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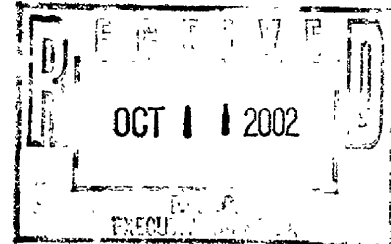
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VIA ELECTRONIC MAIL AND OVERNIGHT DELIVERY

October 9, 2002

Dr. Mary Andrews Bane
Executive Director
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850



Re: Docket 990649B-TP
Investigation into Pricing of Unbundled Network Elements (Sprint/Verizon track)

Dear Dr. Bane:

On September 25, 2002, Commission Staff issued its recommendation for Verizon Florida Inc. (Verizon) in the above-referenced docket. In that recommendation, Staff accepts Verizon's cost model (ICM-FL), but changes several of Verizon's inputs. Verizon has reviewed Staff's workpapers in an effort to better understand its proposed changes and to duplicate its results. In doing so, Verizon detected certain errors in Staff's calculations. These include:

1. Compared to Verizon's proposals, Staff recommended longer depreciation lives in a number of accounts; a lower cost of capital; lower material loading costs; and a higher administrative fill factor. These changes will necessarily decrease the modeled investment relative to Verizon's ICM-FL run with Verizon's inputs. Staff's recalculation of the common cost allocator, however, reflects a modeled investment figure 60% higher (about \$4.9 billion) than the amount reflected in Verizon's filing (about \$2.7 billion). (Verizon could not find the source of the \$4.9 billion either in Staff's recommendation or its workpapers.) The common cost allocator is the ratio of common to direct costs. Using the incorrect (larger) modeled investment figure overstates the capital costs and property taxes associated with the modeled network in the denominator of this ratio, with the result being an understatement of the common cost allocator. The correct calculation is reflected on the attached document, "FIXEDALLOCATOR-STAFF-CORRECTED07.xls." This file is not confidential. Also included is a second, back-up file that may be useful to

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understanding the FIXEDALLOCATOR-STAFF-CORRECTED07.xls file. This second file (flxattch00SRDGT6wStaffRec.xls) does contain confidential information and has only been distributed to Staff and parties that have signed protective agreements.

2. A second problem with Staff's common cost allocator calculation is that the allocator was not adjusted for the shortfall in recovery that resulted when ICM-FL's calibration option was turned off. (Disabling the calibration option affects only expenses, not investment.) This shortfall equals \$77 million. It is calculated as the difference between the forward-looking expenses that are to be modeled via expense-to-investment ratios and the sum of the products of these ratios times the corresponding modeled investment. The only way to recover these costs, if the expense-to-investment ratios are left unchanged, is to modify the fixed allocator by adding the \$77 million to the numerator and subtracting it from the denominator. The corrected calculation also appears in the attached FIXEDALLOCATOR-STAFF-CORRECTED07.xls document. Again, the file flxattch00SRDGT6wStaffRec.xls provides additional back-up to the calculations.

3. To calculate rates for the UNE platform (UNE-P), Staff recommended adding up the monthly charges for each of the UNEs in the platform and then subtracting \$1.39 to account for the purported cost savings of using integrated digital loop carrier (IDLC) technology. As the recommendation (at 354) reflects, the \$1.39 is the cost reduction ICM-FL yields for the UNE-P when ICM-FL is modified to use IDLC to estimate costs. The \$1.39 figure, however, reflects Verizon's inputs, rather than the Staff's. If Staff's inputs are carried through to this calculation (as they should be for the recommendation to be internally consistent), the figure is \$1.17. (Staff can verify this differential by reviewing the files and instructions Verizon provided in response to Staff interrogatory 239 in this proceeding.)

4. Finally, there are some minor discrepancies between the lives and salvage values contained in Staff's recommendation and those in Staff's workpapers. Specifically, the ICM-FL input file provided by Staff showed a 9-year life for account 223200 (Circuit Equipment) even though Staff's recommendation is for an 8-year life. Similarly, the input table showed a 36-year life for account 241100 (Poles) even though Staff's recommendation is for a 35-year life. Note that these changes are not reflected in any of the results presented above or in the attached files.

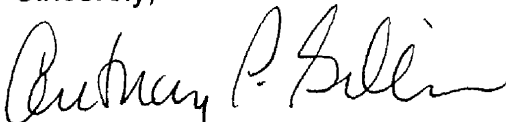
Please note that Verizon does not agree with any of the Staff's recommended changes to Verizon's inputs or its model run. However, to the extent Staff maintains these recommendations, their effects should be consistently reflected in Staff's results. Verizon will promptly make available its subject matter experts to further discuss with Staff the corrections noted here. Verizon urges the Staff to modify its

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recommendation to reflect these corrections before the Commission's vote, in order to avoid potential clarifications after the vote.

Please contact me at 727-360-3241 if you have any questions or wish to further discuss the matters raised in this letter.

Sincerely,


for Kimberly Caswell

KC:tas
Attachments

c: Parties of Record - VIA ELECTRONIC MAIL

CALCULATION OF FIXED ALLOCATOR

	AS FILED	From Staff PP&S Calibration off	Corrected	Comment
A. NUMERATOR	\$169,821,793	\$157,818,966 XX	\$157,818,966	Value is consistent with Staff's recommendation -- see tab B.
B. DENOMINATOR\				
Total forward-looking direct costs				
1. Annual Capital Charges	\$645,067,831	\$746,128,763 XX	\$430,045,494	See Tab C, Columns I and J
2. Annual Property Taxes	\$29,954,453	\$49,432,395 XX	\$26,997,794	See Tab D, Columns G and H
3. Annual Operating Expenses	\$523,349,402	\$500,384,537 XX	\$500,384,535	From row 22 below.
4. Collocation Costs	\$6,668,784	\$6,668,784	\$6,668,784	Staff agrees with filed number
TOTAL DIRECT COSTS	\$1,205,040,470	\$1,302,614,479 XX	\$964,096,606	
C. ANNUAL OPERATING EXPENSES				
1. Total Operating Expenses	\$718,710,367	\$718,710,367	\$718,710,367	Staff agrees with filed number
2. Adjustments				
A. NRC Expenses	-\$99,739,025	-\$99,739,023 XX	-\$99,739,025	Use filed number -- only \$2 difference.
B. General Support	\$132,306,665	\$97,338,971 XX	\$97,338,971	Value is consistent with Staff's recommendation -- see tab B.
C. Miscellaneous	-\$58,106,812	-\$58,106,812	-\$58,106,812	Staff agrees with filed number
D. Common	-\$169,821,793	-\$157,818,966 XX	-\$157,818,966	Value is consistent with Staff's recommendation -- see tab B.
ANNUAL OPERATING EXPENSES	\$523,349,402	\$500,384,537 XX	\$500,384,535	
D. FIXED ALLOCATOR CALCULATION				
Common Costs/Direct Costs	14.09262200%	12.11555400% XX	16.36962200%	Note that Staff Used 12.1155542% in their rate development.

	Numerator	Denominator	Allocator w/ Shortfall Correction
Common Costs/Direct Costs w/ Correction for Calibration Shortfall	\$234,853,500	\$887,062,072	26.47543000%

Common			From Staff	Corrected	Comment
Cost Pool	Column	As Filed	PP&S calibration off		
From Attachment L					
B&C	U	\$13,954,087	\$13,954,087	\$13,954,087	
Carrier Line of Business	Z	\$13,663,940	\$13,663,940	\$13,663,940	
Common	AA	\$92,786,240	\$92,786,240	\$92,786,240	
SUBTOTAL		\$120,404,267	\$120,404,267	\$120,404,267	
From Attachment M					
B&C	P	\$15,911,983	\$12,204,908	XX	Staff's values correctly reflect the impact of their changes to depreciation and the cost of money on the carrying cost of the general support assets assigned to common.
Carrier Line of Business	U	\$14,861,296	\$11,389,538	XX	
Common	V	\$18,644,247	\$13,820,253	XX	
SUBTOTAL		\$49,417,526	\$37,414,699	XX	
TOTAL COMMON COSTS		\$169,821,793	\$157,818,966	XX	

Account	ICM Invest		from Staff (OKAY)			From Staff		Corrected Investment	Corrected Dep & Return	Comment
	As Filed	PP&S calibration off	Depreciation & Ret		Depreciation & Return					
			As filed	PP&S calibration off	As filed	PP&S calibration off				
221100	\$0		0.1295	0.09632	\$0	\$0	\$0	\$0		
221200	\$432,871,846	\$745,359,311	0.182833007	0.138105499	\$79,143,261	\$102,938,219	\$432,871,846	\$59,781,982		
221500	\$0		0.1295	0.09632	\$0	\$0	\$0	\$0		
222000	\$0		0.183921436	0.160181469	\$0	\$0	\$0	\$0		
223100	\$0		0.283967768	0.174848159	\$0	\$0	\$0	\$0		
223200	\$496,618,041	\$844,875,183	0.193206638	0.171108723	\$95,949,902	\$144,565,514	\$486,947,458	\$83,320,958		
235100	\$0		0.208030142	0.184940161	\$0	\$0	\$0	\$0		
236200	\$0		0.225759031	0.220595933	\$0	\$0	\$0	\$0		
241100	\$22,695,697	\$61,728,458	0.135527264	0.101975238	\$3,075,886	\$6,294,774	\$20,281,861	\$2,068,248		
242110	\$216,821,324	\$313,817,372	0.156826503	0.122251227	\$34,003,330	\$38,364,559	\$151,212,282	\$18,485,887		
242120	\$1,982,472	\$1,078,498	0.143168804	0.117071591	\$283,828	\$126,261	\$1,702,733	\$199,342		
242210	\$312,102,793	\$511,270,483	0.156826503	0.110589472	\$48,945,990	\$56,541,133	\$197,623,453	\$21,855,073		
242220	\$10,750,259	\$106,085,038	0.143168804	0.115979402	\$1,539,102	\$12,303,679	\$9,303,347	\$1,078,997		
242310	\$981,811,200	\$1,749,658,447	0.155584389	0.120658959	\$152,754,496	\$211,111,966	\$909,144,237	\$109,696,397		
242320	\$33,801,722	\$10,156,628	0.142547495	0.115797370	\$4,818,351	\$1,176,111	\$31,276,896	\$3,621,782		
242410	\$0		0.156826503	0.120204025	\$0	\$0	\$0	\$0		
242420	\$0		0.143168804	0.115433307	\$0	\$0	\$0	\$0		
242610	\$0		0.158068617	0.116343465	\$0	\$0	\$0	\$0		
242620	\$0		0.143168804	0.116343465	\$0	\$0	\$0	\$0		
243100	\$0		0.155584389	0.130344289	\$0	\$0	\$0	\$0		
244100	\$476,435,131	\$543,229,642	0.129823845	0.096998151	\$61,852,640	\$52,692,271	\$380,313,428	\$36,889,699		
269030	\$70,490,076	\$40,212,501	0.423162449	0.399512231	\$29,828,753	\$16,065,386	\$70,490,076	\$28,161,648		
TOTAL	\$3,056,380,561	\$4,927,471,561			\$512,195,539	\$642,179,874	\$2,691,167,617	\$365,160,012		

61.2% Increase

Account	ICM Invest		Composite Income		Composite Income Tax		Corrected Investment	Corrected Dep & Return	Comment
	As Filed	PP&S calibration off	As Filed	PP&S calibration off	As filed	PP&S calibration off			
221200	\$432,871,846	\$745,359,311	0.024854313	0.00979453	\$10,758,733	\$7,300,444	\$432,871,846	\$4,239,776	
221500	\$0	\$0	0.06947268	0.04235243	\$0	\$0	\$0	\$0	
222000	\$0	\$0	0.02555067	0.012607098	\$0	\$0	\$0	\$0	
223100	\$0	\$0	0.042013306	0.016250045	\$0	\$0	\$0	\$0	
223200	\$496,618,041	\$844,875,183	0.0264999	0.013963234	\$13,160,329	\$11,797,190	\$486,947,458	\$6,799,361	
235100	\$0	\$0	0.036869667	0.020860643	\$0	\$0	\$0	\$0	
236200	\$0	\$0	0.040416855	0.023300903	\$0	\$0	\$0	\$0	
241100	\$22,695,697	\$61,728,458	0.041046583	0.020508771	\$931,581	\$1,265,975	\$20,281,861	\$415,956	
242110	\$216,821,324	\$313,817,372	0.047692641	0.026170124	\$10,340,782	\$8,212,640	\$151,212,282	\$3,957,244	
242120	\$1,982,472	\$1,078,498	0.042598032	0.024492228	\$84,449	\$26,415	\$1,702,733	\$41,704	
242210	\$312,102,793	\$511,270,483	0.047692641	0.021943601	\$14,885,006	\$11,219,116	\$197,623,453	\$4,336,570	
242220	\$10,750,259	\$106,085,038	0.042598032	0.023665004	\$457,940	\$2,510,503	\$9,303,347	\$220,164	
242310	\$981,811,200	\$1,749,658,447	0.046838872	0.025020202	\$45,986,929	\$43,776,808	\$909,144,237	\$22,746,973	
242320	\$33,801,722	\$10,156,628	0.042124158	0.023527133	\$1,423,869	\$238,956	\$31,276,896	\$735,856	
242410	\$0	\$0	0.047692641	0.024691653	\$0	\$0	\$0	\$0	
242420	\$0	\$0	0.045980317	0.023251391	\$0	\$0	\$0	\$0	
242610	\$0	\$0	0.04854641	0.023940745	\$0	\$0	\$0	\$0	
242620	\$0	\$0	0.042598032	0.023940745	\$0	\$0	\$0	\$0	
243100	\$0	\$0	0.046838872	0.027668273	\$0	\$0	\$0	\$0	
244100	\$476,435,131	\$543,229,642	0.036771857	0.016542667	\$17,519,404	\$8,986,467	\$380,313,428	\$6,291,398	
269030	\$70,490,076	\$40,212,501	0.245754748	0.21422135	\$17,323,271	\$8,614,376	\$70,490,076	\$15,100,479	
TOTAL	\$3,056,380,561	\$4,927,471,561			\$132,872,292	\$103,948,889		\$64,885,481	

TOTAL ANNUAL CAPITAL COSTS \$645,067,831 \$746,128,763 ~~\$433,345,494~~

Account	ICM Invest as filed	Property Tax as filed	Staff Adjusted Invest calibration off	From Staff Staff Adjusted Tax - calibration off	Corrected Investment	Corrected Property Tax	Comment
221100	\$0	\$0	\$0	0	\$0	\$0	
221200	\$432,871,846	\$4,342,570	\$745,359,311	7477444.608	\$432,871,846	\$4,342,570	
221500	\$0	\$0	\$0	0	\$0	\$0	
222000	\$0	\$0	\$0	0	\$0	\$0	
223100	\$0	\$0	\$0	0	\$0	\$0	
223200	\$496,618,041	\$4,982,072	\$844,875,183	8475787.836	\$486,947,458	\$4,885,057	
235100	\$0	\$0	\$0	0	\$0	\$0	
236200	\$0	\$0	\$0	0	\$0	\$0	
241100	\$22,695,697	\$227,683	\$61,728,458	619259.8907	\$20,281,861	\$203,468	
242110	\$216,821,324	\$2,175,152	\$313,817,372	3148215.876	\$151,212,282	\$1,516,962	
242120	\$1,982,472	\$19,888	\$1,078,498	10819.49194	\$1,702,733	\$17,082	
242210	\$312,102,793	\$3,131,015	\$511,270,483	5129065.485	\$197,623,453	\$1,982,558	
242220	\$10,750,259	\$107,847	\$106,085,038	1064245.101	\$9,303,347	\$93,331	
242310	\$981,811,200	\$9,849,530	\$1,749,658,447	17552573.54	\$909,144,237	\$9,120,535	
242320	\$33,801,722	\$339,099	\$10,156,628	101891.2921	\$31,276,896	\$313,770	
242410	\$0	\$0	\$0	0	\$0	\$0	
242420	\$0	\$0	\$0	0	\$0	\$0	
242610	\$0	\$0	\$0	0	\$0	\$0	
242620	\$0	\$0	\$0	0	\$0	\$0	
243100	\$0	\$0	\$0	0	\$0	\$0	
244100	\$476,435,131	\$4,779,597	\$543,229,642	5449679.769	\$380,313,428	\$3,815,304	
269030	\$70,490,076	\$0	\$40,212,501	403411.81	\$70,490,076	\$707,156	
TOTAL	\$3,056,380,561	\$29,954,453	\$4,927,471,561	\$49,432,395	\$2,691,167,617	\$26,997,794	

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This file is based on the file "fixedallocator-PP&S-2.123" which was provided as part of the workpapers supporting Staff's recommendation.

This file shows the corrected calculation of the fixed allocator for common costs, consistent with the changes underlying Staff's recommendation.

Tabs A, B, C and D were part of the original file. They have been modified to show the correct calculation of the fixed allocator. This "ReadMe" tab and the "2WireComparison", "Correct_Inv", and "Calib_Shortfall" tabs have been added to this file.

The "2WireComparison" tab compares the resulting 2-wire rates that result from application of the corrected fixed allocator, based on Staff's recommended TELRICs by zone and for the statewide average.

The "Correct_Inv" tab presents the correct modeled investment produced by ICM, given the changes underlying the Staff's recommendation. Note that only changes to the material inputs file and to the administrative fill on the run time option screen affect the modeled investment. While changes to the cost of money, depreciation and the deselection of the calibration option affect the resulting TELRICs, they do not affect modeled investment.

the Calibration option. Briefly, ICM uses expense-to-investment ratios to model maintenance expenses by multiplying the ratios times the modeled investment for each UNE. If this is done at the total network level, the sum of the resulting products do not equal the sum of the numerators in the expense-to-investment ratios. This shortfall is recovered through the fixed allocator.

There are two major flaws in Staff's calculation of the fixed allocator.

First, Staff has overstated the amount of investment modeled by ICM given their recommended changes. Even though their changes should result in a decrease in the modeled investment compared to the Company's filed study, the Staff has based their fixed allocator on a level of modeled investment that is more than 60 percent greater than the filed study. The level of modeled investment used by Staff is more than 1.8 times greater than the correct investment amount.

Second, Staff has failed to recognize the shortfall in recovered expenses that results from their deselection of ICM's calibration option. As shown in the "Calib_Shortfall" tab, the amount of this shortfall is in excess of \$77 million dollars.

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Staff Proposed 2-Wire TELRICS	Rates With Staff's Allocator As Recomend	Rates With Staff's Allocator Corrected	Rates With Staff's Allocator Corrected and With Calibration Shortfall Adjustment	
Staff's Zone 1	\$10.70	\$12.00	\$12.45	\$13.53
Staff's Zone 2	\$14.43	\$16.18	\$16.79	\$18.25
Staff's Zone 3	\$24.57	\$27.55	\$28.59	\$31.08
Statewide Average	\$15.22	\$17.06	\$17.71	\$19.25

Average Contribution to Common Costs: \$4.03

Contribution by Zone:

Staff's Zone 1	\$2.83
Staff's Zone 2	\$3.82
Staff's Zone 3	\$6.51

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Account	Account #	Staff Investment	Modeled Investment*	Staff - Modeled
Analog Electronic Switching	221100	\$0	\$0	\$0
Digital Electronic Switching	221200	\$745,359,311	\$432,871,846	\$312,487,465
Electro-Mechanical Switching	221500	\$0	\$0	\$0
Operator Systems	222000	\$0	\$0	\$0
Radio Systems	223100	\$0	\$0	\$0
Circuit Equipment	223200	\$844,875,183	\$486,947,458	\$357,927,725
Public Telephone Terminal Equipment	235100	\$0	\$0	\$0
Other Terminal Equipment	235200	\$0	\$0	\$0
Poles	241100	\$61,728,458	\$20,281,861	\$41,446,597
Metallic Aerial Cable	242110	\$313,817,372	\$151,212,282	\$162,605,090
Nonmetallic Aerial Cable	242120	\$1,078,498	\$1,702,733	-\$624,235
Underground Cable - Metallic Cable	242210	\$511,270,483	\$197,623,453	\$313,647,030
Underground Cable - Nonmetallic Cable	242220	\$108,085,038	\$9,303,347	\$98,781,691
Buried Cable - Metallic	242310	\$1,749,658,447	\$909,144,237	\$840,514,210
Buried Cable - Nonmetallic	242320	\$10,156,628	\$31,276,896	-\$21,120,268
Submarine Cable - Metallic	242410	\$0	\$0	\$0
Submarine Cable - Nonmetallic	242420	\$0	\$0	\$0
Intra-building Network Cable - Metallic	242610	\$0	\$0	\$0
Intra-building Network Cable - Non-metallic	242620	\$0	\$0	\$0
Aerial Wire	243100	\$0	\$0	\$0
Conduit Systems	244100	\$543,229,642	\$380,313,428	\$162,916,214
Intangibles - Network Software -App & Oprng	269030	\$40,212,501	\$70,490,076	-\$30,277,575
TOTAL		\$4,927,471,561	\$2,691,167,617	\$2,236,303,944

Staff's modeled investment is
1.83 times as much as the correct amount
83.1% too much investment

Account Description	Account #	Staff Investment	Modeled Investment	Staff Minus Modeled	Percent Error
Digital Electronic Switching	221200	\$745,359,311	\$432,871,846	\$312,487,465	-27.8%
Circuit Equipment	223200	\$844,875,183	\$486,947,458	\$357,927,725	-26.5%
Poles	241100	\$61,728,458	\$20,281,861	\$41,446,597	104.4%
Metallic Aerial Cable	242110	\$313,817,372	\$151,212,282	\$162,605,090	7.5%
Nonmetallic Aerial Cable	242120	\$1,078,498	\$1,702,733	-\$624,235	NA
Underground Cable - Metallic Cable	242210	\$511,270,483	\$197,623,453	\$313,647,030	58.7%
Underground Cable - Nonmetallic Cable	242220	\$108,085,038	\$9,303,347	\$98,781,691	94.0%
Buried Cable - Metallic	242310	\$1,749,658,447	\$909,144,237	\$840,514,210	-7.5%
Buried Cable - Nonmetallic	242320	\$10,156,628	\$31,276,896	-\$21,120,268	-167.5%
Conduit Systems	244100	\$543,229,642	\$380,313,428	\$162,916,214	-57.2%
Intangibles - Network Software -App & Oprng	269030	\$40,212,501	\$70,490,076	-\$30,277,575	-143.0%
TOTAL		\$4,927,471,561	\$2,691,167,617	\$2,236,303,944	-16.9%

*From Calibration Report run with all Staff's changes but with Calibration ON.
This is the same investment as with Calibration OFF, because Calibration does not affect the modeled network.
Compare the unit investments from the UNE report with Calibration ON and OFF - they are identical.

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Account Description	Account #	Staff Maint & Exp		Staff Maint & Exp Ratio, Calculated			Chk Diff
		E/I Ratio (from ICM)	Modeled Investment	E/I Numerator	E/I Denominator	E/I Ratio	
Digital Electronic Switching	221200	0.077023	\$432,871,846	60,506,915	785,571,812	0.077023	0
Circuit Equipment	223200	0.025272	\$486,947,458	21,399,327	846,771,815	0.025272	0
Poles	241100	0.302917	\$20,281,861	18,698,590	61,728,458	0.302917	0
Metallic Aerial Cable	242110	0.038822	\$151,212,282	12,300,660	316,847,831	0.038822	0
Nonmetallic Aerial Cable	242120	0.011225	\$1,702,733	12,106	1,078,498	0.011225	0
Underground Cable - Metallic Cable	242210	0.004197	\$197,623,453	2,145,671	511,270,483	0.004197	0
Underground Cable- Nonmetallic Cable	242220	0.004062	\$9,303,347	430,879	106,085,038	0.004062	0
Buried Cable - Metallic	242310	0.030566	\$909,144,237	53,589,485	1,753,250,413	0.030566	0
Buried Cable - Nonmetallic	242320	0.018222	\$31,276,896	206,797	11,348,718	0.018222	0
Conduit Systems	244100	0.00049	\$380,313,428	266,282	543,229,642	0.00049	0
Intangibles - Network Software -App & Oprtng	269030	0.077023	\$70,490,076	-----	-----	0.077023	0

\$2,691,167,617

From Tab O of file "flxattach00Sdgt6wStaffRec.xls"

	Numerators in E/I Ratios			Denominators in E/I Ratios			Filed E/I
	With C. A. Turner	With No C. A. Turner	Filed	No Calibration	No Calib or C. A. Turner	Filed E/I	
Aerial Non-Metallic	12,106	12,124	671,084	1,078,498	1,052,707	0.018039	
Aerial Metallic	12,300,660	12,319,117	197,155,077	316,847,831	222,674,752	0.062391	
Buried Non-Metallic	206,797	207,107	7,061,615	11,348,718	11,012,540	0.029285	
Buried Metallic	53,589,485	53,669,894	1,090,940,784	1,753,250,413	1,353,340,863	0.049122	
Underground Non-Metallic	430,879	431,525	66,010,248	106,085,038	100,203,115	0.006527	
Underground Metallic	2,145,671	2,148,891	318,132,434	511,270,483	349,586,655	0.006745	
Poles	18,698,590	19,176,852	38,409,854	61,728,458	29,177,755	0.486818	
Conduit	266,282	273,921	338,018,669	543,229,642	301,191,862	0.000788	
Transmission	21,399,327	16,947,673	498,514,265	846,771,815	882,497,000	0.042926	
Switch	60,506,915	52,637,030	503,362,208	785,571,812	1,033,230,501	0.120206	

Sum of Numerators of E/I Ratios: \$169,556,712

Sum of Products of E/I Ratios times Modeled Investment: \$92,522,178

Shortfall Due to Turning Calibration OFF: (\$77,034,534)