTWPAHE       21.22       24.01       2.79       37         ZLNPPAZE       23.54       26.33       2.79       38         GVCYPAGR       20.21       23       2.79       39         OLCYPAXO       28.01       30.79       2.78       40         INDIPAIN       19.17       21.95       2.78       41         CNPNPACE       24.24       27.01       2.77       42         HMBGPAHB       24.84       27.61       2.77       43         MCMRPAMC       20.93       23.69	PTTVPAPO	17.16	20.02	2.86		
KZTNPAKZ       23.22       26.04       2.82       29         BVFLPABF       21.36       24.17       2.81       30         HZTNPAHZ       17.95       20.76       2.81       31         ELCYPAEC       22.28       25.09       2.81       32         SCHWPASV       23.5       26.3       2.8       33         MTPTPAMP       20.06       22.86       2.8       34         BADNPABA       20.63       23.43       2.8       35         JHTWPAXJ       18.77       21.57       2.8       36         HLTWPAHE       21.22       24.01       2.79       37         ZLNPPAZE       23.54       26.33       2.79       38         GVCYPAGR       20.21       23       2.79       39         OLCYPAXO       28.01       30.79       2.78       40         INDIPAIN       19.17       21.95       2.78       41         CNPNPACE       24.24       27.01       2.77       42         HMBGPAHB       24.84       27.61       2.77       43         MCMRPAMC       20.93       23.69       2.76       44	BMBGPABL			2.84		
BVFLPABF       21.36       24.17       2.81       30         HZTNPAHZ       17.95       20.76       2.81       31         ELCYPAEC       22.28       25.09       2.81       32         SCHWPASV       23.5       26.3       2.8       33         MTPTPAMP       20.06       22.86       2.8       34         BADNPABA       20.63       23.43       2.8       35         JHTWPAXJ       18.77       21.57       2.8       36         HLTWPAHE       21.22       24.01       2.79       37         ZLNPPAZE       23.54       26.33       2.79       38         GVCYPAGR       20.21       23       2.79       39         OLCYPAXO       28.01       30.79       2.78       40         INDIPAIN       19.17       21.95       2.78       41         CNPNPACE       24.24       27.01       2.77       42         HMBGPAHB       24.84       27.61       2.77       43         MCMRPAMC       20.93       23.69       2.76       44				2.83		
HZTNPAHZ       17.95       20.76       2.81       31         ELCYPAEC       22.28       25.09       2.81       32         SCHWPASV       23.5       26.3       2.8       33         MTPTPAMP       20.06       22.86       2.8       34         BADNPABA       20.63       23.43       2.8       35         JHTWPAXJ       18.77       21.57       2.8       36         HLTWPAHE       21.22       24.01       2.79       37         ZLNPPAZE       23.54       26.33       2.79       38         GVCYPAGR       20.21       23       2.79       39         OLCYPAXO       28.01       30.79       2.78       40         INDIPAIN       19.17       21.95       2.78       41         CNPNPACE       24.24       27.01       2.77       42         HMBGPAHB       24.84       27.61       2.77       43         MCMRPAMC       20.93       23.69       2.76       44	KZTNPAKZ	23.22	26.04	2.82		
ELCYPAEC         22.28         25.09         2.81         32           SCHWPASV         23.5         26.3         2.8         33           MTPTPAMP         20.06         22.86         2.8         34           BADNPABA         20.63         23.43         2.8         35           JHTWPAXJ         18.77         21.57         2.8         36           HLTWPAHE         21.22         24.01         2.79         37           ZLNPPAZE         23.54         26.33         2.79         38           GVCYPAGR         20.21         23         2.79         39           OLCYPAXO         28.01         30.79         2.78         40           INDIPAIN         19.17         21.95         2.78         41           CNPNPACE         24.24         27.01         2.77         42           HMBGPAHB         24.84         27.61         2.77         43           MCMRPAMC         20.93         23.69         2.76         44	BVFLPABF	21.36	24.17	2.81	30	
SCHWPASV         23.5         26.3         2.8         33           MTPTPAMP         20.06         22.86         2.8         34           BADNPABA         20.63         23.43         2.8         35           JHTWPAXJ         18.77         21.57         2.8         36           HLTWPAHE         21.22         24.01         2.79         37           ZLNPPAZE         23.54         26.33         2.79         38           GVCYPAGR         20.21         23         2.79         39           OLCYPAXO         28.01         30.79         2.78         40           INDIPAIN         19.17         21.95         2.78         41           CNPNPACE         24.24         27.01         2.77         42           HMBGPAHB         24.84         27.61         2.77         43           MCMRPAMC         20.93         23.69         2.76         44						
MTPTPAMP         20.06         22.86         2.8         34           BADNPABA         20.63         23.43         2.8         35           JHTWPAXJ         18.77         21.57         2.8         36           HLTWPAHE         21.22         24.01         2.79         37           ZLNPPAZE         23.54         26.33         2.79         38           GVCYPAGR         20.21         23         2.79         39           OLCYPAXO         28.01         30.79         2.78         40           INDIPAIN         19.17         21.95         2.78         41           CNPNPACE         24.24         27.01         2.77         42           HMBGPAHB         24.84         27.61         2.77         43           MCMRPAMC         20.93         23.69         2.76         44	ELCYPAEC	22.28	25.09	2.81	32	
BADNPABA       20.63       23.43       2.8       35         JHTWPAXJ       18.77       21.57       2.8       36         HLTWPAHE       21.22       24.01       2.79       37         ZLNPPAZE       23.54       26.33       2.79       38         GVCYPAGR       20.21       23       2.79       39         OLCYPAXO       28.01       30.79       2.78       40         INDIPAIN       19.17       21.95       2.78       41         CNPNPACE       24.24       27.01       2.77       42         HMBGPAHB       24.84       27.61       2.77       43         MCMRPAMC       20.93       23.69       2.76       44	SCHWPASV	23.5	26.3	2.8	33	
JHTWPAXJ         18.77         21.57         2.8         36           HLTWPAHE         21.22         24.01         2.79         37           ZLNPPAZE         23.54         26.33         2.79         38           GVCYPAGR         20.21         23         2.79         39           OLCYPAXO         28.01         30.79         2.78         40           INDIPAIN         19.17         21.95         2.78         41           CNPNPACE         24.24         27.01         2.77         42           HMBGPAHB         24.84         27.61         2.77         43           MCMRPAMC         20.93         23.69         2.76         44	MTPTPAMP					
HLTWPAHE       21.22       24.01       2.79       37         ZLNPPAZE       23.54       26.33       2.79       38         GVCYPAGR       20.21       23       2.79       39         OLCYPAXO       28.01       30.79       2.78       40         INDIPAIN       19.17       21.95       2.78       41         CNPNPACE       24.24       27.01       2.77       42         HMBGPAHB       24.84       27.61       2.77       43         MCMRPAMC       20.93       23.69       2.76       44	BADNPABA				35	
ZLNPPAZE       23.54       26.33       2.79       38         GVCYPAGR       20.21       23       2.79       39         OLCYPAXO       28.01       30.79       2.78       40         INDIPAIN       19.17       21.95       2.78       41         CNPNPACE       24.24       27.01       2.77       42         HMBGPAHB       24.84       27.61       2.77       43         MCMRPAMC       20.93       23.69       2.76       44		18.77	21.57			
GVCYPAGR       20.21       23       2.79       39         OLCYPAXO       28.01       30.79       2.78       40         INDIPAIN       19.17       21.95       2.78       41         CNPNPACE       24.24       27.01       2.77       42         HMBGPAHB       24.84       27.61       2.77       43         MCMRPAMC       20.93       23.69       2.76       44						
GVCYPAGR         20.21         23         2.79         39           OLCYPAXO         28.01         30.79         2.78         40           INDIPAIN         19.17         21.95         2.78         41           CNPNPACE         24.24         27.01         2.77         42           HMBGPAHB         24.84         27.61         2.77         43           MCMRPAMC         20.93         23.69         2.76         44	ZLNPPAZE	23.54	26.33			
INDIPAIN         19.17         21.95         2.78         41           CNPNPACE         24.24         27.01         2.77         42           HMBGPAHB         24.84         27.61         2.77         43           MCMRPAMC         20.93         23.69         2.76         44	GVCYPAGR	20.21				
CNPNPACE         24.24         27.01         2.77         42           HMBGPAHB         24.84         27.61         2.77         43           MCMRPAMC         20.93         23.69         2.76         44	OLCYPAXO	28.01	30.79	2.78	40	
HMBGPAHB         24.84         27.61         2.77         43           MCMRPAMC         20.93         23.69         2.76         44	INDIPAIN	19.17	21.95	2.78	41	
MCMRPAMC 20.93 23.69 2.76 44	CNPNPACE	24.24	27.01	2.77	42	
	HMBGPAHB	24.84	27.61	2.77	43	
	MCMRPAMC	20.93	23.69	2.76	44	
DYTWPADB 18.44 21.17 2.73 45	DYTWPADB	18.44	21.17			
FRERPAXF 26.95 29.67 2.72 46	FRERPAXF			<del></del>		
YORKPAXN 19.86 22.58 2.72 47	YORKPAXN	•	<del></del>	<del> </del>		
NATNPANR 19.95 22.66 2.71 48				<del> </del>		
SHRNPASH 19.29 21.98 2.69 49	SHRNPASH					
SPDLPASP 18.15 20.84 2.69 50		<del></del>		<del></del>		

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	Exhibit RI			
		Total		
		Monthly		count by
		Cost per	non-loop	cost
CLLI	Loop	Line	cost	bracket
RDPKPARP	16.11	18.8	2.69	51
GNVLPAGR	26.53	29.22	2.69	52
ENOLPAEN	17.94	20.63	2.69	53
CGVLPACL	20.51	23.19	2.68	54
SLTTPAES	25.21	27.88	2.67	55
PRFDPAPF	24.25	26.91	2.66	56
SRBGPAST	20.73	23.39	2.66	57
TRPRPATR	17.41	20.06	2.65	58
MCRKPAMR	17	19.65	2.65	59
CHTTPACT	22.27	24.91	2.64	60
MUVLPAES	16.93	19.57	2.64	61
BTHYPABH	17.58	20.22	2.64	62
NZRTPANA	22.01	24.64	2.63	63
ERIEPAXE	22.02	24.64	2.62	64
BEWKPABR	21.78	24.4	2.62	65
DWTWPADT	19.68	22.29	2.61	66
CRPLPACO	18.38	20.98	2.6	67
OKMTPAOA	17.02	19.62	2.6	68
CTVLPACV	21.17	23.76	2.59	69
LNSDPALD	16.77	19.36	2.59	70
ALTWPAMT	17.76	20.34	2.58	71
KHVLPAKU	20.73	23.3	2.57	72
ROCHPARC	20.13	22.7	2.57	73
NWLSPANW	18.66	21.23	2.57	74
LRDLPALB	16.37	18.94	2.57	75
UNTNPAUN	21	23.55	2.55	76
ERIEPAXW	19.06	21.61	2.55	77
SLTNPAST	17.87	20.42	2.55	78
WGTNPAWR	21.13	23.67	2.54	79
GLLDPAGN	17.31	19.85	2.54	80
ALNAPAAL	18.34		2.53	81
BHLHPABE	17.14	19.67	2.53	82
PTTNPAPI	17.96		2.52	83
PTTWPAPT	18.93	21.44	2.51	84
WKBGPAWK	17.25	19.76	2.51	85
NWSTPANS	24.85	27.35	2.5	86
ERIEPAXT	22.71	25.21	2.5	87
IRWNPAIR	19.52		2.5	88
LARCPALM	18.32		2.5	89
PEHLPAPH	19.26		2.5	90
SCTNPASC	16.75		2.5	91
RYFRPARF	18.69		2.49	92
ERIEPAXS	19.87		2.49	93
MLVAPAMI	17.16		2.49	94
177 - 77 H 7 H 7 H	.,,,,,,	10.00	2.73	

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Exhibit RL-6					
		Total	<b> </b>		
		Monthly		count by	
		Cost per	non-loop	cost	
CLLI	Loop	Line	cost	bracket	
CHESPACB	18.16	20.65	2.49	95	
BRDDPABR	16.21	18.7	2.49	96	
CLRTPACL	18.4	<u> </u>	2.48	97	
BLLVPABE	16.95		2.48	98	
SLWBPASL	18.95	21.42	2.47	99	
NWTWPANW	19.15		2.46	100	
PHLAPACH	16.96		2.46	101	
PHLAPADE	17.52			102	
JNNTPAJE	19.01	<del>+</del>			
MNTPPAMO	21.97			104	
BGVLPABR	18.07				
SHSAPASH	17.05			106	
YORKPAXM	16.88		2.45	107	
PHLAPAIV	16.71			108	
LNLXPALN	21.02		2.44	109	
DRMTPADO	17		2.44	110	
AMBRPAAM	18.76		2.44	111	
PHLAPAWV	16.69	19.13	2.44	112	
NWKNPANK	19.22				
PHLAPAEW	16.22	18.65	2.43	114	
PHLAPAMY	16.81	19.23	2.42	115	
CHVLPACH	18.48		2.42	116	
PRKSPAPE	21.81	24.22	2.41	117	
PYVLPAPE	17.72	20.13	2.41	118	
ARMRPAAR	15.91		2.41	119	
CHESPACA	17.4		2.41	120	
LDVLPAES	19.61	22.01	2.4	121	
ALTWPAAL	16.04			122	
PHLAPAKR	16.08			123	
PHLAPAPI	16.29	18.69	2.4	124	
PHLAPARE	16.4		2.4	125	
WSVWPAWE	15.87	18.26	2.39	126	
OLYPPAOL	17.15	19.54	2.39	127	
SWKYPASE	21.35	23.74	2.39	128	
ALQPPAAL	20.94	23.33	2.39	129	
NRTWPANR	16.17	18.56	2.39	130	
MCPTPAMK	17.81	20.19	2.38	131	
KGTNPAES	16.24	18.62	2.38	132	
PHLAPAGE	15.94	18.32	2.38	133	
SNSPPASS	19.09			134	
PAOLPAPA	17.2		2.37	135	
				136	
IPHLAPAOR	ונס.סו	סש.סו	L 2.J!		
PHLAPAOR	16.61 19.72			137	

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	Exhibit RL		<u> </u>	
		Total		
		Monthly		count by
		Cost per	non-loop	cost
CLLI	Loop	Line	cost	bracket
PHLAPAJE	16.82	19.18	2.36	139
NWCSPANC	21.57	23.92	2.35	140
TRNTPATA	19.75	22.1	2.35	141
SPFDPASF	17.47	19.82	2.35	142
WAYNPAWY	14.69	17.03	2.34	143
EXTNPAEX	16.95		2.34	144
PLHSPÄPH	17.54	19.88	2.34	145
LANGPALA	17.3	19.64	2.34	146
HTBOPAHB	16.88	19.22	2.34	147
LNCSPALA	16.29	18.62	2.33	148
PHLAPADB	15.59	17.92	2.33	149
SDTNPASD	19.51	21.84	2.33	150
WCHSPAWC	18.44	20.76	2.32	151
WLPTPAWI	17.18	19.5	2.32	152
EPBGPAEP	16.6	18.92	2.32	153
MRSLPAMV	18.46	20.77	2.31	154
PXTGPAPG	16.5	18.81	2.31	155
WLBRPAWB	17.17	19.48	2.31	156
GNBGPAGR	17.29	19.59	2.3	157
MOVLPAMO	16.54	18.84	2.3	158
TRCKPATC	17.54	19.84	2.3	159
QKTWPAQT	20.96	23.25	2.29	160
LBNNPAES	18.39	20.68	2.29	161
PITBPAAL	16.25	18.54	2.29	162
PHLAPASA	16.73	19.02	2.29	163
PXVLPAPV	19.06	21.34	2.28	164
WMFLPAWM	17.61	19.89	2.28	165
PITBPACA	17.56	19.84	2.28	166
RDNGPARE	15.82	18.1	2.28	167
PITBPANS	15.57	17.85	2.28	168
HRBGPAHA	15.28	17.56	2.28	169
RBTPPART	18.05	20.33	2.28	170
CTSQPACT	15.84		2.27	171
SHLNPASH	20.11	22.37	2.26	172
HMSTPAHO	17.84	20.1	2.26	173
WASHPAWA	21.42	23.68	2.26	174
MBRGPAME	19.12	21.38	2.26	175
GLNSPAGL	18.99	21.24	2.25	176
ERIEPAXM	16.66		2.25	177
PHLAPAEV	13.56		2.24	178
PITBPAEL	16.42		2.24	179
PITBPASQ	15.96	<del>.</del>	2.23	180
PHLAPASH	16.38	<del></del>	2.22	181
STCGPAES	17.92	<del></del>	2.22	182

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Exhibit RL-6					
		Total			
		Monthly		count by	
		•	non-loop	cost	
CLLI	Loop	Line	cost	bracket	
TULYPATU	18.28		2.21	183	
KGPRPAKP	14.03	16.23	2.2	184	
YORKPAXE	18.92	21.12	2.2	185	
PHLAPATR	16.43	18.63	2.2	186	
PHLAPAPE	15	17.2	2.2	187	
CARNPACA	16.99	19.18	2.19	188	
PHLAPABA	17.09	19.28	2.19	189	
CNSHPACN	15.69	17.88	2.19	190	
CPHLPACH	16.44	18.63	2.19	191	
EDTNPAED	16.05	18.24	2.19	192	
PXTNPAPA	18.17	20.35	2.18	193	
LNDLPALD	18.49	20.66	2.17	194	
BCYNPABC	15.52	17.69	2.17	195	
CRAFPACR	14.72	16.89	2.17	196	
BRYMPABM	16.55	18.72	2.17	197	
KRLNPAKL	17.01	19.18	2.17	198	
ESTNPAEA	18.43	20.58	2.15	199	
BRSTPABR	17.09	19.24	2.15	200	
WLGRPAWG	15.79	17.93	2.14	201	
PHLAPAMK	13.75	15.88	2.13	202	
JENKPAJK	16.55	18.68	2.13	203	
PHLAPALO	12.41	14.52	2.11	204	
ВТРКРАВР	16.83	18.92	2.09	205	
PITBPADT	11,77	13.85		206	
AMBLPAAM	18.34	20.41	2.07	207	
Source: Wire Center Spreads	L	<del></del>			

## Exhibit RL-7

Exhibit RL-7 PA Rural Carrier Rural Task Force Results

EXHIBITINE FA INITIAL CAPITEL NUI AL TASK I OFCE NE			non-loop		loop cost
	total switched	loop cost	cost per		percent of
company	lines	per line	line	total cost	total cost
Alltel Pennsylvaniainc Total	214,359	39.06	5.16	44.22	88.3%
Armstrong Tel Co North Total	461	70.66	9.87	80.53	87.7%
Armstrong Tel Co-PA Total	1,595	56.07	6.68	62.75	89.4%
Buffalo Valley Tel Co Total	18,989	31.51	3.37	34.88	90.3%
Citizens Tel Co Of Kecksburg Total	4,575	42.67	5.18	47.85	89.2%
C-tec Corp Total	237,196	38.75	4.42	43.17	89.8%
Denver And Ephrata Tel And Tel Co Total	51,372	24.44	2.91	27.35	89.4%
Frontier Comm Of Breezewood Inc Total	3,342	98.71	16.42	115.13	85.7%
Frontier Comm Of Canton Inc Total	3,826	58.21	5.80	64.01	90.9%
Frontier Comm Of PA Inc Total	26,424	27.84	2.71	30.55	91.1%
Frontier Comm-lakewood Inc Total	1,435	41.04	6.97	48.00	85.5%
Frontier Comm-oswayo River Inc Total	1,923	76.93	14.54	91.47	84.1%
Hickory Tel Co Total	1,278	50.82	7.58	58.40	87.0%
Ironton Tel Co Total	4,115	27.94	5.26	33.20	84.2%
Lackawaxen Tel Co Total	3,048	47.68	5.89	53.57	89.0%
Laurel Highland Tel Co Total	4,274	59.53	6.97	66.50	89.5%
Mahanoy And Mahantongo Tel Co Total	3,598	61.10	7.98	69.07	88.5%
Marianna-scenery Hill Tel Co Total	2,531	48.04	7.92	55.96	85.8%
North Penn Tel Co Total	4,281	74.43	7.13	81.56	91.3%
North Pittsburgh Tel Co Total	62,891	26.18	2.53	28.72	91.2%
Palmerton Tel Co Total	11,227	34.62	3.92	38.54	89.8%
Pennsylvania Tel Co Total	1,153	64.72	7.75	72.47	89.3%
Pymatuning Ind Tel Co Total	2,250	34.34	6.08	40.43	85.0%
South Canaan Tel Co Total	2,335	54.30	7.72	62.02	87.6%
Sugar Valley Tel Co Total	902	81.82	8.82	90.64	90.3%
The Bentleyville Tel Co Total	3,304	37.50	5.66	43.15	86.9%
The Conestoga Tel And Tel Co Total	47,984	27.59	3.07	30.66	90.0%
The North Eastern PA Tel Co Total	10,949	57.70	9.45	67.15	85.9%
Tuolumne Tel Co Dba Alltel Pennsylvani Total	3,607	56.39	7.28	63.67	88.6%
United Tel Co Of PA Total	349,504	34.79	3.41	38.20	91.1%
Venus Tel Corp Total	1,076	76.98	9.01	85.99	89.5%
Yukon-waitz Tel Co Total	1,011	38.53	7.86	46.40	83.1%

Source: Rural Task Force

## Exhibit RL-8

### Information Alleged To Be Proprietary Has Been Deleted

Public Exhibit RL-8	Curre	rent Model Estimate		Rural Task Force Estimate		
		Total			Total	
		Monthly			Monthly	
		Cost per	non-loop		Cost per	non-loop
clli	Loop	Line	cost	Loop	Line	cost
ALVLPAXA				55.05	67.38	12.33
BCCKPAXB				49.30	57.48	8.17
BIGVPAXB				40.95	43.79	2.84
BLINPAXB				81.84	94.09	12.25
BLVLPAXB				31.80	38.53	6.73
BRINPAXB				46.37	52.62	6.26
BTLRPAXB				25.41	28.07	2.65
CHBGPAXC				24.72	27.20	2.48
CHCRPAXC				49.20	52.60	3.40
CLMAPAXC				21.34	24.21	2.87
CNQNPAXC				37.90	41.95	4.05
CRLSPAXC				26.09	28.13	2.04
DNCNPAXD				31.57	35.60	4.03
DYRNPAXD				83.04	87.35	4.31
EMTNPAXE				64.28	77.28	13.00
EUCLPAXE				69.19	74.50	5.31
EVCYPAXE				32.54	35.59	3.04
EWFRPAXE				94.48	103.89	9.41
EZTWPAXE				26.34	28.75	2.41
FRFDPAXF				41.74	45.06	3.32
FXBGPAXF				44.83	63.34	18.51
FYVLPAXF				33.07	36.15	3.09
GTBGPAXG				28.85	31.20	2.34
HNVRPAXH				23.52	25.56	2.04
HWRDPAXH				56.85	66.44	9.59
ICBGPAXI			ļ <u> </u>	80.17	86.45	6.28
LTTWPAXL				31.52	33.97	2.46
LVRPPAXL			L	53.61	60.48	6.87
LYSVPAXL				67.00	72.94	5.94
MARNPAXM	ļ			39.37	43.89	4.52
MCBGPAXM	ļ			51.47	54.54	3.07
MCLVPAXM				51.15	59.00	7.84
MFTWPAXM	ļ			43.07	49.33	6.26
MHSPPAXM	<u> </u>		ļ	35.84	38.36	2.52
MLHLPAXE	ļ	ļ	ļ	40.27	46.01	5.75
MLTWPAXM			<u> </u>	58.35	64.23	5.89
MRDNPAXM			<u> </u>	21.04	24.93	3.88
MRTTPAXM		<u> </u>		26.30	29.75	3.45
MTVLPAXM			<u> </u>	25.29	28.30	3.01
MYVIPAXM	<u> </u>		<u> </u>	31.03	36.33	5.29
NBFDPAXN			ļ	45.47	49.52	4.05
NIXNPAXN	ļ		ļ	36.40	39.69	3.30
NVLCPAXN				46.86	49.33	2.47
NWOXPAXN	L		ļ <u> </u>	31.46	35.48	4.02
NWPTPAXN				40.48	44.83	4.35
NWSHPAXN			<u> </u>	60.94	65.82	4.87
ORBSPAXO	L	<u> </u>	<u> </u>	67.98	73.73	5.76

### Information Alleged To Be Proprietary Has Been Deleted

Public Exhibit RL-8	Curre	Current Model Estimate			Rural Task Force Estimate		
		Total			Total		
		Monthly			Monthly		
1		Cost per	non-loop		Cost per	non-loop	
clli	Loop	Line	cost	Loop	Line	cost	
PRKRPAXP				55.86	60.74	4.88	
PRSPPAXP				43.89	47.88	3.99	
PTRLPAXP	Į.			43.43	48.03	4.60	
PTRYPAXP				53.32	59.51	6.18	
PTVLPAXP				55.63	59.29	3.66	
RCFDPAXR		}		61.08	69.07	8.00	
RDVLPAXR				43.00	49.14	6.14	
SHGPPAXS				94.61	101.65	7.04	
STTMPAXS				45.00	48.29	3.29	
THSPPAXT				69.80	73.79	3.99	
TMTWPAXT				58.23	65.45	7.22	
WSNBPAXW	Ţ			57.75	61.75	4.00	
YRSPPAXY				47.49	51.20	3.70	
ZIONPAXZ				60.32	68.82	8.50	

#### OCA STATEMENT No. 1-R

### BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Investigation Regarding Intrastate Access	)	
Charges and IntraLATA Toll Rates of Rural	)	Docket No. I-00040105
Carriers, and the Pennsylvania Universal	)	
Service Fund	)	

#### REBUTTAL TESTIMONY OF DR. ROBERT LOUBE

#### **ON BEHALF OF**

#### PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

January 15, 2009

RECEIVED

MAR 2 6 2009

PA PUBLIC UTILITY COMMISSION SECRETARY'S BUREAU



#### TABLE OF CONTENTS TESTIMONY OF ROBERT LOUBE

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#### Introduction and Summary

- 2 Q: Please state your name and business address. 3 My name is Robert Loube. My business address is 10601 Cavalier Drive, Silver A: 4 Spring, Maryland 20901. 5 Q: By whom are you employed and in what capacity? 6 A: I am the Vice President of Rolka Loube Saltzer Associates. 7 Q: Are you same Robert Loube that filed Direct Testimony on December 10, 8 2008 in this proceeding? 9 Yes. A: 10 On whose behalf are testifying? Q:
- 11 A: I am testifying on behalf of the Pennsylvania Office of Consumer Advocate
- 12 (OCA).
- 13 Q: What is the purpose of your testimony?
- 14 A: The purpose of my rebuttal testimony is to respond to the testimony of Mr. Nurse
  15 and Dr. Oyefusi on behalf of AT&T, the testimony of Dr. Pelcovits on behalf of
  16 Comcast Phone of Pennsylvania (Comcast), the testimony of Mr. Buckalew on
  17 behalf of the Office of Small Business Advocate (OSBA), the testimony of Mr.
  18 Laffey on behalf of the Pennsylvania Telephone Association (PTA) and the
  19 testimony of Mr. Price on behalf of Verizon. I will address the claims made in

these testimonies regarding the legal basis for establishing a rate cap, the determination of the rate cap, the need to expand the Pennsylvania Universal Service Fund (Pa USF), the impact of maintaining a rate cap and expanding the Pa USF on competition.

#### The Legal Basis for a Rate Cap

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6 Q: OSBA witness Buckalew testified on advice of counsel that, "there is no basis in law for capped rates." (OSBA at 5). Mr. Buckalew also testified that he is 7 8 not "aware of any rural ILEC that has a cap on local exchange rate increases 9 for the purpose of the annual PSM filings in its alternative form of regulation 10 plan" (OSBA at 6). Finally, Mr. Buckalew testified that he is not "aware of 11 any commission orders that were in effect on November 30, 2004, which 12 established a cap on local exchange rate increases for the purpose of the 13 annual PSM filings." (OSBA at 6-7). Do you have any response to these 14 statements? Yes. While I too am not a lawyer, I am advised by counsel that there is a basis in 15 A: law for capped rates. As a policy analyst, I am also familiar with the history of 16 17 this issue. The genesis of the rate cap was the Commission's Global Order in 1999. In that proceeding, the Commission specifically stated that small 18 19 incumbent local exchange carriers (ILECs) with average monthly residential one-20 party basic local rates above \$16.00 at the time the Pa USF is implemented will provide customers a Universal Service credit in an amount that will effectively 21

<sup>&</sup>lt;sup>1</sup> Re: Nextlink Pennsylvania, Inc., 93 PaPUC 172 (1999)(Global Order)(subsequent history omitted).

reduce the rate to \$16.00. In other words, customers were only to be charged \$16.00 for basic local exchange service, no more.

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The Commission discussed this issue later in the Global Order and stated that "on consideration of the positions of the parties, and the evidence contained in this record, we conclude that as to all non BA-PA ILECs, a rate ceiling will be implemented which caps the one-party residential local rates of each such ILEC, including charges for dial-tone, touchtone, and local usage, at \$16.00 per month until December 31, 2003. As set forth below, if such ILEC's one-party residential rate is above \$16.00 per month, and is found to be just and reasonable by the Commission, the revenue associated with the difference between the rate ceiling and the approved rate will be recovered from the Pennsylvania USF." Four months after the Global Order, the Commission approved the Small Company Group's Chapter 30 plan and the ALLTEL Chapter 30 Plan and included the \$16.00 rate ceiling as part of those Chapter 30 plans.<sup>2</sup> In the ALLTEL Reconsideration Order, for example, the Commission clarified that, if an increase based on ALLTEL's Price Stability Mechanism resulted in a just and reasonable residential rate over the \$16.00 rate ceiling, then the difference could be recovered from the interim Pa USF.3

<sup>20</sup> 

<sup>&</sup>lt;sup>2</sup> See, Petition of the following Companies For Approval of an Alternative Form of Regulation Plan and Network Modernization Plan, Docket Nos. P-00981425, et al., Opinion and Order (entered January 20, 2000), Opinion and Order on Reconsideration (entered March 20, 2000); Petition of ALLTEL Pennsylvania, Inc. for Approval of an Alternative Form of Regulation and Network Modernization Plan, Docket No. P-00981423, Opinion and Order (entered January 20, 2000); Opinion and Order on Reconsideration (entered March 20, 2000).

<sup>&</sup>lt;sup>3</sup> ALLTEL Chapter 30 Reconsideration Order at 41.

1	Q:	Were there any other Commission Orders that addressed the residential rate
2		cap that you are aware of?
3	A:	Yes. In 2003, the Commission approved a Joint Procedural Stipulation
4		concerning the RTCC/Sprint United Joint Proposal for Access Charge
5		Reductions. <sup>4</sup> This proceeding arose as a result of the Commission's
6		determination in the Global Order to further examine intrastate access rates in
7		Pennsylvania. The Joint Procedural Stipulation specifically provided that:
8		
9		The monthly \$16.00 cap on R-1 [residential] average rates
0		established in the Global Order and any ILEC-specific
1		weighted average rate cap which may have been
2		established in any individual ILEC's Chapter 30 Plan will
3		be increased for all ILECs to the weighted average \$18.00
4		cap for a minimum of three (3) year period January 1,
5		2004 through December 31, 2006. As to any ILEC which
6		as of July 1, 2002 has hit the \$16.00 cap and takes a credit
7		from the USF, the ILEC shall continue to receive and apply
		· · · · · · · · · · · · · · · · · · ·
8		the credit but would be limited to recovering from its
9		customers future R-1 increases of \$2.00 under the
20 21 22 23 24 25		foregoing \$18.00 cap reflecting the USF credit in effect as
1.		of July 1, 2002. Any approved future increases in rates
22		above the \$18.00 rate cap for any ILEC shall also be
23		recoverable from the USF under the exact same terms
24		and conditions as approved in the Global Order.
26		(emphasis added). The Commission even provided an example of
27		a practical application of the Pa USF by providing:
28		
29		For example, if ILEC A's R-1 rates are currently \$17.25,
30		then their customer is billed \$17.25 but receives a credit of
31		\$1.25 from USF, receiving a net bill of \$16.00. ILEC A
32		could, as of December 31, 2004, implement the provisions
33		of Paragraph 3 hereof, increase its rates, if justified, by
34		\$2.00 to \$19.25, charge its customers \$19.25, reflect a
35		credit of \$1.25 to its customers, receive \$1.25 from the

<sup>&</sup>lt;sup>4</sup> <u>Access Charge Investigation per Global Order of September 30, 1999</u>. Docket No. M-00021596, Order (entered July 15, 2003) (<u>Rural Access Settlement Order</u>).

USF and then send a net bill to its customers of \$18.00. If 1 ILEC A justified an R-1 rate of \$20.25, then it would be 2 entitled to \$2.25 from the USF and will send a net bill to its 3 4 customers of \$18.00. 5 The Commission clearly increased the residential rate cap from \$16.00 to \$18.00 6 7 in approving the Joint Procedural Stipulation and maintained the fundamental protection that the customer would only be charged \$18.00 with the remaining 8 allowed revenue recovered from the Pa USF. The Commission further 9 10 determined that the rate cap would be in effect for a *minimum* of three additional 11 years. 12 13 Q: What happened next? 14 15 A: In 2004, the General Assembly made changes to the original Chapter 30 through the passage of Act 183. One of the new provisions was Section 3015(g) of the 16 Public Utility Code, entitled "Rate Change Limitations." Section 3015(g) 17 18 specifically provides that: "The annual rate change limitations set forth in a local 19 exchange telecommunications company's effective commission-approved alternative form of regulation plan or any other commission-approved annual rate 20 21 change limitation shall remain applicable and shall be deemed just and reasonable under section 1301." As I discussed above, the Commission's Order approving 22 23 the rural ILECs alternative form of regulation plans contained a rate ceiling of 24 \$18.00. Did you review any other information? 25 Q: 26 27 **A**: A review of the legislative history of House Bill 30, which became Act 183, 28 reveals a specific recognition regarding the presence and significance of the

1		\$18.00 residential rate cap and its relationship to other sections of Chapter 30.
2		Representative Adolph, the prime sponsor of House Bill 30, stated on the floor of
3		the House of Representatives in defense of the bill: "Mr. ADOLPH. Finally, Mr.
4		Speaker, as amended by the Senate, HB 30 recodifies existing section 1301 of the
5		Public Utility Code, which states that rates shall be just and reasonable.
6		Additionally, the legislation grandfathers rate change limitations contained in
7		current network modernization plans, and keep in mind that there is an \$18.00 cap
8		for basic telephone service."5
9		Luctora well that Governor Dandell, man gigning Act 192 in to law angeliaelly
10		I note as well that Governor Rendell, upon signing Act 183 in to law specifically
11		noted that Act 183 "ensures that every Pennsylvanian has access to affordable
12		basic telephone service by making it easier for more low-income Pennsylvanians
13		to enroll in federal Lifeline service, which will help them install phones and pay
14		their monthly bills, protecting access to basic telephone services even in the most
15		rural and economically depressed areas of the state [and] limiting the price
16		increases for basic service, particularly hard to serve rural areas."6
17 18	Q:	Do you have any further comments in response to Mr. Buckalew's contention
19		that there is no basis for the current rate cap?
20	A:	Yes. Many if not all of the rural ILECs' respective Commission-approved
21		Chapter 30 alternative regulation and network modernization plans include a
22		provision that caps rates and allows the company to receive any amount above
23		that rate that is determined to be just and reasonable from the Pa USF. For

<sup>&</sup>lt;sup>5</sup> Leg. Journ. Nov. 19, 2004 at 2161.
<sup>6</sup> "Governor Rendell Signs House Bill 30," Press Release ( Nov. 30, 2004)(www.state.pa.us).

1		example, the Buffalo variety relephone Company's Commission-approved
2		Chapter 30 plan provides:
3		
4		2. Pursuant to the <u>Global Order</u> entered September 30,
5		1999, the Commission instituted a transitional universal
6		service funding mechanism, i.e. the Pennsylvania USF,
7		with a projected termination date of December 31, 2003.
8		During the pendency of the Pennsylvania USF, the
9		Company retains the right to change and rebalance its
10		intrastate access rates in accordance with the Price Stability
11		Plan, and if such rates are found to be just and reasonable,
12		they shall be permitted to become effective. Further,
13		should the new rates exceed the \$16.00 monthly residential
14		ceiling and applicable business rate ceiling established in
15		the Global Order for the duration of the Pennsylvania USF,
16		the Company is permitted to recover the revenue
17		difference arising from the application of the <u>Global</u>
18		Order rate ceilings from the Pennsylvania USF. By Order
19 20		entered July 15, 2003, at Docket No. M-00021596, et al., the Commission approved modifications to the Global
20 21		Order including a continuation of the USF and an increase
22		of the \$16.00 residential cap to \$18.00.
23 <sup>°</sup>		of the \$10.00 residential cap to \$10.00.
24		(emphasis added).
25		(emphasis autou).
26		
27	Q:	Did you also want to comment on another matter in response to other
28		parties' Direct Testimony in this proceeding?
29	A:	In their Direct Testimony, several witnesses quoted to the Commission Order tha
30		initially instituted the Pa USF or discusses the Pa USF. In my review of their
31		quotes, I determined that a more complete recitation of the Order would be useful
32		I wanted to take this opportunity in rebuttal testimony to provide a fuller context
33		for the quotes.
34		
35	Q:	Please explain.

A: Comcast witness Pelcovits, for example, quoted to the Commission Order instituting the Pa USF by saying "The Commission has recently reiterated that the Pa USF 'is actually a pass-through mechanism .... an exchange of revenue between telephone companies which attempts to equalize the revenue deficits occasioned by mandated decreases in their toll and access charges'." (Comcast at 4). Furthermore, AT&T witnesses Nurse and Oyefusi state in their Direct Testimony that "the Pa USF was established for the *specific purpose* of funding switched access and toll rate decreases." (AT&T at 17, emphasis in original).

A:

#### Q: And what additional context do you think is needed?

The specific sentence immediately proceeding the sentence cited by Comcast from the Global Order provides, for example, that "the USF is a means to reduce access and toll rates for the ultimate benefit of the end-user and to encourage greater toll competition, while enabling carriers to continue to preserve the affordability of local rates." Witnesses Pelcovits, Nurse and Oyefusi failed to mention in this portion of their Direct Testimony that the Pa USF was intended to keep basic local service rates affordable. Instead, these witnesses focus only on the portion of the Global Order that discusses reducing access and toll rates. The entire Commission discussion must be considered.

#### O: Why is the full quote significant?

A: This is significant because, as I have stated in my Direct Testimony, the federal Telecommunications Act of 1996 and Chapter 30 of the Public Utility Code

<sup>&</sup>lt;sup>7</sup> Global Order at 238 (emphasis added).

1		support both the promotion of the competitive provision of telecommunications
2		services and the maintenance, preservation and enhancement of universal service
3		principles. One cannot look solely to promoting competition at any cost without
4		also considering universal service principles.
5		
6	Q:	Do you have any other concerns about parties' quotation of Commission
7		orders in their Direct Testimony?
8	A:	Yes. In Verizon's Direct Testimony of witness Don Price, the witness questions
9		the legality of the Pa USF beyond December 31, 2006 (Verizon at 10). In doing
10		so, Mr. Price fails to recognize that the Commission Order approving the
11		extension of the rate cap from December 31, 2003 to December 31, 2006 as part
12		of the Rural Access Settlement Order specifically provided that the residential
13		rate cap will continue for a <i>minimum</i> of three years. That Order provided no end
14		date. Similarly, the Commission determined in that Order that the Pa USF will
15		"continue beyond December 31, 2003 until a further Commission rulemaking
16		Order determines otherwise." Such a Commission rulemaking Order has not yet
17		occurred.
18 19 20	The I	Determination of the Rate Cap
21	Q:	What is the purpose of this section of your testimony?
22	A:	The purpose of this section of my testimony is to summarize and critically

evaluate the testimony of the other witnesses in this proceeding with regard to

1 .		their recommendations as to whether there should be a rate cap, and if so, what
2		rate cap or benchmark the Commission should adopt.
3	Q:	Please summarize the testimony of Mr. Laffey.
4	A:	Mr. Laffey, on behalf of PTA, asserts that current \$18.00 benchmark should be
5		retained. He justifies this retention by showing that the \$18.00 benchmark is
6		greater than the national average urban rate of \$15.03 and by providing a
7		comparison to Verizon PA rates. Thus, he uses a comparability standard to
8		determine just and reasonable rates for the rural ILEC carriers.
9	Q:	Do you agree with the Mr. Laffey's justification for retaining the \$18.00
10		benchmark?
11	A:	I generally agree with Mr. Laffey's justification for retaining the \$18.00
12		benchmark. The requirement to maintain rural and urban rate comparability is
13		written into the Telecommunications Act of 1996, and other states have used that
14		guideline to provide support to rural carriers. However, there are two issues
15		where I disagree with Mr. Laffey's position.
16	Q:	Please explain.
17	A:	First, I disagree with the way Mr. Laffey determined the Verizon PA density cell
18		3 and 4 rates for the purposes of determining the benchmark. Second, I have
19		asserted that the benchmark should change over time, while Mr. Laffey has not

provided a mechanism that would change the benchmark.

1	Ų:	How did Mr. Lattey determine the verizon PA density cell 3 and 4 rates?
2	A:	Mr. Laffey's calculation of those rates included the cost of Extended Area Service
3		(EAS) unlimited calling rates.
4	Q:	How should the Verizon PA density cell 3 and 4 rates be calculated for the
5		purpose of determining the basic local exchange benchmark?
6	A:	The density cell 3 and 4 rates should only include the usage rates for unlimited
7		local calling. I have provided those rates in Exhibit RL-2 of my Direct
8		Testimony. Those rates are lower than the rates included in Mr. Laffey's
9		testimony. Those rates reflect the basic exchange service rates, and it is only the
10		basic exchange service rate that is limited by the benchmark. I realize that many
11		customers may be paying the EAS rate as well but the Pa USF should only be
12		used to fund access to basic local exchange service, with unlimited local calling,
13		not extended area service. Furthermore, customers also pay a subscriber line
14		charge (SLC) rate and other fees. These other charges and fees are also not part
15		of the rate that is governed by the benchmark. It is necessary to match the rate
16		comparisons to the definition of the rate governed by the benchmark and thus,
17		EAS usage rates should not be used.
18	Q:	Why is it necessary to provide a mechanism that allows the benchmark to
19		change over time?
20	A:	It is necessary to provide a mechanism that allows the benchmark to change over
21		time because the underlying forces that determine the benchmark, comparability

and affordability, change over time. A mechanism that allows the benchmark to change over time would thus maintain the comparability and affordability standards and would save the Commission the time and expense of re-evaluating the benchmark every couple of years. Therefore, if the Commission would adopt Mr. Laffey's recommendation, it would have to return to these issues more frequently. Adopting the recommendations included in my and Mr. Colton's Direct Testimony would allow the Commission to establish a flexible mechanism that would maintain the rural ILEC benchmark at a just and reasonable level for the foreseeable future.

#### O: Please summarize the testimony of Mr. Buckalew.

A:

Mr. Buckalew, on behalf of the OSBA, asserts that any rate cap that might be adopted should meet an affordability standard and a cost standard. He states that the affordability standard should be based on the average of Verizon's urban rates. He also notes that the benchmark should increase because there has been ongoing inflation since the benchmark was first established. Yet, he also notes that inflation should not be used as a rate making standard because ILEC cost of service does not increase with inflation. Finally, he disagrees with the concept of a rate cap because capping one rate in an environment that allows revenue to increase with inflation places the burden of the increased allowed revenue on all other rates that are not capped.

#### Q: How does Mr. Buckalew determine his affordability standard?

i	A:	Mr. Buckalew asserts that the affordability standard should be based on the
2		average of Verizon's urban rates. Mr. Buckalew asserts that this average is
3		approximately \$21.00. Moreover, he asserts that \$21.00 is affordable because it
1		matches the existing benchmark of \$16.00 times the rate of inflation as measured
5		by change in Consumer Price Index (CPI) from September 1999 through July
6		2008.

# Q: Do you have any concerns with Mr. Buckalew's determination of an affordability standard?

A:

Yes. First, his standard is not based on the average of Verizon's urban rates as he asserts. The average of Verizon's urban rates is only \$15.29. To reach his approximate \$21.00 average, he added the Verizon PA SLC to the urban average basic exchange rate. Thus, using his criterion for affordability, the benchmark for local exchanges rates is only \$15.29, not \$21.00. Second, his choice of inflation indices, the CPI, is different from the GDP inflation index used to establish rates in Pennsylvania. The GDP price inflation index increased 25 percent from the third quarter 1999 to the third quarter 2008 as compared to the 30 percent CPI increase. Using that index would result in a \$20 affordability rate in 2008 if one were to follow Mr. Buckalew's methodology.

# Q: Will a cap on the residential rate cause undue discrimination for other rates or ratepayers?

A: A cap on the residential rate will not cause undue discrimination for other ratepayers. The Commission has already placed a cap on one group of non-

competitive ratepayers, those who pay access charges. The result of that cap has been that residential and business rates have either increased faster than inflation or the carriers have banked the allowed rate increases. If the Commission now fulfills its mandate to establish just and reasonable residential basic local exchange rates, another group of customers will be protected from rate increases.

# Q: How can the Commission protect another group of customers without harming the remaining unprotected customers?

A:

In such a situation, in order to allow carriers to recover allowed revenue increases without undue discrimination, the Commission should allow carriers to collect the allowed amount of revenue from the Pa USF. Mr. Buckalew denies the Commission the right to use the Pa USF to maintain just and reasonable rates when he states that "Generalized support programs in today's open market should end. You can't have competition and at the same time provide general subsidies." Mr. Buckalew's assertion is incorrect. Competition will theoretically erode implicit support mechanisms where a company increases its rates in a low cost market to support rates in a high cost market because competitors will enter the low cost market and entice customers away from the carrier providing the implicit subsidies. However, an explicit support mechanism that is charged to all carriers on the basis of their state revenue and designed to provide support to carriers serving rural areas is compatible with open markets.

#### Q: Please summarize Dr. Pelcovits' testimony?

<sup>&</sup>lt;sup>8</sup> Direct Testimony of Allen Buckalew, page 12, lines 5-6.

Dr. Pelcovits, on behalf of Comcast, asserts that the Commission should retain its \$18.00 cap on residential rates. He further states that even if the \$18.00 rate can not be justified on the basis of cost, it may be necessary to retain that rate in order to meet other public policy goals. He also notes that the \$18.00 rate may become less meaningful in the future as customers switch to competitive services and away from non-competitive services. However, he argues against providing any additional Pa USF funding. This requirement, along with the current cap on access charges, means that carriers would have to bank allowed revenue increases or attempt to obtain significant revenue increase from a shrinking portion of their revenue stream. The only way that a carrier could receive additional revenue under Dr. Pelcovits' recommendations, other than to raise rates for optional services like Caller ID and Call Waiting by extreme amounts, would be to file a rate of return case, including a full disclosure of all revenue streams earned by any affiliate company.

#### Q: Do you have any concerns with Dr. Pelcovits' recommendations?

Yes. While I agree with him that the \$18.00 residential rate cap should be maintained, I do not agree that rural carriers should be shut off from obtaining additional funding. His recommendations would deny rural carriers allowed revenue unless or until the legislature changed the current law.

#### Q: Please summarize the testimony of Mr. Price.

A:

<sup>&</sup>lt;sup>9</sup> Direct Testimony of Michael Pelcovits, page 21, lines 9-12.

1	A:	Mr. Price, on behalf of Verizon, asserts that it is not necessary to establish a
2		generic rate cap in this proceeding. It is his understanding that the current rate
3		cap was established to limit the rate re-balancing of access and toll rates that was
4		required in the past, and therefore, the \$18.00 cap is not applicable to the current
5		proceeding. Moreover, he contends that a single rate cap is not applicable
6		because many rural carriers have residential rates below the \$18.00 cap and
7		because some rural carriers have banked their allowed rate increases. In addition,
8		he notes that the ability to increase rates is limited by competition and the Chapter
9		30 rules associated with inflation. Finally, he asserts that, if the Commission
10		wishes to establish a new rate cap, that cap should be no lower than \$21.00.
11	Q:	Do you agree with Mr. Price that the current rate cap is limited to past rate
11 12	Q:	Do you agree with Mr. Price that the current rate cap is limited to past rate re-balancing of access and toll rates only?
	Q: A:	
12		re-balancing of access and toll rates only?
12 13		re-balancing of access and toll rates only?  No. As I noted above, the rate cap is not limited solely to recovering revenue lost
12 13 14		re-balancing of access and toll rates only?  No. As I noted above, the rate cap is not limited solely to recovering revenue lost from reductions in access and toll charges. Instead, future allowed rate increases
12 13 14 15	A:	re-balancing of access and toll rates only?  No. As I noted above, the rate cap is not limited solely to recovering revenue lost from reductions in access and toll charges. Instead, future allowed rate increases that push rates above \$18.00 are offset by Pa USF support.
12 13 14 15	A:	re-balancing of access and toll rates only?  No. As I noted above, the rate cap is not limited solely to recovering revenue lost from reductions in access and toll charges. Instead, future allowed rate increases that push rates above \$18.00 are offset by Pa USF support.  Do you agree with Mr. Price's recommendation that there should not be a

rate cap. Carriers with rates below \$18.00 would be allowed to increase

some carriers are charging less than \$18.00 does not reduce the need for a generic

residential rates as part of an approved rate increase associated with a Chapter 30

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1	revenue case. The fact that some carriers bank allowed revenue increases also
2	does not reduce the need for a generic rate cap. In those cases, the carriers made a
3	business decision to keep their rates below the rate cap. The purpose of the cap is
4	to ensure that rates will never exceed a just and reasonable level. That purpose
5	exists even when some carriers have rates that are less than the cap.

Q: Do you agree with Mr. Price that the Chapter 30 rules that limit rate increases to inflation have been an effective limitation on residential rate increases?

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- No. Chapter 30 limits the overall increase in non-competitive revenue to inflation. However, due to the Commission's decisions prohibiting access charge increases, basic service rates may be increased by amounts significantly greater than inflation. This substantial increase occurs because the two largest non-competitive revenue streams are basic service revenue and access revenue. Given that access rates are not increased, the revenue responsibility associated with the access rates is transferred primarily to basic local service.
  - Q: Do you agree with Mr. Price's assertion that competition offers protection for customers of basic local exchange service?
- 18 A: No. For example, the cable and wireless offerings are generally bundles of local
  19 and long distance service. In the case of a cable provider, the bundle may also
  20 include Internet connection and video service. These bundles may be very
  21 attractive to customers wishing to purchase all of the services offered in
  22 combination but they do not provide protection for the customer that wishes to

purchase a stand-alone basic local exchange service or stand-alone service with a 1 limited amount of long distance and vertical services. 2

#### Do you agree with Mr. Price's recommendation that a new rate cap should 3 O: be no lower than \$21? 4

No. First, Mr. Price based his analysis on the CPI rather than the GDP price A: index used in Chapter 30 revenue cases. Changes in the CPI have been 6 influenced by the extreme fluctuations in the price of gasoline. The average price 7 of gasoline decreased from \$4.14 in July 2008 to \$2.20 in November 2008, and 8 consequently the CPI decreased at annual rate of -10.2 percent. 10 It would. 9 therefore, be unreasonable to base telephone rates on the CPI. As noted above, 10 11 Mr. Buckalew also used CPI to adjust his affordability standard and that adjustment would also be unreasonable due to the volatility of the CPI. Second, 12 even if Mr. Price had relied on the GDP price index, I would disagree with the 13 14 proposition that inflation is the key determinant of the reasonableness of telephone rates. Instead, as I and Mr. Colton have proposed, the reasonableness 15 16 of telephone rates depends on comparability and affordability.

#### Please summarize the testimony of Mr. Nurse and Dr. Oyefusi. Q:

Mr. Nurse and Dr. Oyefusi, panel witnesses on behalf of AT&T, assert that the 18 A: rate cap should be eliminated. In support of their recommendation to eliminate 19 the rate cap, the panel witnesses claim that the any rate cap is arbitrary, that there 20 is no requirement for rates to be affordable, that competition can be relied upon to 21

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<sup>10</sup> http://www.bls.gov/cpi/cpid0811.pdf.

1		maintain reasonable rates, that other state rate caps are higher than the current
2		Pennsylvania rate cap and that customers are moving away from purchasing
3		stand-alone basic service.
4	Q:	Do you agree with the panel witnesses that affordability concerns should be
7	Ų.	·
5		ignored in determining the rate cap?
6	A:	No. As I noted above, the Global Order states: "the USF is a means to reduce
7		access and toll rates for the ultimate benefit of the end-user and to encourage
8		greater toll competition, while enabling carriers to continue to preserve the
9		affordability of local rates."11 Thus, the purpose of the rate cap from its inception
10		has been to maintain affordable local rates.
11	Q:	Do you agree with the panel witnesses that competition can be relied on to
12		maintain just and reasonable rates for basic local service?
13	A:	No. There are three alternative potential sets of providers of basic local service.
14		These are competitive local exchange carriers (CLECs), cable providers and
15		wireless carriers. However, these carriers are not active in the stand-alone local
16		exchange market.
17	Q:	Please explain why CLECs are not actively providing competition in the
18		stand-alone basic exchange market?

19

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A:

For a number of years, CLECs using unbundled network element platforms

(UNE-P) offered a bundle of services that included local exchange service. Thus,

<sup>11</sup> Global Order at 238 (emphasis added).

1		even when they were active in the market place, they generally did not provide
2		stand-alone service. However, since the FCC no longer requires ILECs to provide
3		UNE-P, the largest CLECs, AT&T and MCI, have disappeared from the
4		residential market. Moreover, given that most rural carriers were exempt from the
5		provision of UNEs, it is likely that CLECs offered only very limited service in the
6		service territories of the rural ILECs.
7	Q:	Please explain why wireless service does not provide competition for the
8		stand-alone basic exchange market?
9	A:	Wireless service does not provide competition for the stand-alone basic exchange
10		market because wireless service is a complement rather than a substitute service
11		and because wireless service is substantially more expensive than stand-alone

Q: What is the basis for your claim that wireless is a complement and not a substitute for wireline service?

basic exchange service.

- 15 **A:** The basis for my claim that wireless is a complement to wireline service is that over 58 percent of households continue to purchase and use both services. 12
- 17 Q: Does the existence of households that are wireless only prove that wireless service is a substitute for wireline service?
- 19 **A:** The fact that some households are wireless only supports a claim that wireless 20 service is considered a substitute for wireline service for only those households.

<sup>&</sup>lt;sup>12</sup> Wireless Substitution: Early Release of Estimates from the National Health Interview Survey, July-December 2007, <a href="http://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless200812.htm">http://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless200812.htm</a>.

#### OCA STATEMENT No. 1-S

### BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Investigation Regarding Intrastate Access	)	
Charges and IntraLATA Toll Rates of Rural	)	Docket No. I-00040105
Carriers, and the Pennsylvania Universal	)	
Service Fund	)	

#### SURREBUTTAL TESTIMONY OF DR. ROBERT LOUBE

#### ON BEHALF OF

#### PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

RECEIVED

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PA PUBLIC UTILITY COMMISSION SECRETARY'S BUREAU

February 10, 2009

(Public Version)



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j	I		Introduction and Summary
2	2	Q:	Please state your name and business address.
3	3	<b>A:</b>	My name is Robert Loube. My business address is 10601 Cavalier Drive, Silver
4	4		Spring, Maryland 20901.
4	5	Q:	By whom are you employed and in what capacity?
(	6	<b>A</b> :	I am the Vice President of Rolka Loube Saltzer Associates.
,	7	Q:	Are you same Robert Loube that filed Direct Testimony on December 10,
:	8		2008 and Rebuttal Testimony on January 15, 2009 in this proceeding?
•	9	A:	Yes.
10	0	Q:	On whose behalf are testifying?
1	1	A:	I am testifying on behalf of the Pennsylvania Office of Consumer Advocate
12	2		(OCA).
1:	3	Q:	What is the purpose of your testimony?
1	4	A:	The purpose of my Surrebuttal Testimony is to respond to the Rebuttal Testimony
1:	5		of Mr. Nurse and Dr. Oyefusi (Panel Witnesses) on behalf of AT&T, Rebuttal
1	6		Testimony of Mr. Buckalew on behalf of the Office of Small Business Advocate
1	7		(OSBA), the Rebuttal Testimony of Ms. Londerholm on behalf of the United
1	8		Telephone Company of Pennsylvania LLC d/b/a Embarq Pennsylvania (Embarq)
1	9		and the Rebuttal Testimony of Mr. Price on behalf of Verizon. I will address the

claims made in these testimonies regarding the allocation of common cost and just and reasonable residential rates, the use of the FCC's Synthesis Model, the relationship between competition and universal service, the requirement to increase the Pennsylvania Universal Service Fund (Pa USF), and the use of Verizon's rates to determine the comparability benchmark.

A:

#### Joint and Common Cost Allocation and Just and Reasonable Residential Rates

Q: Please summarize the rebuttal testimony regarding the relationship between joint and common cost allocation and just and reasonable residential rates?

Ms. Londerholm and the Panel witnesses deny the fact that the loop is a joint and common network investment required to provide a number of services. Instead, they would directly assign the loop to local service. Panel witnesses assert that classifying the loop as a joint and common cost is a "tired old argument [that] simply does not have any place in today's telecommunications policy." Ms. Londerholm and the Panel witnesses support that argument based on the alleged primacy of local service. The Panel witnesses further argue that the FCC has held that loop cost should be recovered solely from end-users. The logical conclusion of these premises, that the loop cost should be assigned 100% to local service, is that the local rate should be increased when that rate is below the sum of the total cost of using the network and the fixed loop costs. Moreover, Ms. Londerholm, the Panel witnesses and Mr. Price assert that I believe that the residential rates

<sup>&</sup>lt;sup>1</sup>Panel Witnesses, Rebuttal Testimony, page 17, lines 2-3.

should be no higher than the incremental cost of service, and therefore, that I have not even assigned any of the joint and common cost of the loop to residential customers. They believe that it is impossible for a carrier to be financially viable if zero joint and common costs are allocated to residential customers.

# 5 Q: Do you agree with the assertion that local rates should be equal to the incremental cost of service?

7 A: No. As I discuss further below, local residential rates are generally greater than
8 the incremental cost of service, thus proving that local residential rates are not
9 being subsidized by access revenue.

#### Q: What do you mean by the primacy of local service?

A:

Primacy of local service refers either to the fact that local service was offered first in a historical sense or to the fact that it is the primary service that customers want. For example, the Panel witnesses state "Local loops were an indispensable part of local service before telephone companies even offered long-distance service." In addition, Ms. Londerholm states that "when a customer contacts Embarq for service it is to establish basic local exchange service. Embarq builds loops to provide basic local exchange service. Therefore the cost causation to Embarq for the loop is basic exchange service."

### 19 Q: Do you agree that history should dictate cost of service allocation?

<sup>&</sup>lt;sup>2</sup> Panel witnesses, Rebuttal Testimony, page 16, lines 12-13.

<sup>&</sup>lt;sup>3</sup> Londerholm, Rebuttal Testimony, page 7, lines 9-11.

No. The fact that one service preceded another service does not determine how a carrier is currently building or using a particular facility. It is current usage and current building practices along with the regulatory goals that determine the cost allocation process. With regard to the particular reference to the lack of long distance service, one must remember that long distance has been around for a very long time. As early as 1885, AT&T was created as the Bell System long distance carrier. The Kingsbury Agreement required AT&T to allow non-competing carriers to use its long distance system and the first transcontinental line was established in January 1915. Therefore, while there may be a few loops still in service in Pennsylvania that existed prior to the beginning of long distance, the overwhelming majority of Pennsylvania loops were constructed with the understanding that the loop would provide both local and long distance service.

A:

A:

#### Q: Do you agree that local service is the only cost causer of the local loop?

No. If a service is directly responsible for the additional cost incurred by a carrier, then that service is considered the cost causer of that additional cost. However, the local loop is not directly related to a single service. Instead, the local loop is required to provide many services including local service, long distance service, emergency services, data services such as internet access and more recently video services. If the local loop was not being used to provide these additional services, there would be little need for additional investment, and

<sup>&</sup>lt;sup>4</sup> Neil Wasserman, From Invention to Innovation, Johns Hopkins University Press, 1985, page 18.

<sup>&</sup>lt;sup>5</sup> Letter from N.C. Kingsbury, vice-president of AT&T, to the Attorney General of the United States, December 19, 1913.

<sup>&</sup>lt;sup>6</sup> Steven B. Adams and Orville R. Butler, Manufacturing the Future: A History of Western Electric, Cambridge University Press, 1999, page 2.

the cost of local service would have decreased to cover maintenance and a few line extensions and replacements. However, the local loop is constantly being redesigned to provide additional services. In the early 1980's, the standards for building the local loop were revised to incorporate the carrier serving area standards in order to provide digital services such as ISDN. More recently, bridge taps and load coils are being removed, more remotes are being placed and old remotes are being upgraded in order to provide DSL service and meet Chapter 30 requirements. Verizon is currently deploying its FiOS system that provides voice, data and video over a fiber local loop. Other carriers are also upgrading plant to provide video service. In fact, the very basis of this case, the Chapter 30 rate increases and broadband requirements, confirm that local service is not the only cost causer of the local loop.

O:

A:

Do you agree with Panel witnesses' description of the FCC reforms cited in their footnote 13 on page 16 of their Rebuttal Testimony that local loop costs should be directly assigned to local service?

I disagree. First, the FCC never declared that all loop costs should be included in the cost of local service. The FCC has recognized since <u>Smith v. Illinois</u> and its first Separation Manuals in the 1940's that a portion of the local loop should be assigned to the interstate jurisdiction.<sup>7</sup> That portion is currently 25 percent. Second, while the FCC asserted that Non-traffic sensitive costs should be recovered on fixed rate basis and Traffic sensitive costs should be recovered on a

<sup>&</sup>lt;sup>7</sup> Smith v. Illinois Bell Telephone Co., 282 U.S. 133 (1930). See also, Richard Gabel, Development of Separations Principles in the Telephone Industry, Institute of Public Utilities, Michigan State University Press 1967.

per-minute basis, it never declared that Non-traffic sensitive costs should be recovered only from end-users. Instead, it authorized the recovery of Non-traffic sensitive cost from carriers and through the federal universal service fund along with access charges paid by end-users.

Q:

Q:

A:

#### What was the fixed rated carrier charge that was authorized by the FCC?

The FCC authorized the local exchange carriers to recover common line (loop) costs "through a flat per-line charge (the 'primary interexchange carrier charge,' or 'PICC'), not on the end user, but on the end user's presubscribed interexchange carrier." Thus, the primary concern of the FCC was not who paid, end user or carrier, but how they paid, flat rate or per-minute. Moreover, the obligation of carriers to pay the PICC is similar to the obligation of Pennsylvania carriers to pay state common line access charges.

# What interstate universal service programs support the portion of the local loop that is allocated to the federal jurisdiction?

A: There are two interstate universal service programs that support the portion of the local loop that is allocated to the federal jurisdiction. First, the Interstate Access Support (IAS) program provides support to price cap carriers. As a result of this support, carriers receiving the support made significant reductions in the carrier common line charges and other interstate access charges. Second, the Interstate

<sup>&</sup>lt;sup>8</sup> In the Matter of Access Charge Reform, CC Docket No. 96-262, First Report and Order, FCC 97-158, released May 16, 1997, ¶ 55.

- 1 Common Line Support (ICLS) program provides support to rate of return carriers.
- These carriers were required to eliminate their carrier common line charge.
- 3 Q: Do any Pennsylvania carriers receive support from the IAS program?
- 4 A: Yes. Surrebuttal Exhibit RL-1S shows that Pennsylvania incumbent local
- 5 exchange carriers (ILECs) are projected to receive \$20.2 million in IAS funds in
- 6 2009. Of that amount, Verizon Pennsylvania and Verizon North are scheduled to
- 7 receive \$13.3 million in IAS funds. Thus, in that instance, the end users of other
- 8 carriers are supporting Verizon's local loops.
- 9 Q: Do any AT&T ILECs receive funds from the IAS program?
- 10 A: Yes. Surrrebuttal Exhibit RL-2S shows that AT&T ILECs are projected to receive
- \$12.6 million in IAS funds in 2009. Thus, the end users of other carriers,
- including Pennsylvania end users, are supporting the local loops of AT&T ILECs.
- 13 Q: Do any Pennsylvania carriers receive support from the ICLS program?
- 14 A: Yes. Surrebuttal Exhibit RL-3S shows the Pennsylvania rate-of-return<sup>9</sup> ILECs are
- projected to receive \$24.8 million in ICLS funds in 2009.
- 16 Q: Did you assert that the local residential rates should be equal to the
- incremental cost of service as Mr. Price and Ms. Londerholm contend?

<sup>&</sup>lt;sup>9</sup> The term rate of return ILECs refers to how the carriers are regulated at the federal jurisdiction level. Rate of return carriers are supported via the ICLS funds. These funds are the difference between allowed interstate common line revenues and the interstate common line revenue requirement. See 47 C.F.R. §§ 54.901-54.904.

1 A: No. I have shown in my Direct Testimony that local residential rates are
2 generally greater than the incremental cost of service. This showing proves that
3 local residential rates are not being subsidized by access revenue. It also shows
4 that residential customers of basic exchange service are making a contribution to
5 the joint and common cost of the firms. As such, residential customers are
6 helping to maintain the financial viability of the carriers.

# Q: Do you believe that local residential rates should be equal to the incremental cost of service?

O:

A:

A:

No. It is my opinion that local residential rates should be equal to the incremental cost of service plus a contribution to partially recover the joint and common cost of service. This same basic principle should be applied to all services using the local loop including access charges paid by other carriers. Thus, I agree with the other witnesses that a carrier would not be financially viable if the rates charged for all of its services were equal to the incremental cost of service.

# How should the Commission determine the amount of contribution to joint and common loop costs that should be recovered from residential customers?

A contribution to joint and common cost equals the amount paid by customers above and beyond the incremental cost of service. Accordingly, in this proceeding, that contribution equals the difference between the just and reasonable rate based on the principles of comparability and affordability and the incremental cost of service based on the principle that the loop is not part of the incremental cost of service.

#### Q: Please summarize your points in this section of your testimony.

First, I supported my position that the loop is part of the joint and common cost of the network and cannot be directly assigned to any service, especially not to basic local exchange service. My position is consistent with Chairman Cawley's recent motion that "the Commission has consistently adopted the position that the fixed costs associated with the loop plant and facilities of ILECs should be allocated and recovered by services that utilize the local loop, including the ILECs' intrastate carrier access services." Second, I have refuted the claim that the FCC believes that all loop costs should be recovered only from end users. Third, I agree with the other witnesses that the residential rate should be above the incremental cost of service and that residential customers should contribute to the recovery of loop costs. However, that contribution must be limited by the fact that the residential basic service rate should be no higher than the just and reasonable benchmark.

A:

<sup>&</sup>lt;sup>10</sup> Motion of Vice Chairman James H. Cawley, Docket Nos. C-20077332 and C-20066987 (August 7, 2008) at 3. In addition, in affirming the Commission's <u>Global Order</u> in its entirety, the Commonweath Court also determined that "users of all services, including access, should share in the payment of total network costs, with the cost of the local loop included as an element of that total network." <u>Bell Atlantic Pennsylvania v. Pa.P.U.C.</u>, 763 A.2d 440, 479 (Pa. Cmwlth 2000), subsequent history omitted. Similarly, this Commission has also stated: "We reaffirm our findings in our September 5, 1995 Order at Docket No. L-00950105 that the local loop is a "joint cost", not a direct cost of providing only those services included in the definition of B[asic] U[niversal] S[ervice]. It is used for a variety of services other than BUS and must be allocated among the services which utilize it." Universal Service Investigation, January 28, 1997 Order.

#### The FCC's Synthesis Model

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A:

Q: Please summarize the Rebuttal Testimony of the Panel witnesses, Mr. Price
 and Ms. Londerholm with regard to the use of the FCC's Synthesis Model.

Mr. Price asserts that the FCC developed its Synthesis Model only as tool to compare costs across states and not to evaluate the absolute level of cost for any specific carrier. He also states that the FCC has only used the model for non-rural carriers and thus, it should not be used to estimate the costs of the Rural ILECs. The Panel witnesses also argue that the model was designed for non-rural carriers and it is not appropriate to use the model to estimate the costs for rural carriers. The Panel witnesses assert that, in general, forward-looking costs are expected to be lower than embedded cost. Upon showing that the Rural ILECs' embedded costs are lower than the forward-looking costs, the Panel witnesses assert that the forward-looking results are way off base. Ms. Londerholm asserts that because the FCC's Synthesis model is 10 years old, it has not incorporated recent cost modeling advances and it still uses out-of-date input values. She does admit, however, that "the results of his cost model work can be used for a basic understanding of costs." 11 Yet she warns that "both the methodology and results of Dr. Loube's study give only a cursory understanding of the costs."12

#### Q. For what purpose and how did you use the model?

<sup>&</sup>lt;sup>11</sup> Londerholm, Rebuttal Testimony, page 6, lines 3-4.

<sup>&</sup>lt;sup>12</sup> Id., lines 4-5.

A. The purpose of estimating Rural ILEC cost with the model was to examine the general relationship between loop cost and total cost and to understand whether those costs varied by density. I attempted to run the model for every Rural ILEC. However, because of a large number of data problems, my analysis was restricted to Embarq and Armstrong. The most significant change that I made to the model was to determine customer locations based on street address and geo-coded locations. This type of information is a significant improvement over the information that was available to the FCC and the Rural Task Force. The early customer location data included many addresses based on rural route numbers and post office box numbers. That type of information could not be successfully geocoded. Instead, the FCC and the Rural Task Force had to use a number of assumptions and algorithms to locate a portion of the customers in rural areas.

A:

# Q: Do you agree that the Synthesis Model was designed solely to be used for estimating the non-rural carrier cost?

No. The Synthesis Model was designed to estimate the cost of all carriers. It can estimate the cost of Rural ILECs because there is no model design difference between estimating the cost at the wire center level for a Rural ILEC wire center and estimating the cost at the wire center level for a non-rural ILEC rural wire center. It is important to note that "When the Commission [FCC] determined in May 1997 that universal service support should be based on the forward-looking

<sup>&</sup>lt;sup>13</sup> The Rural Task Force contained representatives from incumbent rural carriers local exchange carriers, rural competitive local exchange carriers, consumers advocates, interexchange carriers, insular areas, state regulation, and other non-LEC participants. See, Federal-State Joint Board on Universal Service Announces the Creation of a Rural Task Force, CC Docket No. 96-45, Public Notices, FCC 98J-1, (Jt. Bd. 1998).

economic cost of constructing and operating the network facilities and functions used to provide the supported services, it is also determined that rural carriers would shift gradually to a forward-looking economic cost methodology."<sup>14</sup>

#### Q: Did the Rural Task Force assert that the model's design was incorrect?

No. The Task Force Reports admits that it "did not explore or analyze the network design, but accepted that the model reasonably meets the forward-looking least cost design criterion." Moreover, the task force "did not attempt to conduct a review of the program logic used in developing the loop cost." Thus, the Rural Task Force concerns are not with the design of the model.

#### Q: What were the concerns of the Rural Task Force?

A:

The concerns of the Rural Task Force were with the results of the method for providing support and with the outputs of the model. The method of providing support associated with the non-rural model was based on the difference between the state average cost and the national average cost. If the state average cost was above 135 percent of the national average, then all carriers in the state were eligible for support and if the state average cost was below 135 percent of the national average, then no carriers in the state would be eligible for support. This criterion is different for the embedded loop support program, where the carrier's cost is compared to the national average cost to determine support eligibility. The

<sup>&</sup>lt;sup>14</sup> In the Matter of Federal-State Joint Board on Universal Service, CC Docket No. 96-45, Fourteenth Report and Order, FCC 01-157, released May 23, 2001, ¶ 4.

<sup>&</sup>lt;sup>15</sup> Rural Task Force, A Review of the FCC's non-rural universal service fund method and the synthesis model for rural telephone companies, Rural Task Force White Paper 4, September, 2000, page 23. <sup>16</sup> Id., page 26.

result of the change in eligibility criterion could be dramatic for an individual carrier. For example, if the state average is \$25 per line and the national average is \$20 per line, then no carrier in that state would receive support because 135 percent of the national average is \$27 line. Thus, a rural carrier that may have a cost of \$90 per line would not be eligible for support. The Rural Task Force estimated that this change in method would reduce the support to rural carriers by \$1.102 billion from \$1.553 billion to \$451 million.<sup>17</sup> The Rural Task Force also stated that outputs of the model did not appear reasonable. The major complaint with the outputs is that the outputs do not match actual attributes of the rural carriers.<sup>18</sup>

### Q: Did you attempt to correct the model for out-of-date inputs?

Yes. I used current cost of loop inputs, current wire center locations and current customer locations as provided by the carriers. I did not update the switching inputs because these inputs were originally based on Rural Utility Service<sup>19</sup> and FCC data, and because it has been my experience, from reviewing proprietary central office cost information in Unbundled Network Element proceedings, that there has been no upward trend in the price of central office equipment.

Q: Do you agree that the Synthesis Model should only be used to compare the cost of service among carriers and not to establish absolute cost levels?

A:

<sup>&</sup>lt;sup>17</sup> Id., page 15.

<sup>&</sup>lt;sup>18</sup> Id., pages 9-10.

<sup>&</sup>lt;sup>19</sup> The Rural Utility Service is part of the United States Department of Agriculture.

1 A: No. On a number of occasions the Synthesis Model (SM) has been used to
2 estimate absolute cost levels. In particular, in the Virginia arbitration
3 proceeding,<sup>20</sup> AT&T proposed and the FCC adopted the use of a modified
4 Synthesis Model (MSM) for the determination of Verizon Virginia Unbundled
5 Network Element rates. In adopting the MSM, the FCC noted:

In most respects, including in particular the model's central design algorithms, the MSM remains the same model as that adopted by the Commission in the universal service proceeding. For example, just as the original SM begins designing outside plant by assuming the existing incumbent wire center locations and by using road surrogate data to locate customers, so does the MSM. Both models then use algorithms to determine efficient outside plant routes to connect the customer locations to the wire center locations. Although the MSM is substantially the same in construct as the underlying SM, AT&T/WorldCom made certain platform and cost inputs changes to the loop module, designed, they assert, to improve the model. The switching and transport module of the MSM, and the calculations contained therein, remain the same as in the SM.<sup>21</sup>

# Q: Do you agree that the forward-looking costs should be lower than embedded cost?

A: No. Forward-looking cost is based on the latest technology and the current prices of inputs. Embedded cost is based on the mix of technology in use and price of inputs at the date of purchase. Forward-looking cost will, in general, be lower than embedded cost if the impact of technological change reduces the cost of

<sup>&</sup>lt;sup>20</sup> The Virginia arbitration proceeding refers to the proceeding in which the FCC established Unbundled Network Rates for Verizon Virginia. In the Matter of Petition of WorldCom, Inc., Pursuant to Section252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon Virginia Inc., and for Expedited Arbitration, Memorandum Opinion and Order, DA 03-2738, rel. August 29, 2003, ¶¶37-57 ("Virginia Arbitration Order").

ld, ¶45, original footnotes removed.

service faster than the impact of inflation on input prices increases the cost of service. With regard to switching and inter-office transport, functions dominated by technological change, forward-looking costs are usually much lower than embedded cost. However, with regard to loop costs, this function may be dominated by structure costs such as digging trenches and placing poles. Structure costs, generally, increase with inflation and are a higher percentage of total cost in rural areas. Thus, for rural loop costs, embedded cost may be higher than forward-looking cost. In addition, embedded cost is based on the actual depreciated rate base. For carriers that have not experienced growth, it is possible that accumulated depreciation is relatively high and thus, the rate base is small. On the other hand, a forward-looking model cost estimate is not impacted by such an investment cycle. Therefore, even if both models generated the same gross investment, if the embedded rate base has been significantly depreciated, the forward-looking cost estimate would be higher than the embedded estimate.

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### O: Do you agree that because the Synthesis Model is 10 years old that your results are misleading?

No. First, I updated many of the data inputs. Second, with regard to model procedures, the Synthesis Model groups customers using a clustering algorithm that is more advanced that recent versions of the Verizon and Embarg proprietary loop models.

O: Do you agree that your cost study work can be used for a basic 22 understanding of cost in this proceeding?

Yes. The purpose of using the Synthesis Model was to show that loop costs are a very high percentage of the total cost of service, and that loop cost increases as density decreases. These general facts were confirmed by my analysis. Thus, when loop costs are counted as joint and common costs, the residential rates are sufficient to cover the incremental cost of residential service. These basic relationships are confirmed not only by my analysis in this proceeding but are also confirmed by the FCC public data and by the Rural Task Force data.<sup>22</sup>

#### Please summarize your points from this section of your testimony.

It is appropriate to use the Synthesis Model to determine a basic understanding of the costs of Rural ILECs in this case. Data sources were updated to include data from specific carriers. I sponsored the Synthesis Model in an attempt to address the Commission's request to provide an economic cost study to support my position. No other party provided an economic cost study, even though the Synthesis Model is available to all parties and Verizon, Embarq and AT&T have their own economic models. The results of running the model confirm the general understanding that loop costs are a very high percentage of the total cost of service, and that loop cost increases as density decreases.

Q:

A:

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<sup>&</sup>lt;sup>22</sup> The Rural Task Force data was prepared by AT&T.

#### Competition

A:

- Q: Please summarize the Panel witnesses' rebuttal testimony with regard to the relationship between competition, just and reasonable rates and universal service.
- The Panel witnesses believe that the establishment of just and reasonable rates is a relic of the monopoly era. They assert that now that competition exists, there is no reason to establish just and reasonable rates or to use universal service funds to support such rates.
- 9 Q: Do you agree that competition has eliminated the need to establish just and reasonable rates?
  - No. First and foremost, the Public Utility Code requires rates to be just and reasonable. Nothing in Chapter 30 has changed that, and I am sure OCA counsel will address that issue in brief. Furthermore, while markets are now open to competition, it has not been shown that rural telephone markets display ubiquitous and effective competition in all markets. This is especially true for the basic exchange service market. There is no evidence presented in this proceeding that any alternative provider is offering a stand-alone basic service. Individuals purchasing that service have only one provider, the ILEC. Moreover, in the rural market for bundles of service that may include basic service, there are generally only two providers of that service, the cable provider and the ILEC. In addition, there is, at most, only a small percentage of customers choosing the wireless bundle over a wireline bundle. Moreover, the rates for those alternative services

1	are generally significantly higher than basic service. Thus, competition cannot be
2	relied on to maintain affordable basic local service at a just and reasonable rate.

Q: In light of these limitations on competition for basic local service, is it still necessary to maintain or enhance universal service funds in the presence of a market open to competition?

Yes. Competitive markets often exhibit market failures. Those failures include a failure to provide discounted rates to low-income households, the failure to invest in broadband facilities in low density areas, and the failure to maintain affordable rates for consumers in general. Thus, in order to fulfill its policy obligations under both state and federal law, I have recommended that the Commission enhance the Pa USF even in the presence of markets that are open to competition.

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#### **Universal Service Requirements**

- Q: Please summarize Mr. Price's arguments regarding the need for continuing and increasing the Pa USF.
- Mr. Price asserts that the fund was a "temporary mechanism that the PUC adopted nearly 10 years ago to replace the revenue from a discrete set of access and toll rate reductions to help the RLECs transition to a competitive market." He emphasizes that the proposed change to the fund will provide an ever increasing burden on contributors. Further, he argues that the USF proposal "would divorce

<sup>&</sup>lt;sup>23</sup> Price, Rebuttal Testimony, page 5, lines 3 to 5.

the RLECs' annual exercise of their revenue increase from the disciplining effect of the market."<sup>24</sup> Finally, he argues that there is no need for additional funds given that Rural ILECs were required to complete their broadband build-out by December 31, 2008.

### Do you agree that the Pa USF was a temporary measure?

O:

A:

No. The Commission has an obligation to maintain affordable and just and reasonable rates. This obligation is part of the universal service mandate that the FCC and this Commission operate under. Both the FCC and this Commission are allowed to establish universal service funds to meet that obligation. Every fund obligates either other carriers or customers of other carriers to support a specified group of carriers or customers. The Commission has chosen to use the Pa USF as policy tool to fulfill that obligation. It should not be a surprise to any witness or party in this case that support funds flow from one group of carriers to another group. That obligation is part of the policy goals of the Pennsylvania legislation and is consistent with decades of federal and state efforts to increase the number of consumers who have access to affordable basic local telephone service. In contrast, the arguments of those who would eliminate the Pa USF in this proceeding could have the effect of reducing the number of consumers who have access to affordable basic local telephone service.

In addition, while the Pa USF was created by the Global Order, it was continued by the approval of unanimous settlement in 2003. It is my understanding that not

<sup>&</sup>lt;sup>24</sup> Price, Rebuttal Testimony, page 8, lines 1-3.

only the Rural Carriers and OCA but also Verizon and AT&T were parties to that stipulation. The Order approving the settlement reads "Our Global Order calls for the Pa USF to expire on December 31, 2003, subject to the provisions of an access charge investigation. However, the Pa USF regulations codified at 52 Pa. Code §§ 63.161-63.171 do not have a sunset provision. The Joint Proposal calls for a continuation of the Pa USF beyond December 31, 2003, until a further Commission Ruling determines otherwise." It is my understanding based on the advice from Counsel that the quoted language confirms that the Pa USF is not temporary and that the current proceeding is, in part, a proceeding that will address the future obligations of the Fund. Furthermore, to the extent that the current Pa USF is a transitional tool, it is a transition to another universal service device, not a transition to no universal service support at all.

# Q: Do you agree that the sole purpose of the Fund is to offset access and toll rate reductions?

A: No. While initially Pa USF has been used in part to offset reductions in access rates, it is my understanding that the Fund is not limited solely to that obligation.

Instead, the purpose of the Fund is to maintain reasonable and affordable basic local rates. If it is necessary to increase the size of the fund in order to maintain reasonable and affordable basic local rates, such an additional obligation is not prohibited.

<sup>&</sup>lt;sup>25</sup> Access Charge Investigation per Global Order of September 30, 1999, Docket Nos. M-00021596, P-00991648, P-00991649, Order, July 10, 2003, page 12 (emphasis added).

# O: Do you agree that your proposed change will lead to an ever increasing Pa USF?

Q:

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A:

I agree that the proposed change may lead to an increase in the support provided by the Pa USF. However, that increase is warranted and the annual increases should become smaller over time. The increase is warranted because it is providing revenue required to maintain just and reasonable rates. The increase will become smaller over time because of mitigating or offsetting trends. Under the proposal, the benchmark will increase once Verizon's weighted average residential rate exceeds \$18.00. As the benchmark increases, basic residential rates may be increased to pay Chapter 30 revenue increases and the impact on the Pa USF will decrease as a result.

#### Should a Universal Service Fund proposal be subject to market discipline?

No. Universal service funds are designed to implement regulatory goals. Universal service funds are not designed to implement market activity. In fact, in many cases, universal service funds correct market failures. At the same time the funds should not lead to waste, fraud or abuse. Thus, it is imperative that the fund solve an immediate problem in an efficient manner. In this case, the problem is that rural residential rates would increase above a just and reasonable level if the Commission does not enhance the current Pa USF. The proposal is efficient because it requires a carrier to increase its rates to the benchmark before that carrier can obtain any additional support.

1	Q:	Did you argue, as Mr. Price suggests, that the Pa USF should be enhanced or
2		a "need basis"?

No. I noted that the Chapter 30 broadband obligation is a non-symmetric obligation placed only on ILECs. I also noted that the impact of that obligation does not stop when the build-out is complete because carriers will have to pay a return on capital and recover the depreciation on the additional plant in the future. Because of this obligation, enhancement of the Pa USF would not harm competition but instead may repair any harm done to competition associated with the non-symmetric broadband obligation because it will bring the rural ILECs back to a level playing field with companies who do not have this obligation in Pennsylvania. My recommended purpose for enhancing the fund is to allow a carrier an opportunity to recover allowed revenue increases in instances when the Commission has disallowed access rate increases and determines that basic service rate increases established by an ILECs<sup>2</sup> Chapter 30 plan need to be moderated to conform with a just and reasonable standard.

A:

#### Comparable Rates

18 Q: Please summarize Mr. Price's and Mr. Buckalew's rebuttal testimony with 19 regard to your proposed comparable rate?

<sup>&</sup>lt;sup>26</sup> Loube, Direct Testimony, pages 27-30.

First, Mr. Price asserts that the Verizon rate should not be used as a comparable rate because Verizon's residential rate did not increase with inflation from 1993 through 2004. Second, Mr. Price clarified Verizon's current tariffs. Third, he believes, given the Verizon proposed rates that will be effective March 1, 2009, that I would support a rate benchmark of \$19.27. Finally, he disagrees with my proposed 120% standard because it is inconsistent with the FCC's use of a comparability standard, noting that the current FCC factor would be 143%. Mr. Buckalew asserts that my recommendation is not reasonable because he believes that it is arbitrary.

A:

A:

Q: Do you agree that the fact that Verizon's rate did not increase with inflation from 1993 through 2004 disqualifies that rate as a comparable rate to be used in determining the rural benchmark in Pennsylvania?

No. Verizon's rate is the standard that should be used in Pennsylvania. The Verizon rate is the rate paid by more residential customers than any other rate in Pennsylvania. The fact that it did not increase with inflation does not matter. Inflation is an average of many prices. Prices of some services and commodities increase faster than inflation, others increase slower than inflation and still other prices decrease. Therefore, there is no a priori reason to assert that the residential rate should increase with inflation. During the 1993 to 2004 period, the rate of change in Verizon's residential basic rate was determined by legislative and regulatory actions. Those actions appear to be based on a relationship between inflation and an offset that was consistent with other price cap mechanisms.

- 1 Moreover, Verizon has not placed into the record of this proceeding any evidence 2 that supports an alternative reasonable price for the period 1993 through 2004.
- 3 Q: Did Mr. Price clarify Verizon's residential rates?
- 4 A: Yes. Mr. Price's rebuttal exhibit 4 provides Verizon's residential rates as of

  January 15, 2009 and the rates that will be effective as of March 1, 2009.

  However, he did not provide the number of customers associated with each cell

  and usage rate. Therefore, it is not possible to determine the precise current weighted average Verizon residential rate based on that information.
- 9 Q: Is Mr. Price correct that, given the March 1, 2009 rates, you would support residential rate benchmark of \$19.27?
- 11 A: No. Mr. Price relied on the residential rate in Cell 1 only to determine his \$19.27

  12 estimate. However, I recommended that the benchmark be the weighted average

  13 of the rates in all four Verizon rate cells. My recommendation relies on the fact

  14 that the relationship between Verizon's rural rates and the rates of the Rural

  15 ILECs should also affect the comparability standard.
- 16 Q: Given the March 1, 2009 rates, what residential comparability rate
  17 benchmark would you recommend?
- I calculated that the comparability rate benchmark to be \$16.40, which is 120% of the appropriate Verizon weighted average rate of \$13.66. Surrebuttal Exhibit RL-4S shows the calculation of the weighted average rate and the comparability rate benchmark. Because Verizon did not update its line counts, I used the line counts

previously provided to weight the rates across Cells. Because the comparability rate benchmark, \$16.40, is less than the current benchmark, I continue to recommend that the Commission retain the current \$18.00 residential benchmark.

# Q: Is it necessary to adopt the same comparability factor as the FCC in order to be consistent with the general principle of comparability?

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A: No. States are not required to adopt exactly the same factor as the FCC but should meet the specific needs of their particular state. As noted in my direct testimony, Maine adopted the Verizon rate without an additive factor. Other states have adopted other guidelines that meet the needs of their particular state. My proposed factor of 120 percent is similar to the program of the other states. I also note that for rural carriers the FCC starts providing support when a carrier's cost exceeds 115% of the national average loop cost.

### Q: Is there any reason not to adopt the FCC's comparability standard?

14 A: Yes. The United States Court of Appeals for the 10<sup>th</sup> Circuit found that the FCC
15 had not sufficiently supported its reasoning for adopting its two standard
16 deviations from the national average proposal.<sup>27</sup> The Appeals Court decision was
17 released approximately four years ago. The FCC has not answered the Court's
18 questions in a remand order. In light of that delay, Qwest Corporation, Maine
19 Public Utilities Commission, Vermont Public Service Board and Wyoming Public
20 Service Commission have filed a petition for a writ of mandamus with the Court

<sup>&</sup>lt;sup>27</sup> Owest Communications International v. FCC, 398 F.3d 1222 (10<sup>th</sup> Cir. 2005).

in an effort to have the Court put an end to the FCC's delay.<sup>28</sup> 1 recommend that this Commission should not adopt the specific FCC proposal 2 3 because the FCC has not been able to establish that its proposal is reasonable. Is Mr. Buckalew correct in describing your recommended benchmark? 4 Q: 5 No. My benchmark is based on a reasonable consideration of the basic rates paid **A**: 6 by Pennsylvania consumers. 7 How would Mr. Buckalew adjust your recommendation? Q: 8 A: Mr. Buckalew provides two ways to change my recommendation. First, he would 9 compare the Rural ILEC rates to the rates offered by competitors. Second, he would adjust the benchmark by adding the basic rate and the federal subscriber 10 11 line charge (SLC) and subtracting Federal loop support. Do you agree with Mr. Buckalew that rates for basic service offered by 12 **O**: competitors-should-be compared the Rural ILEC basic service rate? 13 No. It is not possible to compare these rates because rival providers do not 14 A: 15 provide stand-alone basic service exchange service. Thus, there is no alternative rate that can be used to perform Mr. Buckalew's suggested comparison. 16 Do you agree with Mr. Buckalew that the Commission should consider the 17 0:

SLC and federal universal service support?

<sup>&</sup>lt;sup>28</sup> In the United States Court of Appeals for the Tenth Circuit, In re Qwest Corporation, Maine Public Utilities Commission, Vermont Public Service Board, and Wyoming Public Service Commission, Petitioners, Petition for a Writ of Mandamus to the Federal Communications Commission, January 14, 2009.

A: No. The purpose of this proceeding is to establish a just and reasonable basic local exchange rate. The SLC and federal universal service support are beyond the scope of this Commission's authority and could vary significantly depending on the carrier and the FCC's future findings. Because the FCC could change both the SLC and its support payments, adding these items to the calculation add an element of arbitrariness to the process and decrease the reasonableness of my comparability recommendation. I also note that OCA witness Roger Colton discusses the affordability constraint considerations regarding the SLC and the federal universal service support.

### 10 Q: Does this complete your surrebuttal testimony at this time?

11 A: Yes it does.

#### 12 - 109003

Surrebuttal Exhibit RL-1S

-		No.					Access		Monthly Su	poport Amounts	A THE REAL PROPERTY.	Annual Total
State	ŚAC	Study Area Name	Rural	Туре	. IAS	CERT	Lines	Jan- Mar	Apr-Jun	Jul-Sep	Oct-Dec	Support Amounts
PA	170169	VERIZON NORTH-PA	N	C	Y	Y	410.923	\$ 255,498	\$ 255,498	\$ 255,498		
PA	175000	VERIZON PENNSYLVANIA	N	Ç	Y	Y	3,696,543	\$ 695,713			\$ 695,713	
PA	170149	FRONTIER-BREEZEWOOD	R	Ç	Y	Y	3,947	\$ 6,806	\$ 6,806	\$ 6,806	\$ 6,806	
PA	170152	FRONTIER-CANTON	R	С	Υ .	Y	3,762	\$ 1,795	\$ 1,795	\$ 1,795	\$ 1,795	\$ 21,540
PA ]	170168	FRONTIER-PA	R	C	ΥΥ	Y	22,678	\$ -	\$ -	\$ -	\$	\$
PA		VERIZON N-PA(CONTEL)	R	C	Y	Y	47.768	\$ 158,737	\$ 158,737	\$ 158,737	\$ 158,737	\$ 1,904,844
PA	170178	FRONTIER-LAKEWOOD	R	C	Y	Y	1,391	\$ -	\$	\$ -	\$ -	\$ -
PA .	170194	FRONTIER-OSWAYO RIVR	R	C	Y	Y	2,072	\$ 4,416	\$ 4,416	\$ 4,416	\$ 4,416	\$ 52,992
PĀ	170201	VERIZON N-PA(QUAKER)	R	С	Υ	Y	42,935	\$ 150,141	\$ 150,141	\$ 150,141	\$ 150,141	\$ 1,801,692
PA	170209	EMBARQ (PA)	R	С	Y	Y	296,418	\$ 407,857	\$ 407,857	\$ 407,857	\$ 407,857	\$ 4,894,284
PA	179001	VERIZON BUSINESS GLOBAL LLC	N	X	Y	Y	38,896	\$ 10,518	\$ 10,518	\$ 10,518	\$ 10,518	\$ 126,216
PA	179009	D&E SYSTEMS, INC.	N	X	Y	Y - Y	43,339	\$ 447	\$ 447	\$ 447	\$ 447	
PA	179009	D&E SYSTEMS, INC.	R	X	Y	Y	1,333	\$ 2,191	\$ 2,191	\$ 2,191	\$ 2,191	\$ 26,292
		Verizon ILEC Total						_				\$ 13,319,376
		PA ILEC Total										\$ 20,171,556
		PA Total										\$ 20,329,428
		US ILEC Total										\$ 474,401,304
		US Total								I		\$ 667,642,596

source: USAC FCC Filing, HC 12 -Interstate Access Support, Projected by State by Study Area - 1Q2009

Surrebuttal Exhibit RL-2S

SAC	Study Area	IAS
135200	SOUTHERN NEW ENGLAND	-
305150	OHIO BELL TEL CO	-
315090	MICHIGAN BELL TEL CO	-
325080	INDIANA BELL TEL CO	<u> </u>
335220	WISCONSIN BELL	-
345070	ILLINOIS BELL TEL CO	-
405211	SOUTHWESTERN BELL-AR	76,980
415214	SOUTHWESTERN BELL-KS	496,296
425213	SOUTHWESTERN BELL-MO	•
435215	SOUTHWESTERN BELL-OK	675,528
445216	SOUTHWESTERN BELL-TX	-
545170	PACIFIC BELL	7,794,216
555173	NEVADA BELL	3,537,792
	total	12,580,812

source: USAC FCC Filing, HC 12 -Interstate Access Support, Projected by State by Study Area - 1Q2009

Surrebuttal Exhibit RL-3S

		1	1			1,	Num		Monthly Sup	port Amount 🧠		. Annual Total ~
State	SAC	Study Area Name	Rural	Туре	ICLS	Certified	Loops	Jan - Mar	Apr - Jun	⊿a≋Jul∸Sep ≟a	Oct - Dec	Support Amount
PA	170145	BENTLEYVILLE TEL CO	R	Α	Y	Y	2,735	\$ 15,260	\$ 15,260	\$ 15,260	\$ 15,260	\$ 183,120
PA	170151	BUFFALO VALLEY TEL	R	Α	Y	Ŷ	19,025	\$ 59,851	\$ 59,851	\$ 59,851	\$ 59,851	\$ 718,212
PA	170156	CITIZENS - KECKSBURG	R	Α	Y	Υ	4,559	\$ 25,231	\$ 25,231	\$ 25,231		\$ 302,772
PA	170161	COMMONWEALTH TEL CO	R	A	Υ	Y	271,342	\$ 986,272	\$ 986,272	\$ 986,272		
PA	170162	THE CONESTOGA TEL	R	Α	Υ	Y	49,979					
PA		DENVER & EPHRATA	R	Α	Y	Y	51,713					\$ 1,431,600
PA	170171	HICKORY TEL CO	R	A	Y	Υ	1,310	\$ 10,477				
PA	170175	IRONTON TEL CO	R	Α	Ÿ	Y	5,013					\$ 322,260
PA	170176	WINDSTREAM PA	R	С	Υ	ΥΥ	199,747	\$ 119,583	\$ 119,583		\$ 119,583	\$ 1,434,996
PA	170177	LACKAWAXEN TELECOM	R	C	Y	Y	3,628	\$ 10,223	\$ 10,223		<u> </u>	
PA		LAUREL HIGHLAND TEL	Ŕ	Α	Y	Y	5,513					
PA		MAHANOY & MAHANTANGO	R	C	Y	Y	3,753	\$ 13,703	\$ 13,703			
PA	170185	MARIANNA - SCENERY	R	С	Y	Y	2,278	\$ 20,051				\$ 240,612
PA	170189	ARMSTRONG TEL CO-PA	R	С	Y	Y	1,492	\$ 40,755	\$ 40,755	\$ 40,755	\$ 40,755	\$ 489,060
PA	170191	NORTH EASTERN PA TEL	R	Α	Y	Y	11 393	\$ 65,111	\$ 65,111	\$ 65,111	\$ 65,111	\$ 781,332
PA	170192	NORTH PENN TEL CO	R	C	Υ	Y	5,082	\$ 68,448	\$ 68,448	\$ 68,448		\$ 821,376
PA	170193	NORTH PITTSBURGH TEL	R	Α	Y	Y	59,278	\$ 172,577	\$ 172,577	\$ 172,577	\$ 172,577	\$ 2,070,924
PA		ARMSTRONG TEL NORTH	R	Α	Υ	Ÿ	496	\$ 5,970	\$ 5,970	\$ 5,970	\$ 5,970	\$ 71,640
PA	170196	PALMERTON TEL CO	R	A	Υ	Y	11.698	\$ 55,228	\$ 55 <u>,228</u>	\$ 55,228	\$ 55,228	\$ 662,736
PA	170197	PENNSYLVANIA TEL CO	R	Α	Υ	Υ	1.349	\$ 9,131	<b>\$</b> 9,131	\$ 9,131	\$ 9,131	\$ 109,572
PA	170200	PYMATUNING IND TEL	R	Α	Y	Y	2,189	\$ 19,641	\$ 19,641	\$ 19,641	\$ 19,641	\$ 235,692
PA	170204	SOUTH CANAAN TEL CO	R	Α	Υ	Y .	2,677	\$ 18,231	\$ 18,231	\$ 18,231	\$ 18,231	\$ 218,772
PA	170206	SUGAR VALLEY TEL CO	R	Ç	Υ	Y	1,056	\$ 8,439	\$ 8,439	\$ 8,439	\$ 8,439	\$ 101,268
PA		VENUS TEL CORP	R	Α	Υ	Y	1,288	\$ 9,300	\$ 9,300	\$ 9,300	\$ 9,300	\$ 111,600
PA	170215	YUKON - WALTZ TEL CO	R	A	Υ	Y	862	\$ 8,253	\$ 8,253	\$ 8,253	\$ 8,253	\$ 99,036
PA	170277	WEST SIDE TEL CO-PA	R	Α	Υ	Υ	38	\$ 1,360	\$ 1,360	\$ 1,360	\$ 1,360	\$ 16,320
PA		NPCR, INC.	Ŕ	Х	Υ	Υ	26,558	\$ 82,633	\$ 82,633	\$ 82,633	\$ 82,633	\$ 991,596
		Pennsylvania ILEC Total										\$ 24,817,920
		Pennsylvania Total										\$ 25,809,516
		US ILEC Total							-			1,058,583,864
		US Total										\$ 1,726,714,020

source: USAC FCC Filing, HC 09 -Interstate Common Line Support, Projected by State by Study Area - 1Q2009

### Information Alleged To Be Proprietary Has Been Deleted

Proprietary Surrebutta	al Exhibit RL- 4S: Ver	izon Weighted A	verage Residentia	al Rate		
	zone 1	zone2	zone 3	zone 4	total	
rate	16.06	14.36	13.17	13.57		
residential lines				<u> </u>	Ì	
weighted rate	1				1	
				weighted average	\$	13.66
		-		120 percent	\$	16.40
•						

Source: Price Rebuttal Exhibit 4; Verizon PA's Response to OCA Data Request No. I-2

Information Alleged To Be Proprietary Has Been Deleted

#### OCA STATEMENT No. 2

### BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Investigation Regarding Intrastate Access	)	
Charges and IntraLATA Toll Rates of Rural	)	Docket No. I-00040105
Carriers, and the Pennsylvania Universal	)	
Service Fund	)	

#### **DIRECT TESTIMONY OF ROGER D. COLTON**

#### **ON BEHALF OF**

### PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

RECEIVED

MAR 2 6 2009

PA PUBLIC UTILITY COMMISSION SECRETARY'S BUREAU

**December 10, 2008** 

PENGAD 800-631-6889

1		
2	Q.	PLEASE STATE YOUR NAME AND ADDRESS.
3	A.	My name is Roger Colton. My address is Fisher, Sheehan & Colton, Public Finance and
4		General Economics, 34 Warwick Road, Belmont, Massachusetts, 02478.
5		
6	Q.	BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?
7	A.	I am a principal in the firm of Fisher Sheehan & Colton, Public Finance and General
8		Economics of Belmont, Massachusetts. In that capacity, I provide technical assistance to a
9		variety of federal and state agencies, consumer organizations and public utilities on rate and
10		customer service issues involving telephone, water/sewer, natural gas and electric utilities.
11		
12	Q.	FOR WHOM ARE YOU TESTIFYING IN THIS PROCEEDING?
13	A.	I am testifying on behalf of the Pennsylvania Office of Consumer Advocate (OCA).
14	,	
15	Q.	PLEASE DESCRIBE YOUR PROFESSIONAL BACKGROUND.
16	A.	I work primarily on low-income utility issues. This involves regulatory work on rate and
17		customer service issues, as well as research into low-income usage, payment patterns, and
18		affordability programs. At present, I am working on various projects in the states of New
19		Hampshire, Maryland, Pennsylvania, North Carolina, Ohio, Indiana, Iowa, Colorado, New
20		Mexico, Oregon and Washington. My clients include state agencies (e.g., Pennsylvania
21		Office of Consumer Advocate, Maryland Office of Peoples Counsel, North Carolina
22		Department of Justice, Iowa Department of Human Rights), federal agencies (e.g., U.S.
23		Department of Health and Human Services), community-based organizations (e.g.,
24		Community Action of New Mexico, Coalition to Keep Indiana Warm, Community Action

1		1 attlership of Oregon), and private utilities (e.g., Entergy Services, Chizens Oas and Coke
2		Utilities, Northern Indiana Public Service Company, Tacoma Public Utilities). In addition
3		to state- and utility-specific work, I engage in national work in the United States and
4		Canada. For example, I am currently working on a national study of the responses of water
5		utilities to the payment troubles of residential customers for the American Water Works
6		Association Research Foundation. In 2007, I was part of a team that performed a multi-
7		sponsor public/private national study of low-income energy assistance programs.
8		
9	Q.	PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.
10	A.	After receiving my undergraduate degree in 1975, I obtained further training in both law and
11		economics. I received my law degree in 1981; I received my Masters Degree (economics)
12		in 1993.
13		
14	Q.	HAVE YOU AUTHORED ARTICLES ON PUBLIC UTILITY REGULATORY
15		ISSUES?
16	A.	Yes. I have published more than 80 articles in scholarly and trade journals, primarily on
17		low-income utility and housing issues. I have published an equal number of technical
18		reports for various clients on energy, water, telecommunications and other associated low-
19		income utility issues. A list of my professional publications is included in Attachment RC-1.
20		
21	Q.	HAVE YOU EVER TESTIFIED BEFORE THIS OR OTHER UTILITY
22		COMMISSIONS?

Yes. I have previously testified before the Pennsylvania Public Utility Commission (PUC or Commission) on a variety of low-income energy, water and telecommunication issues over the past 20 years. On telecommunications issues, I testified on behalf of the Pennsylvania Utility Law Project (PULP) in the Global Order proceeding in 1999. More recently, I worked with the OCA in the 2007 proceeding regarding the inter-action between the Pennsylvania Lifeline program and the sale of basic local telecommunication services as part of a bundle of services. I have served as the consultant to the National Association of State Utility Consumer Advocates (NASUCA) on issues pending before the Federal Communications Commission (FCC) regarding universal service price supports as well as regarding Lifeline and Link-up service.

Α.

Overall, I have testified in regulatory proceedings in more than 30 states and various Canadian provinces on a wide range of low-income water, telecommunications and energy issues. Proceedings in which I have previously appeared as an expert witness are listed in Attachment RC-1.

#### O. PLEASE EXPLAIN THE OBJECTIVE OF YOUR TESTIMONY.

A. My testimony is designed to respond to Issue 2(b) in the Pennsylvania PUC's April 9,
2008 order commencing this proceeding. The Commission's Order specifically provides
that "the reopened investigation should address the appropriate benchmark for the rural
ILEC residential rate for basic local exchange service taking into account the statutory
requirements for maintaining and enhancing universal telecommunications service at

<sup>&</sup>lt;sup>1</sup> Re. Nextlink Pennsylvania, Inc., Docket No. P-00991648; P-00991649, 93 PaPUC 172 (September 30, 1999) (Global Order).

affordable rates." My testimony addresses the affordability requirements of the April 9, 2008 Order.

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Moreover, the Commission's April 9, 2008 Order was issued within the policy framework established by statute. It is Pennsylvania policy to "(2) Maintain universal service at affordable rates..., (3) Ensure that customers pay only reasonable charges for protected services which shall be available on a nondiscriminatory basis." (66 Pa.C.S. § 3011(2), (3)). Other provisions of Section 3011 require that "the provision of universal telecommunications service at affordable rates" not be jeopardized by other goals. (66 Pa.C.S. § 3011(8),(12)). Section 254(b) of the Federal Telecommunications Act requires that local rural telephone rates be affordable and reasonably comparable with urban rates. (47 USC § 254(b)). These two tests are not at odds with each other. The affordability analysis that I present below is based on the proposition that rural telephone rates should be reasonably comparable to non-rural rates within an affordability constraint. This construct allows local rural rates to be reasonably comparable to non-rural rates so long as meeting that test does not result in unaffordable bills. OCA witness Loube will address the comparability of rates. The objective of my testimony is to determine the point at which local telephone rates become unaffordable.

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### Q. WHAT IS THE PURPOSE OF IMPOSING THE AFFORDABILITY

#### **CONSTRAINT?**

A. The purpose of imposing an affordability constraint on local rural telephone rates is to advance the statutory directive that local rates be sufficiently affordable so as to maintain

1		and enhance universal service. I examine the extent to which basic telephone service at
2		affordable rates is available to all customers in their homes.
3		
4	Q.	WHY IS IT IMPORTANT TO IMPOSE AN AFFORDABILITY CONSTRAINT IN
5		ORDER TO ADVANCE UNIVERSAL TELEPHONE SERVICE?
6	A.	Inability to obtain affordable, accessible telephone service can create life-threatening
7		situations for the poor. Frequently, the most important problem arising from the lack of
8		access to telephone service is the denial of access to agencies and institutions that can
9		provide help. For example, a frequently cited danger that results from lack of telephone
10		service involves access to timely medical attention.
11		
12		The lack of telephone service can generate other life-threatening results as well.
13	,	Consider, for example, the impact of the lack of telephone service on the deadly nature of
14		home fires. Aside from low-income status being associated with an increased incidence
15		of home fires generally, it is associated with <u>deadly</u> fires as well. According to the
16		National Fire Prevention Association (NFPA), the lack of telephone service is one of the
17		poverty-related causes of increased fire fatalities. A 1996 study by the NFPA found that
18		"without a telephone, the chance of a delay in alarm when reporting a fire to the fire
19		department increases." <sup>2</sup> This problem also affects the neighbors of the low-income
20		customer that does not have telephone service as their home may be affected by the
21		spread of a fire if the fire company is not called quickly enough.
22		Lack of access to a telephone jeopardizes access to public assistance programs as well.

Work that I have performed looking at the causes of non-participation in LIHEAP has

identified "inability to contact" the program as one leading reason why people do not apply for this federal energy assistance. Because of changes in the way that social service providers are doing business, these no-phone consumers are being denied equal access to critical social services, such as fuel assistance. As budget cuts have eliminated staffs, and as technological developments have introduced new, less staff intensive methods of contact, social service providers across the country are depending more on the telephone in providing services. Outreach, consultation and, increasingly, intake and referral functions are being conducted over the phone for a host of essential services including energy assistance.

Finally, the lack of telephone service is a significant barrier to employment. The types of employment low-income households obtain often involve jobs offered and accepted via telephone. Moreover, hourly wage employees frequently receive information about when they might work on a daily or weekly basis. In such circumstances, having access to telephone service is critical to their ability to earn wages.

# Q. IS THE LACK OF TELEPHONE SERVICE A PROBLEM EXCLUSIVE TO THE POOR?

A. No. Access to telephone service is seen as an important tool to avoid social isolation for many people, whether or not those individuals are poor. The elderly in particular suffer more acutely from social isolation problems, often compounded by their physical isolation.

<sup>&</sup>lt;sup>2</sup> "Burning Issues," NFPA Journal, at 104 (January/February 1996).

#### IS LOCAL TELEPHONE SERVICE OF PARTICULAR BENEFIT TO RURAL 1 Q. 2 **CUSTOMERS?** 3 Yes. The increased driving distances for rural households for local services, from health A. care to banking to accessing public assistance, makes the ability to substitute (or 4 5 complement) in-person contact with telephone contact even more important. 6 7 Q. WHAT IS THE FIRST MEASURE OF UNIVERSAL SERVICE THAT YOU 8 HAVE EXAMINED? 9 I have examined telephone penetration rates in Pennsylvania over the last several years. Α. 10 WHAT CAN TELEPHONE PENETRATION RATES TELL ABOUT 11 Q. UNIVERSAL SERVICE AND THE AFFORDABILITY OF BASIC LOCAL 12 **SERVICE IN PENNSYLVANIA?** 13 The FCC regularly tracks changes in the telephone penetration rate by state and across 14 A. the nation based on surveys conducted by the U.S. Census Bureau. In 1997, the FCC 15 recognized that "subscribership levels provide relevant information regarding whether 16 consumers have the means to subscribe to universal service and, thus, represent an 17 important tool in evaluating the affordability of rates." However, the FCC also noted 18 that telephone "subscribership levels do not address the second component of 19 20 affordability, namely whether paying the rates charged for the service imposes a hardship

<sup>&</sup>lt;sup>3</sup> Telephone penetration rates include all form of telephony service, wireline, wireless and other. See Belinfante, Telephone Subscribership in the United States (Data through March 2008) at 2 (rel. Aug. 2008) ("Telephone Subscribership Report"). Available at <a href="http://hraunfoss.fcc.gov/edocs\_public/attachmatch/DOC-284923A1.pdf">http://hraunfoss.fcc.gov/edocs\_public/attachmatch/DOC-284923A1.pdf</a>. <sup>4</sup>In the Matter of the Federal-State Joint Board on Universal Service, Report and Order, 12 FCC Rcd 8776, ¶ 112 (rel. May 8, 2007) ("1997 Universal Service Report").

for those who subscribe."<sup>5</sup> Both the FCC "and states should use subscribership levels
and certain other non-rate factors, to identify those areas in which the area designated for
support may not be affordable."<sup>6</sup>

5 Q. BASED ON THE FCC'S TELEPHONE SUBSCRIBERSHIP REPORTS,

PENNSYLVANIA'S 2007 TELEPHONE PENETRATION RATE WAS 97.0%.7

WHY IS MORE ANALYSIS NEEDED?

A. First, the 97.0% telephone penetration rate reflects that 3% of Pennsylvania households did not have any telephone service in their house, apartment, or living area. Given roughly 4.9 million households in Pennsylvania, this translates to nearly 150,000 households without telephone service in Pennsylvania. Even for those households with telephone service, maintaining basic telephone service may impose an economic hardship. Second, the FCC Telephone Subscribership Report just reports on the telephone penetration rate for Pennsylvania as a whole. While the FCC Report provides an adequate basis upon which to make nationwide and state-by-state changes, the state-level data reported by the FCC does not provide the intra-state detail needed to consider rural affordability for Pennsylvania.

Q. HOW HAVE YOU EXAMINED THE EXTENT TO WHICH PENNSYLVANIA
HAS MAINTAINED OR ENHANCED UNIVERSAL TELEPHONE SERVICE?

<sup>&</sup>lt;sup>5</sup> Id., ¶ 113.

<sup>6</sup> Id

<sup>&</sup>lt;sup>7</sup> Telephone Subscribership Report at 22. From 2004 to 2006, the annual average telephone penetration rate for Pennsylvania was 95.6%, 95.6%, and 96.3%, respectively.

1	A.	I have examined the change in telephone penetration rates in different parts of
2		Pennsylvania between 2000 and 2006. The data upon which I rely is provided by the
3		U.S. Census Bureau. Since the Census Bureau does not publish data on a county-wide
4		basis for all counties between the decennial Censuses, I have examined data for
5		Pennsylvania's Public Use Microdata Areas (PUMAs). <sup>8</sup> The 2000 data is taken from the
6		Decennial Census. The 2006 data is taken from the Census Bureau's 2006 American
7		Community Survey (ACS).9

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#### Q. WHAT DOES THIS DATA SHOW?

Between 2000 and 2006, the penetration of telephone service in Pennsylvania decreased 10 Α. in a substantial part of the state. While in 2000, telephone penetration equaled or 11 12 exceeded 95% in 91 of Pennsylvania's 92 PUMAs for all income levels, in 2006, telephone penetration equaled or exceeded 95% in only 69 PUMAs. Many of those 13 PUMAs where penetration fell below 95% are in the southeastern region of 14 Pennsylvania, taking in populations in Philadelphia, Delaware, Bucks, Lancaster, York, 15 and Montgomery Counties. Of the eight rural PUMAs with telephone penetration less 16 than 95%, five are in rural counties in west and west central Pennsylvania counties 17 (Mercer, Butler, Indiana, Cambria, Greene). The other three are in rural counties in 18 central Pennsylvania (Centre, Perry, Schuylkill). 19

<sup>&</sup>lt;sup>8</sup> Data from the American Community Survey is available on-line through use of the U.S. Census Bureau's "DataFerrett" database. The DataFerrett software may be downloaded at the following web site: http://dataferrett.census.gov. Pennsylvania is comprised of 92 PUMAs. Some, but not all, are limited to specific counties.

<sup>&</sup>lt;sup>9</sup> The 2006 ACS data is the most recent, available data. Data from the 2007 ACS is not yet published. As noted above, the FCC *Telephone Subscribership Report* only provides data at the statewide level for after 2006.

The penetration rate for low-income households is even lower. Telephone penetration for households with income less than \$20,000 exceeded 95% in only 60 of Pennsylvania's PUMAs in 2006. Consistent with the above data, the rural counties with PUMAs having less than a 95% penetration level for households with income less than \$20,000 are concentrated in the west and southwestern regions of Pennsylvania (Greene, Somerset, Bedford, Cambria, Indiana, Butler, Mercer, Venango), with others located throughout the state, including the northern tier (Clearfield, Perry, Union, Schuylkill, McKean, Bradford).

In 30 Pennsylvania PUMAs, the residential telephone penetration dropped by 3% or more from 2000 to 2006. While most of that decrease in penetration rates occurred in the southeastern part of the state, seven PUMAs with substantial decreases in telephone penetration represented rural counties. In an <u>additional</u> 23 PUMAs, residential telephone penetration dropped by more than 2% and less than 3% between 2000 and 2006. Again, seven of these PUMAs represented rural counties throughout Pennsylvania.

# Q. HOW DOES THIS DROP IN TELEPHONE PENETRATION MANIFEST ITSELF IN PENNSYLVANIA'S RURAL AREAS?

A. The Center for Rural Pennsylvania defines an area to be "rural" when there is a population density of 274 persons (or fewer) per square mile. In Pennsylvania, 48 of the 67 counties are deemed to be "rural," with nearly 3.4 million residents living in these

<sup>&</sup>lt;sup>10</sup> Center for Rural Pennsylvania, Newsletter (March/April 2006). The Center reported: "In 2003, the Center for Rural Pennsylvania's Board of Directors adopted a definition of rural to guide its legislative mandate of research and database development. This definition identifies rural counties, school districts, and municipalities using population

counties (at the time of the 2000 Census). Schedule RDC-1 presents the PUMAs for which a drop in telephone penetration of 2% or more occurred from 2000 to 2006. In this Schedule, I have indicated the county represented by the PUMA and whether the county is classified by the Center for Rural Pennsylvania as a "rural" county in Pennsylvania.

A.

#### Part 1. Measuring "Affordability" in Pennsylvania.

# Q. PLEASE EXPLAIN WHAT YOU MEAN BY AN "AFFORDABLE" TELEPHONE RATE.

When considering the "affordability" of residential telephone rates, I use the definition of affordability that was adopted by the Federal Communications Commission (FCC) in its implementation of Section 254(b)(1) the Telecommunications Act of 1996. Under that federal statute, Congress articulated the national policy that telecommunications services be available and affordable to all households, including to low-income customers. In implementing Section 254(b)(1), the FCC noted that the concept of "affordability" has two components to it, an absolute component and a relative component. The absolute component references whether a household has the ability to obtain the service at all. The relative component references whether a household has the ability to obtain the service without serious detriment to the household. Both aspects of affordability should be considered in considering whether rural telephone service is affordable in Pennsylvania.

density, or the number of persons per square land mile." While legislation to codify this definition of "rural" was introduced in 2006 (House Bill 2347; Senate Bill 1083), that legislation was not acted upon.

<sup>&</sup>lt;sup>11</sup> The Pennsylvania counties deemed to be "urban" include: Erie, Beaver, Allegheny, Westmoreland, Cumberland, Dauphin, York, Lebanon, Lancaster, Berks, Chester, Luzerne, Lackawanna, Northampton, Lehigh, Bucks, Montgomery, Delaware and Philadelphia.

<sup>&</sup>lt;sup>12</sup> Some PUMAs represent partial counties; that is indicated where applicable.

<sup>&</sup>lt;sup>13</sup> 1997 Universal Service Report and Order, ¶ 110.

#### 2 Q. PLEASE DESCRIBE THE TYPICAL WAY IN WHICH THE

#### "AFFORDABILITY" OF PARTICULAR HOUSEHOLD EXPENSES ARE

4 **DETERMINED.** 

The generally-recognized mechanism for measuring the "affordability" of household expenses involves assessing the "burden" which those expenses impose on a household as a percentage of income. This is certainly true with respect to shelter costs. Shelter costs include costs for housing and utilities.

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#### Q. HOW IS THE AFFORDABILITY OF HOME ENERGY COSTS MEASURED?

11 The affordability of home energy costs is measured by examining the burden which those A. 12 energy costs impose on a household as a percentage of income. The notion of measuring affordability by examining bills as a percentage of income is familiar in Pennsylvania. 13 The Pennsylvania Public Utility Commission (PUC) has adopted the Customer 14 Assistance Program (CAP) as a mechanism for energy utilities to deliver rate 15 affordability assistance to low-income customers. In specifying the design of these 16 17 natural gas and electric CAP programs, the PUC has directed that the programs should be 18 designed to reduce home energy bills to an affordable percentage of income (within a 19 budget constraint). Different burdens have been prescribed by the PUC depending upon 20 whether a customer has natural gas heating with electricity, all electric service, or electric 21 service with an unregulated source of home heating fuels (e.g., fuel oil, propane).

The notion of measuring home energy affordability by reference to home energy burdens (bills as a percentage of income) is not unique to Pennsylvania. Other states operating home energy affordability programs (e.g., New Jersey, Maine, Ohio, Utah) explicitly tie their programs to the achievement of an affordable percentage of income. Even in those states that do not explicitly incorporate percentage of income objectives, programs have implicitly incorporated the goal of achieving an affordable home energy burden. The New Hampshire and Indiana "tiered rate discount" programs, for example, both devise the level of their tiered discounts based on the percentage of income burden that the discount generates for customers.

Moreover, even the federal Low-Income Home Energy Assistance Program (LIHEAP) takes home energy bills as a percentage of income into account. Pursuant to the federal LIHEAP statute (42 USC §8621), that federal fuel assistance program authorizes the Secretary of Health and Human Services "to make grants... to States to assist low-income households, particularly those with the lowest incomes, that pay a high proportion of household income for home energy, primarily in meeting their immediate home energy needs." After defining "home energy burden" to mean "the expenditures of the household for home energy divided by the income of the household," Congress directed that "the highest level of assistance will be furnished to those households which have the lowest incomes and the highest energy costs or needs in relation to income, taking into account family size." (42 USC §8624).

Ω	HOW IS THE	<b>AFFORDARII</b>	ITY OF WATI	ER/WASTEWAT	'FR SERVIC
	114774 13 1111	AFFUNIADE	4	r, 18,7 v v es. 3 i r. v v es r	r K or Kvii.

#### DETERMINED?

The affordability of water and wastewater (sewer) service is determined based upon a consideration of water/wastewater burdens (*i.e.*, bills as a percentage of income). The issue of affordability arises in the water industry when considering the affordability implications of complying with safe drinking water directives. According to the National Drinking Water Advisory Council's (NDWAC) Small Systems Working Group, "utility bills have a regressive effect with respect to the distribution of household incomes; households at lower income levels must devote a greater percentage of their income to utilities than households at higher income levels. It can be argued that at higher income levels, consumers can afford to pay not only a higher total water bill but a higher percentage of their income toward water utility payments."<sup>14</sup>

A.

A two percent (2%) water/wastewater burden was used by the Environmental Protection Agency (EPA) in its 1993 assessment of the affordability of water/wastewater service. More recently, NDWAC reports that different states have adopted different "affordability criteria" to use in determining whether a water system is eligible for grant and loan assistance to help with compliance with the federal Safe Drinking Water Act (SDWA). NDWAC reports that New York, Idaho, Washington state, Maine and Maryland all base their affordability criteria on a percentage of income between 1% and 2%.

National Drinking Water Advisory Council (NDWAC), Small Systems Working Group (January 2003).
 Information to States on Affordability Criteria, US. Environmental Protection Agency: Washington D.C.
 Environmental Protection Agency (1993). Affordability of the 1986 Amendments to Community Water Systems, U.S. Environmental Protection Agency: Washington D.C.

Other states have set similar standards. New Hampshire uses an affordability index that is
calculated by dividing the estimated user rate by one percent (1.0%) of the median
household income for the community. Oregon sets the affordable drinking water rate at
1.75% of median household income for the area (city/county) in which the water system
resides. South Carolina sets its definition of drinking water affordability as a target user
rate of at or below 1.4% of the median household income for the community. In fact, the
U.S. General Accounting Office (GAO) observed in 2002 that:

Of the 31 states with a disadvantaged community program, 27 have adopted criteria that consider local water rates, often in conjunction with a community's median household income. For example, seven states have determined that a community qualifies as "disadvantaged" if its water rates are at least 1 percent of its median household income. Another 11 states have established thresholds for local water rates ranging from 1.25 to 2 percent of median household income. The remaining nine states use different thresholds depending on the community's median household income or a formula that considers other factors. <sup>16</sup>

In 2002, the Environmental Economics Advisory Committee of the U.S. Environmental Protection Agency's (EPA) Science Advisory Board (SAB) was asked to review the current standard for affordability determinations made by the EPA for SDWA compliance. The EPA had determined that clean water compliance technologies were unaffordable if they resulted in rates that exceeded 2.5% of state household median income.<sup>17</sup>

# Q. WHAT DOES PENNSYLVANIA USE TO MEASURE THE AFFORDABILITY OF WATER?

<sup>&</sup>lt;sup>16</sup> GAO (January 2002). Drinking Water: Key Aspects of EPA's Revolving Fund Program Need to be Strengthened, at 16, General Accounting Office: Washington D.C.

Under the federal Safe Drinking Water Act amendments of 1996, Congress created the Drinking Water State Revolving Fund (DWSRF) to help fund the construction and upgrade of safe drinking water treatment facilities by local governments. The federal law provides that each state may allow "disadvantaged communities" to borrow money from the Fund with longer payback terms and possible principal forgiveness. Under the provisions of the Safe Drinking Water Act, states have the discretion on how to define a "disadvantaged community."

A.

Pennsylvania is one of roughly 30 states that has chosen to adopt such "disadvantaged community" provisions. In implementing the "disadvantaged community" provisions, The Pennsylvania Infrastructure Development Authority (PENNVEST) has determined that affordability is to be measured by assessing whether the "target service charge" exceeds an annual burden (bill divided by income) of between one percent (1%) and two percent (2%) depending on the socioeconomic condition of the community.

### Q. ARE YOU FAMILIAR WITH THE RECENT WORK OF PENNSYLVANIA'S SUSTAINABLE WATER INFRASTRUCTURE TASK FORCE?

A. Yes. Governor Edward G. Rendell created the Sustainable Water Infrastructure Task

Force through Executive Order 2008-02. The Task Force was charged with addressing
the financing issues associated with the fact that Pennsylvania is facing nearly \$11 billion
in unmet drinking water infrastructure needs and at least \$7.2 billion in unmet wastewater
infrastructure needs, plus millions of dollars more in ongoing operation and maintenance

<sup>&</sup>lt;sup>17</sup>Environmental Protection Agency (February 1998). *Information for States on Developing Affordability Criteria for Drinking Water*, U.S. Environmental Protection Agency: Washington D.C.

1 costs. The final report of that Task Force found that water and wastewater rates could 2 each be affordable at 1.5% of the community's median income. According to the November 1, 2008 final report, "...spending a total of 3% of median household income 3 on water services is considered affordable by economists...<sup>18</sup> 4 5 6 HOW IS THE AFFORDABILITY OF HOUSING COSTS DETERMINED? O. 7 Households are considered to be over-extended if they pay more than 30% of their A. 8 income toward their shelter costs. "Shelter costs" include not only rent and mortgage payments, but include home utilities as well (excepting telephone). <sup>19</sup> 9 10

Throughout HUD's affordable housing programs, the term "cost burden" is a term of art.

It is defined as the percentage of household income spent for mortgage costs or gross rent. According to HUD programs, households spending more than 30 percent of income for these housing costs are considered to be "cost-burdened." Households spending more than 50 percent are considered to be "severely cost-burdened."

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This 30-percent standard is generally accepted. Consider, for example, the annual survey of housing affordability published by the National Low-Income Housing Coalition (NLIHC).<sup>21</sup> NLIHC describes the contents of its report as follows: "For each jurisdiction, the report calculates the amount of money a household must earn in order to afford a

<sup>&</sup>lt;sup>18</sup> Governor's Sustainable Infrastructure Task Force (November 1, 2008). Creating a Sustainable Solution for Pennsylvania: Governor's Sustainable Infrastructure Task Force Report, at iii – iv, Pennsylvania Department of Environmental Protection: Harrisburg (PA).

<sup>&</sup>lt;sup>19</sup> See e.g., 24 CFR §5.100 (2008).

<sup>&</sup>lt;sup>20</sup> See, e.g., 24 CFR Subtitle A, Section 91.5 (definition of "cost burden").

<sup>&</sup>lt;sup>21</sup> National Low-Income Housing Coalition (annual). Out of Reach: Why Everyday People Can't Afford Housing, NLIHC: Washington D.C.

rental unit at a range of sizes (0, 1, 2, 3, and 4 bedrooms) at the area's Fair Market Rent
(FMR), based on the generally accepted affordability standard of paying no more than
30% of income for housing costs." <sup>22</sup> That "generally accepted standard" of 30% of
income for total shelter costs is mandated by the Cranston Gonzalez National Affordable
Housing Act. <sup>23</sup>

The Community Planning and Development (CPD) bureau with the U.S. Department of Housing and Urban Development explains the rationale for the 30% threshold. HUD's CPD states that "The generally accepted definition of affordability is for a household to pay no more than 30 percent of its annual income on housing. Families who pay more than 30 percent of their income for housing are considered cost burdened and may have difficulty affording necessities such as food, clothing, transportation and medical care."<sup>24</sup>

# Q. DOES PENNSYLVANIA USE THESE PERCENTAGE OF INCOME HOUSING BURDENS TO DEFINE HOUSING AFFORDABILITY?

A. Yes. In implementing state affordable housing initiatives funded through federal programs such as the federal Home Investment Partnership Program (HOME), the Low-Income Housing Tax Credit (LIHTC), and the Community Development Block Grant (CDBG), among others, Pennsylvania adopts this 30% affordability standard.

#### Q. WHAT DO YOU CONCLUDE?

<sup>&</sup>lt;sup>22</sup> http://www.nlihc.org/oor/oor2008 (accessed July 19, 2008).

<sup>&</sup>lt;sup>23</sup> See. 42 U.S.C. 812745.

<sup>&</sup>lt;sup>24</sup> http://www.hud.gov/offices/cpd/affordablehousing/ (accessed September 17, 2008).

1	A.	My conclusion here is not that any particular percentage of income level is appropriate by
2		which to measure the affordability of home energy, water service, or housing costs.
3		Rather, I find simply that in each instance, the affordability of the particular service at
4		issue was measured by reference to household burdens, i.e., bills as a percentage of
5		income. I conclude that, in deciding upon the affordability of basic local telephone
6		service, it would also be appropriate to establish that affordability threshold by reference
7		to a percentage of income. This is not simply an academic discussion. Pennsylvania uses
8		burdens (i.e., bills as a percentage of income) to distribute hundreds of millions of dollars
9		through home energy, water, and housing affordability programs.

Q.

Α.

# HAS A PERCENTAGE OF INCOME BURDEN EVER BEEN DISCUSSED AS A MEASURE OF AFFORDABILITY FOR TELEPHONE SERVICE?

Yes. In the 1997 Universal Service Order, the Federal Communications Commission specifically referenced the use of a percentage of income approach in assessing the "affordability" of local telephone service. The "relative component" of affordability, the FCC said, "takes into account whether consumers are spending a <u>disproportionate</u> amount of their income on telephone service." (emphasis added). The FCC continued on to note that "subscribership levels do not reveal whether consumers are spending a <u>disproportionate amount of income</u> on telecommunications services." (emphasis added). desproportionate amount of income on telecommunications services." (emphasis added).

<sup>&</sup>lt;sup>25</sup> 1997 Universal Service Order ¶ 110.

<sup>&</sup>lt;sup>26</sup> Id., ¶ 113.

1		Part 2. The Local Telephone Service Affordability Threshold.
2	Q.	PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR
3		TESTIMONY.
4	A.	In this section of my testimony, I propose an affordability threshold for basic local
5		telephone service. Not only do I articulate the affordability threshold as a percentage of
6		income, but I explain the derivation of the percentage of income threshold.
7		
8	Q.	WHAT PERCENTAGE OF INCOME DO YOU USE TO DEFINE AN
9		"AFFORDABLE" LOCAL TELEPHONE BILL?
10	A.	For all of the reasons I outline below, I have determined that a local rural telephone bill is
11		affordable if it does not exceed 0.75% of Pennsylvania's rural median household income.
12		
13	Q.	HOW DID YOU DERIVE YOUR PERCENTAGE FIGURE?
14	A.	I derive the affordable local telephone percentage of income through application of a
15		market basket methodology. The market basket methodology is the accepted mechanism
16		for assessing the affordability of household expenses in Pennsylvania. Through a market
17		basket approach, I assess telephone expenditures in light of both total household income,
18		and total household expenditures on other household necessities.
19		
20	Q.	UPON WHAT DO YOU BASE YOUR CONCLUSION THAT A MARKET
21		BASKET APPROACH IS THE MOST APPROPRIATE BASIS UPON WHICH
22		TO ASSESS THE AFFORDABILITY OF BASIC HOUSEHOLD SERVICES?

1	A.	I begin my analysis with the proposition that the Pennsylvania PUC should, to the extent
2		practicable, use a methodology that is consistent with the methodology used by other
3		Pennsylvania state government agencies to assess the affordability of basic household
4		necessities. Accordingly, I used two primary sources of data. On the one hand, I
5		examined the Self-Sufficiency Standard in Pennsylvania. <sup>27</sup> The 2008 Self-Sufficiency
6		Standard was published as a cooperative effort between PathwaysPA and the
7		Pennsylvania Department of Labor and Industry. According to Sandi Vito, Acting
8		Secretary for the Department of Labor and Industry, "the 2008 Self-Sufficiency Standard
9		of Pennsylvania helps businesses and industry sectorsby showing how much families
10		need to earn to cover their basic expenses."28

Also, I used data from the American Chamber of Commerce Research Association (ACCRA).<sup>29</sup> Each quarter, ACCRA publishes data on the relative cost of living for more than 300 metropolitan areas throughout the United States. The Center for Rural Pennsylvania<sup>30</sup> uses the ACCRA data to periodically determine the relative cost of living in Pennsylvania's rural and urban areas. More specifically, the Center for Rural Pennsylvania reported that: "Given the frequency and currency of the ACCRA database, it is surprising that more researchers have not made use of it. The fact that it is published

<sup>&</sup>lt;sup>27</sup> Pearce, Diana M., Ph.D, <u>The Self-Sufficiency Standard for Pennsylvania 2008</u>, (Aug. 2008, 6<sup>th</sup> ed.), prepared for and with support from PathWaysPA, the Pennsylvania Dept. of Labor & Industry, the University of Washington, and United Way of Southeastern Pennsylvania. Available at: <a href="http://www.pathwayspa.org/Self-Sufficiency%20\_Standard.pdf">http://www.pathwayspa.org/Self-Sufficiency%20\_Standard.pdf</a>. The Self-Sufficiency Standard "measures how much income a family of a certain composition in a given place must earn to meet their basic needs." The standard is intended to be used by legislators and policy makers to establish programs which lead to self-sufficiency for working families. Id. at v.

<sup>&</sup>lt;sup>28</sup> Forward, The Self-Sufficiency Standard for Pennsylvania: 2008, PathwaysPA/Pennsylvania Department of Labor and Industry: Harrisburg (PA).

<sup>&</sup>lt;sup>29</sup> The ACCRA database is available on a licensed basis through the ACCRA Historical Cost of Living Index. I have a license to use the ACCRA data for the full years of 2005, 2006 and 2007, and for the quarterly 2008 data available of the summer of 2008.

by a private firm may make it less widely known in the research community, or it may be the case that the cost of the data deters some researchers from using it." The Center continued, however, to observe further: "In any case, [the ACCRA data base] has proven itself to be a solid foundation upon which to build a [cost of living] study such as ours." This legislative agency of the Pennsylvania General Assembly uses ACCRA data to help inform itself of the cost-of-living in Pennsylvania's rural areas.

# Q. DOES THE ACCRA DATA HAVE A PARTICULAR BENEFIT FOR YOUR CURRENT INQUIRY?

A. Yes. My current inquiry involves a determination of the affordability of basic local telephone service. In order to obtain data on this, I need a source of data that confines its reporting exclusively to basic local telephone service (along with the appurtenant fees and taxes). The ACCRA survey explicitly limits its pricing data for "telephone service" to a "private residential line, basic local rate, fees and taxes." The technical documentation for the ACCRA survey explicitly instructs local personnel collecting data that "the price you report must include monthly base rate, the federal long distance access fee, any other mandatory monthly charges (such as a "911" fee in many areas), the Touchtone fee, and all taxes. Don't include *optional* features such as call-forwarding and call-waiting."<sup>32</sup> (emphasis in original).

<sup>&</sup>lt;sup>30</sup> The Center for Rural Pennsylvania is a "bipartisan, bicameral legislative agency that serves as a resource for rural policy within the Pennsylvania General Assembly." See Mission Statement at <a href="http://www.ruralpa.org/mission.html">http://www.ruralpa.org/mission.html</a>. <sup>31</sup> Center for Rural Pennsylvania (July 2000). *Differences in the Cost of Living Across Pennsylvania's 67 Counties*, at 14, Center for Rural Pennsylvania: Harrisburg (PA), updating *Differences in the Cost of Living Across Pennsylvania's 67 Counties: 1992*, Center for Rural Pennsylvania: Harrisburg (PA) (also using ACCRA data).

<sup>32</sup> ACCRA Cost of Living Index, Manual, at 2.17 (May 2008). ACCRA further directs the personnel collecting telephone price data that "where the consumer can *choose* among base rates, price the base rate that allows the widest geographic coverage and the most non-toll calls. . .Exclude long distance calls beyond the area within which a family's routine activities normally occur." Id. (emphasis in original).

#### Q. DOES THE ACCRA DATA STAND IN CONTRAST TO OTHER PUBLICLY

#### AVAILABLE DATA IN THIS RESPECT?

Yes. One major source of data on consumer spending commonly used by researchers is the U.S. Department of Labor's annual Consumer Expenditures Survey (CEX). Because of the frequent use of CEX data for research purposes, I want to explain why I do not use this data for my purposes of assessing the affordability of local telephone service. The CEX data on "telephone" expenditures is *not* limited to basic local service. The Information Book published by the U.S. Department of Commerce for the Quarterly Interview Survey component of the Consumer Expenditures Survey<sup>33</sup> reports that included in "telephone expenses" are the following: residential service; mobile/cellular service; pager/beeper services; basic (local) service charge; domestic long distance charge; international long-distance charge; "telephone related services such as caller ID, call waiting, call forwarding, or voice mailboxes" (but not including data services); installation or repair of telephone line(s); telephone or pager purchases or rentals; internet access or data services; cable or satellite television services; DSL or ISDN charges; and non-telephone related rentals or purchases. As one can see, whether or not appropriate for other inquiries into consumer spending, for purposes of assessing the affordability of local telephone service, the CEX data is too broad to be helpful.

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# Q. PLEASE EXPLAIN THE DERIVATION OF YOUR RECOMMENDED AFFORDABLE TELEPHONE BURDEN OF 0.75% OF INCOME.

A. As set forth in Schedule RDC-2, I obtained a local telephone bill (in dollars) for seven different metropolitan areas in Pennsylvania (Erie, Indiana County, Johnstown,

Lancaster, Philadelphia, Pittsburgh, York) from the ACCRA data. Combining these basic local telephone bills with self-sufficiency budgets for the counties in which these communities are located, I found that a Pennsylvania household would spend between 0.75% and 1.0% of the county's self-sufficiency budget for basic local telephone service.<sup>34</sup>

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#### Q. DID YOU APPLY THIS DATA TO PENNSYLVANIA'S RURAL COUNTIES IN

#### PARTICULAR?

Yes. I began by using the 48 counties that the Center for Rural Pennsylvania had
identified as being "rural" as I have previously described above. For each of those rural
counties, I used the Self-Sufficiency Standard I have previously described for a fourperson household. The results of these calculations are presented in Schedule RDC-3.
Schedule RDC-2 shows that at a 0.75% level, the total local bills fell between \$25 and
\$30 for 36 of Pennsylvania's 48 rural counties. At a 1.0% of income level, the total local
bills fell between \$33 and \$41 for 39 of Pennsylvania's 48 rural counties.

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#### Q. WHY DO YOU SELECT 0.75% OF INCOME RATHER THAN 1.0% OF

#### 18 **INCOME?**

<sup>&</sup>lt;sup>33</sup> April 1, 2004, at 15.

<sup>&</sup>lt;sup>34</sup> County-specific self-sufficiency budgets are published by Pathways USA and the Pennsylvania Department of Labor and Industry. Diana Pearce, *The Self-Sufficiency Standard for Pennsylvania: 2008*, County Data Tables, at 9 – 50 (June 2008).

<sup>&</sup>lt;sup>35</sup> I used a four-person household for two reasons. First, in assessing the affordability of housing, the generally-accepted standard for a typical or average household is a four-person household. Moreover, programs such as the LIHEAP program, in publishing median income for use in determining maximum program eligibility—by law, a state may not set LIHEAP eligibility in excess of 60% of state median income—uses a four-person household as its standard. I believe that maintaining some consistency with such norms of usage is conceptually fair. Moreover, after assessing the 2000 Census data for the rural Pennsylvania counties, I decided that it was substantively most reasonable to use a four-person household to reflect a typical or average household.

A.	I performed two different "checks" on my conclusion that an affordable basic local
	telephone bill is 0.75% of income. First, I compared the results of an application of the
	0.75% of income standard for each county to the application of this standard to the
	average of county median incomes reported for rural Pennsylvania counties. The average
	of the median incomes reported for 2008 was \$50,261 for Pennsylvania's rural counties. <sup>3</sup>
	The 0.75% of income standard yields a total local bill (including fees and surcharges) of
	\$31. This result was consistent with the applicability of the 0.75% of income standard
	using the self-sufficiency budget analysis I described above. I concluded that this
	consistency lends weight to the validity of the analysis.

Second, I compared the results of the 0.75% of income standard to the Standard Utility Allowance (SUA) offered for local telephone service by the Pennsylvania Food Stamp program.<sup>37</sup> The SUA is promulgated by states for Food Stamp recipients to use in determining whether they qualify for an "excess shelter deduction" under the Food Stamp program.<sup>38</sup> In making that determination, a household may use either its actual home utility bills or may use the SUA promulgated by the State. In comparing the results of my analysis to the SUA, I can assess whether there is consistency with an affordability

<sup>&</sup>lt;sup>36</sup> The U.S. Department of Housing and Urban Development publishes annual median incomes for virtually all counties in the nation. Because of their rural nature, twelve Pennsylvania counties do not have such income published and were excluded from this calculation (Blair, Butler, Cambria, Carbon, Centre, Fayette, Lycoming, Mercer, Perry, Pike, Washington, Wyoming).

<sup>&</sup>lt;sup>37</sup> The Food Stamp program is now referred to as the Supplemental Nutrition Assistance Program (SNAP). While the programs are identical, except for the name, for ease of reference, I use the historical program name (Food Stamps).

Under the Food Stamp program, households do not use their gross household income for purposes of qualification. They instead use what is called "countable income." Countable income is gross household income minus specific deductions. One such deduction is the "excess shelter deduction," the extent to which shelter costs (shelter costs include all utilities, including telephone) exceed 50% of household income.

1	standard for limited income households.	Food Stamp eligibility is, with some excep	ptions
2	not relevant here, set at 130% of the Fed	eral Poverty Level.	

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The SUA is designed to address basic local telephone service (including fees and taxes) 5 for Food Stamp recipients. The Pennsylvania telephone SUA for Fiscal Year 2008 was \$31.<sup>39</sup>

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#### HAVE YOU COMPARED YOUR AFFORDABILITY ANALYSIS TO EXISTING Q. LOCAL RATES FOR PENNSYLVANIA'S RURAL CARRIERS?

A. Yes. In response to OCA discovery, the Pennsylvania Telephone Association provided sample residential local telephone bills that individually itemize the unbundled charge for basic local exchange services as well as all taxes, fees, surcharges and the like that apply. The sample bills were to include "all such items that a customer has to pay in order to obtain basic local service." (OCA-V-1). The responses to this OCA discovery are summarized in Schedule RDC-4. As can be seen in Schedule RDC-4, setting aside Citizens of Pennsylvania (Quaker Lake) at the lower end of monthly bills (having a total price for local service of only \$16.72), the basic monthly bills that need to be paid for local service fall in a range of \$20.07 (Citizens Telephone of Kecksburg) to \$27.10 (Frontier Communications/Oswayo River). Of the 31 companies providing illustrative

<sup>39</sup> The Fiscal Year 2008 SUAs are published on-line by the U.S. Department of Agriculture at: http://www.fns.usda.gov/fsp/rules/Memo/SUAAlpha.htm

<sup>&</sup>lt;sup>40</sup> Basic exchange rates for Citizens of New York's Little Meadows and Quaker Lake exchanges are included, as they have separate rate structures and service areas. Otherwise, if PTA's reply to OCA-V-1 provided multiple bills for one company to reflect different rate bands or exchanges, I used the bill with the higher basic exchange rate. It is possible that not all of the sample bills reflect the highest cost exchange for each company.

1	bills, 41 including the specified fees and surcharges, 18 had bills between \$20 and \$25 per
2	month, while 13 had bills between \$25 and \$30 per month.

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#### 4 Q. WHY ARE THESE NUMBERS HIGHER THAT THE \$18.00 RATE "CAP"

#### **CURRENTLY IN PLACE IN PENNSYLVANIA?**

It is my understanding that the \$18.00 cap applies only to the basic exchange price that is 6 Α. 7 set forth in Column 1 of Schedule RDC-4. That price is useful for determining "comparability" at basic exchange prices across companies. For purposes of determining 8 "affordability," however, it is necessary to include the current subscriber line charge 9 10 (\$6.50 or less) as well as the mandatory fees and certain surcharges that must be paid by customers in order to obtain service. 42 These mandatory fees include, for example, the E-11 12 911 charge, the Federal Universal Service Fund surcharge, and the PA Telephone Relay Service (TRS) charge. 13

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#### O. WHAT DO YOU CONCLUDE?

16 A. I conclude that the PUC should establish an affordability constraint on basic local
17 telephone service (including fees and surcharges) based on a percentage of income. The
18 appropriate percentage of income to use is 0.75% of the average statewide non19 metropolitan median income published annually for each state by HUD. 43

<sup>&</sup>lt;sup>41</sup> The OCA-V-1 Pennsylvania Telephone Company bill was for business service and so is not included. OCA obtained the Embarq bill informally.

<sup>&</sup>lt;sup>42</sup> Schedule RDC-4 does not include billed amounts for taxes and the State Tax Adjustment Surcharge (STAS), which apply to all intrastate services, including optional or non-basic services.

<sup>&</sup>lt;sup>43</sup> See, Notice PDR-2007-1, Estimated Median Family Incomes for FY2007 (March 19, 2007).

This proposed 0.75% of income standard is based on data that has been used, and found to be reliable, by other state agencies for official purposes. Moreover, the results of an application of the 0.75% of income standard are consistent with other officially published state standards that use (or incorporate) local telephone bills. Finally, the standard can be updated on an annual basis using annually-published, authoritative, government income figures. I will discuss the updating process further below.

A.

#### Q. HOW DOES THE \$31 PRICE COMPARE TO CURRENT RATES FOR

#### PENNSYLVANIA RURAL COMPANIES?

As shown in Schedule RDC-4, all of the rural companies' monthly rates currently fall below the \$31 affordability line (0.75% of income). Thus, the affordability "constraint" would not come into play under current rates.

A.

#### Part 3. Escalating the Affordability Threshold.

# Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY.

In this section of my testimony, I explain how I propose to escalate the calculation of an affordable local telephone bill so that the affordability determination adjusts appropriately with other changes. This would help avoid a frequent need to re-examine what level of local telephone service represents an "affordable burden." When one accepts the proposition that "affordability" is to be tied to the "burdens" imposed by local telephone service (i.e., bills as a percent of income), it becomes clear that the affordability of local service is not a static number. In the event that incomes increase,

1		the bill for local service that would be deemed to be "affordable" would increase as well.
2		Should incomes decrease, the level at which a bill for local service is affordable would
3		decrease as well.
4		
5		In calculating an affordable bill, therefore, I would use the following escalation factor:
6 7		$ALB_{current} = (APIB \times NMSMI_{current})$
8		
9		<u>WHERE</u>
1		ALB <sub>current</sub> = Affordable Local Bill for current year (including fees and surcharges)
12 13		APIB = Affordable Percentage of Income Burden (constant = 0.75%)
4		
15		NMSMI <sub>current</sub> = Non-metropolitan State Median Income for the current year
16 17		I have explained the derivation of the constant Affordable Percentage of Income Burden
18		(0.75%) above. I explain the purpose of using the Pennsylvania non-metropolitan mediar
19		income for the current year below.
20		
21	Q.	WHY DO YOU PROPOSE TO USE THE PENNSYLVANIA MEDIAN INCOME
22		FOR YOUR CALCULATION?
23	A.	Chapter 30 supports the goal of universal telecommunications service at affordable rates
24		for all Pennsylvanians. Since the calculation of the 0.75% burden was based on total
25		median income, the escalation rate should be based on total Pennsylvania median income
26		as well.
27		
28	Q.	DID YOU CONSIDER OTHER INCOME LEVELS AS A POSSIBLE
29		REFERENCE POINT?

Yes. Home energy and housing programs that tie "affordability" to a percentage of Α. income are focused on deriving an affordable bill for low-income customers. For example, the Pennsylvania CAP programs (for natural gas and electric utilities) use the Federal Poverty Level (or some increment thereof) as the basis for the calculation. In contrast, the focus of this proceeding differs from programs such as CAP in that the goal is to determine how to assure affordable rates for all rural Pennsylvania telephone consumers. As the Commission noted in its April 9, 2008 Order commencing this proceeding (at 26), it seeks to "assur(e) that local service rates do not become unreasonably high in those incumbent service territories, and that there are always reasonably affordable phone carriers operating in all areas of this State." In that Order (page 24), the Commission asked for information to help establish "the appropriate residential benchmark rate for maintaining and enhancing universal telephone service goals in Pennsylvania." As can be seen, the Commission's focus in this proceeding is on rural residential customers generally, not on low-income residential customers in particular.

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Even aside from the focus of this proceeding, use of the Federal Poverty Level would be inappropriate. The Federal Poverty Level is a uniform national number that would not reflect statewide conditions unique to Pennsylvania, let alone regional conditions unique to <u>rural</u> Pennsylvania.

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In addition, I decided not to use an increment of area median income such as the U.S. Department of Housing and Urban Development (HUD) uses for affordable housing

programs. HUD defines "moderate income," for example, by reference to 80% of area 1 2 median income (AMI). 3 Finally, it is inappropriate to use the Consumer Price Index as an escalation factor for an 4 5 affordable local telephone bill. This is true for five reasons. First, the Consumer Price Index (CPI-U) is based on prices for *urban* 6 consumers. What is generally referred to as the Consumer Price Index is, in 7 8 fact, technically known as the Consumer Price Index for all URBAN consumers. This CPI-U would thus be inappropriate to use as an escalation 9 factor for the affordability of rural local telephone bills. 10 11 12 > Second, the CPI-U applies to the price for goods and services. In our inquiry here, however, the price of the good (i.e., local telephone service) is the 13 14 dependent variable. Income is the independent variable. The CPI-U does not 15 reflect changes in income. 16 > Third, the CPI-U contains multiple components in it that are completely 17 unrelated to telephone service, let alone to *local* telephone service, let alone to 18 rural local telephone service. For example, increases in the CPI-U in recent 19 years have largely been driven by increases in transportation energy (e.g., 20 gasoline), home energy (e.g., natural gas, fuel oil), and health care costs. 21 Higher bills for rural local telephone service in Pennsylvania, however, do not 22 become more affordable because the price of gasoline for a consumer's 23 24 automobile, the price for heating their home, or the price of their health care 25 has increased. 26 27 Fourth, the CPI-U nearly always escalates. Median income, however, may increase or decrease depending on underlying economic conditions. In 28 Pennsylvania, for example, median income for non-metropolitan areas 29 actually decreased from 2006 to 2007, before rebounding in 2008.<sup>44</sup> As 30 discussed above, the affordability of local telephone service should reflect the 31 burden that local bills impose as a percentage of income. The CPI-U does not 32 33 contribute to that inquiry. 34 Finally, the CPI-U is not available on a state-specific basis, let alone on a 35 36 basis specific to rural areas within a state. The narrowest CPI-U that might be available is for Northeastern regional urban areas. Changes in the cost-of-37 living in these areas do not relate to the affordability of local telephone service 38

<sup>&</sup>lt;sup>44</sup> Indeed, median incomes may decrease precisely because of the economic conditions imposed by increased rates of inflation.

1 2 3		in rural Pennsylvania. The affordability of local telephone service should reflect local conditions to the maximum extent practicable.
4	Q.	WHY DO YOU RECOMMEND USING THE NON-METROPOLITAN MEDIAN
5		INCOME IN PARTICULAR AS THE BASIS FOR ESCALATING THE LOCAL
6		BILL AFFORDABILITY?
7	A.	HUD publishes three statewide median income figures for every state each year. HUD
8		publishes a statewide median income, a statewide metropolitan median income, and a
9		statewide non-metropolitan median income. 45 The non-metropolitan median incomes are
10		calculated each year by HUD using a process that takes into account the 2000 Census
11		median income, the statewide median income calculated by the most recent ACS data and
12		local Bureau of Labor Statistics (BLS) average wage changes for all employees.
13		
14	Q.	WHY IS IT IMPORTANT TO TAKE INTO ACCOUNT THESE LOCAL WAGE
15		CHANGES FOR RURAL AREAS IN PENNSYLVANIA RATHER THAN
16		SIMPLY USING STATEWIDE DATA?
17	A.	Income is not evenly distributed in Pennsylvania. Indeed, the gap between urban and
18		rural areas is growing larger. In 2001, the per capita income in Pennsylvania's rural
19		counties was \$24,941, compared to a per capita income in urban counties of \$32,578.
20		This \$8,637 gap is higher than the \$4,700 income gap between urban and rural areas

found in the 1980s. Indeed, between 1969 and 2001, rural income growth occurred only

<sup>&</sup>lt;sup>45</sup> There is not necessarily a complete confluence between the "non-metropolitan" counties identified by HUD and the "rural" areas identified by the U.S. Census Bureau. "Non-metropolitan" counties are identified as those counties that do not fall within a metropolitan area as defined by the Office of Management and Budget (OMB). Some non-metropolitan counties may, therefore, have some non-rural areas as those areas are defined by the Census Bureau.

during the period 1969 to 1979.<sup>46</sup> Since 1979, however, rural income stagnated while urban incomes continued to grow in Pennsylvania. By 2007, the income gap between rural and urban counties in Pennsylvania had grown to \$10,000. While in 1969, there was a 19 percent gap between rural and urban per capita incomes, over the next 32 years, that gap widened to 25 percent.

Α.

# Q. IS THIS INCOME STAGNATION SIMPLY AN ATTRIBUTE OF HOUSEHOLDS IN POVERTY?

No. The rate of Poverty in rural Pennsylvania is somewhat higher than in Pennsylvania's urban areas. Being "in poverty," in this sense, means that a household lives with income at or below 100% of the Federal Poverty Level. In 2007/2008, while 11% of rural Pennsylvania households were in Poverty, only 9% of urban households were. This is true even though fewer rural households receive public assistance through the Temporary Aid to Needy Families (TANF) program, a program generally thought of as "welfare." Indeed, 32% of adults in rural poverty households were employed (compared to 35% of urban poverty households). The percent of rural persons who were employed but still in poverty increased from 2005/2006 to 2007/2008 (from 29% to 32%).

Aside from differences between urban and rural households in poverty, there are differences in the middle income families as well. The Center for Rural Pennsylvania specifically studied the attributes of middle income Pennsylvania residents. In this

<sup>&</sup>lt;sup>46</sup> C.A. Christofides et al (November 2006). Examining the Rural-Urban Income Gap, at 6, Center for Rural Pennsylvania: Harrisburg (PA). ("Total personal income initially grew faster in rural counties relative to urban counties between 1969 and 2001, decreasing the gap early on. However, most of the rural growth occurred between 1969 and 1979, after which rural growth slowed while urban income growth accelerated.")

analysis, the Center made clear that it distinguished between "middle-income" and "middle class." Middle income is a term-of-art, referring to those households who live with annual incomes of between \$37,501 and \$50,000. This income range represents the middle one-fifth (quintile) of all households among the total range of household incomes in Pennsylvania. As compared to urban Pennsylvania households in the middle income range, rural middle-income households are more likely to have experienced unemployment within the previous 12 months (16% vs. 9%). Indeed, the Center found that the incomes of rural Pennsylvania residents are less stable than those of their urban counterparts. In addition to rural workers having higher unemployment and lower wages and salaries than in urban areas, Pennsylvania's rural areas have fewer employers per capita and a sluggish growth in business. According to the Center, "with these factors as a backdrop, rural middle-income households may not have the same economic safety net as urban middle-income households."

# Q. HAVE YOU REVIEWED THE DIFFERENCES IN AFFORDABLE BILLS THAT WOULD RESULT FROM THE USE OF VARIOUS ESCALATION RATES?

A. Yes. Schedule RDC-5 sets forth the results of three escalation factors. Scenario #1 is the recommended scenario. This Scenario adjusts the affordable rural bill by reference to changes in the non-metropolitan median income reported annually for Pennsylvania. The Scenario is reflective of actual economic conditions as they exist for rural Pennsylvania. When median rural income decreased in 2007, for example, the rural local bill that was deemed to be "affordable" decreased as well. Since the base year for this analysis

<sup>&</sup>lt;sup>47</sup> Center for Rural Pennsylvania (2007). A Comparison of Rural and Urban Middle-Income Households, at 4, Center for Rural Pennsylvania: Harrisburg (PA).

1		(2004), the fural local bill that was calculated to be altordable has seen a modest increase,
2		reflecting the modest increase in rural median income.
3		
4		In contrast, use of the state median income would result in a bill deemed to be
5		"affordable," yet that would not reflect the lower incomes of rural Pennsylvania. Indeed,
6		as shown in Scenario #2, use of the state median income would result in a local bill that
7		would be 20% higher (( $\$36 - \$30$ ) / $\$30 = 0.20$ ) than would be appropriate at the rural
8		income. Use of the state median income would result in an annual increase for rural local
9		telephone service of more than \$70 per year by 2008 (\$458 - \$386 = \$72).
10		
11		Finally, Schedule RDC-5 (Scenario #3) shows the impropriety of using the CPI-U as an
12		escalation factor. Use of the CPI-U, simply over a four-year period (2004 through 2008),
13		would have resulted in an increase in the bill deemed to be "affordable" of twice that
14		merited by reference to changes in either state median income or rural median income.
15		Moreover, use of the CPI-U would not have reflected the dip in median income during
16		2007, which would have resulted in a decrease in the affordability of local rural telephone
17		bills.
18		
19	Q.	IS THERE ANY FINAL REASON WHY IT IS IMPORTANT TO TAKE RURAL
20		MEDIAN INCOME INTO ACCOUNT RATHER THAN STATEWIDE MEDIAN
21		INCOME?
22	A.	Yes. In the 1997 Universal Service Order, the FCC expressed concern about defining
23		"affordability" through "establishing a formula based on percentages of consumers'

disposable income dedicated to telecommunications services." Such an approach, the FCC indicated, "would over-emphasize income levels in relation to other non-rate factors that may affect affordability and fail to reflect the effect of local circumstances on the affordability of a particular rate." The approach I have taken above, while based on a percentage of household income, seeks to address that concern. Using rural median income rather than statewide median income de-emphasizes the exclusive use of income levels in favor of taking into account other local circumstances. As I have described in detail above, the use of rural median income has the effect of taking into account "non-rate factors" such as cost-of-living, the economic stability of the underlying population, the relationship between income and external economic factors, and related "non-rate-factors." The use of the non-metropolitan median income takes into account the impact of "local circumstances" rather than basing the affordability determination on larger geographic averages. The approach that I have outlined above is designed specifically to take into account the concerns expressed by the FCC in its 1997 order.

A.

#### O. WHAT DO YOU CONCLUDE?

It would be inappropriate to base any escalation in the affordability of local rural telephone service based on statewide median income data. Statewide median income does not reflect median income in Pennsylvania's rural areas. Not only are rural incomes lower than statewide incomes, but rural incomes are less stable and more subject to the vagaries of changes in local economic conditions. There is authoritative annual data published for non-metropolitan median incomes. These incomes are objective, publicly

<sup>48 1997</sup> Universal Service Order ¶ 115.

<sup>&</sup>lt;sup>49</sup> 1⁄4

available, and annually updated. These non-metropolitan median incomes should be used for any escalation in a determination of what constitutes an affordable bill.<sup>50</sup>

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Part 4. The Interrelationship between Lifeline and Affordable Rural Rates.

#### O. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR

#### 6 TESTIMONY.

A. This section of my testimony considers the relationship, between promoting affordable rural local telephone service and low-income telecommunications support programs such as the federal Telephone Lifeline program. I conclude that the telephone Lifeline program is not a substitute for the rural telephone price support mechanism.

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#### Q. PLEASE EXPLAIN THE PURPOSE OF THE LIFELINE PROGRAM.

13 The federal Lifeline program is a program that is designed to increase the penetration of Α. 14 low-income telephone service by providing monthly bill credits toward local service. Under the Lifeline program, local telephone companies provide a waiver of the 15 Subscriber Line Charge, a waiver of the federal Universal Service Fund charge, and a 16 17 reduction of local service charges. In Pennsylvania in particular, what is called the "Lifeline 135" program is available for customers of all qualified telephone service 18 19 providers. Lifeline helps customers who have incomes at or below 135 percent of the 20 federal poverty guidelines, as well as any customers who receive help from any of the 21 following programs: General Assistance (GA), Supplemental Security Income (SSI), 22 TANF, LIHEAP, Federal Public Housing Assistance, Medicaid, Food Stamps, or the National School Lunch Program's Free Lunch Program. 23

<sup>&</sup>lt;sup>50</sup> The non-metropolitan median incomes can be accessed at http://www.huduser.org/datasets/il.html.

As can be seen, the objectives of the high cost rural support fund and of the Lifeline programs are substantively different. Unlike the low-income benefits provided by Lifeline, the affordability provisions of the high cost rural support fund are directed toward *all* customers.

A.

#### Q. DO PENNSYLVANIA TELEPHONE COMPANIES GENERATE A HIGH

#### ENROLLMENT IN THE TELEPHONE LIFELINE PROGRAM?

No. A second problem with relying exclusively on the telephone Lifeline program as a mechanism for ensuring "affordability" under the statute is that Pennsylvania has a relatively low enrollment in its Lifeline program. Consider that in its most recent *Trends in Telephone Service* report (released in August 2008), the FCC reports that Pennsylvania had 143,824 Lifeline subscribers. This 2006 Lifeline subscription rate was a *decrease* from the 2005 subscription of 160,408 Lifeline customers. Indeed, the data reported in August 2008 shows a virtually constant subscription to the FCC Lifeline program as existed in 2004, when the Lifeline program reached 145,558 customers in Pennsylvania.

A.

# Q. DO YOU BELIEVE THAT PENNSYLVANIA COULD DO BETTER IN ITS LIFELINE PROGRAM ENROLLMENT?

Yes. Consider the Telephone Lifeline enrollment compared to the state's enrollment of customers in the natural gas and electric Customer Assistance Programs (CAPs). In contrast to the roughly 145,000 telephone Lifeline subscribers, Pennsylvania's *investorowned* electric utilities have enrolled 225,691 customers in their CAP programs, while

the state's investor-owned natural gas utilities have enrolled 184,833 low-income customers in their CAP programs. There would be some, but not complete, overlap between the natural gas and electric CAP programs but, still, the Lifeline enrollment is as much as 35% lower than the electric CAP enrollment ((225,691 - 145,000) / 145,000 = 0.358).

Similarly, as of November 28, 2008, there were 558,939 households participating in the federal Food Stamp program, slightly more than the 530,243 that participated in 2007 and substantially more than the 431,664 that participated in 2004. Moreover, 284,000 low-income Pennsylvania households participated in Pennsylvania's LIHEAP heating program in Fiscal Year 2007.

Q.

A.

# ARE THERE OTHER PROBLEMS THAT WOULD ARISE FROM AN EXCLUSIVE RELIANCE ON THE LIFELINE PROGRAM AS THE MECHANISM FOR ADDRESSING RURAL AFFORDABILITY PROBLEMS?

Yes. The Lifeline program has insufficient performance goals and reporting mechanisms to use as an exclusive response to rural unaffordability. It is not possible for policymakers such as the FCC to track the impact of the Lifeline program on low-income affordability generally, let alone for policymakers to track the impact of the Lifeline program on rural unaffordability in particular. In its August 29, 2007 Report and Order with respect to the oversight and management of the Lifeline program, the FCC explicitly found that "the low-income program is designed to ensure that telecommunications services are available to low-income customers at just, reasonable, and affordable rates. .

e measurements." <sup>51</sup> Even if one were to assume that Lifeline is structured to briate substitute for rural cost supports, the program has insufficient e goals, and performance tracking capacity, for it to be used in such a way at
goals, and performance tracking capacity, for it to be used in such a way at
URPOSE HERE TO PROPOSE CHANGES IN THE PENNSYLVANIA
PROGRAM?
oceeding is neither the time nor the place to consider how to modify
a's Lifeline program. My only observation, at this juncture, is that of the
of a low-income affordability program such as Lifeline does not stand as a
r adopting an affordability constraint on the reasonably comparable rates tha
ed for purposes of high cost rural support.
UMMARIZE YOUR CONCLUSIONS WITH RESPECT TO THE
ST SUPPORT MECHANISM FOR BASIC LOCAL TELEPHONE
IN PENNSYLVANIA.
e data and analysis presented above, I reach the following seven conclusions
gh cost support for basic local rural telephone service in Pennsylvania:
The touchstone of high cost support involves the comparability of rural and non-rural rates. This comparability standard, however, must be implemented subject to an affordability constraint. If reasonably comparable rates yield maffordable rural bills, the affordability standard serves as a limitation on hose rates.

<sup>&</sup>lt;sup>51</sup> In the Matter of Comprehensive Review of the Universal Service Fund, Administration, and Oversight, WC Docket No. 05-195, Report and Order, at ¶50 (Aug. 29, 2007).

1 2 3		"Affordability" should be defined using the same two elements as adopted by the FCC in its implementation of the affordability provisions of the Telecommunications Act of 1996. Affordability has both an absolute
4 5		component (can households retain service?) and a relative component (can households retain service without undue detriment to the household?) to it.
6		
7		The proper test for demarcating "affordable" local telephone service should be
8		based on the "burden" imposed on households as a result of local telephone
9		bills (including all taxes and fees). The local telephone burden is the bill for
10		basic local service as a percentage of income.
11		> T
12		Local rural telephone service should be deemed affordable so long as the bill
13		for such service (including the subscriber line charge and all other mandatory
14		taxes and fees) does not exceed 0.75% (three-quarters of one percent) of
15		household income.
16		The appropriate "income" to use in applying the 0.750/ standard is the new
17 18		The appropriate "income" to use in applying the 0.75% standard is the non-metropolitan median income published annually for the Commonwealth of
19		Pennsylvania.
20		
21 22		The affordability of bills for local rural telephone service should be adjusted annually based on published data for non-metropolitan median income in
23		Pennsylvania.
24		
25		➤ Low-income affordability programs, such as the FCC's Lifeline program, are
26		not a substitute for imposing an affordability constraint on reasonably
27		comparable rates generated for purposes of rural high cost support.
28		
29	Q.	DOES THIS CONCLUDE YOUR TESTIMONY?
20		Van it daan
30	A.	Yes, it does.
31 32	00107.	374.doc ·

## **ATTACHMENT RC-1**

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#### **EDUCATION:**

J.D. (Order of the Coif), University of Florida (1981)

M.A. (Economics), McGregor School, Antioch University (1993)

B.A. Iowa State University (1975)

#### **PROFESSIONAL EXPERIENCE:**

#### Fisher, Sheehan and Colton, Public Finance and General Economics: 1985 - present.

As a co-founder of this economics consulting partnership, Colton provides services in a variety of areas, including: regulatory economics, poverty law and economics, public benefits, fair housing, community development, energy efficiency, utility law and economics (energy, telecommunications, water/sewer) and planning and zoning.

#### National Consumer Law Center (NCLC): 1986 - 1994

As a staff attorney with NCLC, Colton worked on low-income energy and utility issues. He pioneered cost-justifications for low-income affordable energy rates, as well as developing models to quantify the non-energy benefits (e.g., reduced credit and collection costs, reduced working capital) of low-income energy efficiency. He designed, implemented and evaluated low-income affordable rate and fuel assistance programs across the country.

#### Community Action Research Group (CARG): 1981 - 1985

As staff attorney for this non-profit research and consulting organization, Colton worked primarily on energy and utility issues. He provided legal representation to low-income persons on public utility issues; provided legal and technical assistance to consumer and labor organizations; and provided legal and technical assistance to a

variety of state and local governments nationwide on natural gas, electric, and telecommunications issues. He routinely appeared as an expert witness before regulatory agencies and legislative committees regarding energy and telecommunications issues.

#### PROFESSIONAL AFFILIATIONS:

Member: Board of Directors, Belmont Housing Trust, Inc.

Member: Advisory Board: Fair Housing Center of Greater Boston.

Past Member: Fair Housing Committee, Town of Belmont (MA)

Past Member: Aggregation Advisory Committee, New York State Energy Research

and Development Authority.

Past Member: Board of Directors, Vermont Energy Investment Corporation.

Past Member: Board of Directors, National Fuel Funds Network

Past Member: National Advisory Committee, U.S. Department of Health and

Human Services, Administration for Children and Families,

Performance Goals for Low-Income Home Energy Assistance.

Past Member: Editorial Advisory Board, International Library, Public Utility Law

Anthology.

Past Member: ASHRAE Guidelines Committee, GPC-8, Energy Cost Allocation of

Comfort HVAC Systems for Multiple Occupancy Buildings

Past Member: National Advisory Committee, U.S. Department of Housing and

Urban Development, Calculation of Utility Allowances for Public

Housing.

Past Member: National Advisory Board: Energy Financing Alternatives for

Subsidized Housing, New York State Energy Research and

Development Authority.

#### PROFESSIONAL ASSOCIATIONS:

National Association of Housing and Redevelopment Officials (NAHRO)

Association for Enterprise Opportunity (AEO)

Iowa State Bar Association

Energy Bar Association

Association for Institutional Thought (AFIT)

Association for Evolutionary Economics (AEE)

Society for the Study of Social Problems (SSSO)

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#### COLTON EXPERIENCE AS EXPERT WITNESS

#### 1988 - PRESENT

CASE NAME	ROLE	CLIENT NAME	торіс	JURIS.	DATE
I/M/O Equitable Gas Company	Witness	Office of Consumer Advocate	Low-income program	Pennsylvania	08
1/M/O Columbia Gas Company	Witness	Office of Ohio Consumers' Counsel	Rate design	Ohio	08
I/M/O Dominion East Ohio Gas Company	Witness	Office of Ohio Consumers' Counsel	Rate design	Ohio	08
I/M/O Vectren Energy Delivery Company	Witness	Office of Ohio Consumers' Counsel	Rate design	Ohio	08
I/M/O Public Service Company of North Carolina	Witness	NC Department of Justice	Rate design	North Carolina	08
1/M/O Piedmont Natural Gas Company	Witness	NC Department of Justice	Rate design	North Carolina	08
1/M/O National Grid	Witness	New Hampshire Legal Assistance	Low-income rate assistance	New Hampshire	08
I/M/O EniPower Maryland	Witness	Office of Peoples Counsel	Low-income energy efficiency	Maryland	08
I/M/O Duke Energy Carolinas Save-n-Watt Program	Witness	NC Equal Justice Foundation	Low-income energy efficiency	North Carolina	08
I/M/O Zia Natural Gas Company	Witness	Community Action New Mexico	Low-income/low-use rate design	New Mexico	08
I/M/O Universal Service Fund Support for the Affordability of Local Rural Telecomm Service	Witness	Office of Consumer Advocate	Telecomm service affordability	Pennsylvania	08
I/M/O Philadelphia Water Department	Witness	Public Advocate	Credit and Collections	Philadelphia	08
I/M/O Portland General Electric Company	Witness	Community Action-Oregon	General rate case	Oregon	08
I/M/O Philadelphia Electric Company (electric)	Witness	Office of Consumer Advocate	Low-income program	Pennsylvania	08
1/M/O Philadelphia Electric Company (gas)	Witness	Office of Consumer Advocate	Low-income program	Pennsylvania	08
1/M/O Columbia Gas Company	Witness	Office of Consumer Advocate	Low-income program	Pennsylvania	08
I/M/O Public Service Company of New Mexico	Witness	Community Action New Mexico	Fuel adjustment clause	New Mexico	08
I/M/O Petition of Direct Energy for Low-Income Aggregation	Witness	Office of Peoples Counsel	Low-income electricity aggregation	Maryland	07
I/M/O Office of Consumer Advocate et al. v. Verizon and Verizon North	Witness	Office of Consumer Advocate	Lifeline telecommunications rates	Pennsylvania	07
I/M/O Pennsylvania Power Company	Consultant	Office of Consumer Advocate	Low-income program	Pennsylvania	07
I/M/O National Fuel Gas Distribution Corporation	Consultant	Office of Consumer Advocate	Low-income program	Pennsylvania	07

CASE NAME	ROLE	CLIENT NAME	ТОРІС	JURIS.	DATE
1/M/O Public Service of New Mexico-Electric	Witness	Community Action New Mexico	Low-income programs	New Mexico	07
I/M/O Citizens Gas/NIPSCO/Vectren for Universal Service Program	Witness	Citizens Gas & Coke Utility/Northern Indiana Public Service/Vectren Energy	Low-income program design	Indiana	07
I/M/O PPL Electric	Witness	Office of Consumer Advocate	Low-income program	Pennsylvania	07
I/M/O Section 15 Challenge to NSPI Rates	Witness	Energy Affordability Coalition	Discrimination in utility regulation	Nova Scotia	07
I/M/O Philadelphia Gas Works	Witness	Office of Consumer Advocate	Low-income and residential collections	Pennsylvania	07
I/M/O Equitable Gas Company	Witness	Office of Consumer Advocate	Low-income program	Pennsylvania	07
1/M/O Section 11 Proceeding, Energy Restricturing	Witness	Office of Peoples Counsel	Low-income needs and responses	Maryland	06
I/M/O Citizens Gas/NIPSCO/Vectren for Universal Service Program	Witness	Citizens Gas & Coke Utility/Northern Indiana Public Service/Vectren Energy	Low-income program design	Indiana	06
I/M/O Public Service Co. of North Carolina	Witness	North Carolina Attorney General/Dept. of Justice	Low-income energy usage	North Carolina	06
1/M/O Electric Assistance Program	Witness	New Hampshire Legal Assistance	Electric low-income program design	New Hampshire	06
1/M/O Verizon Petition for Alternative Regulation	Witness	New Hampshire Legal Assistance	Basic local telephone service	New Hampshire	06
I/M/O Pennsylvania Electric Co/Metropolitan Edison Co.	Witness	Office of Consumer Advocate	Universal service cost recovery	Pennsylvania	06
I/M/O Duquesne Light Company	Witness	Office of Consumer Advocates	Universal service cost recovery	Pennsylvania	06
!/M/O ::(atural Gas DSM Planning	Witness	Low-Income Energy Network	Low-income DSM program.	Ontario	06
I/M/O Union Gas Co.	Witness	Action Centre for Tenants Ontario (ACTO)	Low-income program design	Ontario	06
I/M/O Public Service of New Mexico merchant plant	Witness	Community Action New Mexico	Low-income energy usage	New Mexico	06
1/M/O Customer Assistance Program design and cost recovery	Witness	Office of Consumer Advocate	. Low-income program design	Pennsylvania	06
I/M/O NIPSCO Proposal to Extend Winter Warmth Program	Witness	Northern Indiana Public Service Company	Low-income energy program evaluation	Indiana	05
L/M/O Piedmont Natural Gas	Witness	North Carolina Attorney General/Dept. of Justice	Low-income energy usage	North Carolina	05
I/M/O PSEG merger with Exelon Corp.	Witness	Division of Ratepayer Advocate	Low-income issues	New Jersey	05
Re. Philadelphia Water Department	Witness	Public Advocate	Public Advocate Water collection factors		05
I/M/O statewide natural gas universal service program	Witness	New Hampshire Legal Assistance	Universal service	New Hampshire	05

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CASE NAME	ROLE	CLIENT NAME	TOPIC	JURIS.	DATE
I/M/O Sub-metering requirements for residential rental properties	Witness	Tenants Advocacy Centre of Ontario	Sub-metering consumer protections	Ontario	05
1/M/O National Fuel Gas Distribution Corp.	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	05
I/M/O Nova Scotia Power, Inc.	Witness	Dalhousie Legal Aid Service	Universal service	Nova Scotia	04
I/M/O Lifeline Telephone Service	Witness	National Ass'n State Consumer Advocates (NASUCA)	Lifeline rate eligibility	FCC	04
Mackay v. Verizon North	Witness	Office of Consumer Advocate	Lifeline rates—vertical services	Pennsylvania	04
I/M/O PECO Energy	Witness	Office of Consumer Advocate	Low-income rates	Pennsylvania	04
!/M/O Philadelphia Gas Works	Witness	Office of Consumer Advocate	Credit and collections	Pennsylvania	04
I/M/O Citizens Gas & Coke/Vectren	Witness	Citizens Action Coalition of Indiana	Universal service	Indíana	04
1/M/O PPL Electric Corporation	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	04
I/M/O Consumers New Jersey Water Company	Witness	Division of Ratepayer Advocate	Low-income water rate	New Jersey	04
I/M/O Washington Gas Light Company	Witness	Office of Peoples Counsel	Low-income gas rate	Maryland	04
1/M/O Washington Gas Light Company	Witness	Office of Peoples Counsel	Low-income gas rate	Maryland	03
Golden v. City of Columbus	Witness	Helen Golden	ECOA disparate impacts	Ohio	02
Huegel v. City of Easton	Witness	Phyllis Huegel	Credit and collection	Pennsylvania	02
I/M/O Universal Service Fund	Witness	Public Utility Commission staff	Universal service funding	New Hampshire	02
I/M/O Philadelphia Gas Works	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	02
1/M/O Washington Gas Light Company	Witness	Office of Peoples Counsel	Rate design	Maryland	02
1/M/O Consumers Illinois Water Company	Witness	Illinois Citizens Utility Board	Credit and collection	Illinois	02
I/M/O Public Service Electric & Gas Rates	Witness	Division of Ratepayer Advocate	Universal service	New Jersey	01
I/M/O Pennsylvania-American Water Company	Witness	Office of Consumer Advocate	Low-income rates and water conservation	Pennsylvania	Οl
1/M/O Louisville Gas & Electric Prepayment Meters	Witness	Kentucky Community Action Association	Low-income energy	Kentucky	01
I/M/O NICOR Budget Billing Plan Interest Charge	Witness	Cook County State's Attorney	Rate Design	Illinois	01
I/M/O Rules Re. Payment Plans for High Natural Gas Prices	Witness	Cook County State's Attorney	Budget Billing Plans	Illinois	01

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CASE NAME	ROLE	CLIENT NAME	ТОРІС	JURIS.	DATE
I/M/O Philadelphia Water Department	Witness	Office of Public Advocate	Credit and collections	Philadelphia	01
I/M/O Missouri Gas Energy	Witness	Office of Peoples Counsel	Low-income rate relief	Missouri	01
1/M/O Bell AtlanticNew Jersey Alternative Regulation	Witness	Division of Ratepayer Advocate	Telecommunications universal service	New Jersey	01
I/M/O T.W. Phillips Gas and Oil Co.	Witness	Office of Consumer Advocate	Ratemaking of universal service costs.	Pennsylvania	00
1/M/O Peoples Natural Gas Company	Witness	Office of Consumer Advocate	Ratemaking of universal service costs.	Pennsylvania	00
I/M/O UGI Gas Company	Witness	Office of Consumer Advocate	Ratemaking of universal service costs.	Pennsylvania	00
I/M/O PFG Gas Company	Witness	Office of Consumer Advocate	Ratemaking of universal service costs.	Pennsylvania	00
Armstrong v. Gallia Metropolitan Housing Authority	Witness	Equal Justice Foundation	Public housing utility allowances	Ohio	00
VM/O Bell AtlanticNew Jersey Alternative Regulation	Witness	Division of Ratepayer Advocate	Telecommunications universal service	New Jersey	00
I/M/O Universal Service Fund for Gas and Electric Utilities	Witness	Division of Ratepayer Advocate	Design and funding of low-income programs	New Jersey	00
I/M/O Consolidated Edison Merger with Northeast Utilities	Witness	Save Our Homes Organization	Merger impacts on low-income	New Hampshire	00
I/M/O UtiliCorp Merger with St. Joseph Light & Power	Witness	Missouri Dept. of Natural Resources	Merger impacts on low-income	Missouri	00
I/M/O UtiliCorp Merger with Empire District Electric	Witness	Missouri Dept. of Natural Resources	Merger impacts on low-income	Missouri	00
I/M/O PacifiCorp	Witness	The Opportunity Council	Low-income energy affordability	Washington	00
I/M/O Public Service Co. of Colorado	Witness	Colorado Energy Assistance Foundation	Natural gas rate design	Colorado	00
I/M/O Avista Energy Corp.	Witness	Spokane Neighborhood Action Program	Low-income energy affordability	Washington	00
I/M/O TW Phillips Energy Co.	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	00
I/M/O PECO Energy Company	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	00
I/M/O National Fuel Gas Distribution Corp.	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	00
I/M/O PFG Gas Company	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	00
I/M/O UG1 Energy Company	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	00
Re. PSCO/NSP Merger	Witness	Colorado Energy Assistanœ Foundation	Merger impacts on low-income	Colorado	99 - 00
I/M/O Peoples Gas Company	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	99
I/M/O Columbia Gas Company	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	99
I/M/O PG Energy Company	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	99

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CASE NAME	ROLE	CLIENT NAME	TOPIC	JURIS.	DATE
1/M/O Equitable Gas Company	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	99
Allerruzzo v. Klarchek	Witness	Barlow Allerruzzo Mobile home fees and sales		Illinois	99
I/M/O Restructuring New Jersey's Natural Gas Industry	Witness	Division of Ratepayer Advocate	Universal service	Pennsylvania	99
I/M/O Bell Atlantic Local Competition	Witness	Public Utility Law Project	Lifeline telecommunications rates	New Jersey	99
I/M/O Merger Application for SBC and Ameritech Ohio	Witness	Edgement Neighborhood Association	Merger impacts on low-income consumers	Ohio	98 - 99
Davis v. American General Finnce	Witness	Thomas Davis	Damages in "loan flipping" case	Oltío	98 - 99
Griffin v. Associates Financial Service Corp.	Witness	Earlie Griffin	Damages in "loan flipping" case	Ohio	98 - 99
1/M/O Baltimore Gas and Electric Restructuring Plan	Witness	Maryland Office of Peoples Counsel	Consumer protection/basic generation service	Maryland	98 - 99
I/M/O Delmarva Power and Light Restructuring Plan	Witness	Maryland Office of Peoples Counsel	Consumet protection/basic generation service	Maryland	98 - 99
I/M/O Potomac Electric Power Co. Restructuring Plan	Witness	Maryland Office of Peoples Counsel	Consumer protection/basic generation service	Maryland	98 - 99
1/M/O Potomac Edison Restructuring Plan	Witness	Maryland Office of Peoples Counsel	Consumer protection/basic generation service	Maryland	98 - 99
VMHOA v. LaPierre	Witness	Vennont Mobile Home Owners Association	Mobile home tying	Vermont	98
Re. Restructuring Plan of Virginia Electric Power	Witness	VMH Energy Services, Inc.	Consumer protection/basic generation service	Virginia	98
Mackey v. Spring Lake Mobile Home Estates	Witness	Timothy Mackey	Mobile home fees	State ct: Illinois	98
Re. Restructuring Plan of Atlantic City Electric	Witness	New Jersey Division of Ratepayer Advocate	Low-income issues	New Jersey	97-98
Re. Restructuring Plan of Jersey Central Power & Light	Witness	New Jersey Division of Ratepayer Advocate	Low-income issues	New Jersey	97-98
Re. Restructuring Plan of Public Service Electric & Gas	Wilness	New Jersey Division of Ratepayer Advocate	Low-income issues	New Jersey	97-98
Re. Restructuring Plan of Rockland Electric	Witness	New Jersey Division of Ratepayer Advocate	Low-income issues	New Jersey	97-98
Appleby v. Metropolitan Dade County Housing Agency	Witness	Legal Services of Greater Miami	HUD utility allowances	Fed. court: So. Florida	97 - 98
Re. Restructuring Plan of PECO Energy Company	Witness	Energy Coordinating Agency of Philadelphia	Universal service	Pennsylvania	97
Re. Atlantic City Electric Merger	Witness	New Jersey Division of Ratepayer Advocate	Low-income issues	New Jersey	97
Re. IES Industries Merger	Witness	Iowa Community Action Association	Low-income issues	Iowa	97

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CASE NAME	ROLE	CLIENT NAME	TOPIC	JURIS.	DATE
Re. New Hampshire Electric Restructuring	Witness	NH Comm. Action Assh	Wires charge	New Hampshire	97
Re. Natural Gas Competition in Wisconsin	Witness	Wisconsin Community Action Association Universal service		Wisconsin	96
Re. Baltimore Gas and Electric Merger	Witness	Maryland Office of Peoples Counsel	Low-income issues	Maryland	96
Re. Northern States Power Merger	Witness	Energy Cents Coalition	Low-income issues	Minnesota	96
Re. Public Service Co. of Colorado Merger	Witness	Colorado Energy Assistance Foundation	Low-income issues	Colorado	96
Re. Massachusetts Restructuring Regulations	Witness	Fisher, Sheehan & Colton	Low-income issues/energy efficiency	Massachusetts	96
Re. FERC Merger Guidelines	Witness	National Coalition of Low-Income Groups	Low-income interests in mergers	Washington D.C.	96
Re. Joseph Keliikuli [II]	Witness	Joseph Keliikuli III	Damages from lack of homestead	Honolulu	96
Re. Theresa Mahaulu	Witness	Theresa Mahaulu	Damages from lack of homestead	Honolulu	95
Re. Joseph Ching, Sr.	Witness	Re. Joseph Ching, Sr.	Damages from lack of homestead	Honolulu	95
Joseph Keaulana, Jr.	Witness	Joseph Kenulana, Jr.	Damages from lack of homestead	Honolulu	95
Re. Utility Allowances for Section 8 Housing	Witness	National Coalition of Low-Income Groups	Fair Market Rent Setting	Washington D.C.	95
Re. PGW Customer Service Tariff Revisions	Witness	Philadelphia Public Advocate	Credit and collection	Philadelphia	95
Re. Customer Responsibility Program	Witness	Philadelphia Public Advocate	Low-income rates	Philadelphia	95
Re. Houston Lighting and Power Co.	Witness	Gulf Coast Legal Services	Low-Income Rates	Texas	95
Re. Request for Modification of Winter Monatorium	Witness	Philadelphia Public Advocate	Credit and collection	Philadelphia	95
Re. De <sub>1</sub> of Hawaii Homelands Trust Homestead Production	Witness	Native Hawaiian Legal Corporation	Prudence of trust management	Honolulu	94
Re. SNET Request for Modified Shutoff Procedures	Witness	Office of Consumer Counsel	Credit and collection	Connecticut	94
Re. Central Light and Power Co.	Witness	United Farm Workers	Low-income rates/DSM	Texas	94
Blackwell v. Philadelphia Electric Co.	Witness	Gloria Blackwell	Role of shutoff regulations	Penn. courts	94
U.S. West Request for Waiver of Rules	Witness	Wash, Util. & Transp. Comm'n Staff	Telecommunications regulation	Washington	94
Re. U.S. West Request for Full Toll Denial	Witness	Colorado Office of Consumer Counsel	Telecommunications regulation	Colorado	94
Washington Gas Light Company	Witness	Community Family Life Services	Low-income rates & energy efficiency	Washington D.C.	94
Clark v. Peterborough Electric Utility	Witness	Peterborough Community Legal Centre	Discrimination of tenant deposits	Ontario, Canada	94
Dorsey v Housing Auth, of Baltimore	Witness	Baltimore Legal Aide	Public housing utility allowances	Federal district court	93

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CASE NAME	ROLE	CLIENT NAME	ТОРІС	JURIS.	DATE
Penn Beil Telephone Co.	Witness	Penn. Utility Law Project	Low-income phone rates	Pennsylvania	93
Philadelphia Gas Works	Witness	Philadelphia Public Advocate Low-income rates		Philadelplua	93
Central Maine Power Co.	Witness	Maine Assn Ind. Neighborhoods	Low-income rates	Maine	92
New England Telephone Company	Witness	Mass Attorney General	Low-income phone rates	Massachusetts	92
Philadelphia Gas Co.	Witness	Philadelphia Public Advocate	Low-income DSM	Philadelphia	92
Philadelphia Water Dept.	Witness	Philadelphia Public Advocate	Low-income rates	Philadelphia	92
Public Service Co. of Colorado	Witness	Land and Water Fund	Low-income DSM	Colorado	92
Sierra Pacific Power Co.	Witness	Washoe Legal Services	Low-income DSM	Nevada	92
Consumers Power Co.	Witness	Michigan Legal Services	Low-income rates	Michigan	92
Columbia Gas	Witness	Office of Consumer Advocate (OCA)	Energy Assurance Program	Pennsylvania	91
Mass. Elec. Co.	Witness	Mass Elec Co.	Percentage of Income Plan	Massachusetts	91
AT&T	Witness	TURN	Inter-LATA competition	California	91
Generic Investigation into Uncollectibles	Witness	Office of Consumer Advocate	Controlling uncollectibles	Pennsylvania	91
Union Heat Light & Power	Witness	Kentucky Legal Services (KLS)	Energy Assurance Program	Kentucky	90
Philadelphia Water	Witness	Philadelphia Public Advocate (PPA)	Controlling accounts receivable	Philadelphia	90
Philadelphia Gas Works	Witness	PPA	Controlling accounts receivable	Philadelphia	90
Mississippi Power Co.	Witness	Southeast Mississippi Legal Services Corp	Formula ratemaking	Mississippi	90
Kentucky Power & Light	Witness	KLS	Energy Assurance Program	Kentucky	90
Philadelphia Electric Co.	Witness	PPA	Low-income rate program	Philadelphia	90
Montana Power Co.	Witness	Montana Ass'n of Human Res. Council Directors	Low-income rate proposals	Montana	90
Columbia Gas Co.	Witness	Office of Consumer Advocate	Energy Assurance Program	Pennsylvania	90
Philadelphia Gas Works	Witness	Pl'A	Energy Assurance Program	Philadelphia	89
Southwestern Bell Telephone Co.	Witness	SEMLSC Formula ratemaking		Mississippi	90
Generic Investigation into Low-income Programs	Witness	Vermont State Department of Public Service	Low-income rate proposals	Vermont	89

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CASE NAME	ROLE	CLIENT NAME	TOPIC	JURIS.	DATÉ
Generic Investigation into Dinnd Side Management Measures	Consultant	Vermont DPS	Low-income conservation programs	Vennont	89
National Fuel Gas	Witness	Office of Consumer Advocate	Low-income fuel funds	Pennsylvania	89
Montana Power Co.	Witness	Human Resource Develop. Council District	Low-income conservation	Montana	88
Washington Water Power Co.	Witness	Idaho Legal Service Corp.	Rate base, rate design, cost-allocations	Idaho	88

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## **SCHEDULE RDC-1**

#### Schedule RDC-1

	ennsylvania PUMAs in w	•	<u>– 2006)</u>		<u></u> _
_	Decrease >2% and <3%			Decrease 3% or more	-
PUMA	County	Rurai	PUMA	County	Rural
902	Luzerne (part)		801	Lackawanna (part)	
903	Luzeme (part)		1300	Center	X
1000	Lycoming	X	1600	Mercer	X
1100	Northumberland	X	1701	Allegheny (part)	
1200	Union	X	1702	Allegheny (part)	
1801	Allegheny (part)		1703	Allegheny (part)	
1802	Allegheny (part)		1900	Butler	X
1804	Allegheny (part)		2202	Greene	X
1806	Allegheny (part)		2400	Indiana	Х
1807	Allegheny (part)		2501	Cambria	X
2600	Blair	X	2802	Franklin	X
3002	Dauphin (part)		3401	Berks (part)	
3102	Perry	Х	3903	Bucks (part)	
3202	York (part)		3904	Bucks (part)	
3301	Lancaster (part)		4001	Montgomery (part)	
3302	Lancaster (part)		4003	Montgomery (part)	
3303	Lancaster (part)		4004	Montgomery (part)	
3500	Schuylkill	X	4005	Montgomery (part)	
3702	Carbon	X	4006	Montgomery (part)	<del></del>
3801	Northampton (part)		4102	Philadelphia (part)	
3802	Northampton (part)		4103	Philadelphia (part)	•
4202	Delaware (part)		4104	Philadelphia (part)	
4301	Chester (part)		4106	Philadelphia (part)	
			4107	Philadelphia (part)	
			4108	Philadelphia (part)	
			4109	Philadelphia (part)	
		[	4111	Philadelphia (part)	
			4204	Delaware (part)	
			3101	Cumberland (part)	-
			3203	York (part)	

## **SCHEDULE RDC-2**

		Local Telephone F	Bills as a Percentage of 2008	of Income (Six I vs. 2006	Pennsylvania Con	nmunities)	
			2008 (1 <sup>st</sup> Quarter)			2006 (4 <sup>th</sup> Quarter)	
		Local Phone /a/	Cost of Living /b/	Percentage	Local Phone	Cost of Living	Percentage
Erie	Erie	\$27.95	\$4,112	0.68%	\$27.95	\$3,497	0.80%
Indiana	Indiana	\$29.42	\$3,941	0.75%	\$19.48	\$3,352	0.58%
Johnstown	Cambria	\$29.95	\$3,550	0.84%	\$24.05	\$3,121	0.77%
Lancaster	Lancaster	\$22.55	\$4,225	0.53%	\$22.84	\$3,574	0.64%
Philadelphia	Philadelphia	\$35.89	\$4,468	0.80%	\$35.79	\$3,900	0.92%
Pittsburgh	Allegheny	\$22.90	\$4,131	0.55%	\$22.90	\$3,638	0.63%
Williamsport	Lycoming	\$35.01	\$3,526	0.99%	\$26.65	\$2,324	1.15%
York	York	\$24.44	\$4,025	0.61%	\$23.47	\$2,584	0.91%
Average				0.72%	-		0.80%

#### NOTES

/a/ Local phone bills were obtained from the ACCRA database described in the text.
/b/ Cost of living figures were obtained from the Self-Sufficiency Standard for Pennsylvania for 2008 and 2006 respectively. The Self-Sufficiency Standard is published every two years.

## **SCHEDULE RDC-3**

#### Schedule RDC-3

	Self-Sufficiency	Local Bill at 0.7	5% of Income	Local Bill at 1.0	% of Income
	(2 adults/2 children) /a/	Local Phone Bill	Mid-Range (\$25 - \$30)	Local Phone Bill	Mid-Range (\$33 – 41)
Adams	\$46,667	\$29	Yes	\$39	Yes
Armstrong	\$45,484	\$28	Yes	\$38	Yes
Bedford	\$40.332	\$25	Yes	\$34	Yes
Blair	\$44.125	\$28	Yes	\$37	Yes
Bradford	\$41,614	\$26	Yes	\$35	Yes
Butler	\$50,876	\$32		\$42	
Cambria	\$42.595	\$27	Yes	\$35	Yes
Cameron	\$40,551	\$25	Yes	\$34	Yes
Carbon	\$47,466	\$30	Yes	\$40	Yes
Centre	\$59.920	\$37		\$50	
Clarion	\$43.724	\$27	Yes	\$36	Yes
Clearfield	\$40.141	\$25	Yes	\$33	Yes
Clinton	\$40.463	\$25	Yes	\$34	Yes
Columbia	\$43,994	\$27	Yes	\$37	Yes
Crawford	\$43.615	\$27	Yes	\$36	Yes
Elk	\$42,963	\$27	Yes	\$36	Yes
Fayette	\$42.258	\$26	Yes	\$35	Yes
Forest	\$44,012	\$28	Yes	\$37	Yes
Franklin	\$43,977	\$27	Yes	\$37	Yes
Fulton	\$38,620	\$24		\$32	
Greene	\$49,751	\$31		\$41	
Huntingdon	\$44,423	\$28	Yes	\$37	Yes
Indiana	\$47.296	\$30	Yes	\$39	Yes
Jefferson	\$42,342	\$26	Yes	\$35	Yes
Juniata	\$39,531	\$25		\$33	
Lawrence	\$47,613	\$30	Yes	\$40	Yes
Lycoming	\$42,313	\$26	Yes	\$35	Yes
McKean	\$42,466	\$27	Yes	\$35	Yes
Mercer	\$48,756	\$30		\$41	Yes

	Self-Sufficiency	Local Bill at 0.7	5% of Income	Local Bill at 1.0	% of Income
	(2 adults/2 children) /a/	Local Phone Bill	Mid-Range (\$25 - \$30)	Local Phone Bill	Mid-Range (\$33 – 41)
Mifflin	\$40.312	\$25	Yes	\$34	Yes
Monroe	\$52,578	\$33		\$44	
Montour	\$49.439	\$31		\$41	
Northumberland	\$40,511	\$25	Yes	\$34	Yes
Ретгу	\$46.845	\$29	Yes	\$39	Yes
Pike	\$55.960	\$35		\$47	
Potter	\$40,375	\$25	Yes	\$34	Yes
Schuylkill	\$40,718	\$25	Yes	\$34	Yes
Snyder	\$41,846	\$26	Yes	\$35	Yes
Somerset	\$39,333	\$25		\$33	
Sullivan	\$42,573	\$27	Yes	\$35	Yes
Susquehanna	\$45,198	\$28	Yes	\$38	Yes
Tioga	\$45,522	\$28	Yes	\$38	Yes
Union	\$41.817	\$26	Yes	\$35	Yes
Venango	\$48.057	\$30		\$40	Yes
Warren	\$44,448	\$28	Yes	\$37	Yes
Washington	\$49,156	\$31		\$41	Yes
Wayne	\$47,692	\$30	Yes	\$40	Yes
Wyoming	\$44.461	\$28	Yes	\$37	Yes

## **SCHEDULE RDC-4**

### Schedule RDC-4 (two pages)

· · · · · · · · · · · · · · · · · · ·	Sched	ule RDC-4	: Basic Lo	cal Exchan	ge Rates			,	
Companies	Basic Exchange	SLC	E-911 Charge	Fed Univ Svc Chg	PA Relay	T-tone	Other	Total	Basic Exchange as % Total
Citizens of PA: Quaker Lake	\$7.52	\$6.50	\$1.50	\$0.78	\$0.08	\$0.00	\$0.34	\$16.72	45%
Citizens Telephone of Kecksburg	\$11.00	\$6.50	\$1.25	\$0.74	\$0.08	\$0.50	\$0.00	\$20.07	55%
Laurel Highland Telephone Co.	\$12.45	\$6.50	\$1.25	\$0.74	\$0.08	\$0.00	\$0.00	\$21.02	59%
Bentleyville Telephone Co.	\$13.50	\$6.50	\$1.25	\$0.74	\$0.08	\$0.00	\$0.00	\$22.07	61%
North Penn Telephone Co.	\$12.84	\$6.50	\$1.50	\$0.74	\$0.08	\$1.25	\$0.00	\$22.91	56%
Ironton Telephone Company	\$13.50	\$6.50	\$1.25	\$0.75	\$0.08	\$1.00	\$0.00	\$23.08	58%
Armstrong Telephone Company North	\$13.50	\$6.50	\$1.50	\$0.00	\$0.08	\$1.50	\$0.00	\$23.08	58%
Armstrong Telephone Company - PA	\$13.50	\$6.50	\$1.25	\$0.74	\$0.08	\$1.25	\$0.00	\$23.32	58%
Lackawaxen Telecommunications Services	\$13.50	\$6.50	\$1.50	\$0.74	\$0.08	\$1.00	\$0.00	\$23.32	58%
North-Eastern Pennsylvania Telephone Co.	\$14.72	\$6.50	\$1.50	\$0.74	\$0.08	\$0.00	\$0.00	\$23.54	63%
Conestoga Telephone Company	\$15.53	\$6.50	\$1.25	\$0.75	\$0.08	\$0.00	\$0.00	\$24.11	64%
Buffalo Valley Telephone Company	\$15.80	\$6.50	\$1.25	\$0.75	\$0.08	\$0.10	\$0.00	\$24.48	65%
Windstream Pennsylvania	\$16.00	\$6.30	\$1.50	\$0.72	\$0.08	\$0.00	\$0.00	\$24.60	65%
Embarq	\$18.00	\$4.86	\$1.25	\$0.55	\$0.08	\$0.00	\$0.00	\$24.74	73%
Pymatuning Telephone Company	\$14.97 /a/	\$6.50	\$1.25	\$0.74	\$0.08	\$1.25	\$0.00	\$24.79	60%
Venus Telephone Company	\$15.00	\$6.50	\$1.50	\$0.74	\$0.07	\$1.00	\$0.00	\$24.81	60%
YukonWaltz Telephone Company	\$16.00	\$6.50	\$1.25	\$0.00	\$0.08	\$1.00	\$0.00	\$24.83	64%
Mahanoy & Mahantango Telephone Co.	\$16.00 /b/	\$6.50	\$1.25	\$0.77	\$0.08	\$0.00	\$0.24	\$24.84	64%
Frontier Commonwealth	\$16.18	\$6.50	\$1.25	\$0.75	\$0.08	\$0.00	\$0.13	\$24.89	65%
TDS Telecom/Sugar Valley Telephone Co.	\$16.00 /b/	\$6.50	\$1.50	\$0.77	\$0.08	\$0.00	\$0.24	\$25.09	64%
South Canaan Telephone Co.	\$16,40	\$6.50	\$1.50	\$0.74	\$0.08	\$0.00	\$0.00	\$25.22	65%
Frontier Communications of PA	\$16.49	\$6.50	\$1.25	\$0.77	\$0.08	\$0.00	\$0.26	\$25.35	65%
Marianna & Scenery Hill Telephone Co.	\$16.00	\$6.50	\$1.25	\$0.77	\$0.08	\$1.00	\$0.00	\$25.60	63%
Palmerton Telephone Company	\$16.68	\$6.50	\$1.50	\$0.74	\$0.08	\$0.00	\$0.12	\$25.62	65%
Hickory Telephone Company	\$17.27	\$6.50	\$1.25	\$0.73	\$0.08	\$0.00	\$0.00	\$25.83	67%
Frontier Communications/Lakewood	\$16.99	\$6.50	\$1.25	\$0.77	\$0.08	\$0.00	\$0.26	\$25.85	66%
Consolidated Communications	\$17.54	\$6.50	\$1.25	\$0.74	\$0.08	\$0.00	\$0.00	\$26.11	67%

Schedule RDC-4: Basic Local Exchange Rates									
Companies	Basic Exchange	SLC	E-911 Charge	Fed Univ Svc Chg	PA Relay	T-tone	Other	Total	Basic Exchange as % Total
Citizens of PA: Little Meadows	\$16.00 /c/	\$6.50	\$1.50	\$0.78	\$0.08	\$1.20	\$0.34	\$26.40	61%
Frontier Communications/Breezewood	\$17.96	\$6.50	\$1.50	\$0.74	\$0.08	\$0.00	\$0.00	\$26.78	67%
Frontier Communications/Canton	\$18.00	\$6.50	\$1.50	\$0.74	\$0.08	\$0.00	\$0.00	\$26.82	67%
Denver & Ephrata	\$18.30	\$6.50	\$1.25	\$0.76	\$0.08	\$0.00	\$0.14	\$27.03	68%
Frontier Communications/Oswayo River	\$18.00	\$6.50	\$1.50	\$0.76	\$0.08	\$0.00	\$0.26	\$27.10	66%

#### NOTE:

/a/ Pymatuning local service R1 charge of \$15.65 minus "RES PA USF CREDIT" of \$0.68.

/b/ M&M and Sugar Valley bills each show one-party residence access line charge of \$18.50 minus "Global Settlement Credit" of \$2.50.

/c/ Citizens NY - Little Meadows local exchange rate of \$17.73 minus "PA USF CREDIT - Res" of \$1.73.

#### NOTE 2:

A Pennsylvania Telephone Company residential bill was not provided in OCA-V-1.

## **SCHEDULE RDC-5**

# Applicability of Different Escalation Rates to Affordable Rural Local Telephone Bills (Pennsylvania) ario #1: Adjusted for Annual Change in Non-Metropolitan Median Income

Scenario #1: Adjusted for Annual Change in Non-Metropolitan Median Income							
	2008	2007	2006	2005	2004		
Non-metro Median Income	\$51,500	\$49,800	\$50,600	\$48,450	\$47,700		
Affordable burden	0.0075	0.0075	0.0075	0.0075	0.0075		
Affordable bill (annual)	\$386	\$374	\$380	\$363	\$358		
Months in year	12	12	12	12	12		
Affordable bill (monthly)	\$32	\$31	\$32	\$30	\$30		
Scenario #2: Adjusted for Ann	nual Change i	n Statewide N	/ledian Incom	ė			
	2008	2007	2006	2005	2004		
State Median Income	\$61,100	\$59,100	\$60,000	\$57,400	\$57,300		
Affordable burden	0.0075	0.0075	0.0075	0.0075	0.0075		
Affordable bill (annual)	\$458	\$443	\$450	\$430	\$430		
Months in year	12	12	12	12	12		
Affordable bill (monthly)	\$38	\$37	\$38	\$36	\$36		
Scenario 3: Adjusted by Annu	ıal Changes i	n CPI-U	•				
	2008	2007	2006	2005	2004		
2004 bill	\$30	\$30	\$30	\$30	\$30		
January CPI-U (all items)	212.516	201.8	198.3	190.7	185.2		
Adjusted bill	\$34	\$32	\$32	\$31	\$30		

#### OCA STATEMENT No. 2-R

### BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Investigation Regarding Intrastate Access	)	
Charges and IntraLATA Toll Rates of Rural	)	Docket No. I-00040105
Carriers, and the Pennsylvania Universal	)	
Service Fund	)	

#### **REBUTTAL TESTIMONY OF ROGER D. COLTON**

#### **ON BEHALF OF**

#### PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

RECEIVED

MAR 2 6 2009

PA PUBLIC UTILITY COMMISSION SECRETARY'S BUREAU

January 15, 2009



1	Q.	PLEASE STATE YOUR NAME AND ADDRESS FOR THE RECORD.
2	A.	My name is Roger Colton. My address is Fisher, Sheehan & Colton, Public
3		Finance and General Economics (FSC), 34 Warwick Road, Belmont, MA 02478.
4		
5	Q.	ARE YOU THE SAME ROGER COLTON WHO PREVIOUSLY
6		APPEARED AND SUBMITTED WRITTEN DIRECT TESTIMONY IN
7		THIS PROCEEDING?
8	A.	Yes.
9		
10	Q.	WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?
11	A.	The purpose of my rebuttal testimony is to respond to the Direct Testimony of
12		AT&T, Embarq and the Office of Small Business Advocate (OSBA) with respect
13		to the manner in which to preserve and enhance the affordability of local
14		telephone service in rural Pennsylvania.
15 16		
17		I. Competition and the Affordability of Local Service.
18	Q.	WHAT IS THE FIRST ISSUE TO WHICH YOU WISH TO RESPOND?
19	A.	AT&T urged in the prefiled Direct Testimony of E. Christopher Nurse and Ola
20		Oyefusi that competition in the telecommunications industry is sufficient to
21		preserve and enhance the affordability of local telephone service. The AT&T
22		witnesses urge that the Pennsylvania communications market has become
23		increasingly competitive, even in rural areas. They then urge that "market forces
24		will ensure that rates are kept just and reasonable." (Direct Testimony of Nurse

and Oyefusi, at 7). They conclude that "with the amount of competition that exists in Pennsylvania, and that continues to grow, it is no longer necessary for the Commission to impose a regulatory rate cap on retail rates." (Direct Testimony of Nurse and Oyefusi, at 10).

A.

## Q. DO YOU AGREE THAT COMPETITION IS "CONTINUING TO GROW" FOR BASIC LOCAL TELEPHONE SERVICE IN PENNSYLVANIA?

No. Local exchange carriers in Pennsylvania generally do not "compete" for customers seeking to subscribe to basic local service on a stand-alone basis.

Support for this conclusion comes from a search for information as though a customer were shopping for local telephone service in Pennsylvania. In performing this search, I accessed the Pennsylvania Public Utility Commission's (PUC) Utility Choice web site (www.UtilityChoice.org). No plan was generated through that search that offered a choice of taking basic local service as a stand-alone service. A search for competitive local telephone service through the UtilityChoice.org, in other words, turned up no references to local telephone service that was not packaged with other services. This site for shopping for local telephone service in Pennsylvania (UtilityChoice.org) provides no references to unbundled, unpackaged, basic local telephone service.

There may be basic local service offerings available through various telecommunications carriers serving rural service territories in Pennsylvania. The information above, however, demonstrates that carriers do not aggressively market basic local service which is to be supported through the Pennsylvania

1		Universal Service Fund (Pa USF). In approving local competition for
2		Pennsylvania, the state legislature (as well as the Pennsylvania PUC) underscored
3		the purpose of making competitive local telephone service available to all the
4		people of the Commonwealth.
5		
6		AT&T's witnesses do not establish that there is competition for the type of
7		service that is to be supported through the Pa USF. Accordingly, I conclude that
8		their assertion that competition can serve to keep basic local service rates
9		affordable is not well-grounded.
10		
11	Q.	DO YOU HAVE ANY FURTHER CONCERNS WITH THE ASSERTION
12		THAT COMPETITION CAN KEEP BASIC LOCAL RATES
13		AFFORDABLE?
14	A.	Yes. AT&T witnesses Nurse and Oyefusi argue "it is not necessary to cap retail
15		rates to assure their affordability." (Direct Testimony of Nurse and Oyefusi at 7).
16		These witnesses further argue that "in such a competitive marketplace, if one
17		carrier chooses to set rates that are too high, then market forces will ensure that
18		rates are kept just and reasonable." (Direct Testimony of Nurse and Oyefusi, at 7).
19		In making this statement, the AT&T witnesses never define what they mean by
20		the term "too high."
21		
22		In assessing whether basic local telephone rates are "affordable," I have
23		recommended that the Pennsylvania PUC adopt the Federal Communications

Commission (FCC) two-part definition of "affordability." In its implementation of the affordability provisions of the Telecommunications Act of 1996, the FCC found that affordability has both an absolute component (can households retain service?) and a relative component (can households retain service without undue detriment to the household?).<sup>1</sup>

If nothing else, the competitive markets do not take into account the second component of affordability (can households retain service without undue detriment to the household?). Numerous competitive markets exist that do not necessarily result in affordable prices. Two such markets that I discuss in my Direct Testimony include the housing market and the home energy (bulk fuel) market.

## Q. DOES AT&T OFFER ANY EVIDENCE OF THE CONTINUING AFFORDABILITY OF BASIC LOCAL EXCHANGE SERVICE?

A. The only empirical evidence offered by AT&T was a brief reference to telephone penetration rates. (Direct Testimony of Nurse and Oyefusi, at 13). In offering this testimony on subscribership levels, however, the AT&T witnesses did not acknowledge that the FCC has rejected the use of subscribership levels as the exclusive means of testing affordability. The FCC has noted that telephone "subscribership levels do not address the second component of affordability,"

<sup>&</sup>lt;sup>1</sup> In the Matter of the Federal-State Joint Board on Universal Service, Report and Order, 12 FCC Rcd 8776, ¶ 110 (rel. May 8, 1997) (\*1997 Universal Service Report\*).

namely whether paying the rates charged for the service impose a hardship for those who subscribe."<sup>2</sup>

Office of Small Business Advocate (OSBA) witness Allen Buckalew makes a similar mistake. Mr. Buckalew assumes that the exclusive purpose of ensuring an affordable rate is that "rural consumers would be dropped off the telephone system without it." (OSBA Statement No. 1, at 11). Mr. Buckalew's testimony is simply another way of stating that testing whether telephone rates are affordable should be tied to penetration rates, an approach that has been considered and rejected by the FCC.

### II. The Ad Hoc Determination of Affordability of Local Service in Rural Areas.

#### Q. WHAT IS THE SECOND ISSUE TO WHICH YOU WISH TO RESPOND?

A. Embarq witness Russell Gutshall urged in his prefiled Direct Testimony that the affordability of local telephone service should be determined on a case-by-case basis as local exchange carriers seek rate increases. According to Mr. Gutshall, the Commission should require a local exchange carrier to demonstrate that its proposed rates are affordable at the time it seeks to increase basic local rates. (Embarq Statement 1.0, at 11). Mr. Gutshall further stated that he had conducted no economic study regarding affordable rate levels for basic service. He said there was "no need to produce such a study" until Embarq seeks permission to raise rates above the current \$18.00 benchmark. (Embarq Statement 1.0, at 16).

<sup>&</sup>lt;sup>2</sup> 1997 Universal Service Report, at ¶ 113.

1		I conclude that this proposal does not serve to preserve and enhance the
2		affordability of local telephone service.
3 4	Q.	DO YOU HAVE CONCERNS WITH THE APPROACH TO
5		DETERMINING AFFORDABILITY ADVANCED BY EMBARQ?
6	A.	Yes. Mr. Gutshall's proposal seeks to institutionalize an ad hoc approach to the
7		determination of the affordability of basic local telephone service. Under the
8		Embarq proposal, each individual rural carrier would be responsible for
9		developing its own test of affordability for customers of that service territory.
10		Each carrier could use a different methodology, different data, and a different
11		affordability threshold. Indeed, some carriers might aver that there is no need for
12		an affordability benchmark in their service territory. The result of this ad hoc
13		approach would be that different carriers could make very different demands on
14		the Pa USF based on very different core affordability determinations.
15		
16		There is a geographic problem with this proposal for a case-by-case determination
17		of the affordability of local service as well. Embarq witness Gutshall urged that a
18		determination of the affordability of local telephone service for rural local
19		exchange carriers be limited only to the customers of the specific carrier before
20		the Commission at any given time. (Embarq Statement 1.0, at 11). Under this
21		Embarq proposal, North Penn Telephone Company could argue for a
22		substantively different affordability threshold than would Armstrong Telephone
23		Company. Accordingly, the determination of affordability could well result in

different affordability determinations for different geographic areas.

Since a rural customer in the northwest part of the state may well be in a different service territory than a rural customer in the southeast part of the state, those customers could have identical incomes, and face identical bills, but still be subject to a different affordability threshold based upon what affordability threshold was presented by the local exchange carrier from whom these customers take service.

0.

A.

### III. Defining the Affordability of Rural Local Service.

#### WHAT IS THE THIRD ISSUE TO WHICH YOU WISH TO RESPOND?

OSBA witness Buckalew urged in his prefiled Direct Testimony that "the idea behind rural 'affordable' rates is to have rates similar to urban areas services and rates." (OSBA Statement No. 1, at 10). Based on this assertion, Mr. Buckalew urges that "Verizon's *urban* rates be averaged to determine an 'affordable' rural rate, or that the rates of all carriers operating *in major cities* be averaged to determine an 'affordable' rural rate." (OSBA Statement No. 1, at 10) (emphasis added).

Mr. Buckalew's conclusions are supported neither by policy nor by data. The issues of "comparability" and "affordability" present distinct issues. While OCA witness Loube addresses comparability, I address affordability. Contrary to what Mr. Buckalew states, however, the affordability of rural rates cannot be tied to whether those rates are "similar to urban areas services and rates."

Mr. Buckalew's assertion is not supported by data either. As I describe in detail in my Direct Testimony, both the cost-of-living in rural areas, and the income of Pennsylvania's rural residents, differ sharply from the cost-of-living and income within Pennsylvania's urban areas. In addition, certain non-rate attributes of Pennsylvania's rural areas, as I describe in my Direct Testimony, make clear that real differences exist between Pennsylvania's urban and rural areas. Accordingly, the use of a comparison between urban and rural rates is inappropriate for establishing an affordability benchmark.

#### Q. WHAT IS YOUR OVERALL CONCLUSION?

12 A. No methodology has been advanced by other parties in this proceeding describing
13 an appropriate way to establish an accurate benchmark for an affordable rural
14 rate. I conclude that the proposal that rural rates that are comparable to non-rural
15 rates, within an affordability constraint, as outlined by my Direct Testimony and
16 that of Mr. Loube, is a necessary and appropriate response to implementation of
17 the Pa USF.

#### Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

20 A. Yes, it does.

### BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Investigation Regarding Intrastate Access	)	
Charges and IntraLATA Toll Rates of Rural	)	Docket No. I-00040105
Carriers, and the Pennsylvania Universal	)	
Service Fund	)	

### SURREBUTTAL TESTIMONY OF ROGER D. COLTON

### **ON BEHALF OF**

### PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

RECEIVED

MAR 2 8 2009

PA PUBLIC UTILITY COMMISSION SECRETARY'S BUREAU

February 10, 2009



1	Q.	PLEASE STATE YOUR NAME AND ADDRESS FOR THE RECORD.
2	A.	My name is Roger Colton. My address is Fisher, Sheehan & Colton, Public Finance and
3		General Economics (FSC), 34 Warwick Road, Belmont, MA 02478.
4		
5	Q.	ARE YOU THE SAME ROGER COLTON WHO PREVIOUSLY APPEARED
6		AND SUBMITTED WRITTEN DIRECT AND REBUTTAL TESTIMONY IN
7		THIS PROCEEDING?
8	A.	Yes.
9		
10	Q.	WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?
11	A.	The purpose of my surrebuttal testimony is to respond to the Rebuttal Testimony of
12		Verizon, AT&T and the Office of Small Business Advocate (OSBA) with respect to the
13		manner in which to preserve and enhance the affordability of local telephone service in
14		rural Pennsylvania.
15	•	
16		I. Specific Comments on My Direct Testimony.
17	Q.	PLEASE DESCRIBE THE PURPOSE OF THIS SECTION OF YOUR
18		TESTIMONY.
19	A.	In this section of my testimony, I respond to the specific comments that witnesses for
20		Verizon, AT&T and OSBA made about my Direct Testimony. I demonstrate how those
21		specific comments are not well-founded.
22		

#### A. Verizon's Rebuttal Testimony.

# Q. PLEASE RESPOND TO THE VERIZON COMMENTS ABOUT YOUR DIRECT TESTIMONY.

Verizon witness Price argues in his rebuttal testimony that my determination that a household can afford to spend 0.75% of its income for basic local telephone service is "at odds with the actual facts." (Verizon Statement 1.1, at 25). Verizon witness Price uses data provided in the FCC's 2008 "Reference Book of Rates, Price Indices, and Household Expenditures for Telephone Services," in addition to a variety of unsupported assumptions provided on his part, to build an argument that Pennsylvania's rural customers can afford to spend more than \$43 a month for basic local service. (Verizon Statement 1.1, at 25 – 26). The calculations and conclusions provided by Mr. Price are not well-founded.

. 1

A.

The FCC "Reference Book" that Mr. Price cites makes clear that the FCC relies upon data generated through the U.S. Bureau of Labor Statistics (BLS) Consumer Expenditures Survey (CEX). The CEX data on telecommunication expenditures, however, is not limited to local telephone service. The *Information Book* published by BLS for the Quarterly Interview Survey component of the Consumer Expenditures Survey (April 1, 2004, at 15)<sup>2</sup> reports that included in "telephone expenses" are the following:

> Residential service;

<sup>&</sup>lt;sup>1</sup> Reference Book, at page 2-1 (2008).

<sup>&</sup>lt;sup>2</sup> According to the Bureau of Labor Statistics: "The Consumer Expenditure Survey (CE) program consists of two surveys collected for the Bureau of Labor Statistics by the Census Bureau — the quarterly Interview survey and the

• 1	Mobile/cellular service;
2	> Pager/beeper services;
3	> Basic (local) service charge;
4	> Domestic long distance charge;
5	> International long-distance charge;
6	> "Telephone related services such as caller ID, call waiting, call forwarding, or voice
7	mailboxes" (but not including data services);
8	> Installation or repair of telephone line(s);
9	> Telephone or pager purchases or rentals;
10	> Internet access or data services;
11	> Cable or satellite television services;
12	> DSL or ISDN charges; and
13	> Non-telephone related rentals or purchases.
14	Verizon's comments acknowledge that the "telephone services" expenditures reported in
15	the CEX are not only for local telephone service. Mr. Price states that "I recognize that
16	some of the expenditures accounted for by the FCC may be for wireless service and long
17	distance or other non-basic services." (Verizon Statement 1.1, at 26). He then asserts that
18	"if only half of the average rural household expenditures were for basic local service it
19	would still be 1.3% of total expenditures, or \$43.25 per month." (Verizon Statement 1.1,
20	at 26). (emphasis added). Mr. Price, however, does not seek to support his assumption
21	that half of all rural telecommunication expenditures are for basic local service.

Diary survey — that provide information on the buying habits of American consumers, including data on their expenditures, income, and consumer unit (families and single consumers) characteristics."

In fact, Mr. Price's assumption that basic local service is "half of the average rural household expenditures" would require the PUC to find, with no empirical basis, that the monthly price of basic local telephone service, standing alone, would be equal to the combined monthly price of wireless service, domestic long-distance service, internet access, cable television service, and non-basic telephone service (e.g., call waiting, call forwarding, caller ID, voice mail), amongst other items.

A.

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### Q. DOES MR. PRICE MAKE ANY OTHER ERROR IN HIS ANALYSIS OF THE FCC'S REPORT ON TELECOMMUNICATION EXPENDITURES?

Yes. As I note in my Direct Testimony, according to the FCC, there are two inquiries in a determination of "affordability." One of those inquiries involves the "relative" aspect of affordability. This inquiry examines the extent to which expenditures can be made without undue hardship to the household. Mr. Price's analysis does not even attempt to address that aspect of an affordability determination.

A.

#### B. AT&T's Rebuttal Testimony.

# 17 Q. PLEASE COMMENT ON AT&T'S REBUTTAL TESTIMONY REGARDING 18 THE AFFORDABILITY OF BASIC LOCAL TELEPHONE SERVICE.

AT&T witnesses Nurse/Oyefusi reject the need for a rate cap to promote the affordability of basic local telephone service. The AT&T witnesses argue that "it is clear that consumers are willing to pay more than \$18 for their telephone services." (Nurse/Oyefusi Rebuttal, at 9). They argue that "a large portion of...customers will not even be

affected, or are already voluntarily paying substantially higher rates for their bundles of telephone service." (Nurse/Oyefusi Rebuttal, at 10).

This line of reasoning has a fatal flaw. It may well be that many residential customers shop for bundled packages of telecommunications service. This case is not about them. This case focuses on basic local service. If people want to shop, and have options from which to choose, that is appropriate. However, this case is designed to "maintain and enhance universal service" in high cost rural areas. This case is about people who rely on their ILEC for basic local exchange service and may have no other affordable option.

not wireless, not CLEC, not cable. Merely because there are, in the words that Nurse/Oyefusi themselves use, "a large portion" of customers that will not be affected by this proceeding does not detract from those customers who will be affected.

A.

# Q. PLEASE DESCRIBE AT&T'S COMMENTS REGARDING TELEPHONE PENETRATION RATES IN PENNSYLVANIA.

In his Direct Testimony, PTA witness Laffey noted that Pennsylvania telephone penetration rates had dropped for several years. (PTA St. 1 at 16). AT&T witnesses Nurse/Oyefusi argue in their rebuttal testimony that the decline cited by Mr. Laffey is due to a problem with the survey question. In discussing FCC Telephone Subscribership data, the AT&T witnesses argue that "the FCC realized. . . that the phrasing of [its pre-2005] question may have caused respondents to focus exclusively on traditional wireline phone service and not include wireless services in their responses." (Nurse/Oyefusi Rebuttal, at 6). They assert further that "once the FCC's survey question was changed to

capture both wireline and wireless service, the FCC's data shows that an increasing
 percentage of Pennsylvania households have telephone service." (Nurse/Oyefusi
 Rebuttal, at 6 – 7).

### 5 Q. DOES AT&T'S REBUTTAL DIMINISH THE VALUE OF YOUR ANALYSIS OF

### THE CHANGE OF TELEPHONE PENETRATION RATES WITHIN

#### PENNSYLVANIA AS ONE MEASURE OF UNIVERSAL SERVICE?

A. No. As I discussed in my Direct Testimony, the FCC's Telephone Subscribership Report data only reports penetration rates for Pennsylvania statewide. To look at telephone penetration rates within Pennsylvania, I used a different Census Bureau resource:

Pennsylvania Public Use Microdata Areas (PUMAs) data. The PUMAs data is developed from American Community Surveys conducted by the Census Bureau.

According to the Census Bureau, beginning in 2004, "instructions that accompanied the ACS mail questionnaire advised respondents to answer that the house, apartment or mobile home had telephone service if cell phones were used by household members."

The new directions accompanying the ACS survey told survey respondents to "mark the 'yes' box if 1) there is a telephone in working order; and you receive your service at your house, apartment or mobile home; or 2) if you have a cell phone from which you can both make and receive calls." (emphasis added).

<sup>&</sup>lt;sup>3</sup> U.S. Department of Commerce, U.S. Census Bureau. American Community Survey/Puerto Rico Survey, 2007 Subject Definitions, at 23, Census Bureau: Washington D.C.

<sup>&</sup>lt;sup>4</sup> U.S. Department of Commerce, U.S. Census Bureau, Your Guide for the American Community Survey, at 7, Census Bureau: Washington D.C.

·l	Q.	IN YOUR DIRECT TESTIMONY, YOU CITE AMERICAN COMMUNITY
2		SURVEY DATA FROM 2006. IS THERE UPDATED ACS DATA?
3	A.	Yes. Since the time I prepared my Direct Testimony, the Census Bureau's Ferrett
4		database has made available the 2007 ACS data. This 2007 ACS data represents the most
5		recent telephone penetration data for Pennsylvania and its geographic components.
6		Pennsylvania is divided into 92 geographic areas or PUMAs. My Schedule RDC-1S
7		(attached) includes the newest 2007 ACS data for Pennsylvania PUMAs.
8		
9		Note that for Pennsylvania as a whole, telephone penetration decreased from 2005 to
10		2007. While in 2005, Pennsylvania had a penetration rate of 96.6%, by 2007, that
11		penetration rate had decreased to 96.0%. Looking at statewide figures, however, tells an
12		incomplete story. Of Pennsylvania's 92 PUMAs, 40 experienced a decrease in telephone
13		penetration rates between 2006 and 2007. In addition, of those 92 PUMAs, 52
14		experienced a decrease in penetration rates from 2005 to 2007. Of the 52 PUMAs that
15		experienced decreased telephone penetration rates from 2005 to 2007, 29 experienced a
16		decrease of two percent (2%) or less; in addition, 20 more experienced a decrease in
17		telephone penetration rates of between 2% and 5%, while three experienced a decrease in
18		telephone penetration of 5% or more.
19		
20		Again, it is important to remember that this decreased penetration rate is <u>not</u> attributable
21		to an increase in cell phone penetration. ACS survey respondents are specifically directed
22		to report having telephone service if someone in the home has a cell phone on which they
23		can both send and receive calls.

22

23

2	Q.	DOES THE AT&T REBUTTAL TESTIMONY ERR IN ANY OTHER WAY?
3	A.	Yes. AT&T witnesses Nurse/Oyefusi contend that eliminating or increasing the rate cap
4		above \$18 will not lead to decreased penetration rates. (Nurse/Oyefusi Rebuttal at 5).
5		As I have noted elsewhere, the affordability of local telephone service cannot be
6		measured exclusively by reference to penetration rates. In addition to whether consumers
7		can afford to have service at all, according to the FCC, one test of affordability is whether
8		consumers can afford to have local telephone service without undue hardship. The
9		Nurse/Oyefusi testimony fails to acknowledge this second aspect of affordability.
10		-
11		In addition, however, the Nurse/Oyefusi testimony fails to acknowledge the dynamic
12		nature of the affordability constraint I recommend in my testimony. As I note in my
13		Direct Testimony, it is likely that the affordability of local telephone service will vary
14		over time. In my Direct Testimony, I discuss in some detail the fact that incomes will
15		vary over time. In some years, incomes will increase while in other years incomes will
16		decrease. My Direct Testimony presents an easy-to-apply mechanism for adjusting the
17		affordability constraint in response to these changes in income.
18		
19		What AT&T witnesses Nurse/Oyefusi fail to acknowledge is that the affordability
20		constraint also comes into play because of potential changes not only in the underlying
21		rates for basic local service, but in the underlying fees and miscellaneous charges as well.

with a corresponding increase in the federal Subscriber Line Charge (SLC), the

For example, should the FCC order reductions in interstate or intrastate access charges,

affordability constraint may be implicated even if there were <u>no</u> changes in the basic local service rates of the rural carriers. There are, in other words, multiple aspects to the affordability constraint that I have recommended. The testimony of Nurse/Oyefusi does not acknowledge those multiple aspects.

A.

#### C. OSBA's Rebuttal Testimony.

### 7 Q. PLEASE EXPLAIN YOUR RESPONSE TO THE OSBA TESTIMONY 8 REGARDING AFFORDABILITY.

OSBA witness Buckalew argues that affordability assistance should be provided exclusively to low-income customers and not to all customers through high cost rural support. According to Mr. Buckalew, "the OCA treats all residential customers as though they are low-income." (OSBA Statement 2, at 10). Mr. Buckalew's comments are misplaced. The affordability constraint I calculated for rural basic local service was based on median income data. Median income data reports that income level at which half of all households are above and half of all households are below. The affordability constraint is not an indirect mechanism for delivering low-income assistance. It is instead an explicit response to the *legislative* mandate that local rates be sufficiently affordable so as to maintain and enhance universal service.

## Q. PLEASE EXPLAIN YOUR RESPONSE TO MR. BUCKALEW'S TESTIMONY REGARDING THE NEED TO PROMOTE COMPETITION.

A. Mr. Buckalew states that "the state can't impose an affordability constraint on all rural rates while expecting competition to exist." (OSBA Statement 2, at 10). He argues that

"the entire telecommunications industry has shifted to relying on competition. . ." (OSBA 1 2 Statement 2, at 10). Mr. Buckalew treats a public policy in support of competition in the telecommunications industry as though it is the *only* policy to consider. He 3 inappropriately neglects the legislatively-articulated policies favoring the promotion of 4 5 universal service in favor of the promotion of competition. There is, in fact, no reason to 6 give a policy promoting competition priority over a policy promoting universal service. 7 8 Public policy, including telecommunications policy today, recognizes that universal 9 service mechanisms that are designed to increase subscribership by keeping rates 10 affordable will benefit everyone in the country, including those who can afford basic 11 telephone service. At its simplest level, increasing the number of people connected to the 12 telecommunications network makes the network more valuable to <u>all</u> of its users by 13 increasing the usefulness of the network to them. Increasing subscribership also benefits 14 society in ways unrelated to the value of the network per se; for example, everyone 15 benefits from the widespread availability of basic public safety services (e.g., 911). 16 17 Moreover, it should be clear that universal service in Pennsylvania's rural areas do not 18 benefit only those persons who live in rural areas. The legislative policy that the PUC 19 should "maintain and enhance" universal service benefits not simply the rural customer 20 who wants to call his or her family in Pittsburgh, but also the urban family in Pittsburgh

that wants to call a relative in Elk County.

21

In short, the Pennsylvania General Assembly has said that the obligation of the PUC is to maintain and enhance universal service while promoting competition and deploying a modern network. Mr. Buckalew seems all too willing to edit that legislation to focus exclusively on promoting competition.

A.

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# Q. IS MR. BUCKALEW'S TESTIMONY THAT POLICIES DESIGNED TO PROMOTE COMPETITION SHOULD PREDOMINATE OVER POLICIES DESIGNED TO PROMOTE UNIVERSAL SERVICE CONSISTENT WITH

#### PENNSYLVANIA'S REGULATORY POLICY?

No. Mr. Buckalew asserts that "the entire telecommunications industry has shifted to relying on competition, not government regulation, for pricing telecommunications service." (OSBA Statement 2, at 10). This testimony by Mr. Buckalew fails to acknowledge, let alone seek to implement, the extended history, both at the federal level and in Pennsylvania, of promoting universal service as an important public policy.

Universal telephone service principles have been at the heart of telecommunications policy for the United States for more than 75 years. In the Federal Communications Act of 1934,<sup>5</sup> Congress proclaimed federal policy to be that as many Americans as possible should have access to reasonably priced telephone service. The interdependence of the value of telephone service between all end users makes telephone service unique. As additional users are connected to the telephone network, the network becomes more

<sup>&</sup>lt;sup>5</sup> 47 U.S.C. § 151. Section 151 provides, in relevant part: "<u>Purposes of Act; Federal Communications Commission created.</u> For the purpose of regulating interstate and foreign commerce in communication by wire and radio <u>so as to make available</u>, so far as possible, to all the people of the United State. . . a rapid, efficient, nationwide, and world-

2	receiving calls.
3	
4	When Congress enacted the Telecommunications Act of 1996, that legislation articulated
5	a particular concern about the high cost to provide telephone service to rural areas.
6	Congress recognized in that legislation that telephone service is considerably more
7	expensive to provide in rural areas. Consistent with the universal service provisions of the
8	1996 Act, the FCC has continued and modified universal service support for high cost
9	areas as part of the federal Universal Service Fund. This is in addition to, not in lieu of,
10	the federal Universal Service Fund support for low-income customers provided through
11	the Lifeline program.
12	
13	At the state level, the Pennsylvania legislature has similarly declared its support for a
14	policy supporting universal service. In the original Chapter 30 legislation (Act 67 of
15	1993), the Pennsylvania General Assembly stated the policy of Pennsylvania to include
16	efforts to:
17 18 19 20 21 22 23 24 25 26 27	(1) Maintain universal telecommunications service at affordable rates while encouraging the accelerated deployment of a universally available, state-of-the-art, interactive, public-switched broadband telecommunications network in rural, suburban and urban areas, including deployment of broadband facilities in or adjacent to the public rights-of-way abutting public schools, including the administrative offices supporting public schools; industrial parks; and health care facilities, as defined in the act of July 19, 1979 (P.L.130, No.48), known as the Health Care Facilities Act. <sup>6</sup>

valuable to all users. The value arises both to persons making calls and to persons

wide wire and radio communication service with adequate facilities at reasonable charges...". 47 U.S.C. § 151 (emphasis added). 6 66 Pa. C.S. §3001(1) (repealed).

.1

Subsequent to that legislation, the PUC established the Pennsylvania Universal Service Fund (Pa USF). The Pa USF was designed not only to keep rural rates comparable to non-rural rates, but to maintain and enhance affordable universal service. When the Pennsylvania legislature repealed the original Chapter 30 in 2004, it re-enacted legislation that contained the same universal service provision contained in the original legislation.<sup>7</sup>

- ]

In short, Mr. Buckalew's testimony that the entire telecommunications industry relies exclusively on competition to set prices is inconsistent with a long-standing public policy in Pennsylvania (as elsewhere) that specific public actions must be taken to maintain and enhance universal service. His testimony that competition can and should be the exclusive tool to be used to maintain and enhance universal service should be rejected. There is nothing unreasonable, nor even particularly novel, about the use of an external fund funded by other companies to maintain the reasonableness of rural telephone rates.

A.

# Q. IS THERE ANY FINAL ASPECT OF OSBA'S REBUTTAL TESTIMONY TO WHICH YOU WISH TO RESPOND?

Yes. Mr. Buckalew argues that low-income telephone assistance and high cost rural support are mutually exclusive. He states that "assuming that there is some rate for telephone service which is a 'burden' relative to income, the subsidy should be directed to the low-income consumer and not to all consumers." (OSBA Statement 2, at 10). Mr. Buckalew fails to acknowledge that his argument has been rejected at the federal level. The FCC has made clear that the Lifeline program is to work in *conjunction* with high

<sup>&</sup>lt;sup>7</sup> 66 Pa. C.S. §3011(2).

cost rural support to deliver affordable rates. According to the FCC, "as for commenters concerned about the amount of support for low-income individuals living in high cost areas, we are confident that the support mechanisms we adopt today for high cost, rural, and insular areas combined with Lifeline, will achieve sufficient assistance for low-income consumers in high cost areas." Mr. Buckalew's argument should be rejected as well.

A.

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II. Relationship between Lifeline and High Cost Rural Support.

# Q. PLEASE DESCRIBE THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY.

Several comments were made in rebuttal testimony indicating that the federal Lifeline program is a substitute for rural universal service support. OSBA witness Buckalew, for example, argues that "federal rules. . .provide low-income customers with direct support. There is no need for a general subsidy program for all rural ILECs." (OSBA Statement 2, at 11). He argues that "OCA has not presented an analysis of the contention that low-income customers need an additional low-income plan (in that a federal program, Lifeline, already exists)." (OSBA Statement 2, at 3). Similarly, Verizon witness Price opposes "keep(ing) basic local service for all customers artificially low. . .as a substitute for Lifeline service." (Verizon Statement 1.1, at 31).

# Q. IS THE FEDERAL COMMUNICATION COMMISSION'S (FCC) LIFELINE PROGRAM A SUBSTITUTE FOR RURAL UNIVERSAL SERVICE SUPPORT?

<sup>&</sup>lt;sup>8</sup> 1997 Universal Service Order, at ¶ 360.

No. The FCC's Lifeline program is not intended to be, and does not serve as, a substitute for the state rural Universal Service Fund. The Lifeline eligibility income criterion, for example, is quite narrow. Lifeline eligibility extends to 135% of the Federal Poverty Level, or the participation in a designated low-income program such as TANF. While the aggregated American Community Survey (ACS) data does not report data for that precise income range (up to 135% of Poverty Level), it does provide data for up to 125% of the Federal Poverty Level. While Pennsylvania has 1.7 million people living at or below 125% of the Federal Poverty Level, the state has an *additional* 1.5 million people living between 125% and 200% of Poverty Level. The 200% benchmark is important in that the Pennsylvania self-sufficiency standard for Pennsylvania's rural counties is somewhat over that 200% mark. More than 1.5 million Pennsylvania residents who do not earn enough income to be self-sufficient nonetheless may not even qualify for the FCC's Lifeline telephone program, unless they are also receiving assistance from another low-income assistance program.

A.

Moreover, as I discussed in my Direct Testimony, only a fraction of those customers who do qualify for Lifeline actually are enrolled in the program in Pennsylvania. The Lifeline program is not a substitute for, and is not intended to be a substitute for, state universal support for rural, high cost areas.

#### O. IS THE LIFELINE PROGRAM MIS-REPRESENTED IN ANY OTHER WAY?

A. Yes. AT&T witnesses Nurse/Oyefusi argue that a rate cap is not needed. They assert that "as to...those low-income customers who subscribe to Lifeline services, increasing

the basic local service cap should not affect them, because even if basic local service rates increase with the cap, the Commission can (and should) direct that Lifeline rates remain unchanged." (Nurse/Oyefusi Rebuttal, at 5). This statement is in error. The FCC's Lifeline program does not set local rates at a prescribed level. Instead, the Lifeline program provides a bill credit at a specified level. Simply because local rates increase does not mean that Lifeline credits increase as a result. The Lifeline discount is equal to the Federal Subscriber Line Charge plus a \$1.75 reduction in the basic bill, or a total of about \$8.25. If basic local service rates increased from \$18.00 to \$36.00, the customer would still receive the same \$8.25 Lifeline discount. AT&T's argument that the PUC somehow independently establishes an affordable Lifeline rate for low-income customers is wrong.

A.

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### Q. CAN YOU SUMMARIZE YOUR OWN REFERENCE TO LIFELINE RATES IN YOUR DIRECT TESTIMONY?

Yes. In my Direct Testimony, I observe that the FCC Lifeline Program is not a substitute for high cost rural support. I note first that the objectives of the high cost rural support fund and of the Lifeline program are substantively different. I note further that Pennsylvania has a relatively low enrollment in its Lifeline program, which, while it is a problem that should be addressed, is beyond the scope of this proceeding. The rebuttal testimony of neither OSBA nor AT&T addressed these documented problems with relying on Lifeline as a substitute for high cost rural support.

#### Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

- 1 A. Yes, it does.
  - 2 108990

### Schedule RDC-1S

	<del></del>	Telephone Penet	•	: Use Micro-Data A sylvania)	reas (PUMAs)		
Public Use Micro-		2 10 0		Penetration Rate		Change in Telepho	ne Penetration Rate
data Area	County	Rural County'?	2005	2006	2007	2007 vs. 2005	2007 vs. 2006
Total State			96.6%	95.9%	96.0%	20.6%	0.1%
PUMA #00100	Erie	No	93.9%	96.1%	96.7%	2.7%	0.5%
PUMA #00200	Erie		98.9%	97.7%	97.4%	÷1.5%	-0.3%
PUMA #00300	Crawford, Warren		96.6%	96.0%	96.1%	-0.5%	0.2%
PUMA #00400	McKean, Potter, Elk, Cameron		97.4%	99.1%	96.8%	-0.6%	-2.2%
PUMA #00500	Bradford, Tioga, Sullivan	Yes	97.5%	97.3%	98.1%	0.5%	0.8%
PUMA #00600	Susquehanna, Wayne, Pike		97.4%	98.4%	98.0%	0.6%	-0.4%
PUMA #00700	Monroe		99.1%	97.3%	94.5%	4:6%	-2.8%
PUMA #00801	Lackawanna		96.8%	94.6%	94.4%	-24% N	-0.3%
PUMA #00802	Wyoming, Lackawanna	WY: Yes/LA: No	97.5%	97.8%	98.0%	0.4%	0.1%
PUMA #00901	Luzerne		99.2%	97.3%	96.1%	-3.2% (L)	-1.2%
PUMA #00902	Luzerne	No	97.3%	97.0%	99.0%	1.7%	2.0%
PUMA #00903	Luzerne, Columbia	LU: No/CO: Yes	94.2%	97.0%	97.4%	3.2%	0.3%
PUMA #01000	Lycoming	Yes	96.4%	96.5%	97.2%	0.8%	0.7%
PUMA #01100	Northumberland, Montour		99.0%	95.7%	95.5%	-3.5%	-0.1%
PUMA #01200	Clinton, Union, Snyder, Mifflin, Juniata		97.1%	95.1%	95.7%	1.3%	0.7%
PUMA #01300	Centre	Yes	89.9%	90.6%	91.2%	1.3%	0.6%
PUMA #01400	Jefferson, Clearfield		98.0%	97.4%	97.0%	- 2.1.0%	-0.4%

		Telephone Pene		: Use Micro-Data A	reas (PUMAs)		
Public Use Micro-		D 10 0		Penetration Rate		Change in Telephon	e Penetration Rate
data Area	County	Rural County?	2005	2006	2007	2007 vs. 2005	2007 vs. 2006
PUMA #01 <b>5</b> 00	Venango, Clarion. Forest		97.8%	96.1%	96.9%	<b>≟-0.9</b> %	0.8%
PUMA #01600	Mercer		96.9%	92.8%	94.6%	-2.3%	1.8%
PUMA #01701	Allegheny	No	93.7%	88.3%	93.9%	0.3%	5.6%
PUMA #01702	Allegheny	No	94.2%	90.7%	95.6%	1.4%	4.9%
PUMA #01703	Allegheny	No	93.9%	95.6%	95.9%	2.0%	0.3%
PUMA #01801	Allegheny		97.2%	97.3%	96.6%	-0.6%	-0.7%
PUMA #01802	Allegheny	No	96.8%	97.1%	98.4%	1.6%	1.2%
PUMA #01803	Allegheny		96.0%	98.3%	97.2%	1.2%	-1.1%
PUMA #01804	Allegheny	No	96.5%	96.7%	96.7%	0.2%	0.0%
PUMA #01805	Allegheny		97.0%	98.2%	97.3%	0.3%	-1.0%
PUMA #01806	Allegheny		99.4%	97.1%	98.4%	10%	1.3%
PUMA #01807	Allegheny		97.9%	96.5%	96.3%	1.6%	-0.2%
PUMA #01900	Butler	Yes	94.9%	94.6%	96.1%	1.1%	1.5%
PUMA #02001	Lawrence		97.6%	97.0%	94.8%	-2.9%	-2.2%
PUMA #02002	Beaver	No	97.5%	97.4%	98.0%	0.5%	0.6%
PUMA #02101	Westmoreland		97.8%	97.6%	96.8%	-0.9%1	-0.8%
PUMA #02102	Westmoreland	No	94.8%	97.2%	98.1%	3.3%	0.9%
PUMA #02103	Westmoreland	No	96.0%	98.1%	98.6%	2.6%	0.4%
PUMA #02201	Washington		99.1%	98.3%	96.8%	223%	-1.5%
PUMA #02202	Greene		96.8%	94.6%	96.6%	-0.2%	2.0%
PUMA #02300	Fayette		97.4%	99.2%	97.8%	0.4%	-1 4%
PUMA #02400	Armstrong, Indiana	Yes	93.9%	93.9%	94.6%	0.6%	0.7%

		Telephone Pene		Use Micro-Data A ylvania)	reas (PUMAs)		
Public Use Micro-	Country	Rural County?		Penetration Rate	Change in Telephon	e Penetration Rate	
data Area	County	Ruiai County?	2005	2006	2007	2007 vs. 2005	2007 vs. 2006
PUMA #02501	Cambria		96.7%	94.1%	94.4%	239	0.2%
PUMA #02502	Somerset	VI.	97.2%	96.0%	95.1%	-2.19%	-0.9%
PUMA #02600	Blair	Yes	96.4%	96.0%	97.5%	1.1%	1.5%
PUMA #02700	Bedford, Fulton, Huntingdon	Yes	97.1%	96.3%	97.2%	0.1%	0.8%
PUMA #02801	Adams		97.3%	98.4%	96.1%	1.2%	-2.3%
PUMA #02802	Franklin		96.4%	95.1%	95.9%	-0.6%	0.7%
PUMA #02900	Lebanon	No	97.1%	97.1%	97.7%	0.6%	0.6%
PUMA #03001	Dauphin		92.6%	96.7%	95.0%	2.4%	-1.7%
PUMA #03002	Dauphin		96.7%	96.5%	96.3%	-0.4%	-0.2%
PUMA #03101	Cumberland		97.0%	92.4%	93.8%	-3.3%	1.4%
PUMA #03102	Perry, Cumberland		95.6%	95.3%	94.4%	21.1%	-0.9%
PUMA #03201	York	Walter State of the State of th	95.8%	97.6%	96.6%	0.8%	-0.9%
PUMA #03202	York		96.3%	96.0%	95.5%	-0.8%	-0.5%
PUMA #03203	York	No	91.7%	93.0%	95.4%	3.7%	2.4%
PUMA #03301	Lancaster	No	93.1%	96.0%	96.2%	3.0%	0.2%
PUMA #03302	Lancaster		97.3%	97.3%	94.6%	2.6%	-2.7%
PUMA #03303	Lancaster		93.0%	92.4%	89.9%	-3.1%	-2.5%
PUMA #03401	Berks		95.5%	94.4%	92.8%	2 776 115	-1.6%
PUMA #03402	Berks		99.4%	98.4%	97.2%	-2.2%	-1.2%
PUMA #03500	Schuylkill	No	96.8%	95.9%	97.7%	0.9%	1.8%
PUMA #03600	Northampton		98.3%	95.8%	96.7%	-1.6%	0.9%
PUMA #03701	Northampton		99.4%	99.1%	98.4%	-1.0%	-0.7%

		Telephone Pene		Use Micro-Data A ylvania)	reas (PUMAs)		
Public Use Micro-	Comment	Rural County?		Penetration Rate		Change in Telephone	Penetration Rate
data Area	County	Rurai County?	2005	2006	2007	2007 vs. 2005	2007 vs. 2006
PUMA #03702	Carbon, Lehigh		98.0%	96.6%	97.9%	-01%	1.3%
PUMA #03801	Northampton		97.4%	96.5%	96.8%	20.6%	0.3%
PUMA #03802	Northampton	No	98.8%	97.3%	98.9%	0.1%	1.6%
PUMA #03901	Bucks	No	98.5%	98.0%	99.1%	0.6%	1.0%
PUMA #03902	Bucks		99.4%	98.3%	98.5%	-0.9%	0.2%
PUMA #03903	Bucks	No	97.4%	95.4%	98.7%	1.3%	3.3%
PUMA #03904	Bucks	No	91.0%	93.8%	96.1%	5.1%	2.3%
PUMA #04001	Montgomery		99.6%	93.2%	95.0%	-4.5%2	1.9%
PUMA #04002	Montgomery	No	97.8%	98.0%	98.3%	0.5%	0.3%
PUMA #04003	Montgomery		97.5%	96.2%	97.4%	-0.1%	1.1%
PUMA #04004	Montgomery		97.9%	94.6%	93.9%	40%	-0.8%
PUMA #04005	Montgomery		98.2%	95.3%	96.8%	14%	1.5%
PUMA #04006	Montgomery		97.5%	95.1%	96.3%	:1.2%	1.2%
PUMA #04101	Philadelphia		98.5%	97.8%	98.1%	-0'4%	0.2%
PUMA #04102	Philadelphia		99.2%	96.4%	92.4%	-6.8%	-4.0%
PUMA #04103	Philadelphia	No	97.0%	92.3%	99.3%	2.3%	7.0%
PUMA #04104	Philadelphia		98.9%	95.6%	92.6%	-6.3%	-3.0%
PUMA #04105	Philadelphia		95.8%	91.9%	91.6%	-4.2%	-0.3%
PUMA #04106	Philadelphia		98.9%	94.1%	94.9%	396	0.8%
PUMA #04107	Philadelphia		90.8%	87.3%	89.7%	1116	2.4%
PUMA #04108	Philadelphia		90.4%	88.9%	85.2%	5.3%	-3.8%
PUMA #04109	Philadelphia		92.8%	92.1%	88.9%	3.9%	-3.2%

		Telephone Pener	=	Use Micro-Data A ylvania)	reas (PUMAs)		
Public Use Micro-	Committee	D1 C		Penetration Rate		Change in Telepho	ne Penetration Rate
data Area	County	Rural County?	2005	2006	2007	2007 vs. 2005	2007 vs. 2006
PUMA #04110	Philadelphia		91.6%	95.2%	91.7%	0.1%	-3.5%
PUMA #04111	Philadelphia		93.9%	92.6%	90.8%	-3 1%	-1.8%
PUMA #04201	Delaware	No	97.1%	97.9%	98.4%	1.3%	0.5%
PUMA #04202	Delaware	No	95.3%	96.5%	98.8%	3.6%	2.3%
PUMA #04203	Delaware		96.9%	94.1%	95.7%	1277-12%	1.6%
PUMA #04204	Delaware	No	96.9%	98.7%	98.7%	1.8%	0.0%
PUMA #04301	Chester		96.9%	97.3%	96.3%	0.5%	-1.0%
PUMA #04302	Chester	73.7	97.5%	98.0%	96.5%	1.196.	-1.6%
PUMA #04303	Chester		96.6%	98.9%	96.9%	0.2%	-2.1%

SOURCE: 2007 American Community Survey. U.S. Census Bureau's Ferrett database. Accessed February 3, 2008. Rural Counties identified by Center for Rural Pennsylvania.

NOTES:

Shaded cells are PUMAs with negative growth rate in telephone penetration for stated periods.

RE: Investigation Regarding Intrastate Access
Charges and IntraLATA Toll Rates of Rural
Carriers, and the Pennsylvania Universal
Service Fund
Docket No. I-00040105

OCA Cross-Examination Exhibit No. OC1

Dated Entered: 2/17/09

OC1

PM TIP

### OSBA STATEMENT NO. 1

### BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

2006 Annual Price Stability Index/ Service Price Index filing of Buffalo	:	Docket Nos.	P-00981428F1000 R-00061375
Valley Telephone Company	:		100001373
2006 Annual Price Stability Index/	:	Docket Nos.	P-00981429F1000
Service Price Index filing of Coneston	ga:		R-00061376
Telephone & Telegraph Company	:		
2006 Annual Price Stability Index/	:	Docket Nos.	P-00981430F1000
Service Price Index filing of Denver &	& :		R-00061377
Ephrata Telephone & Telegraph	:		
Company	:		•
		stimony of	<u> </u>
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### On Behalf of the

### Office of Small Business Advocate

Date Served:	January 5, 2007		
Date Submitte	ed for the Record:		

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### I. QUALIFICATIONS AND INTRODUCTION

### 2 Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

- 4 A. My name is Allen G. Buckalew. I am an Economist specializing in
- 5 the telecommunications industry at J.W. Wilson & Associates, Inc.
- 6 Our offices are at 1601 N. Kent Street, Rosslyn Plaza C Suite 1104,
- 7 Arlington, VA 22209.

1

### 8 Q. PLEASE OUTLINE YOUR EDUCATIONAL BACKGROUND.

- 9 A. I hold an A.A. and a B.S. degree with high honors, both from the
- University of Florida, and an M.S. degree from George Washington
- University. My major areas of concentration were economics and
- telecommunications.

### 13 Q. HOW HAVE YOU BEEN EMPLOYED IN THE PAST?

- 14 A. Before I entered the University of Florida, I worked for four years in
- Naval Telecommunications. After graduating from the University of
- 16 Florida, I worked for four years at the Federal Communications
- 17 Commission ("FCC") as an Industry Economist in the Common
- 18 Carrier Bureau and was employed extensively in areas involving
- telecommunications, economics, accounting, engineering, and policy
- 20 matters. For example, one of my major projects was "The Economic
- 21 Implications and Interrelationships Arising from Policies and
- 22 Practices Relating to Customer Interconnection, Jurisdictional
- 23 Separations and Rate Structures" (Docket 20003). This case opened
- 24 the terminal equipment (e.g., telephone sets, and private branch
- exchanges ("PBXs")) market in the United States to competition. I
- also provided economic analysis in several rate cases, including, for
- 27 example, "Communications Satellite Corporation, Investigation into
- Charges, Practices, Classifications, Rates and Regulations" (Docket
- 29 16070). My major responsibility was to serve as an economic advisor
- and analyst for the Common Carrier Bureau.

l	
2	After the FCC, I was appointed Associate Director for
3	Telecommunications Research of the National Regulatory Research
4	Institute ("NRRI") at Ohio State University. My responsibilities at
5	NRRI focused on telecommunications policy as seen from an
6	analytical perspective that combined accounting, engineering, and
7	economic disciplines. During my employment at the Institute, I
8	completed several studies for state public utility commissions,
9	including "The Impact of Measured Telephone Rates on Telephone
10	Usage of Government and Nonprofit Organizations" for the Public
11	Utilities Commission of Ohio and "Toward An Analysis of Telephone
12	License Contracts and Measured Rates" for the Maryland Public
13	Service Commission. In addition, I have provided several state
14	Commissions with on-site technical and economic assistance. This
15	assistance was related to identifying, explaining, and analyzing major
16	issues in telephone cases. Since joining J.W. Wilson & Associates,
17	Inc. in May 1980, I have provided economic analysis in numerous
18	proceedings in most of the states of the United States, as well as in
19	Canada, Bolivia, Nepal, Egypt, and Tanzania. I have provided
20	analysis for the Federal Communications Commission and the United
21	States Department of Justice. For example, I testified on behalf of the
22	Department of Justice in the case that broke up the Bell System. In
23	addition, I have worked for numerous state Attorneys General. For
24	example, I evaluated the Bell Atlantic and NYNEX merger proposal
25	for the National Association of Attorneys General and the Bell

### Q. ARE YOU A MEMBER OF ANY PROFESSIONAL ORGANIZATIONS AND HONOR SOCIETIES?

the California Public Utilities Commission.

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A. Yes. I am a member of the Society of Depreciation Professionals, the
 American Economic Association, Life Member of The Institute of
 Business Appraisers, The Institute of Electrical and Electronics

Atlantic and GTE merger proposal for the Pennsylvania Attorney

General. I also analyzed the MCI and WorldCom merger proposal for

1 2		Engineers, Omicron Delta Epsilon (an international honor society in economics), and Beta Gamma Sigma (an honor society in business).
3	Q.	COULD YOU BRIEFLY SUMMARIZE YOUR PROFESSIONAL RESPONSIBILITIES TO DATE?
5 6 7 8	A.	Yes. My primary responsibilities have been to supervise and actively participate in public utility regulatory policy research, especially in the telecommunications field. These responsibilities required the use and application of economic, accounting, and engineering analyses.
9 10	Q.	WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?
11 12 13 14 15	A.	The OSBA asked me to analyze the price change opportunity ("PCO") filings (including access rate changes) originally proposed by Buffalo Valley Telephone Company, Conestoga Telephone and Telegraph Company, and Denver & Ephrata Telephone and Telegraph Company ("Companies").
16 17 18 19 20 21 22 23		I found that the proposed change in access rates was appropriate. The Companies' new Chapter 30 Plans allow them an annual PCO, which is an opportunity to increase rates based on presumed cost changes. The general level of inflation was used as a measure for these cost changes. The Companies demonstrated that they were allowed to increase noncompetitive service rates based on their respective PCO mechanisms, and therefore they increased access rates and local network rates.
24 25		Access service is one of the Companies' main costs and revenue sources. Access revenues were a major cause for the PCO revenue

increase. Therefore, it would not be reasonable to presume that the

overall costs for these Companies have increased simply due to

inflation and then exclude access from the rate increase.

### II. <u>SUMMARY</u>

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Q.

3		PCO FILINGS. WAS THAT APPROPRIATE AND REASONABLE?
5	A.	Yes. The Companies were allowed an increase in noncompetitive
6		service revenue through their respective PCO mechanisms in order to
7		compensate them for presumed increased costs due to inflation. The
8		Companies proposed to increase rates for access and local network
9		services to recover the additional noncompetitive service revenue.
10		The Commission approved the Companies' PCO filings, and then
11		required a hearing to re-examine the issue of increases to the
12		Companies' access rates.
13		Verizon was the only party filing testimony against the increase.
14		Verizon's direct testimony claims that increasing access rates is
15		wrong and against Commission policy (see page 12 of Mr. Price's
16		testimony). I believe that Verizon has misrepresented the
17		Commission's orders and rules. I agree that the recent trend has been
18		a decline in access rates for Verizon; however, that was during a
19		period when costs were stable or declining. Furthermore, that trend
20		occurred prior to the new Chapter 30, which allows the Companies to
21		pass through rate-of-inflation rate increases without productivity
22		offsets (or with only minimal productivity offsets).
23		Consequently, I do not believe that it is reasonable to continue to
24		lower access rates if it is presumed that costs (including access costs)
25		are increasing at or about the rate of inflation. To continue to lower
26		the access rates, while overall costs are presumed to be increasing,
27		simply transfers the cost of access away from toll consumers (the cost
28		causers who have numerous competitive choices) and onto basic local

ACCESS RATES WERE INCREASED IN THE COMPANIES'

<sup>&</sup>lt;sup>1</sup> The cost of access includes the cost of switching a toll call in the local telephone companies' networks, the cost of transporting the call, and the cost of using the local loop facilities that were designed for toll services.

exchange consumers, who have very little choice in either carriers or 1 2 services. 3 Furthermore, Verizon's direct testimony did not do any analysis of the cost of access in order to rebut the Companies' proposed access rates. 4 There is no evidence in this case that access costs have declined. 5 Verizon simply wants to perpetuate the moving of revenue generation 6 to the least elastic service, basic local exchange service. 7 8 Verizon's actions and recommendation are motivated by the desire to 9 make more money. For example, Verizon's 2006 PCO filing used access revenue to increase the overall total noncompetitive service 10 revenue, but refused to increase access charges in order to help pay 11 for that increase. This is classic monopoly behavior. 12 Furthermore, Verizon is trying to hide behind Commission orders that 13 don't exist. For example, Verizon says that the Companies must not 14 be allowed to increase access rates because it's against the 15 Commission's policy. There is no Commission policy that states that 16 access rates cannot be increased. In fact, the Companies' proposed 17 increase in access rates was already approved by the Commission. 18 WHAT WAS THE PURPOSE OF NEW CHAPTER 30? 19 Q. A primary reason for enacting the new Chapter 30 was to accelerate 20 broadband development in Pennsylvania. The Legislature did not 21 carve out access as a service that was excluded from new Chapter 30 22 increases; in fact, access was included as a protected service that is 23 24 part of the new Chapter 30 revenue stream. Clearly the Legislature included access in its broadband development plan under new Chapter 25 30 and expected access service to contribute to the development of the 26 broadband network, not get a free ride. 27 Verizon's proposal to not increase its access rates in its 2006 PCO 28 29 filing was unjust and unreasonable for the same reason it is unjust and unreasonable in this case to exclude access from any increase. Access 30 rates generated the access revenue that is used to calculate the 31

- noncompetitive service revenue increase. Access rates are paid by toll carriers to provide toll services to consumers; toll carriers and toll consumers should contribute to broadband development in Pennsylvania. If the Verizon philosophy is adopted, then toll carriers will get the direct benefit of a broadband system without paying any of the costs to create the system.
- 7 In addition, Verizon's claim that access cannot be increased is contrary to the movement to market competition. Both federal and 8 state legislatures want competition and have set various standards in 9 place to develop competition. I don't believe we are at a point of 10 workable competition. However, the FCC, in its lifting of many of 11 the UNE requirements, and the Pennsylvania legislation, by enacting 12 the new Chapter 30, allow companies, prices, and markets to 13 interact. New Chapter 30 allows companies in Pennsylvania to set 14 their rates where they believe they need to be as long as those rates are 15 just, reasonable, and nondiscriminatory. 16

### 17 III. ACCESS RATES

### 18 O. WHAT ARE ACCESS RATES?

- A. Access rates are the charges to toll companies for the use of the local exchange company's network. Toll carriers include these access charges as a cost in their toll rates that they charge to consumers for toll services.
- 23 Access rates are designed to recover a portion of the loop and switching costs of the local telephone company. The local telephone 24 company is the main facilities-based provider of access to the 25 consumers' telephones. Local telephone companies have spent 26 27 billions of dollars to develop a system that is cost effective and efficient to deliver all forms of telephone traffic: local, domestic and 28 29 international toll, cellular, and Voice over Internet Protocol ("VOIP"). The network facilities allow the interconnection of all traffic because 30

<sup>&</sup>lt;sup>2</sup> For example, Verizon is a toll carrier in the Companies' service territory.

they were designed for all traffic, not simply local telephone calls. In addition, with very little added investment in these network facilities, local telephone companies have been able to provide broadband access through Digital Subscriber Line ("DSL") using the very same facilities.

### 6 Q. VERIZON SUGGESTS THAT ANY INCREASE IN ACCESS 7 RATES IS WRONG. DO YOU AGREE?

No. Inherent in Verizon's argument is that access is free and that the Α. only real price for access should be zero. In other words, Verizon's view would transfer all of the cost of access onto basic exchange customers. This is a good monopolist strategy, but it would not be the outcome if the market were competitive. If the market were actually competitive, then no local telephone company, with millions of dollars of investment in loop and switches, would allow a competitor free use of its facilities. 

- The loop is the major investment cost for every telephone company and is the major cost for access. Commissions, including this one, have historically moved access rates lower in an attempt to spur toll competition. Some would argue that toll was recovering too much of the cost of access. I have always disagreed with that claim based on the fact that the cost of the loop was directly impacted by the provision of toll service. In any case, the price of access has gone down substantially in recent years under the philosophy that toll was recovering too much.
  - The question now is: does access need to decline any further? The Companies say "no". The Companies claim that moving additional costs to basic local exchange jeopardizes their ability to compete in the market. The Commission agreed when it let these rates go into effect. The Commission also agrees that the price of access is not zero, because access is a joint cost and must be shared with all services. The Commission addressed this issue in *In Re: Formal Investigation to Examine and Establish Updated Universal Service Principles and Policies for Telecommunications Services in the*

Commonwealth, Docket No. I-00940035 (Order entered January 28, 1997), wherein it explained that interexchange carriers ("IXCs") use the local network for access. Specifically, the Commission stated as follows:

We reaffirm our findings in our September 5, 1995 Order at Docket No. L-00950105 that the local loop is a 'joint cost', not a direct cost of providing only those services included in the definition of BUS [Basic Universal Service]. It is used for a variety of services other than BUS and must be allocated among the services which utilize it. For universal service funding purposes, not allocating a portion of the local loop to all the services which utilize it fails to give recognition to the fact that the loop is used to provide many services in addition to BUS.

This finding is consistent with our earlier rulings including *Pennsylvania Public Utility Commission* v. Breezewood Telephone Company, 74 Pa P.U.C. 431 (1991) wherein we stated:

...[W]e consider the costs associated with the loop from the central office to the customers premises a non-traffic sensitive joint cost.

\* \* \*

We reject the ILECs' arguments that the local loop is not a joint cost because other services which use the loop do not result in any additional cost. We do not find the arguments of Bell's expert witness Dr. Kahn persuasive on this point. In particular, we do not accept the basis of Dr. Kahn's argument that because the loop is needed for local service and the incremental cost of the loop does not increase to provide other services, that its full cost must be attributed to local services. This same

argument could be made with respect to toll service. Since the loop is necessary to provide toll service, it could at the same time be argued that the full cost should be allocated to toll, and in so doing the incremental cost to provide local service would be zero. Moreover, since the installation of an additional subscriber loop increases the capacity available for placing and receiving all three types of calls, the telephone company cannot increase the capacity for local calls without concurrently increasing the capacity for toll calls.

*Universal Service Investigation*, at 82-83.

The Commission has found that the loop is part of the integrated telephone network and was built to serve both local and toll usage. In fact, today's loops are of such good quality that they are being put to all kinds of uses, e.g., DSL. Verizon's testimony implies that the Commission has somehow ruled that access is a "supra" protected service isolated from any changes except downward movement to zero. That testimony is wrong.

### Q. HAS THE ECONOMIC RATIONALE FOR REDUCING ACCESS CHANGED?

- Yes. In addition to the fact that the loop is a shared cost, that is, toll Α. must recover some of the costs, the economic environment has changed. The economic rationale for access reductions was that toll services were paying more than their fair share of the cost of the local network. This was claimed to hinder the development of competitive toll services and local exchange services, but this is no longer true. The competitive market, at least for toll, has sorted itself out. Toll carriers have been merged into local exchange companies. Indeed, Verizon acquired MCI and SBC acquired AT&T (and then retained the AT&T corporate name for all of its operations).
  - In addition, there is some local exchange competition, but most of the competition rides over the local exchange companies' loop facilities.

1	In other words, there is very little facilities-based competition for
2	loops.

The two biggest competitive threats to telephone companies are over 3 different networks: wireless carriers over their own networks, and 4 VOIP over broadband networks. In the FCC's February 5, 2006, 5 6 Remand Order of the Triennial Review Order (commonly called the "TRRO"), the FCC made it clear that markets were open and moving 7 8 toward competition: "we recognized the marketplace realities of 9 robust broadband competition and increasing competition from 10 intermodal sources, and thus eliminated most unbundling requirements for broadband architectures serving the mass market." 11 (Page 2 of the TRRO.)<sup>3</sup> Telephone companies, like these Companies, 12 need the ability to set their rates with these new "marketplace 13 realities" in mind. Furthermore, one could argue that forcing local 14 exchange consumers to pay for broadband development is subsidizing 15 VOIP competition. In any case, the economics that were once used to 16 push costs onto local consumers has changed as local exchange 17 18 consumers recover most of the costs of the local network.

# Q. WHY IS IT REASONABLE, IN YOUR OPINION, TO CHARGE TOLL CARRIERS LIKE VERIZON, A PORTION OF THE LOOP COSTS THROUGH ACCESS RATES?

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22 A. Toll carriers, like Verizon, should be required to support the loop.
23 Toll carriers use the loop; without the loop, there is no connection to
24 the customer. The loop was designed to provide quality toll service.
25 One of the reasons we have a telecommunications system that
26 connects to virtually everyone and everywhere in this country is due
27 to the sharing of the loop costs by all services that use the loop.

<sup>&</sup>lt;sup>3</sup> See the Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket Nos. 01-338, 96-98, 98-147, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, 18 FCC Rcd 16978, 17145, para. 278 (2003) (Triennial Review Order), corrected by Errata, 18 FCC Rcd 19020 (2003) (Triennial Review Order Errata), vacated and remanded in part, affirmed in part, United States Telecom Ass'n v. FCC, 359 F.3d 554 (D.C. Cir. 2004) (USTA II) cert. denied, 125 S.Ct. 313, 316, 345 (2004).

1	Q.	WOULD CROSS-SUBSIDIZATION BE INHERENT IN THE
2		VERIZON RECOMMENDATION TO FREEZE OR LOWER
3		ACCESS RATES FOR THESE COMPANIES?
4	A.	Yes. First, the existing rates for access are already too low, and
5		therefore contribute little to pay for the use of the facilities that are
6		required to provide toll services. This causes other services and
7		ratepayers to pay more of the loop cost.
8		Second, there is a subsidy that flows from these Companies'
9		customers to Verizon's customers. Specifically, Verizon's access
10		rates reflect the lower costs due to Verizon's size and more urban
11		distribution of customers. In contrast, rural carriers like the
12		Companies have higher costs for the local network because they have
13		fewer customers per square mile when compared to Verizon's more
14		urban areas. Therefore, keeping the access rates the same or
15		decreasing them allows Verizon's toll customers to access the
16		Companies' rural local network without paying cost-based rates.
17		Therefore, Verizon's toll customers do not pay their fair share towards
18		the broadband upgrades to those rural networks. Thus, the
19		Companies' local exchange customers will be forced to pay higher
20		rates for local service so that Verizon's toll customers can reduce their
21		costs for accessing the more rural network of these Companies. In
22		addition, toll carriers, like Verizon, will simply pocket more money
23		by not passing through the reductions in toll access.
24	Q.	HAS NEW CHAPTER 30 CHANGED THE WAY THE
25		COMPANIES ARE REGULATED?
26	A.	Yes. Over the last few years, the proposals to shift access costs from
27		toll services to local services has found favor with telephone
28		companies eager to recover more of their costs from captive local
29		customers. This is especially true since ILECs, like Verizon, are in
30		the toll business themselves.
31		However several things have changed. First, we have a new Chapter

30 that was designed to increase broadband deployment in

Pennsylvania. New Chapter 30 did *not* exclude access rates from contributing to the development of broadband.

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Second, competition is more prevalent in Pennsylvania and rural carriers like the Companies are exposed to that competition (even with a rural exemption for unbundled network elements). Furthermore, the Companies in this case claim that they can't shift more revenue to the local exchange customers and keep their customers. New Chapter 30 does allow these Companies to collect the PCO increase in any manner that is just, reasonable, and nondiscriminatory. The Companies' proposals to include access in the PCO increase meet those criteria. In fact, to exclude access would not be just and reasonable.

Third, the shift of most of the loop cost to local exchange service has been accomplished; access rates do not need to be decreased any further. One need only look at Mr. Beurer's Exhibit 1 to see the massive changes in access that have already taken place.

Finally, it is time to step back and examine the policies that the legislature created in the new Chapter 30. The legislature did not exclude access from increases, did not treat access as something special outside of the protected category, and did not say that access and toll users are exempt from contributing to the broadband network it hoped to create. New Chapter 30 eliminated most, if not all, of the productivity offset even though the telecommunications industry continues to have declining per unit costs. Therefore, the annual PCO revenue increase is not cost-based in the traditional regulatory sense. In essence, new Chapter 30 imposes a "broadband tax" to help finance the development of broadband. Because all protected services benefit from the development of broadband, all protected services should bear part of the cost of developing broadband. By including access as a protected service for purposes of calculating the PCO revenue increase and not excluding access from the resulting rate increase, the legislature recognized that access should help pay for the development of broadband.

1 2 3 4 5 6 7 8 9		The only way for toll to contribute to the development of broadband in Pennsylvania is through access rates. If access is excluded, then toll users get a free ride over the new broadband system. In addition, new Chapter 30 allows the carriers to set their rates and allows others to challenge the rates as unjust or unreasonable. The rates proposed by the Companies are reasonable and Verizon filed no objection when they were originally proposed and allowed to go into effect. Proposals to reduce access charges or hold them constant, or to shift these costs to local subscribers are wrong from an economic standpoint and in a new Chapter 30 environment.
11 12 13	Q.	VERIZON (ON PAGE 10 OF MR. PRICE'S TESTIMONY) LISTS THE REASONS WHY THE COMPANIES' ACCESS RATES INCREASE IS AGAINST LONG-STANDING COMMISSION POLICY. DO YOU AGREE?
15 16 17 18 19 20 21 22 23 24 25 26	A.	No, there is no long-standing policy to only decrease access charges. Verizon provided no evidence that there is such a policy. There may be some history and a trend to decrease access rates for Verizon, but actual experience demonstrates that access rates have increased and decreased for other carriers. The Companies have pointed out in their testimony that there have been many increases in access rates. This is shown in Mr. Beurer's Exhibit 1. More to the point, if there were such a policy, then the Commission would not have approved the original proposal. However, the most important point is that things have changed with Chapter 30: companies can raise rates, with no restriction on increasing access rates, as long as the resulting rates are just, reasonable, and nondiscriminatory.
27 28 29	Q.	VERIZON CLAIMS THAT INCREASING ACCESS RATES WOULD BE "HIGHLY DISCRIMINATORY" AND FAVOR PARTICULAR CARRIERS. DO YOU AGREE?

30 A. No. Nothing could be further from the truth than this Verizon claim.
 31 Any carrier wanting to use the local network of the Companies pays

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2		exactly the same rates. There is no discrimination if all carriers pay the same rate.
4 5 6 7 8 9	Q.	VERIZON NEXT CLAIMS THAT: "THE SWITCHED ACCESS INCREASES UNDERMINE COMPETITION BY KEEPING THEIR LOCAL RATES ARTIFICIALLY LOW AND THUS DISCOURAGING ENTRY BY WOULD-BE COMPETITORS IN THE COMPANIES' SERVICE TERRITORIES." (Page 10 of Mr. Price's testimony) DOES VERIZON HAVE ANY BASIS FOR THIS CLAIM?
11 12 13 14 15 16 17	Α.	None that it presented. However, there is evidence that shows this claim to be without any foundation. Mr. Beurer demonstrates on page 49 through 52 that there is competition. However, more to the point, local exchange rates are not being kept artificially low; in fact, local rates have had substantial increases. Exhibit 4 of Mr. Beurer's testimony shows that local exchange rates have increased by as much as 126% since 2000. What has been kept artificially low is access rates.
19 20 21 22 23		Continued local exchange rate increases will impact these rural carriers in a way that is counterproductive and negative: the Companies have stated increasing local exchange rates will cause them to lose customers (see Mr. Beurer's testimony on pages 54 and 55).
24 25 26 27 28 29 30 31	Q.	VERIZON NEXT CLAIMS THAT:  "THE SWITCHED ACCESS RATE INCREASES WOULD SHARPEN RATHER THAN DIMINISH THE HISTORICAL RURAL/URBAN DISPARITY IN RATES THAT KEEPS URBAN CUSTOMERS' RATES HIGHER SO AS TO LESSEN UPWARD PRESSURE ON RURAL CUSTOMERS' RATES."  (Page 10 of Mr. Price's testimony) DO YOU AGREE?

1 2 3	A.	Once again, Verizon offers no proof to support the statement. The truth is that local exchange rates have increased because of the constant pressure of toll carriers to lower access rates.
4 5 6 7 8		In addition, as the Companies point out, the universal service fund is there to help rural ILECs retain customers in high cost areas. And again, we should not forget that Chapter 30 allows the Companies the opportunity to change rates based on their assessment of the market, not on the assessment of a competitor such as Verizon.
9 10 11 12 13 14 15 16 17	Q.	VERIZON'S FINAL ARGUMENT IS THAT: "THE SWITCHED ACCESS RATE INCREASES WOULD HARM INTEREXCHANGE CARRIERS ('IXCS') WHO SERVE BOTH RURAL AND URBAN SUBSCRIBERS, BECAUSE OF THEIR GENERAL TENDENCY TO CHARGE GEOGRAPHICALLY AVERAGED TOLL RATES." (Page 10 of Mr. Price's testimony) DO YOU AGREE?
18 19 20 21 22	A.	No. First, other than Verizon, none of the IXCs has intervened, complained, or alleged harm in this case. Second, local carriers should be charging different access rates based on their costs. Third, local exchange carriers have no control over the rate structure charged by an IXC.
23		
24	IV.	RECOMMENDATIONS AND CONCLUSIONS
25	Q.	WOULD YOU SUMMARIZE YOUR RECOMMENDATIONS?
26 27 28 29 30 31	A.	Yes. Local loops are part of the integrated switched telecommunications network – they are not a customer-specific facility such as a gas lateral or an electric drop, on which regulatory commissions may reasonably choose to impose only minimal customer charges. Charging a portion of access costs to toll carriers and allowing them to innovate and experiment in recovering these

costs through their own competitive pricing arrangements is reasonable, and is the law under Chapter 30.

There is not a single "correct" solution to the access cost pricing issue, but there are some wrong ones. Declaring all access costs to be customer costs (so as to rationalize their total attribution to a fixed local subscriber charge) is unwarranted and harmful, especially in the case of higher cost rural carriers like these Companies.

### **8 Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

9 A. Yes, it does.