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October 18, 2005

VIA HAND DELIVERY

Honorable Ron Jones, Chairman
c/o Sharla Dillon, Docket & Records Manager
Tennessee Regulatory Authority
460 James Robertson Parkway
Nashville, Tennessee 37243-0505

RE: Cellco Partnership d/b/a Verizon Wireless For Arbitration Under the Telecommunications Act of 1996
Consolidated Docket No. 03-00585

Dear Chairman Jones:

Enclosed please find an original and thirteen (13) copies of the following for filing in the above-captioned matter Response of CMRS Providers to Cost Study Methodologies and Model Descriptions Proposed by Rural Coalition.

Also enclosed is an additional copy to be "File Stamped" for our records. All parties of record have been served. If you have any questions or require additional information, please let me know.

Respectfully,

Melvin J. Malone

MJM/kdn

Enclosures

cc: Dan Menser
Marin Fettman
Leon M. Bloomfield
Edward Phillips
Charles McKee
Mark J Ashby
Paul Walters, Jr.

BEFORE THE
TENNESSEE REGULATORY AUTHORITY

Petition of:	)	
	)	
Cellco Partnership d/b/a Verizon Wireless For Arbitration Under the Telecommunications Act of 1996	)	**Consolidated Docket No. 03-00585**
	)	
	)	

RESPONSE OF CMRS PROVIDERS TO COST STUDY METHODOLOGIES AND MODEL DESCRIPTIONS PROPOSED BY RURAL COALITION

Pursuant to the September 7, 2005, Hearing before the Tennessee Regulatory Authority ("TRA") in this matter, Cellco Partnership d/b/a Verizon Wireless, New Cingular Wireless PCS, LLC d/b/a Cingular Wireless, Sprint Spectrum L.P. d/b/a Sprint PCS and T-Mobile USA, Inc. (collectively referred to herein as the "CMRS Providers") hereby respectfully submit this response to the Proposed Cost Study Methodology and Model Descriptions Filed on Behalf of the Rural Coalition on September 28, 2005 (the "ICO Filing").

I. Overview

On September 28, 2005, in response to the directives of the TRA, the Rural Coalition filed five (5) different cost models for review to determine whether they are TELRIC-compliant.[1] In addition, three (3) Century Telephone companies are proposing to use the HAI Model, which they did not provide.[2]

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[1] *Proposed Cost Study Methodology and Model Descriptions Filed on Behalf of the Rural Coalition*, In Re Cellco Partnership d/b/a Verizon Wireless for Arbitration Under the Telecommunications Act of 1996, TRA Consolidated Docket No 03-00585 (Sept 28, 2005)

[2] *See Oral Argument Transcript of Proceedings*, In Re Cellco Partnership d/b/a Verizon Wireless for Arbitration Under the Telecommunications Act of 1996, TRA Consolidated Docket No 03-00585 at 75 (Sept 7, 2005) ("[E]very model you submit should stand on its own "). *See also Oral Argument Transcript of Proceedings* at 50-53 (TRA directing ICOs to file all models, including the HAI model)

Although all the models submitted provide additional information beyond that provided in the Rural Coalition's August 11th filing, none of the six (6) cost models submitted on September 28th, as filed, can be considered TELRIC-compliant. For example, each of the six (6) models has some, if not all, of certain deficiencies including, but not limited to, the following: (a) no development of TELRIC investment, (b) no identification of non-traffic sensitive portion of the switch; (c) no exclusion of vertical service costs; and (d) a lack of user guides and input definitions. (See Section III.A., supra.) In essence, the Rural Coalition provided the "top half" of the methodology without providing the more critical "bottom half." In addition, each of the models contain unique deficiencies that will be discussed more thoroughly below. (See Section III.B., supra.) Although certain of the models seem to be intrinsically inconsistent with TELRIC principles (e.g., the CHR and HAI models), it is conceivable that others could be made TELRIC-compliant – at least from the vantage point of methodology - if these deficiencies are properly addressed.[3] However, as currently proposed, the Rural Coalition has once again failed to provide cost models that are consistent with TELRIC and has simply not provided sufficient information to provide either the CMRS Providers or the TRA "with the opportunity to evaluate the model."[4]

As a means to clarify what the CMRS Providers expect as part of TELRIC-compliant cost models, a specific list of suggested ground rules is set forth below. In order to be TELRIC-

[3] *See infra* n 10

[4] *Oral Arguments Transcript of Proceedings*, In Re Cellco Partnership d/b/a Verizon Wireless for Arbitration Under the Telecommunications Act of 1996, TRA Consolidated Docket No 03-00585 at 74 (Sept 7, 2005) ("[T]he whole idea is to be able to provide us - - the Agency as well as the CMRS Providers - - with the opportunity to evaluate the model ")

compliant, the Rural Coalition's cost models, at a minimum, should follow these seven (7) fundamental procedures[5]:

1. *Efficient Network Design.* Utilize verifiable methods that design an efficient, forward-looking transport and termination network to serve total demand and then compute plant investments and costs consistent with the design;

2. *Traffic-Sensitive Switching.* Utilize verifiable methods to determine the traffic sensitive component of switching plant;

3. *Forward-Looking Unit Investments.* Calculate unit investments for network elements (switching, transport cable, transport transmission equipment, etc.) such that plant investments and costs are directly related to total demand (per item 1);

4. *Forward-Looking Direct Expenses.* Reflect forward-looking costs, rather than embedded costs, and exclude retail costs;

5. *Support Assets and Expenses.* Refine methods for key support assets to reflect forward-looking costs and to exclude retail costs;

6. *Allocation of Common Costs.* Allocate forward-looking common costs on the basis of total ICO capital costs and operating expenses (or revenues) rather than telecommunications plant in service to more reasonably allocate costs to retail and non-retail services; and

7. *Loop Costs.* Loop costs cannot be included in the costs of transport and termination.

II. Background

At its January 12, 2005 arbitration deliberations in this docket, the TRA concluded that the reciprocal compensation termination rates applicable to intraMTA traffic exchanged between an ICO and CMRS Provider must be established pursuant to the TELRIC methodology[6] A

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[5] *See Verizon Communications, Inc v FCC*, 533 U S 467, 152 L Ed 2d 701, 744 (2002) ("And what we see from the record suggests that TELRIC rate proceedings are surprisingly smooth-running affairs, with incumbents and competitors typically presenting two conflicting economic models supported by expert testimony, and state commissioners customarily assigning rates based on some predictions from one model and others from its counterpart") As the Supreme Court recognized, it is theoretically possible that only portions of the models produced are in fact TELRIC-compliant However, there are certain core characteristics, derived from the FCC's rules, which any TELRIC-compliant model would follow

[6] *See TRA Transcript of Proceedings*, In Re Cellco Partnership d/b/a Verizon Wireless for Arbitration Under the Telecommunications Act of 1996, TRA Consolidated Docket No 03-00585 at 38-40 (Jan 12, 2005) At the January 12, 2005, deliberations, the Panel concluded that the rates proposed by the ICOs were not TELRIC

Status Conference was subsequently held June 14, 2005, at which a second Status Conference was scheduled to establish a procedural schedule for the cost proceeding phase of this arbitration and, in the interim, the Parties were asked to brief the following issues: (a) whether the rates for reciprocal compensation must be symmetrical, and (b) whether the rate for each ICO must be based upon its particular forward-looking costs (as opposed to one rate for all of the ICOs). The briefs ultimately filed by the CMRS Providers and the ICOs confirmed that there was no dispute between the parties that the rates for reciprocal compensation must be symmetrical and that the rate for each ICO must be based on its particular forward-looking costs.[7]

At the July 21, 2005, Status Conference, contrary to the generally accepted practice utilized in cost proceedings throughout the country that a party simply prepare and file its proposed cost study, the ICOs affirmatively sought an opportunity to obtain some type of pre-cost study preparation approval from the TRA of their proposed "methodologies."[8] Pursuant to the joint procedural schedule developed at the July 21 Status Conference ("Procedural Schedule"), each ICO was to file "a description of its proposed TELRIC cost study methodology,

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compliant because the rates offered by the ICOs were derived from their "interstate access studies " Moreover, the Panel determined that the ICOs' proposed rates were "not compliant with the required TELRIC methodology " *Id* at 39

[7] *See Post-Status Conference Brief of the Rural Coalition of Small LECs and Cooperatives* and *CMRS Providers' Joint Brief Regarding Statutory Requirements for Symmetrical Rates Based on Each ICO's Forward-Looking Costs*, In Re Cellco Partnership d/b/a Verizon Wireless for Arbitration Under the Telecommunications Act of 1996, TRA Consolidated Docket No 03-00585 (June 28, 2005)

At the July 21, 2005, Status Conference, the Hearing Officer ruled "that the rates must be symmetrical, and each ICO's rates must be company-specific " *Status Conference Transcript of Proceedings*, In Re· Cellco Partnership d/b/a Verizon Wireless for Arbitration Under the Telecommunications Act of 1996, TRA Consolidated Docket No 03-00585 at 4-5 (July 21, 2005) *See also Oral Argument Transcript of Proceedings*, In Re Cellco Partnership d/b/a Verizon Wireless for Arbitration Under the Telecommunications Act of 1996, TRA Consolidated Docket No 03-00585 at 30-31 (Sept 7, 2005)

[8] *Status Conference Transcript of Proceedings*, In Re Cellco Partnership d/b/a Verizon Wireless for Arbitration Under the Telecommunications Act of 1996, TRA Consolidated Docket No 03-00585 (July 21, 2005)

specifying in detail how the company proposes to perform the study."[9] The ICOs filed their proposed methodology descriptions on August 11, to which the CMRS Providers filed responses on August 31, 2005.[10]

On September 7, 2005, the TRA heard oral argument regarding the sufficiency of the ICOs' August 11 proposed methodology descriptions. The TRA concluded that the ICOs' August 11 filings were insufficient to make a determination of whether the ICOs' proposed methodology descriptions are TELRIC-compliant, and that the burden is on the ICOs to demonstrate to the TRA that their proposed methodologies are TELRIC-complaint.[11] The ICOs were granted another opportunity to file their proposed cost study methodologies with the specific guidance that their next submissions i) be in hard copy and electronic version, ii) in sufficient detail that another appropriate professional could determine how the calculations in a given model would interact, iii) include whatever type of instructions are necessary with a given model that would be provided internally if someone were to come and do work behind the modeler, and iv) stand on their own so as to provide everything necessary to demonstrate that a given proposed model is TELRIC-compliant.[12]

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[9] *Order Establishing Procedural Schedule for Rate Phase of Proceeding*, In Re: Cellco Partnership d/b/a Verizon Wireless for Arbitration Under the Telecommunications Act of 1996, TRA Consolidated Docket No 03-00585, Attachment 1(Aug 24, 2005)

[10] The CMRS Providers continue to reserve their rights to raise objections to any cost study ultimately presented that is not based on a forward-looking TELRIC methodology or on appropriate inputs to any such methodology or to otherwise engage in discovery regarding any cost study ultimately submitted by the ICOs

[11] *See, e g , Oral Argument Transcript of Proceedings*, In Re Cellco Partnership d/b/a Verizon Wireless for Arbitration Under the Telecommunications Act of 1996, TRA Consolidated Docket No 03-00585 at 77

[12] *Id* at 68, 74 and 77

III.

Review of Rural Coalition September 28, 2005 Cost Models

A. Common Deficiencies

The Rural Coalition has now submitted six (6) different cost methodologies for review to determine whether they are TELRIC-compliant.[13] The six (6) cost models are:

- John Staurulakis, Inc. (JSI),
- Parrish, Blessing & Associates (PBA),
- HAI,
- CHR Solutions,
- TDS, and
- Totherow, Haile & Welch and Lee Olch Consulting (THW / LO).

As discussed more thoroughly below, the six (6) models share some common deficiencies. These common deficiencies include the following:

1. No development of TELRIC investment,
2. No identification of the non-traffic sensitive portion of the switch,
3. No exclusion of vertical service costs,
4. Lack of User Guides and Input Definitions, and
5. Miscellaneous issues.

1. No Development of TELRIC Investment

The fatal flaw in all six (6) of the cost models is their failure to include the *derivation* of TELRIC investment.[14] Instead, each of the cost models simply begins with an assumed level of investment, to which various expense factors are applied. The resulting total expense is then

[13] *Proposed Cost Study Methodology and Model Descriptions Filed on Behalf of the Rural Coalition*, TRA Consolidated Docket No 03-00583 (Sept 28, 2005) As discussed above, the Rural Coalition filed five (5) such models on September 28, 2005 Three (3) Century Telephone companies are proposing to use the HAI Model, which they did not provide

[14] It is important to emphasize that the CMRS Providers are not discussing the amounts of the investment – that is a subject which will likely be a matter of some dispute at a later stage in this proceeding after actual cost studies are submitted At this point, the CMRS Providers are focusing on what those costs will be based on since without that information, it is impossible to determine whether any particular methodology is TELRIC-compliant

divided by total demand to derive a rate per MOU (minute of use). Although this methodology is certainly simple, there is no way to determine whether any of these studies is TELRIC-compliant, since there is no way to determine the methodology – not the input – used to establish the underlying investment. In other words, the cost models, as submitted, are only the second-half of a theoretically complete model, since the most important part of a TELRIC-compliant cost model is missing.

This is not an input issue. TELRIC requires the use of an efficient, lowest cost network configuration. Specifically, 47 CFR § 51.505(b)(1)provides, in part, as follows:

> (1) *Efficient network configuration*. The total element long-run incremental cost of an element should be measured based on the use of the **most efficient telecommunications technology currently available** and the **lowest cost network configuration**, given the existing location of the incumbent LEC's wire centers. (Emphasis added.)

The Rural Coalition's cost models, however, do not indicate whether they are based on those fundamental TELRIC principles. For example, the development of TELRIC investment consistent with the "lowest cost network configuration" is one of the most important functions of any TELRIC-compliant model. In order to determine the TELRIC investment for end office switching, a TELRIC-compliant model should calculate TELRIC switch investment by constructing the most efficient switch possible, office by office, component by component, based upon actual demand and current vendor prices for each switch component. Transport costs should be developed on a ring-by-ring basis, with each transport terminal optimally sized to meet actual demand.

It cannot be determined how any of the Rural Coalition cost models propose to calculate TELRIC investment for either switching or transport. Some appear to begin with embedded investments, which is clearly not TELRIC-compliant Three of the cost models, TDS, PBA, and

HAI, use a grossly simplistic assumption in which switch investment is a function of some initial cost plus a fixed cost per line. The three other cost models, CHR, JSI, and THW / LO, have only a single input for switch investment. All of these models ignore the true nature of switching investment.

In order to determine whether a model properly calculates TELRIC investment, some level of detail is necessary. Without knowing how TELRIC investments are derived, no model can be deemed TELRIC-compliant. Each cost model must include a detailed breakdown of switch and transport components. The cost of each component must be supported by a vendor price list or vendor configuration/pricing model.

For example, circuit-based switches generally contain the following types of equipment:

- Line termination, such as line cards and the main distribution frame,
- Line-related investment driven by demand,
- Switch matrix
- Truck-related investment driven by demand,
- Central processing,
- SS7-related,
- Power,
- Land and buildings,
- Feature-related hardware, and
- Software (both feature-related and switching-related).

Optical-based transport systems generally consist of the following types of investment:

- Fiber (aerial, buried, or underground),
- Fiber support (poles and conduit),
- Fiber repeaters,
- Fiber optic terminal shelves (typically OC3, OC12, or OC 48 capacities),
- OC12, OC3, and DS3 cards,
- DSX3 Cross Connect shelves and cards,
- Power, and
- Channel Bank shelves and cards (not associated with traffic termination).

The following characteristics must be identified for each type of switching or transport equipment:

- Material unit cost,
- Vendor and company EF&I (Engineered, Furnished and Installed),
- Number of units required,
- Demand capacity,
- Utilization factor,
- Applicable sale taxes, and
- Minutes of use ("MOU") per DS1 (transport only).

Demand for switching and transport must include,

- Originating MOU, and
- Terminating MOU.

It is impossible to determine TELRIC investment levels without the above- identified level of detail. This amount of detail will not be burdensome to the Rural Coalition, since it is impossible to operate their business without this knowledge. This information must reflect a forward-looking network design and current vendor pricing, not the existing physical network or embedded investments.

The ILECs may argue that it is more effective to compute plant investments and other key data outside the model and treat them as input data. However, the models in this case fail to include the *essential elements* of the TELRIC calculations. This has two implications. First, the model methods cannot be fully reviewed or completely verified, and more importantly, enormous reliance is thus placed upon documentation. If the methods of computing key data are not in the model, they must be in the documentation. Failure to submit the required documentation along with the models will preclude, both the TRA and the CMRS Providers, a fair and reasonable evaluation.[15] (*see* 47 C.F.R. §51.505(d)). So, as will be discussed below, the ICOs must be required to incorporate essential methods in their models or submit documentation

[15] *Oral Arguments Transcript of Proceedings*, In Re Cellco Partnership d/b/a Verizon Wireless for Arbitration Under the Telecommunications Act of 1996, TRA Consolidated Docket No 03-00585 at 74 (Sept 7, 2005) ("[T]he whole idea is to be able to provide us - - the Agency as well as the CMRS Providers - - with the opportunity to evaluate the model ")

with the completed cost studies to allow the Authority and the CMRS Providers to verify that methods are TELRIC-compliant.

2. No identification of the non-traffic sensitive portion of the switch

Only three (3) of the cost models, CHR, PBA, and HAI, even attempt to distinguish traffic sensitive investment from non-traffic sensitive investment. But, none of these three cost models attempt to either identify or document which components are non-traffic sensitive. Any model that fails to identify and exclude non-traffic sensitive investment from the cost of traffic termination is not TELRIC-compliant.[16]

3. No Assignment of Costs to Vertical Services

While only three (3) of the Rural Coalition cost models appear to distinguish and exclude non-traffic sensitive investment, none of the cost models attempt to exclude traffic sensitive investment that is not associated with the termination of traffic. For example, investment required to provide vertical services such as Custom Calling Features should not be included in the cost of termination. Examples include feature-related software, hardware, and a portion of shared investments such as the central processor required to activate features.

Unless traffic sensitive costs not associated with traffic termination are identified and excluded from the cost of traffic termination, no model can be deemed TELRIC-compliant.[17]

4. Lack of User Guides and Input Definitions

None of the Rural Coalition provided either a user manual or an input definition guide. A user manual describes the internal logic and calculations included in the model, and how to

[16] *In Re Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, 11 FCC Rcd 15499, ¶ 1057 (1996) ("*Local Competition Order*")

[17] *Id*

physically operate the model. An input guide describes each individual input and how it is derived. Both must be provided with the December 7, 2005 cost study filing.[18]

5. Miscellaneous Issues

In addition to the common deficiencies noted above, there are several other deficiencies which affect many of the proposed models. For example, the identified cost models:

- Fail to link the development of TELRIC investment and demand. With the exception of the TDS and HAI models, the other cost models develop both switching and transport investment independent of demand. A TELRIC-compliant cost model begins with the total demand to be served (for example, access lines, minutes of use and dedicated circuits) and "designs" the required switches, transport systems, cabling and transmission equipment necessary to serve this demand using currently available technology.[19] Current costs of construction or plant investment then are determined for the efficiently sized plant. There must be a clear relationship or linkage between total demand and forward-looking plant investment and costs.
- Fail to recognize the three types of cable and wire facilities (CWF): aerial, buried, and underground. Two of the cost models, CHR and JSI, have only one category of CWF. One of the cost models, PBA, distinguishes aerial from underground, but does not refer to buried.
- Fail to identify how common cost factors are developed. In order to be TELRIC-compliant, such cost factors must be developed in such a manner that a portion of these costs are assigned to retail operations of the RLEC, and, therefore, removed from the cost of traffic termination. For example, if common costs are expressed as a percent of total company costs, including capital and expenses, then only a portion of common costs will be properly applied to the cost of traffic termination. None of the submitted cost models are clear on this part of their respective methodologies.

[18] *Oral Argument Transcript of Proceedings*, In Re Cellco Partnership d/b/a Verizon Wireless for Arbitration Under the Telecommunications Act of 1996, TRA Consolidated Docket No 03-00585 at 74 (Sept 7, 2005) ("[I]t would be appropriate to put whatever types of instructions or provide those with the model that you would provide internally if someone was to come and do work behind you ")

[19] According to the FCC, "[t]he increment that forms the basis for a TELRIC study shall be the *entire quantity* of the network element provided " First Report and Order, ¶ 690 Emphasis added

B. Individual Cost Models

In addition to the common deficiencies noted above, each of the cost models proposed has unique deficiencies. The CMRS Providers have identified some of those shortcomings in the following sections.

1. John Staurulakis, Inc. (JSI) Cost Model

Even if the JSI model did not have the common deficiencies noted above, which it does, review of the JSI cost study methodology reveals that it is not TELRIC-compliant since JSI improperly assigns non-traffic sensitive ("NTS") loop costs to the cost of terminating traffic, which by definition includes only traffic sensitive costs.

a. Non-Traffic Sensitive (NTS) Loop Costs

JSI proposes to include a portion of the loop in the costs of termination. This is clearly not TELRIC-compliant, and is contrary to FCC orders. It is interesting to note that none of the other five cost models proposed by the Rural Coalition include any assignment of loop costs to the cost of termination.

First, the *Local Competition Order* very clearly states that loop costs must be recovered through flat-rated charges, not usage-based charges. Specifically, paragraph 744 of the *Local Competition Order* provides:

> First, we require that the charges for dedicated facilities be flat rated, including, but not limited to, charges for unbundled loops, ... We are requiring flat-rated charges for dedicated facilities. Usage-based charges for dedicated facilities would give purchasers of access to network elements an uneconomic incentive to reduce their traffic volumes. ... As stated in the NPRM, a flat-rated charge is most efficient for dedicated facilities, because it will ensure that a customer will pay the full cost of the facility, and no more.[20]

[20] *See also* 47 CFR § 51.507, which provides as follows

(a) Element rates shall be structured consistently with the manner in which the cost of the elements are incurred

(b) The costs of dedicated facilities shall be recovered through flat-rated charges

Further, 47 CFR § 51 509 provides

Second, JSI references paragraph 1057 of the Local Competition Order to support its position that the cost associated with fiber-fed DLC somehow belongs in the rate for termination. Actually, paragraph 1057 explicitly prohibits the recovery of loop costs through usage-sensitive rates for terminating traffic. Specifically, paragraph 1057 provides:

> The costs of local loops and line ports associated with local switches do not vary in proportion to the number of calls terminated over these facilities. We conclude that such non-traffic sensitive costs should not be considered "additional costs" when a LEC terminates a call that originated on the network of a competing carrier. For the purposes of setting rates under section 252(d)(2), only that portion of the forward-looking, economic cost of end-office switching that is recovered on a usage-sensitive basis constitutes an "additional cost" to be recovered through termination charges.

Third, JSI also references the HCPM[21] utilization of digital loop carrier (DLC) to support its position to include the cost of fiber-fed DLC in the rate for termination. In fact, the HCPM treats all fiber-fed DLC investment as NTS loop plant. The FCC's USF Order, for which the HCPM was developed, assigns 100% of the loop cost (including fiber-fed DLC) to basic service. No loop costs are assigned to usage-based services.

b. Use of Surrogate Cost Studies

As noted in their August 11th filing, the JSI cost methodology reveals that some of the ICOs do not intend to comply with the Procedural Schedule proposed jointly by the parties and approved by the TRA. In particular, the Procedural Schedule requires "each Rural Independent Telephone Company to file its own separate cost study, based on each company's specific costs..."[22]

Local Loops Loop costs shall be recovered through flat-rated charges

[21] High Cost Study Model

[22] *See also Status Conference Transcript of Proceedings*, In Re Cellco Partnership d/b/a Verizon Wireless for Arbitration Under the Telecommunications Act of 1996, TRA Consolidated Docket No 03-00585 at 4 (July 21, 2005)

Nonetheless, JSI indicated in the August 11th filing that it intended to perform only two (2) company-specific cost studies, for Millington and Loretto. The Millington cost study would apparently be used as a surrogate for two other "large" ICOs, while the Loretto cost study would be used as a surrogate for one other "small" company. At the September 7th Hearing, the ICOs changed their position and maintained that they would only be using "surrogate numbers."[23] This is still in direct conflict with the Procedural Schedule and the FCC requirements in this regard.[24] Differences in key cost drivers among the ICOs, such as minutes of use per access line, distances among switches, interoffice transport system sizes and others, cause significant differences in transport and termination costs that can only be determined by company-specific studies.[25]

c. Other JSI Issues

As noted above, the JSI cost model does not attempt to distinguish between non-traffic sensitive and traffic sensitive costs, simplistically expresses TELRIC switching investment as a single investment value for the entire cost study (see worksheet "Inputs," cell E6).

In addition, JSI also proposes to include the costs incurred to transit ICO-originated traffic via a third party's tandem To the extent that the originating party is responsible for compensating the transit provider, such costs incurred by the Rural Coalition are not costs of transport and termination of CMRS Provider traffic.

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[23] *Oral Argument Transcript of Proceedings*, In Re Cellco Partnership d/b/a Verizon Wireless for Arbitration Under the Telecommunications Act of 1996, TRA Consolidated Docket No 03-00585 at 28 (Sept 7, 2005)

[24] In addition, although the JSI Filing indicates that ten (10) ICOs will use the JSI cost model, the text of the Filing refers to only five (5) ICOs (Ben Lomand, Highland, Loretto, Millington, and Yorkville). It is unclear how JSI intends to address cost studies for the remaining five ICOs (Ardmore, Crockett, Peoples, United, and West Tennessee)

[25] *See, e g , supra* n 7 (Hearing Officer ruling that each submission must be company-specific)

2. Parrish, Blessing & Associates (PBA) Cost Model

Two RLECs, Bledsoe and DeKalb, propose to use the PBA Cost model. As discussed above, the PBA cost model is not TELRIC-compliant because it fails to calculate TELRIC investment. This model contains several logical errors or errors in accounting and tax methods. These include:

- A portion of investment in remote switching is improperly attributed to tandem switching. Remote switches provide no tandem switching functions.
- Buried cable is not reflected in the forward-looking mix of cable, even though buried cable is the predominant interoffice cable type among ILECs.
- Annual cost factors applicable to switching are used for land and buildings.
- Marketing expenses almost entirely related to retail services are included in TELRIC.
- In some instances, costs are double-counted.
- Return on investment and income tax calculations are incorrect and overstate TELRIC.

In addition, it simplistically expresses TELRIC switching investment as a fixed dollar amount per line, without any methodology for how this investment is derived (see worksheet "Input No 5," row 11). Similarly, the TELRIC investment for transport termination is simplistically a fixed investment per terminal, again without any methodology for deriving this investment (see worksheet "Input No 1," rows 87 – 91).

As was also noted above, the PBA cost model allows for the use of only two types of CWF, labeled aerial and underground (see worksheet "WP2 Ring," cells G7 and H7). There is no allowance for the use of buried plant. The use of all three types of outside plant should be allowed in a TELRIC-compliant model. The model also includes a "Marketing Factor" (see worksheet "WS1," row 63), however marketing expenses are generally retail related and should be excluded from the cost of traffic termination.

A very cursory review of the calculations within the PBA model has also found several errors. For example,

- In worksheet "WS3," cell E66 is not linked to the proper cell in worksheet "Input No 2," and
- In worksheet "WP2 Ring," cell H50 is not linked to the proper cell in worksheet "Input No 2, but rather has an incorrect hard-coded value.

It is clear that this model must be carefully scrutinized further for calculation errors.

3. HAI Cost Model

Three Century Telephone-affiliated RLECs, Adamsville, Claiborne, and Ooltewah-Collegedale, propose to use the HAI proxy model with default input values. The CMRS Providers do not believe the HAI Model itself is TELRIC-compliant. The HAI model's internal methods and calculations are not readily apparent. It is very difficult to trace total demand to the design of transport and termination elements, and to the calculation of plant investments and costs. In particular, its internal calculations for switching are overly simplistic and not company-specific. In additional, like any other model, the HAI model results are a function of the quality and appropriateness of the inputs used in the model. To the extent that these companies plan to use default values, they are out-of-date (version 5.0a - referred to as HM 5.0a - was first filed with the FCC on January 28, 1998 and costs of switching and transport have dropped significantly since that time) and not applicable to these specific companies.

Also, in neither the August 11, 2005 "Description of Cost Study Methodology" nor the September 28, 2005 "Proposed Cost Study Methodologies" do the three RLECs state which version of the HAI proxy model they plan to use. At the September 7, 2005 hearing in

Nashville,[26] a Century representative mentioned model version HAI 5.0a. However, the CMRS Providers are aware of at least two more recent versions, HAI 5.2 and HAI 5.3. At a minimum, the three Century-affiliated companies should be required to immediately notify the CMRS Providers which version of the HAI model they propose to use.

In any event, the CMRS Providers note that the HAI model was developed to determine universal service fund (USF) benchmarks. Such models are not appropriate for determining a rate for terminating traffic. USF models are concerned with the cost of basic service. Switching and transport typically account for less than 10% of the total cost of USF basic service Accordingly, most of the complexity in USF models deals with loop costs. As a result, for usage-sensitive services such as terminating traffic or switched access, USF models do not provide sufficient precision for switching and transport costs.

The FCC has noted this deficiency. In its Fifth Report and Order, CC Docket No. 96-45, dated October 22, 1998, Paragraph 75, the FCC states,

> In our evaluation of the switching modules in this proceeding, we note that for universal service purposes where cost differences caused by differing loop lengths are the most significant cost factor, switching costs are less significant than they would be in, for example, a cost model to determine unbundled network element switching and transport costs.

The Oklahoma Corporation Commission has expressly ruled that HAI 5.0a should not be used by ICOs to compute transport and termination rates.[27] That Commission has ruled that "the HAI Model is suspect given the ability of persons to manipulate the inputs to obtain a desired result." The HAI5.0a should be similarly rejected for use in this proceeding.

[26] *Oral Argument Transcript of Proceedings*, In Re Cellco Partnership d/b/a Verizon Wireless for Arbitration Under the Telecommunications Act of 1996, TRA Consolidated Docket No 03-00585 at 34 (Sept 7, 2005)

[27] Cause Nos. PUD 2002-149 through 153, Oklahoma Corporation Commission, Final Order No 468960, *et al*, October 22, 2002

Finally, the CMRS Providers note that the TRA has already rejected the HAI model in favor of a BellSouth cost model in the Tennessee BellSouth Permanent Prices Proceeding.[28] In that case, the TRA stated:

> While the HAI ("Hatfield") Model filed by AT&T and MCI WorldCom appears to comply with the Authority's previous Orders, it estimates costs for only a small subset of UNEs. Furthermore, AT&T and MCI WorldCom now advocate the outputs of BellSouth's Model with adjustments. BellSouth, on the other hand, attempts to meld the two models to estimate costs for the loop inputs, while using its Model, unadjusted, for the remainder. In short, the juggling of the two models has become unwieldy and necessitates a choice. BellSouth's Model is the only one that can generate cost estimates for all of the UNEs and the only one advocated by any party for the non-loop UNEs.[29]

Apparently, the HAI sponsors in that case did not advocate the use of HAI for switching or transport, which are the two key components of traffic termination.

4. CHR Solutions Cost Model

One RLEC, North Central, proposes to use the CHR cost model. The CHR cost model is not TELRIC-compliant and it is so overly simplistic that it is unclear whether it can be sufficiently modified to be made TELRIC-compliant.

As briefly described in the August 11, 2005 "Description of Cost Study Methodology," the cost model is self-described as a LRIC (Long-Run Incremental Cost) study, not a TELRIC study. TELRIC considers the costs of producing the total amount of output, including fixed costs. In contrast, LRIC studies only consider the costs of producing additional output (but without ignoring existing output), which excludes initial fixed costs. Therefore, since LRIC

[28] *Second Interim Order*, In Re Petition of BellSouth Telecommunications Inc to Convene a Contested Case to Establish Permanent Prices for Interconnection and Unbundled Network Elements, TRA Docket No 9701262 at 11 (Nov 22, 2000)

[29] *Id* at 6

excludes initial fixed costs, LRIC is generally less than TELRIC. However, the CHR cost study methodology is not LRIC because it appears to completely ignore existing output.

The CHR cost methodology concludes with the following:

> Rate Development: ADDITIONAL switching and transport cost divided by ADDITIONAL demand. (Underscore and capitals as in original)

Also, footnote 1 states,

> The additional capacity assumes full additional construction costs, e.g., new cable and electronics will be priced independent of existing capacity.

This is clearly not TELRIC-compliant and is in complete contradiction with the FCC Rules.

Specifically, 47 CFR section 51.505(b) states:

> The total element long-run incremental cost of an element is the forward-looking cost over the long run of the total quantity of the facilities and functions directly attributable to, or reasonably identifiable as incremental to, such element, calculated taking as a given the incumbent LEC's provision of other elements.

Also, paragraph 682 of the FCC Local Competition Order states:

> ... the per-unit costs associated with a particular element must be derived by dividing the total cost associated with the element by a reasonable projection of the actual total usage if the element.

The key phrases are "total quantity" and "total usage" and "total cost." The purpose of the TELRIC standard is to assure that the benefits of the economies associated with the total demand on the ILEC's network are reflected in its TELRIC-based rates.

By analyzing "ADDITIONAL demand" and "ADDITIONAL cost", the CHR cost methodology assures that the resulting termination rates will not reflect the economies associated

with total demand on the RLEC's network. Thus the CHR cost study methodology is not TELRIC-compliant by any measure.

The September 28, 2005 Proposed Cost Study Methodology does not provide much additional information. Of the six cost models provided by the Rural Coalition, the CHR cost model is by far the most simplistic. The Excel spreadsheet in its entirety consists of only 132 rows, including all inputs and calculations. Every investment category and expense factor is an input, and provides no information as to the methodology used to determine those inputs and thus no way to determine whether the resulting study would be TELRIC.[30]

5. TDS Internal Cost Model

Four TDS-affiliated RLECs, Concord, Humphreys, Tellico, and Tennessee, propose to use an internal TDS cost model. As discussed in, above, the TDS cost model is not TELRIC-compliant because it fails to identify the methodology used to calculate TELRIC investment. Specifically, it simplistically expresses TELRIC switching investment as a fixed dollar amount plus a per line amount, without any methodology for how this investment is derived (see worksheet "Company Info & Parameters," rows 25 – 26).

In addition, the TDS cost model does not attempt to distinguish between non-traffic sensitive and traffic sensitive costs. Any TELRIC-compliant cost model must identify and exclude non-traffic sensitive costs from the cost of traffic termination.

[30] For example, the CHR cost model includes only a single input value for switching investment for the entire company, without any methodology for how this investment is derived (see worksheet "Work Sheet," cell E11) and a single input value for each of three accounting category of CWF investment for the entire company, again without any methodology for how this investment is derived (see worksheet "Work Sheet," cells E25 – E27).

The TDS model also proposes to recover the cost of the TELRIC cost study through transport and termination rates. However, as transport and termination rates are intended to cover only the additional costs of call termination for end office switching, tandem switching, and common transport, inclusion of cost study costs is inappropriate.

6. Totherow, Haile & Welch and Lee Olch Consulting (THW / LO) Cost Model

One RLEC, Twin Lakes, proposes to use the THW / LO cost model. As discussed in above, the THW / LO cost model is not TELRIC-compliant because it fails to calculate TELRIC investment. Specifically, it simplistically expresses TELRIC switching investment as a gross investment amount per location, without any methodology for how this investment is derived (see worksheet "INPUT_OTHER," row 11). Similarly, the TELRIC investment for transport termination is simplistically a fixed investment per terminal, again without any methodology for deriving this investment (see worksheet "INPUT_OTHER," rows 41 – 43).

The THW / LO cost model also fails to distinguish between non-traffic sensitive and traffic sensitive costs. Any TELRIC-compliant cost model must identify and exclude non-traffic sensitive costs from the cost of traffic termination.

Finally, the THW / LO cost model includes an allowance for uncollectible revenues, which is not a valid cost component for traffic termination from wireless carriers (see worksheet "RATE," cell E12).

IV. TELRIC Cost Study Methodology Ground Rules

The CMRS Providers offer the following as methodological ground rules, which each Rural Coalition cost study should follow in order to be TELRIC-compliant:

1. Each cost study must contain, either within the model or within the supporting documentation, methods to design an efficient, forward-looking transport and termination network to serve total demand and then compute plant investments and costs consistent with the design. The workings of the methods must be explained, as must the rationale supporting the methods.

2. Each cost study must contain, either within the model or within the supporting documentation, methods to determine the traffic-sensitive component of switching plant. The workings of the methods must be explained, as must the rationale supporting the methods.

3. Each cost study must contain, either within the model or within the supporting documentation, methods for calculating unit investments that demonstrate the linkage between plant investment and costs and total demand (per item 1). The workings of the methods must be explained, as must the rationale supporting the methods.

4. Plant-specific expenses shall be determined so as to be forward-looking and exclude retail costs.

5. Support assets and expenses shall be determined so as to be forward-looking and exclude retail costs.

6. Forward-looking common costs shall be allocated on a basis that attributes reasonable shares to retail and non-retail services, such as on the basis of total ICO capital costs and operating expenses or revenues.

7. Loop costs shall not be included in TELRIC.

V. Conclusion

For the foregoing reasons, the CMRS Providers respectfully submit that none of the methodologies submitted by the Rural Coalition in conjunction with their September 28, 2005, filing is TELRIC-compliant, and that each ICO should be required to submit a cost-study on December 7, 2005, based on forward-looking costs consistent with the TELRIC principles

adopted by the FCC, which are discussed in part above and in the CMRS Providers' previous comments submitted to the TRA.

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