Taylor County Rural Electric Cooperative Corporation
P. O. BOX 100
CAMPBELLSVILLE, KENTUCKY 42719
(270) 465-4101 • Fax (270) 789-3625

September 6, 2006

Public Service Commission
ATTN: Elie R. Russell
211 Sower Boulevard
P. O. Box 615
Frankfort, KY 40602-0615

Dear Mr. Russell:

Pursuant to our conversation September 1, 2006, please file the enclosed Exhibit 1 and 2 in Case No. 2006-00286.

If additional information is needed, please let us know.

Sincerely,

TAYLOR COUNTY RURAL ELECTRIC
COOPERATIVE CORPORATION

John F. Patterson, Office Manager

JFP:pwr

Enc

cc: Rob Spragens, Jr.

TAYLOR CO RECC
PO BOX 100
CAMPBELLSVILLE, KY 42719
CASE NO. 2006-00286

SUMMARY OF COST JUSTIFICATION AMR

		12/31/2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
RESIDENTIAL METERS		23,575	24,282	25,011	25,761	26,534	27,330	28,150	28,994	29,864	30,760	31,683
					MODULE	$110.00	3,375					
AMR INSTALLED	ANNUAL INCREASE 3.0%		7,858	7,858	7,858	1,480	796	820	844	870	896	923
CUMMULATIVE			7,858	15,716	23,574	25,054	25,850					
METER		$95.00	$746,510	$746,510	$746,510	$140,594	$75,622	$77,890	$80,227	$82,634	$85,113	$87,666
LABOR	ANNUAL INCREASE 3.0%	$25.00	$196,450	$202,344	$208,414	$40,429	$22,398		$0	$0	$0	$0
		$120.00	$1,697,860	$953,854	$959,924	$186,023	$103,020	$82,890	$85,227	$87,634	$90,113	$92,666
FAILURE RATE 0.4%			$6,791	$10,607	$14,447	$15,191	$15,603	$15,934	$16,275	$16,626	$16,986	$17,357
METERS NORMALLY PURCHASED		$55.00	$277,112	$285,369	$293,929	$81,396	$45,094	$46,447	$47,841	$49,276	$50,754	$52,277
NET AMR INVESTMENT			$1,427,539	$679,092	$680,441	$119,817	$73,528	$52,377	$53,662	$54,984	$56,345	$57,746
LIFE OF INVESTMENT			15	15	15	15	15	15	15	15	15	15
DEPRECIATION			$95,169	$140,442	$185,805	$193,793	$198,694	$202,186	$205,764	$209,429	$213,186	$217,035
INTEREST EXPENSE @4.0%			$0	$0	$0	$4,793	$7,734	$9,829	$11,975	$14,175	$16,428	$18,738
Billing of Unbilled Revenue			1,061,777.50									
Cost of Reading LP Meter			16,344.24	16,998.01	17,677.93	18,385.05	19,120.45	19,885.27	20,680.68	21,507.90	22,368.22	23,262.95
Cost of Reading ETS			12,375.72	12,870.75	13,385.58	13,921.00	14,477.84	15,056.96	15,659.23	16,285.60	16,937.03	17,614.51
3 Month Estimate			16,722.00	17,390.88	18,086.52	18,809.98	19,562.37	20,344.87	21,158.66	22,005.01	22,885.21	23,800.62
Connects/Disconnects			106,071.48	110,314.34	114,726.91	119,315.99	124,088.63	129,052.17	134,214.26	139,582.83	145,166.14	150,972.79
Type 59 Adjustments			56,483.46	58,742.80	61,092.51	63,536.21	66,077.66	68,720.77	71,469.60	74,328.38	77,301.52	80,393.58
Phone In Meter Reading			27,987.30	29,106.79	30,271.06	31,481.91	32,741.18	34,050.83	35,412.86	36,829.38	38,302.55	39,834.65
Interest from earlier due date			33,106.77	-	-	-	-	-	-	-	-	-
Total Cost Savings			1,297,761.70	245,423.57	255,240.51	265,450.13	276,068.14	287,110.86	298,595.30	310,539.11	322,960.67	335,879.10
Total Cost Savings Cumulative			1,297,761.70	1,543,185.27	1,798,425.78	2,063,875.91	2,339,944.05	2,627,054.91	2,925,650.20	3,236,189.31	3,559,149.98	3,895,029.08
Cash Flow			(34,608.45)	(293,226.00)	(239,395.83)	334,632.90	393,500.81	427,090.96	438,722.17	450,810.09	463,373.00	476,429.90
Cumulative Cash Flow				(327,834.45)	(567,230.28)	(232,597.38)	160,903.43	587,994.39	1,026,716.57	1,477,526.66	1,940,899.65	2,417,329.55

Cost of Reading Large Power

Meterman Rate	21.27
Overhead	14.2
	35.47
Hours per Month	20
	709.4
Transporatation	
Miles	509
Rate	1.06
	539.54
CSR Enter Readings	
Hours	4
Rate	28.27
	113.08
Yearly	16344.24

Cost of Reading ETS

Serviceman Rate	21.7
Overhead	14.49
	36.19
Reading 16 meters	16
	579.04
Entering Reading	28.27
Transportation	
Miles 16*25	400
Rate	1.06
	424
Yearly Cost	12375.72

Cost of Conn/Disc Same trip

March	141
Service man time	141
	36.19
	5102.79
Transportation	
141*25 miles	3525
	1.06
	3736.5
	106071.48

Decrease in Unbilled Revenue

Residential & Smaal Commercial		
30556365 KWH @ 40%	11,320,564	
KWH Charge	0.0767	
	868,287	
Large Power		
18139717Kwh/30 days	604,657	per day
Days unbilled	5	
	3,023,285	
KWH Charge	0.064	
	193,490	
	1,061,777	

COST 3 Month Estimate Readings

Number of Readings		111
Hours Reading EST		111
Rate		36.19
		4017.09
Transportation		
111*10		1110
		1.06
		1176.6
CSR enter Reading Mail Card		3
		28.27
		84.81
Less Meter Charge	111*35	-3885
		16722

Cost Type 59 Adjustments

March 666 Adjustment made	
15 minute per Adjustment	166.5
CSR	28.27
	4,706.96
	56483.46

Phone in Meter Reading

March 1979 Call Ins	
.5 minute to enter read	16.5
2 minute phone call	66
	82.5
CSR	28.27
	27987.30

PAYMENTS AFTER 20th

	1,766,662.66
INT	0.057
	2758.897853
	33106.77423

TAYLOR CO RECC
CASE NO 2006-00286

EXHIBIT 1
PAGE 3 OF 4

	PAYMENTS	PERCENt	KWH SOLD	unbill KWH
3/1/2006	110,321.67	2.61%	717,110	717,110
3/2/2006	62,493.39	1.48%	406,218	392,677
3/3/2006	70,356.12	1.67%	457,327	426,839
3/6/2006	89,009.71	2.11%	578,579	482,149
3/7/2006	33,342.66	0.79%	216,733	173,387
3/8/2006	102,462.90	2.43%	666,027	510,621
3/9/2006	96,351.90	2.28%	626,304	459,290
3/10/2006	161,152.93	3.82%	1,047,523	733,266
3/13/2006	881,951.16	20.90%	5,732,839	3,439,703
3/14/2006	133,001.69	3.15%	864,535	489,903
3/15/2006	120,844.90	2.86%	785,513	418,940
3/16/2006	93,570.18	2.22%	608,223	304,111
3/17/2006	300,367.82	7.12%	1,952,444	911,141
3/20/2006	198,680.40	4.71%	1,291,458	473,535
3/21/2006	107,841.61	2.56%	700,990	233,663
3/22/2006	144,319.56	3.42%	938,103	281,431
3/23/2006	94,662.74	2.24%	615,325	164,087
3/24/2006	113,447.29	2.69%	737,427	172,066
3/27/2006	322,040.80	7.63%	2,093,322	279,110
3/28/2006	169,229.57	4.01%	1,100,022	110,002
3/29/2006	211,519.14	5.01%	1,374,912	91,661
3/30/2006	257,865.20	6.11%	1,676,169	55,872
3/31/2006	345,736.75	8.19%	2,247,350	
	4,220,570.09	100.00%	27,434,453	11,320,564
				11,320,564

		Year 2005	Average
2005	Resid	293,134,705	24,427,892
	Sm Com	36,078,726	3,006,561
	Total	329,213,431	27,434,453

PAYMENT AFTER 20th 1,766,662.66

EXPLANATION COST FACTORS

The Cost Savings will be realized on an efficiency basis more than a reduced cash outflow.

COST OF READING LARGE POWER METERS

Taylor County reads Large Power meters on a monthly basis, this cost will be eliminated with AMR.

COST OF READING ETS

Taylor County reads the meter on accounts with Electric Thermal Storage devices, this cost will be eliminated with AMR.

COST OF CONNECT/DISCONNECT SAME TRIP

Taylor County currently makes a trip on consumers moving out/consumer moving in locations. This trip will be eliminated with AMR.

DECREASE IN UNBILLED REVENUE

Consumers provide meter reading throughout the month, readings provided the 1st part of the month may have 30 days of usage that is unbilled. With AMR this under billing can be brought up to date.

COST OF 3 MONTH ESTIMATE READINGS.

When a consumer does not provide Taylor Co with a reading for 3 consecutive months Taylor Co makes a trip to the location to get a meter reading, this cost will be eliminated with AMR.

COST TYPE 59 ADJUSTMENTS

Taylor County makes adjustment to the bills of consumers that have been over billed (Example: estimated high, billed through wrong reading, etc.). With AMR these type adjustments will be decreased.

PHONE IN METER READING

Taylor County has approximately on average about 1980 consumers phone in the meter reading, with AMR this cost will be eliminated.

INTEREST FROM EARLIER DUE DATE

Taylor Co. plans on changing billing dates when AMR is implemented, an earlier due date will increase cash flow.

Exhibit 2

Taylor County RECC
P.O. Box 100
Campbellsville, KY 42719

Case No. 2006-00286

Explanation of Voltage Drop Variance - Exhibit U page 1 of 4 of Original Filing

Attached is a document from our consulting engineers, Patterson and DeWar, detailing thoughts on noted variances.

PATTERSON & DEWAR ENGINEERS, INC
850 CENTER WAY, NORCROSS, GEORGIA 30071-4844
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LAYNE A. JORDAN

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KEITH H. COMER
JOHN T. MATTISON
WILLIAM A. MONCRIEF
JERRY G. CRAWFORD
PHILLIP A. BARE
GARY E. GRUBBS

Mike Skaggs
Taylor County RECC
PO Box 100
Campbellsville, KY 42719

Re: Explanation of noted variances between recorded min/max voltage reading and calculated voltages from the TRECC Engineering Model

Mike,

Following within this document are a few of the possible explanations in regard to observed variances between measured/recorded voltage levels and calculated levels from software such as Milsoft Windmil®. Please do take note that the development and use of an engineering model is simply one of many tools used to assist a distribution planning engineer in the review and recommendations of a very complex electrical distribution system such as that found at Taylor County RECC.

Electric distribution modeling and analysis can be likened to tools such as those a physician might use; you take readings such as blood pressure and temperature, listen to the patient's symptoms, and observe the reflexes. The engineer takes all of the various system inputs, factors in the economics and operational considerations and massages them with years of education and experience. Just as medical tools have continued to evolve from X-Ray to CAT Scans to MRIs; the engineer's tools, software and inputs also evolve. Products such as AMR, SCADA and voltage/current recording continue to gravitate to within reach of smaller utilities and give the engineer a much better picture of the interactions within a specific distribution system. Samples of the variables are:

- **Un-Balanced vs. Balanced Voltage Calculations** ~ one enhancement having a stellar improvement to system modeling comes about as utilities migrate toward full implementation of AMR. Inherent to most AMR systems is the ability to continuously maintain a database of which electrical phase each consumer is on and to monitor the loading and interval kWh usage of such.

- **Load Transfers** ~ Systems that do not have AMR may fail to advise of adjustments for the engineering model to reflect possible load transfers during peak periods.

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- **Capacitor Banks** ~ Capacitors that are modeled as on-line may actually be non-energized during peak periods for reasons such as blown fuses, inoperative capacitor controls or even failure to re-energizing banks that were manually opened during summer months.

- **Regulator Banks & Controls** ~ Regulators and associated controls may have setting changes not reflected in the model or configured with line drop compensation that continuously adjusts the set-point as a function of percentage of assigned peak load. Another possible regulator error would be a malfunction of the controls during the once-yearly peak conditions.

- **Allocation of Peak Load by Substation vs. by Feeder/Circuit** ~ Systems without SCADA may elect to allocate peak load to their model by substation areas as they oftentimes do not have accurate feeder/circuit peak load information. This change in load allocation can vary the model's accuracy greatly depending upon factors such as density of residential consumers, availability of natural gas and the mix of commercial & industrial customers.

As mentioned earlier in this correspondence, the model and its accompanying analysis is but one of many tools used to develop/design a growing distribution system. Many other factors such as conductor loading, system losses, sectionalizing, economics and reliability go into the mix of inputs reviewed to reach a collaborative solution to each violation of a specific utilities design criteria. The optimal solutions then must be reviewed against the approved long range system plan to confirm a coherent progression of the distribution build-out and/or replacement.

Please advise if additional explanations and/or discussions are needed.

Sincerely,

Gary E Grubbs

Gary E Grubbs, P.E.
Patterson & Dewar Engineers, Inc.