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State of Florida

Public Service Commission

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TALLAHASSEE, FLORIDA 32399-0850

-M-E-M-O-R-A-N-D-U-M-

DATE: September 11, 2006

TO: Kay B. Flynn, Chief of Records, Division of the Commission Clerk & Administrative Services

FROM: William T. Rendell, Public Utilities Supervisor, Division of Economic Regulation

RE: Docket No. 060255-SU - Request for rate increase by Tierra Verde Utilities, Inc.

Please include the attached documentation to the above referenced docket.

Attachments

Cc: Division of Economic Regulation (Bulecza-Banks, Massoudi, Hudson)
Office of General Counsel (Brown)

CMP _____
COM _____
CTR _____
ECR _____
GCL _____
OPC _____
RCA _____
SCR _____
SGA _____
SEC 1
OTH _____

Mahnaz Massoudi

From: Frank [frankden@nettally.com]
Sent: Tuesday, September 05, 2006 10:30 AM
To: Mahnaz Massoudi
Subject: Tierra Verde U&U - Correction

Attachments: Tierra Verde Meters.xls; Tierra Verde UU- Massoudi Request.doc


Tierra leters.xls (J- Tierra Massoud

On 8/22/06 I e-mailed you a text and spreadsheet explaining our position regarding lot count, customer demand and growth and calculations. In reviewing those documents you noted that I referred to Staff's lot count as 1,159 rather than 1,059. That was an inadvertent error. Attached are the corrected text and spreadsheet. The corrected numbers and text additions are in bold and any text deletions are struck through. The only corrected worksheet in the spreadsheet is F-7a. Frank Seidman

TIERRA VERDE UTILITIES, INC. **8/22/06**
DOCKET NO. 060255-SU **Corrected: 9/5/06**

RESPONSE TO VERBAL REQUEST OF M. MASSOUDI
RE: COLLECTION SYSTEM USED & USEFUL

F. SEIDMAN

This is in response to your request for additional data and supporting documentation used in determining the percent U&U of the Tierra Verde collection system.

First, let me reiterate that it is still our contention that the collection system is 100% U&U, as indicated in the MFR and the associated deficiency response.

Lot Counting

In previous responses, I have expressed my view that it is difficult to get an accurate count in Tierra Verde of the number of lots with sewer service available. In theory, lot counting is simple. You just look at a platted map and count each one. Each lot represents a potential customer location. In practice, it is not so simple.

In Tierra Verde, for example, multi-unit buildings may be master metered or individually metered and they may exist on a single lot or on multiple lots platted as single family. A lot count does not necessarily represent a potential customer count. And the use of platted lots is not static. For example, a 16-unit apartment building was torn down and is being replaced with the 8-unit Bella Casa building on 8th Ave. For these reasons, in the original MFR filing, I had estimated the number of lots available for service at about 1,000. In the deficiency response, I indicated a lot count of 1,003 with 24 unoccupied. The 1,003 lot total represents the number of lots with services addresses of which 24 were currently unoccupied. That means these 24 were addresses that had once had service, but currently were not being billed. Based on your site visit and count, you indicate a lot count of **1,059** with 56 vacant lots. Combining my 1,003 service addresses with your 56 vacant lots **also** generates a total of 1,059. ~~For the sake of cost containment, I accept your count as a starting point of 1,159 versus my 1,059. However,~~ aAs I will address again later, this does not affect my contention that the system is 100% U&U.

Customers and growth

Since there are some unoccupied lots, the mathematical calculation of U&U is not 100%. On that basis, you requested further input as to a proper basis for determining customers and growth; i.e., the numerator of the U&U equation. Again, this is not a simple task in this instance.

Tierra Verde customers receive water service from Pinellas County. The County reads the water meters and, as a service to Tierra Verde, also calculates the bills for wastewater service based on Tierra Verde's tariff and renders a bill on behalf of Tierra Verde. The information available for determining customers and growth is varied.

On a historic basis, for a two year period, Tierra Verde has available from the County a bi-annual sales summary. That summary indicates the number of single family bills and the

number of commercial and multi-family units. Also, on a historic basis, for a five year period, the PSC annual reports show the number of meters by size and meter equivalents. Since the County sets and keeps track of the water meters, this information emanates from them. On a current basis, developed for this filing, the utility has available the average number of bi-monthly bills rendered by class and meter size. Individually metered multi-unit customers were classified as flat rate residential; master metered multi-unit customers were classified as general service.

With regard to the test year "lots", clearly, the average number of bills rendered by Tierra Verde in the test year, as shown in MFR Schedule E-2, is the best match. It represents the number of locations with a meter. That number (bi-monthly bills divided by 6) is 1,006.

With regard to determining the basis for a growth factor, none of the historical choices is without problems. In the deficiency response, I had provided growth information based on the historic meter equivalents in the annual reports. This approach provided statistically unreliable results, mainly because there was meter size changes not necessarily associated with the change in the meter count. I have attached spreadsheet Tierra Verde Meters.xls which provides the data input and calculations referred to in this response. At tab "Meters" you can see how changes in the 6" meter count and changing many 1" and 2" meters to 5/8" meters affected the meter equivalents. At tab "F-10a", you can see that meter equivalents is not a valid basis for measuring growth changes.

At tab "F-10b", you will find a statistical analysis of growth based on the historic number of meters shown in the annual reports. The R^2 coefficient is 81.6% and is statistically significant. It is a valid basis for measuring growth changes in lots served.

At tab "F-10c", you will find a statistical analysis of growth based on the historic number of Pinellas County bills (see tab "Bills"). The R^2 coefficient is 88.2% and is statistically significant. It is also a valid basis for measuring growth changes in lots served.

At tab "F-8a", you will find a calculation, using historic meters and historic bills, of the PN or the five year growth based on the commission rule. And then at tab "F-7a", you will find a calculation of collections system U&U for these two inputs. You will note that in the formulas at tab F-7a", I have included the 24 residents previously served but not served during the test year. They are not accounted for in the 1,006 average customers or the vacant lots. The percent U&U for these two approaches are **102.84% and 112.02%.** ~~93.97% and 102.36%.~~

Conclusion

As previously stated, it is my contention that the collection system is 100% U&U. ~~, even if you rely on the 93.97% calculated percentage.~~ It must be remembered that the mathematical equations utilized by the commission in its standard analysis are a means to an end and not and end in itself. They are to assist in determining the amount of plant that is used & useful in the public service, but they are not a substitute for judgment. It is up to the staff to analyze the results of these mathematical exercises in concert with other input, their knowledge and expertise, and common sense. In the case of Tierra Verde, 56 vacant lots were identified during last week's site visit. They are scattered throughout the service area, not concentrated in any particular neighborhood. The existence of 56 empty lots does not make the sewer mains located

at those lots less used & useful in the public service. Historically, I can tell you that the lot count concept was developed over 45 years ago as a means to deal with large, uncontrolled developments in which mains were placed in service in anticipation of serving thousands while only serving hundreds. In those cases, a main passing 20 homes while only serving one customer was not 100% used & useful in the public service. A main passing 20 homes while serving 18 or 19, clearly is. It is in that context that I conclude that the Tierra Verde system is 100% U&U and it is a judgment which I believe the commission should also make and can support with the information provided.

TIERRA VERDE
METER EQUIVALENTS
Source: Annual Reports - Schedule S-11

Number of Water Meters

Meter Size	Type of Meter	2000	2001	2002	2003	2004	2005	Meter Equiv. Factor
5/8"	All	692.0	710.0	714.0	714.0	940.0	910.0	1.0
3/4"	All							1.5
1"	All	159.0	172.0	185.0	186.0	18.0	25.0	2.5
1 1/2"	All	26.0	26.0	28.0	28.0	2.0	28.0	5.0
2"	All	32.0	32.0	31.0	33.0	4.0	36.0	8.0
3"	Displacement							15.0
3"	Compound							16.0
3"	Turbine							17.5
4"	Displ. or Compd.	1.0	1.0	1.0	1.0	-	1.0	25.0
4"	Turbine							30.0
6"	Displ. or Compd.	3.0	3.0	15.0	3.0	1.0	3.0	50.0
6"	Turbine							62.5
8"	Compound							80.0
8"	Turbine							90.0
10"	Compound							115.0
10"	Turbine							145.0
12"	Turbine							215.0
	Totals	913.0	944.0	974.0	965.0	965.0	1,003.0	

Number of Meter Equivalents

Meter Size	Type of Meter	2000	2001	2002	2003	2004	2005
5/8"	All	692.0	710.0	714.0	714.0	940.0	910.0
3/4"	All						
1"	All	397.5	430.0	462.5	465.0	45.0	62.5
1 1/2"	All	130.0	130.0	140.0	140.0	10.0	140.0
2"	All	256.0	256.0	248.0	264.0	32.0	288.0
3"	Displacement						
3"	Compound						
3"	Turbine						
4"	Displ. or Compd.	25.0	25.0	25.0	25.0	-	25.0
4"	Turbine						
6"	Displ. or Compd.	150.0	150.0	750.0	150.0	50.0	150.0
6"	Turbine						
8"	Compound						
8"	Turbine						
10"	Compound						
10"	Turbine						
12"	Turbine						
		1,650.5	1,701.0	2,339.5	1,758.0	1,077.0	1,575.5

TIERRA VERDE BILLS
Source: City of St. Petersburg

	2005 Nov/Dec	2004 Nov/Dec	2003 Nov/Dec
SFRs	903	897	885
Multi Units	1184	1180	1144
Comm. Units	112	111	110
Total	2199	2188	2139

Used and Useful Calculations
Wastewater Collection System

Florida Public Service Commission

Company: Tierra Verde Utilities, Inc.
Docket No.: 050845-SU
Schedule Year Ended: December 31, 2005

Schedule F-7a
Page 1 of 1
Preparer: Seidman, F.
Corrected:9/5/06

Explanation: Provide all calculations, analyses and governmental requirements used to determine the used and useful percentages for the wastewater treatment plant(s) for the

Line No.			
		Growth Based on Meters	
1	(A)	Average Customers (see E-2; bi-monthly invoices/6)	1,006
2	(B)	Vacant SFRs to which service has previously been provided	24
3	(C)	PN for post test year period (See F-8a)	59
4	(D)	Lots with Service per PSC Staff count	**1,059**
5	(D)	Used and useful percentage = [(A) + (B) + (C)]/ (D)	102.84% %
6	(E)	Non-used and useful percentage	-2.84% %
		Growth Based on Bills	
1	(A)	Average Customers (see E-2; bi-monthly invoices/6)	1,006
2	(B)	Vacant SFRs to which service has previously been provided	24
3	(C)	PN for post test year period (See F-8a)	156
4	(D)	Lots with Service per PSC Staff count	**1,059**
5	(D)	Used and useful percentage = [(A) + (B) + (C)]/ (D)	112.02% %
6	(E)	Non-used and useful percentage	-12.02% %

Margin Reserve Calculations

Florida Public Service Commission

Company: Tierra Verde Utilities, Inc.
Docket No.: 050845-SU
Schedule Year Ended: December 31, 2005

Schedule F-8
Page 1 of 1
Preparer: Seidman, F.
New: 8/18/06

Explanation: If a margin reserve is requested, provide all calculations and analyses used to determine the amount of margin reserve for each portion of used

Line No.		
	Wastewater Collection System	
	Growth Based on Meters	
	PN = EG x PT x U	
	where:	
1	EG = Equivalent annual growth in Meters (see F-10b)	12 Meters
2	PT = Post test year period per statute	5 yrs
3	U = Unit of measure utilized in U&U calculations	1 Meter
4	PN = Property needed expressed in U units	59 Meters
5	5% per year maximum allowable growth rate	49 Meters/yr
	Growth Based on Bills per County	
	PN = EG x PT x U	
	where:	
6	EG = Equivalent annual growth in Bills (see F-10c)	31 Bills
7	PT = Post test year period per statute	5 yrs
8	U = Unit of measure utilized in U&U calculations	1 Bill
9	PN = Property needed expressed in U units	156 Bills
10	5% per year maximum allowable growth rate	110 Bills/yr

Equivalent Residential Connections - Wastewat Florida Public Service Commission

Company: Tierra Verde Utilities, Inc.
Docket No.: 050845-SU
Test Year Ended: December 31, 2005

Schedule F-10 a
Page 1 of 1
Preparer: F. Seidman
Rev: '8/18/06

Explanation: Provide the following information in order to calculate the average growth in ERCs for the last five years, including the test year. If the utility does not have single-family residential (SFR) customers, the largest customer class should be used as a substitute.

Line No.	(1) Year	(2) Meter Equivalents Beginning	(3) Meter Equivalents Ending	(4) Meter Equivalents Average	(5) SFR Gallons Sold	(6) Gallons/ SFR (5)/(4)	(7) Total Gallons Sold	(8) Total ERCs (7)/(6)	(9) Annual % Incr. in ERCs
1	2000	N/A	1,651						
2	2001	1,651	1,701	1,676				1,676	
3	2002	1,701	2,340	2,020				2,020	20.56%
4	2003	2,340	1,758	2,049				2,049	1.41%
5	2004	1,758	1,077	1,418				1,418	-30.81%
6	2005	1,077	1,576	1,326				1,326	-6.44%
		Average Growth Through 5-Year Period (Col. 8)							-3.82%

Regression Analysis per Rule 25-30.431(2)(C)

	X	Y
Constan	2088.2	
X Coeff	-130.2	
R^2:	0.3814	
	1	1,676
	2	2,020
	3	2,049
	4	1,418
	5	1,326
	10	786
5 Year Growth = (yr 10 - yr 5)		(540)
Annual Average Growth = (yr 10 - yr 5/5)		(108)
5 Year Growth = (yr 10 - yr 5)		-8.14%

Equivalent Residential Connections - Wastewater Florida Public Service Commission

Company: Tierra Verde Utilities, Inc.
Docket No.: 050845-SU
Test Year Ended: December 31, 2005

Schedule F-10 c
Page 1 of 1
Preparer: F. Seidman
New: '8/18/06

Explanation: Provide the following information in order to calculate the average growth in ERCs for the last five years, including the test year. If the utility does not have single-family residential (SFR) customers, the largest customer class should be used as a substitute.

Line No.	(1) Year	(2) Meter Beginning	(3) Meter Ending	(4) Meter Average	(5) SFR Gallons Sold	(6) Gallons/ SFR (5)/(4)	(7) Total Gallons Sold	(8) Total ERCs (7)/(6)	(9) Annual % Incr. in ERCs
1	2000	N/A	913						
2	2001	913	944	929				929	
3	2002	944	974	959				959	3.28%
4	2003	974	965	970				970	1.09%
5	2004	965	965	965				965	-0.46%
6	2005	965	1,003	984				984	1.97%
		Average Growth Through 5-Year Period (Col. 8)							1.47%

Regression Analysis per Rule 25-30.431(2)(C)

	X	Y
Constant: 926.1	1	929
X Coeffic 11.7	2	959
R^2: 0.8161	3	970
	4	965
	5	984
	10	1,043
5 Year Growth = (yr 10 - yr 5)		59
Annual Average Growth = (yr 10 - yr 5/5)		12
5 Year Growth = (yr 10 - yr 5)		1.20%

Equivalent Residential Connections - Wastewater Florida Public Service Commission

Company: Tierra Verde Utilities, Inc.
Docket No.: 050845-SU
Test Year Ended: December 31, 2005

Schedule F-10 d
Page 1 of 1
Preparer: F. Seidman
New: '8/18/06

Explanation: Provide the following information in order to calculate the average growth in ERCs for the last five years, including the test year. If the utility does not have single-family residential (SFR) customers, the largest customer class should be used as a substitute.

Line No.	(1) Year	(2) Bills per County Beginning	(3) Bills per County Ending	(4) Bills per County Average	(5) SFR Gallons Sold	(6) Gallons/ SFR (5)/(4)	(7) Total Gallons Sold	(8) Y/E ERCs (7)/(6)	(9) Annual % Incr. in ERCs
1	2000	N/A							
2	2001	N/A						0	
3	2002	N/A						0	
4	2003	N/A	2,139					2,139	
5	2004	2,139	2,188	2,164				2,188	
6	2005	2,188	2,199	2,194				2,199	0.50%
		Average Growth Through 5-Year Period (Col. 8)							0.50%

Regression Analysis per Rule 25-30.431(2)(C)

	X	Y
Constant:	2055.3	
X Coeffic	30	
R^2:	0.8821	
	1	0
	2	0
	3	2,139
	4	2,188
	5	2,199
	10	2,355

5 Year Growth = (yr 10 - yr 5)	156
Annual Average Growth = (yr 10 - yr 5/5)	31
5 Year Growth = (yr 10 - yr 5)	1.42%