

Grayson Rural Electric Cooperative Corporation

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April 11, 2007

Ms. Beth O'Donnell, Executive Director
Public Service Commission of Kentucky
211 Sower Boulevard
P. O. box 615
Frankfort, KY 40602

RECEIVED

APR 12 2007

PUBLIC SERVICE
COMMISSION

RE: Administrative Case No. 2006-00494
An Investigation of the Reliability Measures of Kentucky's Jurisdictional
Electric Distribution Utilities and Certain Reliability Maintenance Practices

Dear Ms. O'Donnell:

Please find enclosed the original and six (6) copies of the responses to questions presented during the informal conference held at the PSC on March 8, 2007. Carol Hall Fraley, President & CEO will be our witness for all items.

Should you need additional information concerning this filing, please contact me, Carol Hall Fraley, President & CEO at 606-474-5136.

Sincerely,

GRAYSON RURAL ELECTRIC
COOPERATIVE CORPORATION




Carol Hall Fraley
President & CEO

CHF/bcg

Enclosures

**Grayson Rural
Electric**

A Touchstone EnergySM Cooperative 
The power of human connections

Administrative
Case No. 2006-00494

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Responses to Questions Presented
During the Informal Conference
Held at the PSC on March 8, 2007

Grayson Rural Electric
Cooperative Corporation
109 Bagby Park
Grayson, KY 41143

Administrative Case No.
2006-00494

5. Staff Questions

All Utilities

1. See Handout No. 1 which reflects several types of tree pruning. Regardless of whether or not the Commission sets any tree trimming standards, should Through or V Pruning, Side Pruning, Under Pruning, or Topping be allowed:

Grayson believes that all right of way should be clear-cut 40' wide, side trimmed and all underbrush cleared. All cut vegetation should be winrowed off the 40' right of way path. We employ all methods, including through, v cutting, side pruning, under pruning, topping, bush hogging and herbicide spraying.

2. If the Utility does not own the property over which its distribution lines are located, what are the utility's legal rights as far as access to the property, and ability to trim trees?

Grayson RECC requires a 40' right of way easement from all members.

5. Staff Questions

Grayson RECC

1. Provide a relative sample of reports produced by the Windmill software as noted in Grayson's response Item No. 3 of Staff's Second Data Request in this case.

See attached: Exhibit A

2. Provide an estimate of the cost to purchase and implement the Windmil and automated meter reading software as noted in Grayson RECC's response Item No. 3 of Staff's Second Data Request in this case.

Grayson RECC has been using Milsoft's engineering analysis package (now known as Windmill) about 20 years. The purchase price of the software was minimal compared to training, modeling the system, annual maintenance fees, software upgrades and the analysis of the data. Milsoft's pricing has obviously changed in the past 20 years as well as the amount of data it generates.

As for the automated meter reading software, it is included in the price of doing a system wide implementation of AMR. We are currently paying annual software support to Hunt Technologies to use their software.

Balanced Voltage Drop Report
Source: Leon

Database: H:\WORKPLAN 2004-2007\EXISTING\2007 WITH MODIFICATIONS.WM\
Title:
Case:

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Units Displayed In Volts																				
-Base Voltage:120.0-																				
Element Name	Parent Name	Cnf	Type/ Conductor	Pri KV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	-----Element-----		Cons On	Cons Thru
Leon		ABC	Leon	7.56Y	126.0	0.00	0.00	220.01	0	4940	704	99	0.00	0.0	0.000	0.000	0	0	0	757
----- Feeder No. 3 (Leon_Feed3) Beginning with Device Leon_D3 -----																				
Leon_D3	Leon	ABC	240-140WVE	7.56Y	126.0	0.00	0.00	98.87	18	2220	316	99	0.00	0.0	0.000	0.000	0	0	0	210
OCR-2254	1133	A	25-H OCR	7.50Y	125.0	0.00	1.01	252	468		61	99	0.00	0.0	1.300	0.000	0	0	0	40
1254	1253	A	044-#6A CW	7.30Y	121.6	3.96	4.39	67	699		96	99	16.21	2.3	1.900	1.500	463	58	35	61
----- Feeder No. 2 (Leon_Feed2) Beginning with Device Leon_D2 -----																				
Leon_D2	Leon	ABC	240-140WVE	7.56Y	126.0	0.00	0.00	80.17	14	1800	256	99	0.00	0.0	0.000	1.500	0	0	0	252
----- Feeder No. 1 (Leon_Feed1) Beginning with Device Leon_D1 -----																				
Leon_D1	Leon	ABC	240-140WVE	7.56Y	126.0	0.00	0.00	40.97	7	920	131	99	0.00	0.0	0.000	1.500	0	0	0	295

KEY-> I = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load Losses	Total		
KW	4865	0	0	0	0	0	75	0.00	4940	Lowest Voltage = 119.74 on Element 1134	
KVAR	623	0	0	0	0	0	81		704	Max Accm VoltD = 6.26 on Element 1134	
										Max Elem VoltD = 3.96 on Element 1254	

Substation Summary:						
Substation	KW	KW Losses	KVAR	KVAR Losses	KVA	% Capacity
Leon	4940.00	75.00	704.00	81.00	4989.83	0.00
Total:	4940.00	75.00	704.00	81.00	4989.83	

Fault Current Report
Source: Leon

Database: H:\WORKPLAN 2004-2007\EXISTING\2007 WITH MODIFICATIONS.WM
Title:
Case:

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Element Name	Parent Name	Element Type	Cnf	Miles From Source	Base kV	Fault Ohms/%	Min Ph-Gd Amps	Max Ph-Gd Amps	Ph-Ph Amps	Ph-Ph-Gd Amps	Three Phase Amps	Three Ph-Gd Amps	Accumulated Impedance			
													R1	X1	R0	X0
Leon				0.000	7.200Y	40	176	3209	2696	3197	3114	3114	0.2107	2.4190	0.1106	2.2086
----- Feeder NO. 3 Beginning with Device Leon_D3 -----																
Leon_D3	Leon	Device	ABC	0.000	7.200Y	40	176	3209	2696	3197	3114	3114	0.2107	2.4190	0.1106	2.2086
1253	Leon_D3	Overhead	ABC	0.400	7.200Y	40	174	2610	2357	2688	2722	2722	0.4331	2.7434	0.5639	3.0851
1133	1253	Overhead	ABC	1.300	7.200Y	40	171	1816	1820	2010	2102	2102	0.9335	3.4734	1.5839	5.0572
OCR-2254	1133	Device	A	1.300	7.200Y	40	171	1816					0.9335	3.4734	1.5839	5.0572
2254	OCR-2254	Overhead	A	2.800	7.200Y	40	156	961					4.6563	5.6516	5.3067	7.2354
2133	1133	Overhead	ABC	2.100	7.200Y	40	168	1423	1506	1634	1739	1739	1.3783	4.1224	2.4905	6.8103
2643	2133	Overhead	ABC	2.300	7.200Y	40	168	1349	1443	1560	1666	1666	1.4895	4.2852	2.7157	7.2507
2143	2643	Overhead	A	2.500	7.200Y	40	166	1248					1.9859	4.5756	3.2120	7.5412
1143	2643	Overhead	ABC	3.000	7.200Y	40	165	1142	1258	1347	1453	1453	1.8787	4.8530	3.5090	8.7846
SW97-B	1143	Switch	ABC	3.000	7.200Y	40	165	1142	1258	1347	1453	1453	1.8787	4.8530	3.5090	8.7846
1254	1253	Overhead	A	1.900	7.200Y	40	160	1200					4.0399	4.6843	4.1706	5.0260
1134	1254	Overhead	A	4.700	7.200Y	40	137	534					10.9891	8.7502	11.1199	9.0919
----- Feeder NO. 2 Beginning with Device Leon_D2 -----																
Leon_D2	Leon	Device	ABC	0.000	7.200Y	40	176	3209	2696	3197	3114	3114	0.2107	2.4190	0.1106	2.2086
1245	Leon_D2	Overhead	ABC	1.300	7.200Y	40	171	1816	1820	2010	2102	2102	0.9335	3.4734	1.5839	5.0572
1292	1245	Overhead	A	1.700	7.200Y	40	167	1516					1.8953	3.9910	2.5457	5.5748
1248	1292	Overhead	A	2.200	7.200Y	40	162	1232					3.0976	4.6380	3.7479	6.2218
1151	1248	Overhead	A	3.500	7.200Y	40	151	804					6.2234	6.3201	6.8738	7.9039
1246	1248	Overhead	A	4.200	7.200Y	40	145	654					8.0613	7.5422	8.7117	9.1260
SW39-A	1246	Switch	A	4.200	7.200Y	40	145	654					8.0613	7.5422	8.7117	9.1260
1078	1245	Overhead	ABC	2.700	7.200Y	40	166	1222	1332	1431	1538	1538	1.7119	4.6090	3.1705	8.1250
1158	1078	Overhead	A	3.700	7.200Y	40	157	896					4.1164	5.9030	5.5750	9.4190
SW39-B	1158	Switch	A	3.700	7.200Y	40	157	896					4.1164	5.9030	5.5750	9.4190
1247	1078	Overhead	ABC	4.200	7.200Y	40	161	903	1030	1095	1189	1189	2.5459	5.8257	4.8705	11.4120
1088	1247	Overhead	A	7.800	7.200Y	40	132	425					11.4807	11.0534	13.8053	16.6396
1086	1247	Overhead	ABC	5.800	7.200Y	40	155	705	828	880	956	956	3.4355	7.1236	6.6838	14.9180
2085	1086	Overhead	A	7.000	7.200Y	40	145	552					6.4138	8.8661	9.6620	16.6605
1085	1086	Overhead	ABC	8.700	7.200Y	40	146	505	610	648	704	704	5.0479	9.4759	9.9704	21.2727
SW92-A	1085	Switch	ABC	8.700	7.200Y	40	146	505	610	648	704	704	5.0479	9.4759	9.9704	21.2727
SW91-A	1085	Switch	ABC	8.700	7.200Y	40	146	505	610	648	704	704	5.0479	9.4759	9.9704	21.2727
----- Feeder NO. 1 Beginning with Device Leon_D1 -----																
Leon_D1	Leon	Device	ABC	0.000	7.200Y	40	176	3209	2696	3197	3114	3114	0.2107	2.4190	0.1106	2.2086
2132	Leon_D1	Overhead	ABC	1.100	7.200Y	40	172	2029	1965	2186	2269	2269	0.8212	3.2287	1.2389	4.3400
1131	2132	Overhead	ABC	1.500	7.200Y	40	171	1783	1782	1960	2057	2057	1.0432	3.5232	1.6492	5.1151
1130	1131	Overhead	ABC	3.100	7.200Y	40	165	1193	1288	1384	1488	1488	1.9312	4.7011	3.2904	8.2154
SW90-B	1130	Switch	ABC	3.100	7.200Y	40	165	1193	1288	1384	1488	1488	1.9312	4.7011	3.2904	8.2154
1154	1130	Overhead	ABC	3.900	7.200Y	40	158	913	1001	1098	1156	1156	3.7232	5.3775	5.6569	10.3530
1129	1154	Overhead	ABC	5.200	7.200Y	40	152	722	808	887	933	933	4.8737	6.4787	7.5579	13.2485
1132	1131	Overhead	A	3.700	7.200Y	40	150	795					6.3331	6.3698	6.9391	7.9618
OCR-2131	2132	Device	A	1.100	7.200Y	40	172	2029					0.8212	3.2287	1.2389	4.3400
2131	OCR-2131	Overhead	A	2.500	7.200Y	40	159	1091					4.1875	5.0402	4.6052	6.1515

Maximum Faults Calculated at 1.050 PU kV
Minimum Faults Calculated at 0.983 PU kV

