



**STATE OF RHODE ISLAND
DIVISION OF PUBLIC UTILITIES & CARRIERS**

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May 15, 2024

Luly Massaro, Clerk
Public Utilities Commission
89 Jefferson Blvd
Warwick, RI 02888

Re: Docket No. 3628

Dear Ms. Massaro,

Attached for filing with the Public Utilities Commission in the above-entitled matter, please find a Memorandum from Division of Public Utilities and Carriers.

Very truly yours,

Leo J. Wold

Leo J. Wold
Chief of Legal Services, DPUC

cc: Service List

Memorandum

To: Rhode Island Division of Public Utilities and Carriers

From: William F. Watson, Econalytics, LLC

Subject: Review and analysis of RIE Proposed Revisions to the Service Quality Plan – Docket No. 3628

Date: May 15, 2024

Introduction

The Rhode Island Division of Public Utilities and Carriers (“Division”) requested assistance in the review and analysis of Rhode Island Energy’s Proposed Revisions to the Service Quality Plan in Docket No. 3628 as ordered by the Rhode Island Public Utilities Commission (“Commission”) in Docket No. 22-49-EL. The Division contracted with Gregory L. Booth, PLLC to provide this assistance. I am working in partnership with Greg Booth to provide this assistance. My qualifications are detailed in my attached resume. In addition, I previously provided testimony on behalf of the Division in Rhode Island Energy’s Advanced Meter Functionality (“AMF”) Business Case (Docket 22-49-EL).

General summary of review and analysis

The scope of the assignment was to review and analyze Rhode Island Energy’s Proposed Revisions to the Service Quality Plan that arose from the Commission’s Open Meeting Decision (“Decision”) in Docket No. 22-49-EL – Advanced Metering Functionality (“AMF”) Business Case so as to provide the Commission with a recommendation as to whether or not the proposal complies with the Decision.¹ The proposed revisions to the Service Quality Plan are presented individually in addressing the specific requirements contained in the five categories in item 14 of the Decision. These categories are:

1. Meter reading and billing
2. Faster outage notification
3. Network speed
4. Trouble, non-outage
5. Customer satisfaction

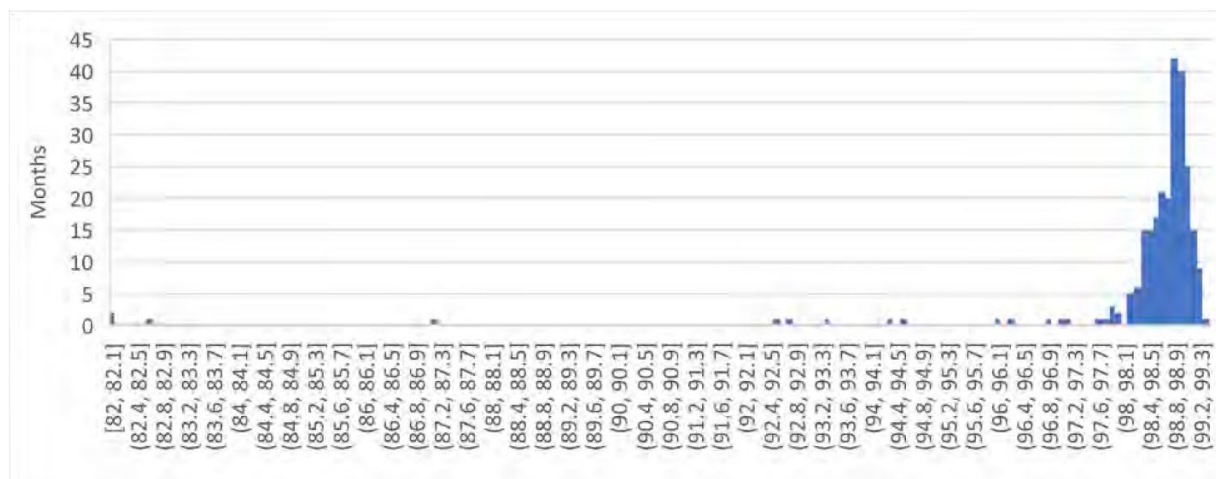
Overall, the Company provided methodologies that comply with the specifications under each of these five categories. However, there are some concerns that the proposed methodologies do not provide adequate accountability when analyzed through the lens of what the Company offered as

¹ The Division’s review of the Company’s proposal is limited in scope to the proposed plan’s compliance with the Decision. The Division’s analysis does not address whether the metrics appropriately modernize the Company’s existing Service Quality Plan. Nor does the Division’s analysis provide a comprehensive assessment of whether the proposed Service Quality Plan will ensure that AMF will deliver its promised benefits.

the basis for its business case for deployment of AMF metering technology. I will address these concerns below by category.

Metering and billing

The Company analyzed meter reading data for 252 months beginning with January 2002 and ending December 2022. The Company finds that the monthly percent meter read data are not normally distributed. It also found that months in which a Major Event Day (“MED”) was declared had fewer meter reads because of the need to “prioritize staff resources for power restoration over meter reading”. As a result, the Company data with existing AMR meters shows the following distribution of monthly meters read.



With the installation of AMF meters, there will not be as much need to prioritize staff resources as with Automated Meter Reading (“AMR”) meters during periods when MEDs occur. The Benefit Cost Analysis (“BCA”) justification for AMF metering assumed that eight FTEs are needed for meter reading and that these eight FTEs can be eliminated when AMF meters are installed, for a net benefit of almost \$5 million Net Present Value (“NPV”) savings.

The Company’s meter reading and billing proposal provides reasonable assurance that the Company will continue to read meters and appropriately bill customers during the transition period to AMF meters. However, the Company’s proposed target should be reassessed at the end of the period of AMF meter deployment using the data relevant to meter read percentage for the deployed AMF meters .

Faster notification

In the Company’s business case in Docket 22-49-EL, faster notification from AMF metering showed the most significant impact of the many claimed benefits from AMF presented. The Company’s BCA showed a NPV savings of \$169 million from this issue alone, representing 23% of the total estimated benefits derived from AMF metering. The maximum penalty proposed by the Company for failing to achieve any of its 22-minute outage notification reduction goal is \$200,000 per year, which is proposed to be eligible for offset by other areas where the Company may exceed its target. The Division believes the proposed penalty is insufficient given the magnitude of the benefits the Company claims will accrue from faster notification as a result of transitioning to AMF metering.

The deadband proposed by the Company allows for no penalty when the lower limit of the annual average reduction in the interval between the Last Gasp notification and the first customer notification is 17.6 minutes. Stated differently, the Company is advocating that it has met its target if the reduction in the notification gap is 17.6 minutes or more, as opposed to the 22-minute reduction. Had this internal gap been factored into the BCA, the NPV benefit of this feature of AMF metering would have been significantly reduced.

Anecdotal experiences with consumers who have AMF metering capability is that they are not as inclined to notify the utility when their service has been interrupted in that they understand that the AMF meter will have notified the company. This leads to the reasonable conclusion that a significantly larger number of consumers than the 20% cited in the Company's development of an outage notification standard will not call in. Following the logic in the Company's derivation of the lower range of the deadband, this would lead to a much broader tolerance for failure to meet the 22-minute standard that the Company had used for justification of AMF metering to begin with. For example, if 50% of consumers do not call in outages after AMF meters are installed, the Company proposal for calculating a lower limit on the deadband is 11.0 (see page 33/51 in Company Service Quality Plan proposal – $0.5 \times 22 \text{ minutes} + 0.5 \times 0 \text{ minutes} = 11.0 \text{ minutes}$). The upshot is that: 1) given that faster outage notifications is a foundational basis for deploying AMF meters and, 2) the Company bases its benefits on an achievable rate of 22 minutes (which in turn is based on statistical analysis of its Pennsylvania affiliate); the penalty for failing to meet this target should be significantly higher, and the Company should be held to a much higher standard by eliminating the lower limit on the deadband.

While consumers can now report outages on the internet, allowances for this capability, and other reasonable means of consumer's reporting outages should be included as first notifications. An improvement in outage notification does not necessarily translate into lower outage durations, although it does follow that it allows the Company to be able to respond and begin restoration work more quickly. If faster outage notification does result in lower outage durations, then it should be reflected in SAIDI numbers, which are also a service quality performance metric, and in turn may allow the Company to qualify for a penalty offset. In other words, even if the full "faster notification" penalty was assessed, it may be partially offset by improved SAIDI performance

Recommendations: 1) eliminate the deadband and assess penalties for failure to achieve any level less than 22-minutes faster outage notification, 2) raise the level of the penalty for failure to achieve the 22-minute faster notification, potentially up to the maximum \$1,000,000 amount proposed in the Commission's Decision. Given that application of this metric is proposed as a one-time assessment, and the Company adopts 22-minute faster notification as a standard feature of AMF metering, the Division's recommendation is not excessive.

Network speed

The Company's proposal appears reasonable and in compliance with the Open Meeting Decision.

Trouble, non-outage

The Company's proposal appears reasonable and in compliance with the Open Meeting Decision.

Customer satisfaction

The Company's proposal appears reasonable and in compliance with the Open Meeting Decision.

General comments

In its prior orders in Docket 3628 – Service Quality Plans, the Commission set a maximum annual penalty for failure to meet service quality requirements at 1% of annual Revenue Decoupling Mechanism for the year in which the order was issued, which represents electric distribution revenue (see Company proposal dated December 27, 2023, page 46 of 51). Applying this formula, the penalty maximum is determined to be \$2.9 million as set forth in the Company's proposal. The Division is in agreement with the Company's calculation and does not oppose the \$2.9M maximum. The Division's proposal to increase the penalty for failure to meet the 22-minute outage notification reduction goal from \$200,000 to \$1,000,000 results in a maximum penalty potential of \$3,768,000 for all performance standards. See Attachment 1 for a comparison of the current Service Quality Plan's maximum penalties and offsets with RIE's proposal and the Division's proposal in this docket. Though the Division's total for all performance standards exceeds the \$2.9 proposed maximum, the Division supports limiting the annual maximum penalty to \$2.9M.

In general, the Company built its business case on assumptions of delivering certain benefits to its consumers. As demonstrated in the above discussion on Meter Reading and Billing, and on Faster Outage Notifications, the Company's assumptions are integral to these provisions of service quality. There are potentially other areas of service quality where specific assumptions justify the deployment of AMF metering technology. It is a general recommendation that the overall Service Quality Plan be revisited upon the completion of the deployment of AMF meters and infrastructure to ensure that the benefits promised by the Company for electric consumers have been achieved.

Service Quality Plan Summary of Proposals

<u>Performance Standard</u>	Current Plan		RIE Proposal		Division Proposal	
	<u>Maximum</u>	<u>Maximum</u>	<u>Maximum</u>	<u>Maximum</u>	<u>Maximum</u>	<u>Maximum</u>
	<u>Penalty</u>	<u>Offset</u>	<u>Penalty</u>	<u>Offset</u>	<u>Penalty</u>	<u>Offset</u>
SAIFI	(\$916,000)	\$229,000	(\$916,000)	\$229,000	(\$916,000)	\$229,000
SAIDI	(916,000)	229,000	(916,000)	229,000	(916,000)	229,000
Customer Satisfaction	(184,000)	46,000	(184,000)	46,000	(184,000)	46,000
Calls w/in 20 seconds	(184,000)	46,000	(184,000)	46,000	(184,000)	46,000
Meter Reading & Billing	N/A	N/A	(184,000)	46,000	(184,000)	46,000
Trouble Non-Outage	N/A	N/A	(184,000)	46,000	(184,000)	46,000
Network Speed	N/A	N/A	(200,000)	50,000	(200,000)	50,000
Faster Outage Notificator	N/A	N/A	(200,000)	50,000	(1,000,000)	50,000
Totals	(\$2,200,000)	\$550,000	(\$2,968,000)	\$742,000	(\$3,768,000)	\$742,000
Maximum Penalty Cap	(\$2,200,000)		(\$2,900,000)		(\$2,900,000)	

RESUME

William Franklin Watson
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Henrico, Virginia 23238
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(804) 839-1758

Education

B.A., Economics, North Carolina State University
Master of Economics, North Carolina State University
Doctor of Philosophy with major in Economics and minor in Statistics,
North Carolina State University

Experience

January 2018 to present
Principal, Econalytics, LLC

Econalytics is a consulting firm specializing in working with utilities in the application of the principles of economic and statistical analysis to meet existing operational challenges and to develop and implement strategic plans to operate successfully in the future environment.

August 2013 to May 2021
Adjunct Faculty member, Virginia Commonwealth University, School of Business

Taught undergraduate and graduate classes in economics and statistics.

January 2009 to January 2018
Regulatory Compliance Specialist
Old Dominion Electric Cooperative (ODEC)
www.odec.com

ODEC is a generation and transmission cooperative based in Richmond, VA that provides wholesale power to 11 full requirements electric distribution cooperatives in the states of Virginia, Delaware and Maryland.

Experience includes ensuring that ODEC and its 11 electric distribution cooperatives met all federally mandated requirements to provide reliable electric service to their customers and as an integrated part of the national electric grid with entities such as the PJM Interconnection. This includes assisting in the development of regulatory standards to meet the energy policy requirements adopted by the United States Congress

February 2006 to December 2008
Financial Analyst
PowerServices, Inc.
www.powerservices.com

PowerServices, Inc. was a management consulting firm based in Raleigh, NC specializing in small to medium sized electric utilities.

Experience included analysis of cost-benefits of various projects, cost-of-service studies with rate design and recommendations, long-range planning for small to medium sized utilities, analysis of trends in the electric utility industry, review of regulatory filings and analysis of loss and assessment of system valuation for acquisitions.

January 2004 to January 2006
Senior Resource Analyst
Power Supply Division
North Carolina Electric Membership Corporation (NCEMC)
www.ncemc.com

NCEMC is a generation and transmission cooperative that provides wholesale power to 22 full requirements and 4 partial requirements electric distribution cooperatives in the state of North Carolina.

Experience included statistical analysis and hourly load forecasting for power supply budgets, developing strategies to optimize financial transmission right revenue for NCEMC's participation in the PJM Interconnection, working with renewable energy suppliers and individual electric distribution cooperatives to develop mutually beneficial power purchase agreements, liaison with North Carolina Utilities Commission which included overall responsibility for the preparation of the NCEMC Annual Integrated Resource Plan.

October 1999 to January 2004
Director, Strategic Analysis
Strategic Services Division
North Carolina Electric Membership Corporation
www.ncemc.com

Experience included statistical analysis for wholesale rates, strategic plan development, scenario planning, acquisition analysis and pricing, long-term rate projections and working with the NC Legislative Study Commission on the deregulation of the electric industry in North Carolina.

June 1981 to October 1999
Various positions with Electricities of North Carolina, including senior management
www.electricities.com

Electricities of North Carolina is an umbrella organization for North Carolina Municipal Power Agency Number 1 and North Carolina Eastern Municipal Power Agency (Power Agencies). These two Power Agencies are the wholesale suppliers of 19 and 32 municipally owned electric utilities in North Carolina, respectively.

Experience included development of wholesale rates for the Power Agencies, load forecasting and budgeting including long-term strategic planning, power purchase agreement negotiations with power suppliers, overall oversight of approximately 1400 megawatts of nuclear and coal-fired generation of which Power Agencies had joint ownership, development of plans for combustion turbine generation. I also developed a retail rate assistance program for Power Agency municipal utilities. As Director of Power Supply, I managed a staff of 6-8 people with engineering and accounting backgrounds and served as the Chief Budget Officer and Planner for the organization.

February 1978 to June 1981
Director of Economic Research Division
North Carolina Utilities Commission (NCUC)
www.pubstaff.commerce.state.nc.us

Experience included preparing expert rate and rate of return testimony in electric, natural gas telephone and water utilities petitions before the NCUC for increase in rates. Testified in numerous NCUC cases and one Federal Energy Regulatory Commission case subject to cross-examination by utilities' counsel. Also responsible for load forecasting and overall economic and statistical analysis of the utility industry. Managed a staff of 5 economists. Also worked on various antitrust cases providing expert economic analysis with the North Carolina Department of Justice.

Academic Experience

Adjunct Faculty member of the School of Business, Virginia Commonwealth University
Taught the following courses

- Foundations of Economics
- Business Statistics II

Adjunct Assistant Professor, Department of Economics, North Carolina State University.
Taught the following courses

- Introduction to Macroeconomics
- Economics of the Firm
- Statistics for Business Majors (first semester course)
- Statistics for Economists (second semester course)

Military

Commissioned Second Lieutenant, US Army Reserves, Armor Branch
Honorable Discharge from US Army Reserves, First Lieutenant

Other Accomplishments and Achievements

Member and former chairman of the Graduate School Board of Advisors, North Carolina State University

Former member of the College of Management Board of Advisors and former chairman of the Faculty Advisory Committee, North Carolina State University

Former chair of the American Public Power Association's Pricing and Market Analysis Committee

Member of the Southern Economic Association

Recent Publications

"NERC mandatory reliability standards: a 10-year assessment", The Electricity Journal, March 2017.

"Reforming reliability standards: A perspective from economics", The Electricity Journal, April 2018.