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BEFORE THE ARIZONA CORPORATION COMMISSION

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IN THE MATTER OF THE COMPLAINT OF MCLEODUSA TELECOMMUNICATIONS SERVICES, INC. AGAINST QWEST CORPORATION.

DOCKET NO. T-03267A-06-0105
DOCKET NO. T-01051B-06-0105

NOTICE OF FILING

Please take notice that McLeodUSA Telecommunications Services, Inc. is filing the Supplemental Direct Testimony of Michael Starkey

RESPECTFULLY SUBMITTED this 9th day of June 2006.

ROSHKA DEWULF & PATTEN, PLC

By _____

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BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF:	)	Docket No. T-03267A-06-0105
	)	Docket No. T-01051B-06-0105
McLEODUSA	)	
TELECOMMUNICATIONS	)	
SERVICES, INC.,	)	
Complainant,	)	
v.	)	
QWEST CORPORATION,	)	
Respondent.	)	

DIRECT TESTIMONY – SUPPLEMENTAL

OF

MICHAEL STARKEY

On behalf of

McLeodUSA Telecommunications Services, Inc.

June 9, 2006

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS FOR THE RECORD.

A. My name is Michael Starkey. My business address is QSI Consulting, Inc., 243 Dardenne Farms Drive, Cottleville, Missouri, 63304.

Q. ARE YOU THE SAME MICHAEL STARKEY THAT ORIGINALLY FILED DIRECT TESTIMONY ON MAY 12, 2006 IN THIS DOCKET?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL TESTIMONY?

A. My supplemental direct testimony will show that Qwest's Arizona-specific collocation cost study (hereafter "Arizona cost study") develops the Power Plant rate on the basis of DC power usage – not the size of power feeder cables – which supports McLeodUSA's interpretation of the *Power Measuring Amendment*, wherein the Power Plant rate should be assessed based on measured usage. At pages 15 – 16 of my direct Testimony filed on May 12, 2006, I explained that Qwest, to that point, had refused to provide McLeodUSA with a copy of the cost study supporting Qwest's collocation rates impacted by the *Power Measuring Amendment*, i.e., the Arizona cost study. I also explained that, based upon my previous experience with cost studies, in general, and with Qwest's collocation cost study in other jurisdictions, in particular, I believed Qwest's Arizona cost study would support McLeodUSA's position in this docket.

Q. SINCE THAT TIME, HAVE YOU BEEN ABLE TO OBTAIN A COPY OF THE ARIZONA COST STUDY?

A. Yes, and this testimony is intended to supplement my 5/12/06 testimony with information taken directly from the Arizona cost study to show that Qwest's application of the Power Plant rate on an "as ordered" basis is flawed.

Q. HAVE YOU HAD AN OPPORTUNITY TO REVIEW QWEST'S ARIZONA COST STUDY?

A. Yes, I have.

Q. DOES THE ARIZONA COST STUDY SUPPORT MCLEODUSA'S POSITION THAT DC POWER PLANT COSTS SHOULD BE RECOVERED BASED UPON THE LEVEL OF MCLEODUSA'S ACTUAL USAGE, RATHER THAN THE SIZE OF ITS DC POWER FEEDER CABLES?

A. Yes, it does.

Q. HOW?

A. There are several aspects of the Qwest collocation cost study which indicate Qwest should be assessing its DC Power Plant charges based upon DC power usage levels, however, the most obvious way in which Qwest's Arizona cost study supports McLeodUSA's position that Power Plant charges should be assessed on measured usage is the fact that Qwest develops its Power Plant rates with DC power *usage* (not power cable orders) as the primary input. Qwest calculates Power Plant rates using the following simplified equation:

$$\frac{\text{Power Plant Investment}}{\text{DC Power Usage}} = \text{Investment per Amp} \times \text{Cost Factors} = \text{Rate per Amp}$$

Note that Qwest calculates the "Rate per Amp" for Power Plant by dividing the total power plant investment by DC power usage – not by some measure of power feeder cable size or an assumption related to List 2 drain for CLEC equipment and List 1 drain for Qwest equipment (as Qwest witnesses have argued in other jurisdictions). To further illustrate this point, the table below is excerpted directly from Qwest's Arizona cost study at tab E.1.4 entitled "Power Equipment":

	A	B	C	D	E
1	**POWER EQUIPMENT**				
2	**Investment**				
3				Version 1.0 Created 6/21/01, 3:26:59 PM	
4	**Equipment**			Arizona	
5	DC Plant	$325,036			
6	Engine/Alternators	$81,999			
7	Commercial AC	$40,835			
8	Total	$447,869			
9					
10	DC Power Usage	1000			
11	Equipment Cost Per Amp	**$447.87**			

Tab E.1.4 "Power Equipment" is where Qwest develops its "investment per Amp" related to its DC Power Plant rate element. More specifically, in Row 10, Qwest divides the overall power plant investment from Row 8 by "*DC Power Usage*" to arrive at a per Amp investment in Row 11.

Q. WHY IS THIS IMPORTANT?

A. Fundamental cost study construction requires rates to be assessed consistent with the manner in which they are developed, with the overarching objective being the ultimate recovery of total investment. This requires that the application of the rates must be consistent with the manner by which total investment, in the cost study, is ultimately divided into "chargeable units." In this way, the total investment can be recovered in full through selling the anticipated number of "chargeable units." The following postulate captures this tenet in the case of Qwest's Power Plant rate:

> **If** the Power Plant investment is divided by DC power *usage* to derive a per amp Power Plant cost, and if Qwest is to recover the total Power Plant cost (no more, no less), **then** Qwest must apply the resulting Power Plant rate to the amount of power *usage* it produces (and ultimately sells or uses itself).

In the case of Qwest's cost study, this tenet can be expressed as a common mathematical corollary as follows: A = (A/B) * B. By substituting A with *Power Plant Investment* and B with *DC Power Usage (in Amps)*, you quickly see that if you originally divide the power plant investment by *DC Power Usage (in Amps)* to arrive at a per Amp cost– i.e., B, you must also multiply the cost-based rate times the number of Amps *used* so as to recover your intended investment – i.e., A (described mathematically below):

$$\frac{\text{Power Plant Investment}}{\text{DC Power Usage (in Amps)}} \times \text{DC Power Usage (in Amps)} = \text{Power Plant Investment}$$

Q. WHAT HAPPENS WHEN QWEST ASSESSES ITS POWER PLANT RATES BASED UPON THE SIZE OF THE CLEC'S POWER FEEDER CABLES, RATHER THAN THE VOLUME OF DC POWER USAGE (IN AMPS)?

A. Qwest's errant interpretation of the *DC Power Measuring Amendment,* which would allow it to continue assessing DC *Power Plant* rates based upon the size of a CLEC's power feeder cables rather than on its measured usage, results in two problems; one problem that is certain and another problem that is likely.

Q. PLEASE EXPLAIN.

A. Based upon Arizona-specific billing data provided by Qwest to McLeodUSA in December 2005, McLeodUSA consumes DC power amperage, in a given month, equal to only about 18.3% of the capacity its feeder cables are designed to accommodate. In other words, McLeodUSA's power feeder cables are designed approximately 5.5 times (i.e., 1/.183) larger than the DC power draw they actually accommodate on average. Hence, using Qwest's errant interpretation of the *DC Power Measuring Amendment*, McLeodUSA will pay to Qwest, in an average month, DC power plant charges that are 5.5 times the amount it actually uses. The following example helps to make this point:

TABLE 1

	DC Power Plant Capacity	1,200 Amps	% of Total		
Row 1	Average Usage (Load)	1,000 Amps	83.33%		
		Measured Usage		**"Order" Size**	**% of Total**
Row 2	Qwest Usage	700 Amps	70.00%	700 Amps	29.92%
Row 3	CLEC A usage	100 Amps	10.00%	546.45 Amps	23.36%
Row 4	CLEC B usage	100 Amps	10.00%	546.45 Amps	23.36%
Row 5	McLeodUSA usage	100 Amps	10.00%	546.45 Amps	23.36%
Row 6		1,000 Amps	100.00%	2,339 Amps	100.00%
Row 7	% of Usage to "Order" (CLECs)		18.30%		

Q. PLEASE EXPLAIN THE TABLE ABOVE.

A. In the table above, it is assumed that in a given Qwest central office, Qwest uses 700 of the 1,000 Amps created by the power plant, while three CLEC collocators each use 100 Amps of the remaining 300 Amps. Given that Qwest develops its per Amp Power Plant rate based upon the number of Amps consumed (i.e., DC power usage), we would expect that each power user would contribute to the recovery of the power plant costs in direct proportion to its usage, i.e., each CLEC would pay 10% of the power plant costs (for a combined CLEC total of 30%) and Qwest would pay 70%.

However, using Qwest's interpretation of the *DC Power Measuring Amendment*, Qwest assesses to CLECs the per Amp Power Plant rate based upon the capacity (in Amps) of their DC power feeder cables (what Qwest loosely refers to as the "power order"). And for various engineering reasons described in the testimony of Sidney Morrison, the size of McLeodUSA's power cables exceed McLeodUSA's actual power usage by about 5.5 times on average. Hence, as shown in Table 1, the 100 Amps of McLeodUSA power *usage* equates to a power cable order of 546.45 Amps (100 times

1/0.183). So, assuming both CLEC A and CLEC B are similar to McLeodUSA and their power feeder cables are five and a half times larger than their actual usage, instead of the CLECs paying 10% apiece (or a combined 30%) toward recovery of the power plant costs, the CLECs actually pay 23.36% apiece (or a combined 70.08% of the total cost). On the other hand, Qwest pays only 29.92% toward recovery of the power plant costs despite using 70% of the total DC power.

Q. ABOVE YOU SAID THERE ARE TWO PROBLEMS WITH QWEST'S APPLICATION OF THE POWER PLANT RATE ON THE AMPERAGE OF THE POWER FEEDER CABLES - ONE PROBLEM THAT IS CERTAIN AND ANOTHER PROBLEM THAT IS LIKELY. WHAT ARE THOSE?

A. The example in Table 1 makes clear that Qwest's interpretation of the *DC Power Measuring Amendment* will necessarily result in Qwest paying far less than its fair share for use of the DC power plant, while at the same time ensuring that CLECs pay for more of the power plant than they use. This problem is a certainty so long as Qwest is allowed to assess the Power Plant rate according to the amperages associated with McLeodUSA's power cable orders.

Table 1 highlights another problem that is likely to result. That is, Qwest will in some circumstances recover more in power plant costs from the CLECs than it has actually incurred, thereby, resulting in Qwest effectively paying $0 for using the same power plant.

Q. PLEASE EXPLAIN THIS SECOND POINT IN MORE DETAIL.

A. Note that in Table 1 above, Qwest's interpretation of the *DC Power Measuring Amendment* results in CLECs paying for a total of 1,639 Amps of power, even though the power plant averages a power load of only 1,000 amps. In other words, because Qwest's interpretation divorces the manner by which it assesses its DC Power Plant charges on CLECs (i.e., Qwest applies the rate based on the relatively higher amperage associated with the CLEC's power feeder cable) from the way in which it calculates the DC Power Plant rate (i.e., Qwest calculates the rate based on the relatively lower actual usage), Qwest recovers more from CLECs than the power plant is even capable of providing. This results in Qwest recovering more from CLECs than Qwest invested in its power plant facilities (i.e., over recovery). Since Qwest recovers the entire cost of the power plant investment (and then some) from collocators, that means Qwest gets free use of the same power plant (*i.e.*, Qwest doesn't have to recoup any power plant costs from its own use or from its retail customers) despite the fact that Qwest consumes more than 70% of the overall plant production to service its own customers (substantial discrimination).

Q. IN THE IMMEDIATELY PRECEDING RESPONSE, YOU ADDED AT THE VERY END A PARANTHETICAL ALLUDING TO THE FACT THAT QWEST'S INTERPRETATION IN THIS REGARD IS DISCRIMINATORY. PLEASE EXPLAIN.

A. The FCC's Total Element Long Run Incremental Cost ("TELRIC") methodology, by which collocation rates (including DC power) must be set, is specifically designed so as to result in rates that are non-discriminatory. In other words, a proper TELRIC-based rate is intended to ensure that both collocators and Qwest pay the same amount for DC power. This ensures that both collocators and Qwest can compete effectively without

fear that one has an inappropriate cost advantage relative to the wholesale products used by both (in this circumstance, DC power). By interpreting its *DC Power Measuring Amendment* so as to allow it to assess its DC *Power Plant* rates based upon the size of a CLEC's power feeder cables, Qwest negates the discriminatory protection inherent with a TELRIC-based rate. It does so by allowing Qwest to pay far less for its DC power than the rates paid by its CLEC collocators, thereby resulting in price discrimination that is not consistent with the FCC's TELRIC requirements.

Q. HOW DO YOU KNOW THAT QWEST PAYS LESS THAN CLECS FOR DC POWER?

A. To date, Qwest has refused to divulge the way Qwest recovers power plant investment relative to its own equipment. However, we know from Qwest's testimony in other states, and its data responses, that it sizes DC power plant for itself on its anticipated List 1 Drain – or the peak power draw of Qwest's equipment under normal operating conditions. We also know that Qwest bills collocators for DC power plant as if they were consuming the higher List 2 Drain – or the size of the power cable order, which is sized to accommodate ultimate demand and worst case scenario draw during battery discharge. Given that Qwest sizes power plant facilities for its own use at List 1 Drain which will always be lower than List 2 Drain used to bill collocators, Qwest will, by definition, always pay less than collocators for DC power plant.

Q. ARE YOU SUGGESTING THAT QWEST'S DC POWER PLANT RATES ARE NOT TELRIC COMPLIANT?

A. No. Nothing I've discussed above is critical of the actual Power Plant rate approved by the Commission, or the manner by which the rate is developed. Indeed, I agree with the underlying nature of Qwest's rate calculation wherein it divides its total power plant investment by its anticipated usage. Because the power plant equipment and its resulting costs are volume-sensitive relative to the amount of DC power they can facilitate, it is absolutely appropriate to divide them by DC power usage for purposes of ensuring proper cost recovery. My critique above is aimed solely at the manner by which Qwest applies its Power Plant rate after it has been established. It is Qwest's misapplication of its Power Plant rate that causes the discrimination discussed above and likewise, it is this same misapplication that should have been (and McLeodUSA believes was) rectified by the *DC Power Measuring Amendment* (just as it was for the DC Power Usage rate element).

Q. DOES THIS CONCLUDE YOUR SUPPLEMENTAL DIRECT TESTIMONY?

A. Yes, it does.