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COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

APR 23 2018

PUBLIC SERVICE
COMMISSION

In the Matter of:

APPLICATION OF GRAYSON RURAL)	
ELECTRIC COOPERATIVE CORPORATION OF)	
GRAYSON, KENTUCKY, FOR COMMISSION)	
APPROVAL PURSUANT TO 807 KAR 5:001)	CASE NO.
AND KRS 278.020 FOR A CERTIFICATE OF)	2017-00419
PUBLIC CONVENIENCE AND NECESSITY TO)	
INSTALL AN ADVANCED METERING)	
INFRASTRUCTURE (AMI) SYSTEM)	

**AMENDED PETITION OF GRAYSON RURAL ELECTRIC
COOPERATIVE CORPORATION PURSUANT TO THE ORDER
HEREIN OF APRIL 17, 2018 CONTAINING UNREDACTED
INFORMATION PREVIOUSLY SOUGHT TO HAVE BEEN GRANTED
CONFIDENTIAL TREATMENT AND SETTING FORTH THE FULL
PETITION WITHOUT ANY REDACTED MATERIAL OR INFORMATION**

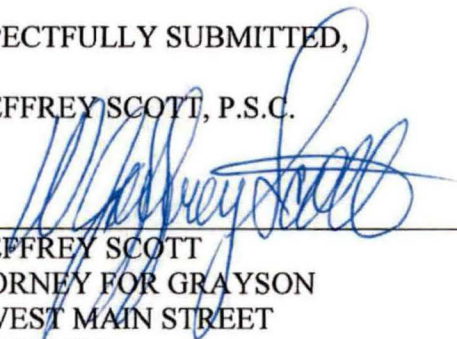
Grayson Rural Electric Cooperative Corporation (Grayson) hereby submits herewith to the Commission the revised and amended Petition setting forth the unredacted information as set forth and as required in the Order entered herein April 17, 2018.

Grayson asks that the relief originally requested be granted and that it be granted all other relief to which it may appear to be entitled.

RESPECTFULLY SUBMITTED,

W. JEFFREY SCOTT, P.S.C.

BY:


 W. JEFFREY SCOTT
 ATTORNEY FOR GRAYSON
 311 WEST MAIN STREET
 P.O. BOX 608
 GRAYSON, KY 41143
 (606) 474-5194

COMMONWEALTH OF KENTUCKY
BEFORE THE
KENTUCKY PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

THE APPLICATION OF GRAYSON RURAL ELECTRIC COOPERATIVE)
CORPORATION OF GRAYSON, KENTUCKY, FOR COMMISSION APPROVAL)
FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO INSTALL) CASE NO. 2017-_____
AN ADVANCED METERING INFRASTRUCTURE (AMI) SYSTEM PURSUANT)
TO KRS 807 KAR 5:0001 AND KRS 278.020)

APPLICATION

Grayson Rural Electric Cooperative Corporation of Grayson, Kentucky, hereinafter referred to as "Grayson", respectfully states:

1. The full name and address of Applicant is:

Grayson Rural Electric Cooperative Corporation
109 Bagby Park Street
Grayson, KY 41143
Email contact for this application: Bradley.Cherry@graysonrecc.com

2. Grayson is a corporation, duly organized, created and existing by and under the laws of the State of Kentucky, and is engaged in the business of supplying retail electric service in Carter, Elliott, Greenup, Lawrence, Lewis and Rowan Counties in Kentucky.
3. Grayson is applying for the issuance of a Certificate of Public Convenience and Necessity (CPCN) to install an Advanced Metering Infrastructure (AMI) system over a 12-month period.
4. Estimated costs of the project are shown below.

a. Meters with a Remote Service Switch	\$1,863,000.00
b. Commercial and Industrial meters	\$57,815.10
c. Network Equipment (RF Routers & Collectors)	\$768,275.00
d. RF Engineering\Test Equipment	\$2,070.00
e. Estimated Network Installation Labor	\$143,250.00
f. Estimated Meter Change Labor	\$145,000.00
g. Meter Testing\Disposal	\$37,500.00
h. Shipping\Handling\Tax	\$172,905.33
i. Additional Equipment (Poles\Grounds\etc.)	\$59,195.37
j. Project Delivery Services	\$81,000.00
k. Employee Training	<u>\$50,400.00</u>
Total	\$3,380,410.80

5. The anticipated annual cost of operation, excluding the cost of power, for the AMI system will be approximately \$16,600.00 based on our current annual per meter hosting fee.
6. Grayson is a non-profit cooperative corporation, and no kind of stock is desired or would be issued. Grayson has spoken with Rural Utility Services (RUS) concerning the financing of the AMI Implementation and received verbal approval. The actual application for financing will be submitted in conjunction with the next Construction Work Plan (CWP), which will be filed in the last quarter of 2018.
7. Attached as part of this application are the following:
 - Exhibit 1 - Certificate of Existence
 - Exhibit 2 - Assessment, Research and Vendor Selection
 - Exhibit 3 - AMI Technologies and Infrastructure
 - Exhibit 4 - Summary of benefits to Grayson and Consumers
8. WHEREFORE, applicant Grayson Rural Electric Cooperative Corporation, respectfully requests that the Public Service Commission grant a certificate of convenience and necessity authorizing Grayson Rural Electric Cooperative Corporation to install an advanced metering infrastructure (AMI) system.

DATED: This 11th day of October 2017.

August 4, 2017

Andrea McCleese
Technical Services Supervisor
Grayson RECC
109 Bagby Park
Grayson, KY 41443

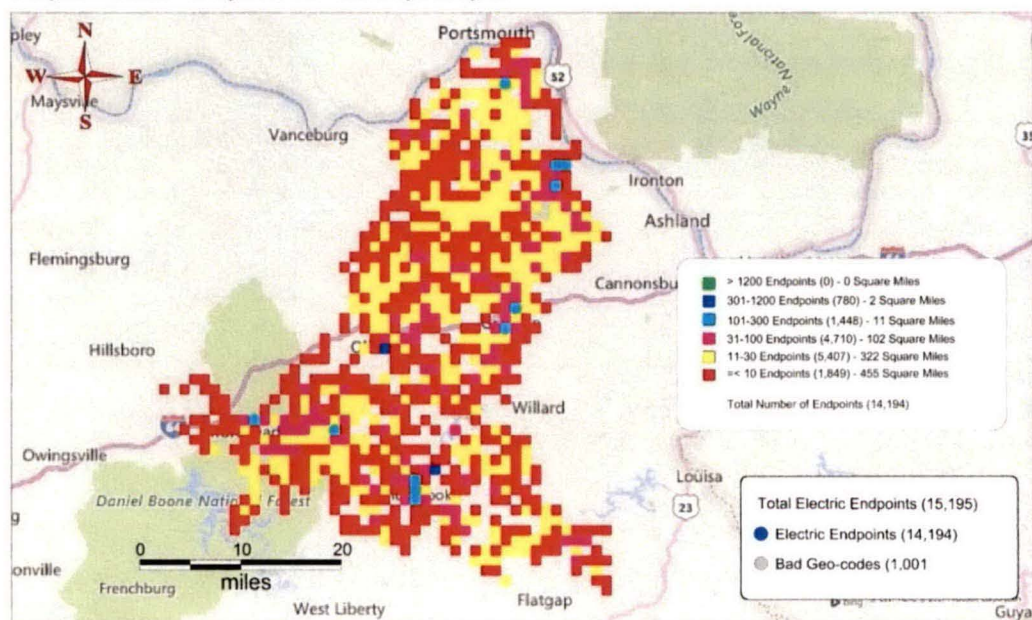
Dear Ms. McCleese:

Landis+Gyr Technology, Inc. sincerely appreciates the opportunity to provide a budgetary quote to Grayson RECC (Grayson) for the provision of a Gridstream® RF Mesh Network solution for its electric infrastructure. Landis+Gyr has proven experience in providing advanced metering systems for electric, gas and water meters. With over 20 years of experience in deploying Advanced Metering Infrastructure (AMI) systems, Landis+Gyr is the largest supplier of AMI technology with 60 million endpoints deployed or under contract globally.

Network Design

To ensure that your territory can be served by Landis+Gyr's Gridstream solution, a density analysis has been completed based on the data set provided by Grayson. This analysis was performed using the 15,195 electric meter locations provided in the data set. From the data set comprised of 15,195 endpoints, 14,194 locations were used in this analysis as it was determined that 1,001 locations were missing information. Additional infrastructure may be required due to invalid geo-coded locations. The results of our analysis validated that your territory can be served by Landis+Gyr's Gridstream RF solution.

Grayson RECC - Grayson, KY - Density Analysis



Landis+Gyr
Proprietary & Confidential

June 28, 2017

Services Overview

In addition to providing pricing on the hardware and software required for your system, Landis+Gyr also provides implementation services. Those services have been priced based on the following assumptions:

Services	Landis+Gyr	Grayson RECC
Project Management Support	√	
System Design	√	
Training	√	
Installation (network)		√
Installation (endpoint)		√
Integration Services		To be determined if required See Clarifications Below
System Administration		√
WAN Backhaul Communication Support		√

For the purposes of providing a budgetary quote, at a minimum Landis+Gyr will provide:

- a. Project Management
- b. System Design
- c. Training on the operation of the Landis+Gyr system

The other services represented in the previous table are assumed to be performed by Grayson, as noted; however, these services can be provided by Landis+Gyr on a time-and-materials basis.

Gridstream RF Solution Pricing

The following table represents quantities and pricing for the proposed AMI solution.

Description	Quantity	Unit Price	Extended Price
Electric Meters with Communication Modules			
RF FOCUS AX-SD (Form 2S)	15,000	\$138.00	\$2,070,000.00
RF RXRS4x (Forms 5S, 6S, 8/9S, 12S, 16S)	161	\$399.00	\$64,239.00
10% Discount			(\$213,423.90)
<i>Electric Meters with Communication Modules Total:</i>			<i>\$1,920,815.10</i>
Network Equipment			
C6000 Series Collector	14	\$6,250.00	\$87,500.00
C6000 Series Collector Mounting Kit (for Mounting on Street Light Arm) with 18ft. Cable	14	980.00	\$13,720.00
RF Router and Kit with 20Ft. Cable	405	\$1,615.00	\$654,075.00
RF Tools			
Tech Studio Software License (per user)	1	\$1,100.00	\$1,100.00
Tech Studio Communications Adapter (per user)	1	\$750.00	\$750.00
Tech Studio Annual Maintenance (per license)	1	\$220.00	\$220.00

Continued on next page

Software and Support			
RF Command Center Software License	1	\$35,206.40	\$35,206.40
Software Support and Maintenance Agreement		<i>See clarification #17 below.</i>	
Services and Training			
Project Delivery Services	1	\$81,000.00	\$81,000.00
Training		\$7,200.00	\$7,200.00
Total:			\$2,801,586.50

Clarifications

Electric Meters with Communication Modules

1. Electric meter pricing is based on providing Landis+Gyr FOCUS® AX meters and S4x Polyphase meters with Gridstream communication modules and ZigBee capability.
2. Additional pricing options for electric meters are as follows:

FOCUS AX Residential Meter Options	Adder
Service Disconnect (Forms 1S & 2S Only)	\$40.00
Service Disconnect (Forms 1S & 2S Only) 100% Deployment	\$36.00
Battery	\$5.00
Reactive Upgrade (KVA or KVAR)	\$40.00
Reactive Upgrade (KVA or KVAR) 100% Deployment	\$30.00
Configuration Port Short Cover	Included
ANSI C12.18 Opti-Com Magnetic Port Short Cover	\$2.00
ANSI C12.18 Opti-Com Magnetic Port + Reconnect Arming Button Short Cover (FOCUS AX-SD Only)	\$3.00
ANSI C12.18 Opti-Com Magnetic Port + Demand Reset Tall Cover	\$4.00
S4x Polyphase Meter Options	Adder
Battery	\$5.00
Class 320	\$20.00
1 MB Load Profile	\$95.00
3 Phase Power Supply	\$40.00
2-Output, 1-Input KYZ W/Cables	\$50.00
4-Output, 2-Input KYZ W/Cables	\$70.00
ANSI C12.18 Opti-Com Magnetic Port + Demand Reset Tall Cover	\$4.00

3. Electric meter and electric meter AMI module installation pricing are not within the scope of Landis+Gyr's proposal.

Network Equipment

4. Network Equipment quantities are approximations of required quantities and have been developed from 14,194 electric meter locations provided by Grayson. 15,195 electric meter locations were provided, however, 1,001 meter addresses had insufficient data for geocoding. Network Device quantities assume a Router mounting height of 20 feet above ground level (AGL). Actual Network Equipment quantities necessary for the AMI System to function properly may vary based on

verification of final meter quantities, system analysis and requirements, locations, deployment approach, and system optimization needs.

5. It is assumed that the electric endpoint deployment will be deployed in a manner in which the electric endpoints are contiguous to enable adequate meshing.
6. Should remote antenna kits be required, the per unit price is \$720.00 each.
7. It is assumed that Grayson will provide WAN backhaul access to each Collector.
8. It is assumed that Grayson will provide new or existing poles, of an appropriate height, with 120/240V power source for installation of network equipment.

RF Tools

9. Tech Studio is a required field tool for the Gridstream RF Mesh solution. Pricing includes one (1) license for each user instance of Tech Studio and a required Communications Adapter for each user.
10. Tech Studio Annual Maintenance includes:
 - Upgrades to Tech Studio throughout the year
 - Maintenance upgrades to licensed Tech Studio software
 - New features as they become available
 - Support for critical bug fixes
11. The Tech Studio Software License fee is a per-user license fee for the Tech Studio Software and does not include the cost of a computer or tablet on which the Software is installed.
12. A Tech Studio Communications Adapter is also required per user to enable Tech Studio communications to the endpoint device. The Communications Adapter pricing includes a radio device with Gridstream RF for communication to the end device, and Bluetooth communications to the laptop or handheld used by the utility personnel. The price includes a battery charger.
13. The Tech Studio Communications Adapter includes a 6-month product warranty. Units returned under warranty via a Return Materials Authorization (RMA) to the designated Landis+Gyr facility will be repaired or replaced by Landis+Gyr.
14. Each user of Tech Studio must have a unique Username and Password of authentication with Command Center to use the tool. Maintenance charges will be based on the total number of users set up for authentication.
15. Alternatively, an enterprise license of Tech Studio software may be purchased for an unlimited number of users for a one-time fee of \$53,000.00. This option requires an annual maintenance fee of \$10,600.00 for the license. Each user must still purchase a Communications Adapter for communications use.
16. Landis+Gyr cannot accept orders for Tech Studio software and Communications Adapters without a mutually executed Software License Agreement and Annual Software Support and Maintenance Agreement.

- 17. RadioShop Software is available when requested under license at no additional charge. Communication between the utility PC using the RadioShop Software will require an IWR, Power Cube, and antenna. Price is \$1,600.00.

Software and Support

- 18. With Grayson transitioning from TS1/TS2 to RF, there would be a one-time RF Command Center software license fee of \$35,206.40 which includes the base license, endpoint licensing for 15,344 endpoints, and HAN and Service Disconnect (SD) functionality. Any incremental endpoints are \$0.60 each. Server hardware and software are not within the scope of Landis+Gyr’s offering.
- 19. With the purchase of a RF Command Center Software License, an annual Software Support and Maintenance Agreement is required. This fee is based on your total number of endpoints; any incremental endpoints require additional fees. These annual agreements are subject to any increase in Consumer Price Index (CPI). Note that Grayson’s current Software Support and Maintenance Agreement with Landis+Gyr will expire on January 1, 2017.

Services and Training

- 20. Network equipment (Collector and Router) installation; electric meter installation; are not within the scope of Landis+Gyr’s offering. It is assumed this installation is the responsibility of Grayson or a third party contracted by the utility.
- 21. Project Delivery Services pricing is based on services being provided by Landis+Gyr for a period of six (6) months, beginning at project kickoff. At a high level, these services include:

<p>Project Management</p> <p><i>Highly credentialed and driven by industry standards and Landis+Gyr’s robust 5-step process</i></p>	<p>Project management services, including on-site project kickoff session, schedule management, logistics support, risk/issue management, scope management, contract management, resource coordination, and weekly or bi-weekly status meetings.</p>
<p>Meter Configuration Support</p> <p><i>In-depth support for this key activity</i></p>	<p>Assist and coordinate with understanding the chosen meter configuration to ensure data is flowing per utility business case.</p>
<p>Network Design and Site Surveys</p> <p><i>Using repeatable ISO-certified processes</i></p>	<p>Initial and final network design, on-site training for completion of site surveys and validation of connectivity.</p>
<p>Network Equipment Commissioning</p> <p><i>In-depth support for this key activity by highly skilled, certified field technical personnel</i></p>	<p>On-site commissioning of initial Network Equipment, including inspection of installation, commissioning of equipment and assurance of network preparation for endpoint deployment. Also includes system orientation for completion of future Collector commissioning by the utility or its selected installation subcontractor.</p>

<p>Technical Implementation Support <i>Executing system success with dedicated engineers</i></p>	<p>Remote technical support from a dedicated Landis+Gyr project technical expert to guide the customer on the technical aspects of Gridstream RF system operation and resolve issues quickly and efficiently through the planning and launch phases of the project. Also plans and develops system test planning in conjunction with the customer and assists with network performance validation.</p>
<p>Integration Support <i>Expert whole-solution guidance and support</i></p>	<p>Remote integration support to facilitate customer's integration with a MultiSpeak/CIM-compliant billing system (Landis+Gyr will lead detailed requirements and design workshops, provide standard APIs and API specifications, provide best practices, and support customer integration activities).</p>

22. Project Delivery Services are invoiced upon performance of the Services.
23. Gridstream RF Training is required prior to deployment. Pricing includes:
 - Two (2) on-line training sessions for Security
 - One (1) online training session for Tech Studio
 - One (1) classroom training course for RF Network Deployment
 - One (1) classroom training course for Command Center Application
24. Pricing for online training sessions is per log-in/registration.
25. Gridstream RF Training pricing assumes that two (2) employees from Grayson will attend classroom training at Landis+Gyr's Pequot Lakes, MN, or Lafayette, IN, locations only. Additional seats are \$1,200.00 per seat. Forty (40) online training credits have also been included for use with continuing education.
26. Grayson is responsible for its own travel and expenses related to training. Delivery of product and system education is offered via several training venues, and selection of the appropriate type of training is negotiable.

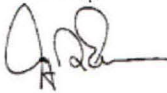
General Clarifications

27. Collectors and Routers are currently available with an initial 20-week manufacturing lead time after receipt of order.
28. Landis+Gyr's standard equipment warranty for defects in material or workmanship is 18 months from the date of shipment. Landis+Gyr warrants its software for a period of thirty (30) days from the date of delivery. An annual Software Support and Maintenance Agreement is assumed to be in place thereafter to provide maintenance and support coverage. Landis+Gyr warrants that Services will be provided in a professional workmanlike manner and the services warranty period is ninety (90) days after performing a service.
29. All pricing is in U.S. Dollars. This quote is valid for 60 days.
30. Landis+Gyr's pricing is subject to change due to any annual increase in CPI.

31. Landis+Gyr's pricing includes shipping charges; shipping terms are DAP destination in accordance with INCOTERMS 2010 and assume full truckload shipments; additional charges may apply if actual shipment is less than a truckload.
32. Landis+Gyr's pricing does not include any applicable sales tax; these fees will be added to the invoices as applicable.
33. Landis+Gyr's payment terms are Net 30 Days from date of invoice.
34. Pricing assumes Grayson and Landis+Gyr will enter into an agreement for this project.
35. This proposal contains confidential and trade secret information of Landis+Gyr. Except as otherwise specified in a non-disclosure agreement regarding Landis+Gyr's confidential information, Landis+Gyr authorizes use and disclosure of the content of this proposal only as necessary for evaluation of Landis+Gyr's proposal or as required by law. No other license rights are intended or implied.

We look forward to taking this next step with you and welcome the opportunity to further define a Gridstream solution to address your needs. If you have any questions, please contact Stevven Timm at (727) 808- 6610 or stevven.timm@landisgyr.com.

Sincerely,



Jay D. Evensen
Vice President, Commercial Operations

Exhibit B

		Landis+Gyr (RF)	Aclara (RF)	Eaton (RF)	Aclara (PLC)
A.	Meters with a Remote Service Switch	\$1,863,000.00	\$2,456,400.00	\$3,225,000.00	\$2,478,000.00
B.	Commercial and Industrial meters	\$57,815.10	\$53,130.00	\$70,800.00	\$71,519.42
C.	Network Equipment (RF Routers & Collectors)	\$768,275.00	\$3,345,440.00	\$428,276.00	\$443,706.00
D.	RF Engineering\Test Equipment	\$2,070.00	\$270,000.00	\$3,899.00	\$34,255.00
E.	Estimated Network Installation Labor	\$143,250.00	\$116,000.00	\$348,500.00	\$35,256.00
F.	Estimated Meter Change Labor	\$145,000.00	\$117,220.00	\$145,000.00	\$117,220.00
G.	Meter Testing\Disposal	\$37,500.00	\$37,500.00	\$37,500.00	\$37,500.00
H.	Shipping\Handling\Tax	\$172,905.33	\$522,228.94	\$272,914.88	\$282,523.84
I.	Additional Equipment (Poles\Grounds\etc.)	\$59,195.37	*	\$144,034.20	\$185,962.83
J.	Project Delivery Services	\$81,000.00	\$229,530.00	\$104,700.00	\$303,130.00
K.	Employee Training	\$50,400.00	**	**	**
	Total Initial Cost	\$3,380,410.80	\$7,147,448.94	\$4,780,624.08	\$3,989,073.09
	Anticipated Annual Fees	\$16,600.00	\$126,465.00	\$9,700.00	\$49,390.00

*Equipment mounts on existing transformer poles.

**Included in Project Delivery Services: only train as part of the Professional Services and conducted in office during installation of equipment.

Two weeks after our initial meeting with Sensus, NRTC informed us they had cut ties with Sensus. Sensus' RF system required a direct line of site to 90 feet or higher towers. Since Grayson does not have those towers they would be forced to lease and/or purchasing property and erect towers. Grayson knew that it would be impractical and cost prohibitive initially from an installation point-of-view as well as the annual expenses of ownership of those towers. It was for that reason Grayson did not ask Sensus for a quote.