

RECEIVED

OCT 30 2019

PUBLIC SERVICE COMMISSION

(502) 348-3931 • (502) 955-9732 • Fax (502) 348-1993

October 25, 2019

Ms. Gwen R. Pinson Executive Director KY Public Service Commission 211 Sower Boulevard Frankfort KY 40601-8294

Re: Certificate of Public Convenience and Necessity

Dear Ms. Pinson:

Attached you will find Salt River Electric Cooperative Corporation's application for a Certificate of Public Convenience and Necessity to install an Advanced Metering Infrastructure System (AMI). Also enclosed is a motion for confidential treatment of certain information contained in the application. Accordingly, 10 copies of the application with the confidential information redacted are included, and one copy in a separate envelope marked "confidential' with the confidential information highlighted in yellow is also included.

Please contact Tim Sharp, <u>tjsharp@srelectric.com</u> 502-350-1605, President and CEO, at Salt River Electric should you have any questions or need additional information.

Respectfully,

Tim Sharp

President & CEO

Attachments



OCT 30 2019

PUBLIC SERVICE COMMISSION

COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

In The Matter of:

THE APPLICATION OF SALT RIVER ELECTRIC COOPERATIVE CORPORATION FOR AN ORDER ISSUING A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

) CASE NO.) 2019- 00399

APPLICATION

Salt River Electric Cooperative Corporation, of Bardstown, Kentucky, hereinafter referred to as "Salt River", respectfully states:

1. The full name and address of Applicant is:

Salt River Electric Cooperative Inc. 111 W Brashear Ave. Bardstown, Kentucky 40004 Email contact for this application: tjsharp@srelectric

2. Salt River 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 Bullitt, Nelson, Spencer and Washington Counties in Kentucky.

A certified copy of the Articles of Incorporation has been previously filed in Case No. 2019- with the Kentucky Public Service Commission hereinafter referred to as the "Commission".

- 3. Salt River is applying for the issuance of a Certificate of Public Convenience and Necessity (CPCN) to install an Advanced Metering Infrastructure (AMI) system over a 48-month period.
- 4. Estimated cost of the project is shown in Appendix A, Estimated Meter and Infrastructure Cost

- 5. The anticipated annual cost of operations, excluding cost of power, for the AMI system is in Appendix C Aclara Reoccurring Costs
- 6. Salt River is a non-profit cooperative corporation, and no kind of stock is desired or would be issued. Salt River has filed an application with and received approval from Rural Utility Service (RUS) securing all necessary financing of AMI implementation (Appendix E RUS Approval of 2019-2022 Construction Workplan). The proposed AMI project would be financed initially with internally generated funds, and a short-term line of credit will be used until such time as RUS loan funds are needed.
- 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 Technology and Infrastructure
Exhibit 4 - Summary of Benefits to Salt River Energy and Consumers
Appendix A- Estimated Meter and Infrastructure Installed Cost
Appendix B-Vendor Comparisons
Appendix C- Aclara Reoccurring Costs
Appendix D- Salt River Board Approval of Aclara System
Appendix E- RUS Approval of 2019-2022 Construction Workplan

 WHEREFORE, applicant Salt River Electric Cooperative Corporation, respectfully requests that the Public Service Commission of Kentucky grant a certificate of convenience and necessity authorizing Salt River Electric Cooperative, Inc. to install an advanced metering infrastructure (AMI) system.

DATED: This 25^{th} day of October, 2019.

COMMONWEALTH OF KENTUCKY

COUNTY OF NELSON,

Tim Sharp, after first being duly sworn, deposes and says: That he is the President and Chief Executive Officer of Salt River Electric Cooperative Corporation, a rural electric cooperative corporation, duly organized and doing business under the Rural Electric Cooperative Corporation Act of the Commonwealth of Kentucky: That he has read the foregoing Application and knows the contents thereof: That the same is true of his own knowledge except as to such matters as are therein stated on information or belief, and as to those matters he believes it to be true.

SALT RIVER ELECTRIC COOPERATIVE CORP.

arp, President and CEO

STATE OF KENTUCKY

COUNTY OF NELSON

The foregoing was subscribed and sworn to before me this $\frac{25}{25}$ day of October, 2019, by Tim Sharp, President and CEO of Salt River Electric Cooperative Corporation.

NØTARY PUBLIC, STATE AT LARGE

Commission expires 07-05-2023 I.D. 626327

The foregoing instrument was prepared by John Douglas Hubbard, Attorney-at-Law, Fulton, Hubbard & Hubbard, 117 East Stephen Foster Avenue, Bardstown, Kentucky. No title examination was performed by the undersigned in the preparation of this document.

flu Kourt John Douglas Hubbard

COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

In The Matter of:

THE APPLICATION OF SALT RIVER ELECTRIC		
COOPERATIVE CORPORATION FOR AN)	
ORDER ISSUING A CERTIFICATE OF PUBLIC)	CASE NO.
CONVENIENCE AND NECESSITY TO INSTALL		2019- 00399
AN ADVANCED METERING INFRASTRUCTURE)	
SYSTEM (AMI) PURSUANT TO KRS 807)	
KAR 5:001 AND KRS 278.00)	

SALT RIVER ELECTRIC COOPERATIVE CORPORATION'S MOTION FOR CONFIDENTIAL TREATMENT OF CERTAIN INFORMATION CONTAINED IN THE INCLUDED APPLICATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECSSITY

)

Salt River Electric Cooperative, Inc. of Bardstown, Kentucky, hereinafter referred to as "Salt River", respectfully requests pursuant to 807 KAR 5:001, Section 13 and KRS 61.878 the Public Service Commission of Kentucky grant confidential treatment to certain information that Salt River is simultaneously filing as part of its application for a Certificate of Convenience and Necessity. The information Salt River seeks to protect is confidential and hereinafter referred to as the "Confidential Information".

- 1. Pursuant to 807 KAR 5:001, Section 13, a single copy in a separate envelope with the Confidential Information highlighted in yellow, is being filed with this motion along with ten (10) copies with the Confidential Information redacted.
- 2. The Confidential Information if openly disclosed could permit an unfair advantage to competitors of Salt River and or the Vendor which in this case is Aclara.
- 3. The information which has been marked for confidential treatment involves competitively bid products and services which could be bid again in the future and therefor Confidential Information could be used by competitors to the detriment of Salt River and Aclara. Salt River and Aclara have agreed to keep pricing for products and services confidential.

4. The time period for which the material should be considered confidential is ten (10) years from the date of this motion. This should allow sufficient time for the prices to become outdated and no longer a detriment to Salt River and or Aclara.

Based on the information above Salt River believes the Confidential Information is entitled to confidential treatment. However, if the Commission disagrees with Salt River that this information should be treated as confidential, then Salt River requests the Commission to hold an informal conference regarding this issue.

SALT RIVER ELECTRIC COOPERATIVE CORP.

narp, President and CEO

STATE OF KENTUCKY

COUNTY OF NELSON

The foregoing was subscribed and sworn to before me this 25^{th} day of October, 2019, by Tim Sharp, President and CEO of Salt River Electric Cooperative Corporation.

IOTARY PUBLIC, STATE AT LARGE I.D. 626327

Commission expires 07-05-2023

The foregoing instrument was prepared by John Douglas Hubbard, Attorney-at-Law, Fulton, Hubbard & Hubbard, 117 East Stephen Foster Avenue, Bardstown, Kentucky. No title examination was performed by the undersigned in the preparation of this document.

John Douglas Hubbard

Certificate of Existence



Assessment, Research and Vendor Selection

Salt River currently has in place a Power Line Carrier (PLC) AMR\AMI system from Landis&Gyr consisting of solid state TS2 meters (50,674 single-phase and 1,102 poly-phase). The majority of these meters and portions of the infrastructure are more than a decade old. Replacement parts are sparsely available and Landis&Gyr announced the product is end of life in 2020 as previously outlined by Cumberland Valley Electric (Case #2018-00056) and Grayson RECC (Case #2017-00419).

As a result, Salt River began looking for alternate methods of fulfilling the desired functionality and the ability to offer as many options to all members as possible. Salt River met with five vendors, Acalra, Landis&Gyr, Tantalus, Sensus, and Itron and determined that product development for PLC technology had virtually stopped, the technology shift was to Radio Frequency (RF) and the competitive pricing reflected such. See Appendix B for vendor comparison. Salt River then solicited proposals from all five vendors with several factors listed as priorities for performance of the proposed system, such as: future expandability, Metering Residential and Commercial members, Pre-Pay Metering, SEDC Software Compatibility, Energy Management\Direct Load Control, Voltage Monitoring, Outage Notification, Blink Notification, Net Metering, Multi-Speak Compliance, Remote Connect\Disconnect Capability, Fast\Reliable Two-Way Communication, Interval Data (15\30\60 minute), Cyber Security, and Theft Detection Capabilities.

All five vendors submitted proposals to Salt River and were evaluated based on overall cost, cost of infrastructure, recurring cost, functionality, compatibility with existing Outage Management, Customer Information Systems and SCADA Systems. Aclara was selected as the vendor of choice for meeting all previously listed criteria, as well as being the lowest cost provider. See Appendix D for Salt River's Board approval of the Acalra system. See Appendix E for RUS approval of 2019-2022 Construction Workplan.

Once the RF infrastructure is in place Salt River will begin the 48 month roll-out to all RF meters. The 48-month installation period was chosen as a balance between cash and work flow as Salt River personnel will be utilized to change out all meters. If advancing the time frame would protect Salt River from investing additional money in aging infrastructure that would be considered as long as meter installation is performed by coop personnel. With the RF system, Salt River will be able to provide and utilize the functionality listed previously as well as continuing to use the currently installed TS2 meters, while all new meters purchased will be RF.

AMI Technology and Infrastructure

A high level overview of the AMI system begins with Aclara performing a Radio Frequency (RF) propagation study to determine the number and location of collectors and routers for data collection. The Aclara system is a point to multi-point network, meaning each meters talks to a data collector. Each solid state meter has multiple paths back to the office to "self-heal" and to prevent a meter from being stranded in the event of equipment failure. This self-healing functionality basically reports to the system operator the failed piece of equipment and then immediately begins rerouting data traffic to other nearby data collectors.

The RF infrastructure is designed, commissioned, and guaranteed to function as quoted by Aclara or the system will be modified at Aclara's expense. Data is transmitted from the meter to RF data collector, which has a battery backup, per the previously mentioned propagation study. This data is transmitted utilizing a licensed channel in the 450-470 MHz bandwidth. Collected data is transmitted to Salt River's data center via cellular backhaul services through secured TLS multilayer authentication firewall systems.

Refer to the following pages for examples of:

Basic RF Network Design Flow Chart RF Meter Transmission Unit Cut Sheet

RF Data Collector Unit Cut Sheet

The Aclara system will coexist with the existing Landis&Gyr AMR\AMI software system already in place for the duration of the replacement. This allows Salt River Electric to continue to use existing meters currently installed and change meters over a planned 48 month time frame. All meters replaced will be tested for accuracy in accordance with 807 KAR 55:041, Section 15(3). All new meters purchased and installed for new service requests, consumers requesting pre-paid metering, replacement, etc. would be RF meters.

Basic RF Network Design Flow Chart



RF Meter Transmission Unit Cut Sheet

Aclara 🐔

RF Electric Meter Transmission Unit

Residential and Commercial



Actara Mater Transmission Units for single- and poly-phase, solid-state, ANSI-certified residential and commercial meters minimize risk and ensure accurate, reliable and efficient measurements.

Aclara Meter Transmission Units provide superior measurement performance, affordability, accuracy and reliability. In addition to reading meters, the units support demand, load profiling, time-of-use, and net metering for distributed generation.

Meter Transmission Units are a critical component of Aclara's Synergize[™] RF network solution, which offers unequalled performance and expandability while providing reliable, flexible and two-way communications for electric meters and other smart-infrastructure devices on distribution networks.

FEATURES AND BENEFITS

- · Operates on FCC licensed 450-470 MHz frequencies, reducing the risk of interference by other radio systems
- Employs NIST-standard, approved Advanced Encryption Standard 256-bit encryption (AES-256) for communications with the headend
- Utilizing Datagram Transport Layer Security (DTLC) protocol, uses X.509 digital certificate-based client and server authentication
- Uses the IEC 61968-9 standard (Application Integration at Electric Utilities) to transact CIM-based messages
- · Applies an extended set of IEC-61968-9 Distribution Management commands all the way from the headend to endpoints
- Outage or restoration confirmation timer reduces false reporting and provides accurate and confirmed outage and
 restoration messaging
- Provides up to six confirmed "last gasp" outage messages across 20 minutes from any affected meter to provide the ultimate ability to know where outages exist.
- · Offers an outage event buffer to reduce the number of false momentary alarms
- Accesses data directly from ANSI C12.19 tables
- Supports integrated connect/disconnect functionality for residential meters

CONVERT DATA TO INFORMATION

Data transmitted to the utility is turned into actionable information by Aclara's iIDEAS* software, a full-featured headend that provides a single user-friendly interface for control and command.

Out-of-the-box functions in iIDEAS are on-demand reads, outage and restoration reporting, connect/disconnect, firmware downloads, alarms and validation, estimation and editing capability. Aclara offers additional valueadded modules for loss analysis, transformer analysis, voltage analysis, meter exchange, power billing, fault detection and localization and more.







RF Electric Meter Transmission Unit Residential and Commercial

METER TRANSMISSION UNIT SPECIFICATIONS

Aclara I-210+, I-210+c, and kV2c meter platforms
9.6 kbps per RF channel
5 minute, 15 minute, 30 minute, hourly, daily
5-minute reads transmitted every 5 minutes, 6 channels 15-minute reads transmitted every 15 minutes, 4 channels
Within 15 seconds
1 W/30 dBm per transmitter channel
IEC 61968-9 CIM
-105 dBm for 10 ⁶ BER per receiver channel
AES-256 encryption with X.509 certificate authentication, DTLS v1.2 and NEMA SG-AMI 1, FIPS 197, FIPS 186-4, FIPS 108-4, SP800-90A
Programmable from 5 to 300 seconds from meter notification
Up to 6 outage notification messages during 20 minute period
High temperature, tamper, outage, restoration, and more
Connect/dlsconnect, demand read, demand reset, historical recovery

RF Data Collector Unit Cut Sheet

Aclara 🛜 Synergize® RF Electric Data Collector Unit

Aclara's Synergize RF network Data Collector Unit offers unequalled performance and expandability while providing reliable, flexible, two way communications for all utility meters.



The data collector is built on the Aclara proven RF network for electric meters and provides the best total cost of ownership (TCO) for utilities looking for smart solutions. It is an innovative, state-of-the-art system that not only reads meters but also contains smart-infrastructure devices that monitor additional points on utility distribution networks.

The devices' confirmed outage notification system ensures correct and timely outage alarms. A 20-minute last gasp power enables up to six outage notifications for 99 percent message success. Data is delivered even in nested outage conditions, when damage is still present along an electric line after a larger problem has already been resolved. The data collector initiates an immediate message upon receipt of an event or alarm from an endpoint, and time synchronization ensures accurate time stamps, which allows for quick decision-making to reduce cost and improve customer services

FEATURES AND BENEFITS

- Device eliminates potential interference and competition from other radio devices and wireless services and promotes efficient
 communications by allowing channels to exist within the same spectrum; home run deployment method is highly reliable and
 latency free
- Offers a flexible solution to install in diverse geographies with various population densities and deploys on existing utility backhaul networks
- · Network design ensures read rate needed to achieve billing accuracy without repeaters or similar devices
- Diagnostic data for alarms, redundancy, location, battery, temperature, charging current, firmware version and passphrase status allow utilities total control over system features
- Priority reporting of error conditions, data-collector door access, and tamper notifications guarantee that data is accurate and secure
- · Battery backup, power save mode and data retention during power outages protect important data and operations



Aclara !

Synergize® RF Electric Data Collector Unit

DOU SPECIFICATIONS

Frequency Internal electronics, enclosure input power consumption Solamic **Dimensions** OCU weight Nominal power Approval Power output Uplink channels per card Data speed Operating temperature Storage temperature Battery specifications

450-470 MHz (FCC licensed) NEMA 4X 5W Zone 4 22"h x 14"w x 8.25"d 55 lbs. 12VDC FCC Part 90, Industry Canada RSS-119 3W 8/16/24 9.6 kbps -40°C to +70°C, 0 to 95% relative humidity -40°C to +85°C, 0 to 95% relative humidity 6.9"h x 6.5"w x 4.9"d, 23.3 lbs Capacity: 26 Ah

OPTIONS

Antenna

Mounting Kits

Baddhaul

Penarer

Single and multiple

Standard wood, concrete or metal pole Tower Rooftop

Ethernet Fiber-optic Cellular: supports major carriers and technologies

AC Power with battery backup or solar-rechargeable with battery backup

Actam Technologies LLC is a world-class supplier of smart infrastructure solutions (SIS) to more than 780 water, gas, and elociric utilities globally. Actam SIS offer/MS include smart regions and other field devices, advanced metering inframouture and software and software and software to conditions, leverage their distribution networks effectively and engage with their customers. Advance fectinalogies UC is owned by an affiliate of Sun Capital Partners. With us of Actara.com, phone 800 297 2728 or contact us in info@scinin.com and follow us on Twitter @ActaraSolutions. E-0317-0yrder_DCU © 2017 Aclara Technologies LLC. All Rights Reserved.

Summary of RF Benefits to Salt River Electric and Consumers

• Existing Investment- Existing installed infrastructure will remain in use as RF infrastructure is installed. This allows Salt River to continue to read meters remotely. Replacement products/meters will be RF.

• Usage Information - The availability of interval data, integration with Salt River's Customer Information System (CIS), and Meter Data Management System (MDMS) allow for more frequent usage information that will assist Customer Service Representatives in answering consumer questions about usage or conservation.

• Automated Outage Reporting- RF meters will report loss of power which will assist Salt River crews in locating the cause of outages as well as verify that all consumers' power has been restored after an outage has occurred.

• Direct Load Control- Salt River will offer direct load control to all consumers in all areas.

• Rate Structures - All RF meters are capable of supporting Real-Time Pricing, Time of Use, On Peak\Off Peak, and Time of Day Rates

• Historical Information for Consumers - The availability of interval data intervals and storing of this data allows consumers to access this data via web portal for nearly real time usage information

• **Pre-Pay Metering**- Salt River will be able to continue to offer a Pre-Pay metering tariff to all residential consumers. The only change is customer will no longer have to press the button on the meter to restore power

• **Remote Connect\Disconnect-** With the use of meters with built in Remote Service Switches, Salt River will be able to quickly connect or disconnect power per consumer requests or for non-pay reasons without the consumer having to wait until personnel can get to the service location.

• **Distribution Automation** - The RF infrastructure cannot only communicate with meters but also has the capability to communicate with various distribution equipment such as regulators, reclosers, and fault indicators, providing the future ability to extend control and data retrieval outside the substation.

• Voltage Data - The ability to receive voltage readings from individual meters will allow Salt River to build historical voltage data at both peak and off peak times to verify voltage levels calculated with engineering analysis software as well as provide system wide voltage levels instead of rotating voltage recorders on the end of individual feeders around the system as required by the PSC.

Personal or sensitive information was discovered within this document. At the filers request this page has been removed. A redacted copy of this page will be uploaded by the filer. BSB 2/25/2020

Appendix B

Vendor Comparisons

	Aclara Technologies LLC	Landis+Gyr	Tantalus	Itron	Sensus
Infrastructure					
Meters					
Software/Support Services					
Discount					
Total					Negative States

Note- due to the difference in system equipment/components, summarized totals are provided

Appendix C

Aclara Reoccurring Costs

	······································
Annual Fees	
Support increase	
Backhaul communication	
FCC License	an man a statul and the support distribution in the book of a factorial of a statul of the book of the support

Appendix D

Salt River Board Approval of Aclara System



RESOLUTION

WHEREAS, a Construction Work Plan for 2019-2022 in the amount of has been prepared by the Staff of Salt River Electric Cooperative Corporation.

NOW THERLI-ORF, BI-TF RI SOF VED, that the Board of Directors adopt the 2019-22 Construction Work Plan as a course of action to be followed, or until amended with the approval of RUS.

CERTIFICATION

I. LINDA WEST. Secretary of Salt River Electric Cooperative Corporation Board of Directors, do hereby certify that the above is a true and correct excerpt from the minutes of the meeting of the Board of Directors of Salt River Electric Cooperative Corporation, held on February 8, 2019, at which meeting a quorum was present.

LINDA WEST, Secretary

SI AL

Appendix E

RUS Approval of 2019-2022 Construction Workplan



Rural Development February 7, 2019

Rural Utilities Service

1400 Independence Ave SW, Room 0221 Stop 1567 Washington, DC 20250

Voice 202 720 1430 Fax 1 844 496 7794 Mr. Tim Sharp President and CEO Salt River Electric Cooperative Corporation P.O. Box 609 Bardstown, Kentucky 40004-0609

Dear Mr. Sharp:

The USDA Rural Utilities Service (RUS) has reviewed the environmental documentation submitted for the facilities included in the cooperative's 2019-2022 Construction Work Plan (CWP). In accordance with 7 CFR Part 1970, Environmental Policies and Procedures, all projects proposed in the CWP appear to meet the criteria for Categorical Exclusions (§1970.53[a][2];[c][1],[8];[d][4]). No additional environmental information needs to be submitted for review, provided there are no new extraordinary circumstances (see §1970.52) and the projects do not change from what has been described in the CWP and its supporting environmental documentation.

RUS has concluded its environmental review of the projects in the CWP. The cooperative is responsible for acquiring the necessary permits for construction and operation of the proposed projects and for implementing all environmental commitments made in the CWP and its environmental documentation. Additional state and federal permits/reviews may be required for projects sited on publicly owned lands or that cross protected streams and wetlands.

Thank you for your assistance and cooperation in helping us fulfill our environmental review requirements. If you have any questions, please contact me at (202) 205-9702 or Ms. Lauren Rayburn, Environmental Scientist, at <u>lauren.rayburn@wdc.usda.gov</u> or (202) 695-2540.

Sincerely,

Kennett Solar

KENNETH SOLANO Chief, Engineering Branch Office of Loan Origination and Approval Rural Utilities Service